Regular Town Council Meeting

June 2, 205
6:00 PM
Town Council Chambers
Chair: Arne Jorgensen

NOTICE: THE VIDEO AND AUDIO FOR THIS MEETING ARE STREAMED TO THE PUBLIC VIA THE INTERNET AND MOBILE DEVICES WITH VIEWS THAT ENCOMPASS ALL AREAS, PARTICIPANTS AND AUDIENCE MEMBERS. PLEASE SILENCE ALL ELECTRONIC DEVICES DURING THE MEETING.

I. ZOOM LINK FOR PUBLIC PARTICIPATION

The Town reserves the right to close Public Comment via Zoom at any time. In-person comment will continue to be taken and written comments can always be submitted to Town Council by emailing electedofficials@jacksonwy.gov.

A. To join, click link or copy it to your browser: https://us02web.zoom.us/j/86870965679?pwd=oxwYLFyT0bsHdofkIH5Fywahcz41c9.1

Or join at zoom.com with Webinar ID: **868 7096 5679** and Password: **83001** or by phone: **+1 253 215 8782**

II. OPENING

A. Call to Order and Roll Call
B. Pledge of Allegiance
C. Land Acknowledgement
D. Announcements/Proclamations
   1. National Gun Violence Awareness Day
   2. Pride Month

III. PUBLIC COMMENT

This section is reserved for public comment about items not included in this agenda. Public comment is limited to 3 minutes. As a general practice, Council does not discuss, debate, or act on issues raised under public comment. Council may or may not discuss an issue raised under Public Comment later in the meeting during Matters from Mayor and Council at their discretion. If you would like to communicate with Council during the meeting about an item on the agenda, please wait until public comment has been called for that item. Public comment may also be submitted to Council at any time by emailing *electedofficials@jacksonwy.gov*.

IV. CONSENT CALENDAR

All matters listed in this section are considered to be of routine nature by the governing body and will be enacted in one motion, unless it is removed from the consent calendar and considered separately by Council. Public comment may be given on any item.

A. Meeting Minutes
   1. May 14, 2025 Special Town Council Meeting - A.M.
   2. May 14, 2025 Special Town Council Meeting - P.M.
   3. May 19, 2025 Regular Town Council Meeting
B. Disbursements
C. Partial Vacation without Replat at 410 E. Gill Ave. (P25-056) (Katelyn Page)
D. Acceptance of Bid for Purchase and Relocation of the Mercer Cabin (Tanya Anderson)

Please note that at any point during the meeting, the Mayor may change the order of items listed on this agenda. In order to ensure that you are present at the time your item of interest is discussed, please join the meeting at the beginning to hear any changes to the schedule or agenda.

E. Amendments to Agreements Governing Compressed Natural Gas Station Located at Lower Valley Energy (Lea Colasuonno)

F. Consideration of Deed Restrictions for Workforce Rental Housing at The Glenwood Units #22, 23, 24 Located at 165 N. Glenwood (Kristi Malone)

G. First Amendment to Sweet Spirits Child Care Lease (Lea Colasuonno)

H. Sublease Agreement for Aspen Drive Employee Housing Unit (Lynsey Lenamond)

I. Parks and Recreation Budget Amendment for Rec Center Sauna (Max Moran)

J. Payment Processor Parking Access Revenue Control System (PARCS) at Millward/Simpson Garage (Charlotte Frei)

V. PUBLIC HEARINGS, DISCUSSION AND/OR POSSIBLE ACTION ITEMS

A. Internal Services

1. Application for Transfer of a Restaurant Liquor License from ChinaTown Lee Inc. at 850 W. Broadway Suite A (Lynsey Lenamond)

B. Planning & Building

1. Hitching Post Development Plan (P25-041) (Andrew Bowen)
2. Three Development Plans for Lots 53, 57, and 58 within the Snow King Master Plan (P24-168, P24-174, P24-175) (Tyler Valentine)

VI. RESOLUTIONS

A. Resolution 25-11: Wyoming Region 8 Hazard Mitigation Plan (Rich Ochs)

VII. ORDINANCES

A. Ordinance V: An Ordinance Extending the Term of the Franchise Granted to CenturyLink (Third Reading, to be designated Ordinance 1439)

B. Ordinance W: An Ordinance Amending Title 6 to Include Special Malt Beverage Permits (Lynsey Lenamond, First Reading)

C. Ordinance X: An Ordinance Relating to the Public Parking Garage (Charlotte Frei, First Reading)

VIII. MATTERS FROM MAYOR AND COUNCIL

A. Board and Commission Reports

IX. MATTERS FROM THE TOWN MANAGER

A. Town Manager's Report

X. ADJOURN

Please note that at any point during the meeting, the Mayor may change the order of items listed on this agenda. In order to ensure that you are present at the time your item of interest is discussed, please join the meeting at the beginning to hear any changes to the schedule or agenda.

Pledge of Allegiance

I pledge allegiance to the flag of the United States of America, and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all.

Land Acknowledgement

We recognize that the land we are gathering on is the ancestral homeland of the Mountain Shoshone People who stewarded it for thousands of years and that many other tribes also lived upon and cared for this area including the Bannock, Blackfoot, Crow, Eastern Shoshone, Gros Ventre, Nez Perce, Northern Arapaho tribes, and others. With gratitude, we honor Indigenous Peoples, past and present. We also acknowledge the sovereignty of the Native nations closest to Jackson whose land was taken through broken treaties that resulted in the creation of the Wind River and Fort Hall Indian Reservations. We recognize this acknowledgement is simply a first step. The Town of Jackson is committed to continued and informed action to connect with indigenous people.

NATIONAL GUN VIOLENCE AWARENESS DAY

Recognizing June 6, 2025 as National Gun Violence Awareness Day

WHEREAS, National Gun Violence Awareness Day, also known as Wear Orange Day, is observed nationally on the first Friday in June and the following weekend each year; and

WHEREAS, the Wear Orange campaign began on June 2, 2015, in commemoration of the life of Hadiya Pendleton who was shot and killed on a playground in Chicago, and in the years since participation has increased tenfold; and

WHEREAS, 125 Americans are killed by gun violence every day; and

WHEREAS, globally, the U.S. ranks at the 93rd percentile for overall firearm mortality, 92nd percentile for children and teens, and 96th percentile for women; and

WHEREAS, as of May 11, 2025, there have been 106 mass shootings in this country.

THEREFORE, we renew our commitment to take the first steps to reduce gun violence and utilize ways that other countries have successfully met this challenge; and

NOW, FURTHER, BE IT RESOLVED, that I, Arne Jorgensen, Mayor of the Town of Jackson, declare June 6, 2025, National Gun Violence Awareness Day and encourage all citizens to support efforts to prevent the tragic effects of gun violence.

DATED THIS 2nd day of June 2025.

TOWN OF JACKSON

_____

Arne O. Jorgensen, Mayor

ATTEST:

_____

Riley Hovorka, Town Clerk

PRIDE MONTH PROCLAMATION

WHEREAS, our nation was founded on the principle of equal rights for all people, but the fulfillment of this promise has been long in coming for many Americans; and

WHEREAS, some of the most inspiring moments in our country's history are the result of various civil rights movements; and

WHEREAS, in the movement toward equal rights for lesbian, gay, bisexual, and transgender (LGBT) people, an historic turning point occurred on June 28, 1969, in New York City, during the Stonewall Riots. During these riots and the movement for LGBT liberation that occurred across the country people, often led by transgender women of color, rose up and fought against discriminatory laws that have since been declared unconstitutional; and

WHEREAS, the Town of Jackson honors the history of the LGBT liberation movement, now the LGBTQIA movement, which has added queer, questioning, intersex and asexual people under its umbrella, and supports the rights of all citizens to experience equality and freedom from discrimination; and

WHEREAS, LGBTQIA pride celebrations take place around the country in June to commemorate the Stonewall Riots; and

WHEREAS, the Town of Jackson's LGBTQIA community members are vital to all sectors, fields, and professions and contribute to a stronger community overall; and

WHEREAS, Jackson is strengthened by and thrives upon the rich diversity of ethnic, cultural, racial, gender and sexual identities of its residents; all of which contribute to the vibrant character of our Town; and

WHEREAS, the Town of Jackson is dedicated to fostering acceptance and belonging for all its residents and preventing discrimination and bullying based on sexual orientation and gender identity; and

WHEREAS, LGBTQIA teens have increased rates of suicide; and recent health assessments show that the LGBTQIA segment of our community experiences increased social isolation; and

WHEREAS, the Town of Jackson is committed to supporting visibility, dignity, and equality for LGBTQIA people in our community and the need for education and awareness remains vital to end discrimination and prejudice; and

WHEREAS, celebrating Pride Month builds awareness and provides support for the queer segment of our community, and is an opportunity to raise visibility, engage in dialogue, strengthen alliances, build acceptance, and advance equity for all.

NOW, THEREFORE BE IT RESOLVED that Jackson's Town Council, on behalf of all Jackson residents, hereby proclaims the month of June 2025 Pride Month and urges all residents to recognize the contributions made by LGBTQIA members of our community, to respect and honor our diverse community, and promote the principles of liberty, equality, and freedom for all.

APPROVED THE 2nd DAY OF JUNE 2025.

Town of Jackson

By: _____
Mayor Arne Jorgensen

ATTEST: _____
Riley Hovorka, Town Clerk

TOWN COUNCIL PROCEEDINGS – UNAPPROVED

MAY 14, 2025 **JACKSON, WYOMING**

The Jackson Town Council met in special session in the Town Hall Council Chambers, located at 150 East Pearl in Jackson, at 9:00 A.M. This meeting was held in-person and through the Zoom platform. Upon roll call the following were found to be present:

TOWN COUNCIL: Mayor Arne Jorgensen, Jonathan Schechter, Devon Viehman, Kevin Regan, and Alyson Spery.

STAFF: Tyler Sinclair, Lea Colasuonno, Paul Anthony, Tyler Valentine, Brian Lenz, and Riley Hovorka. *Via Zoom*: Roxanne Robinson and Floren Poliseo.

Sketch Plan for a +/-190,000 sf (habitable) Mixed-use Hotel and Condominium Development Along North Cache (P24-170). Tyler Valentine, Paul Anthony, Tyler Sinclair, and Lea Colasuonno made staff comment. Council held discussion with staff. Stephan Fodor and Brad Wagstaff commented on behalf of Mogul Capital. Council held discussion.

Council recessed at 10:22 a.m. and reconvened at 10:31 a.m.

Discussion continued.

Council recessed at 11:22 a.m. and reconvened at 11:29 a.m.

Discussion continued. Jonathan Schechter left the meeting at 12:01 p.m.

A motion was made by Devon Viehman and seconded by Kevin Regan to continue this item to a special Town Council meeting on June 16, 2025 at 8:30 a.m. Mayor Jorgensen called for the vote. The vote showed all in favor. The motion carried.

Adjourn. A motion was made by Devon Viehman and seconded by Kevin Regan to adjourn. Mayor Jorgensen called for the vote. The vote showed all in favor. The motion carried. The meeting adjourned at 12:03 p.m.

TOWN OF JACKSON

_____

ATTEST: Arne O. Jorgensen, Mayor

_____

Riley Hovorka, Town Clerk

Minutes: rh. Publish JH News & Guide: May 21, 2025

TOWN COUNCIL PROCEEDINGS – UNAPPROVED

MAY 14, 2025 **JACKSON, WYOMING**

The Jackson Town Council met in special session in the Town Hall Council Chambers, located at 150 East Pearl in Jackson, at 1:30 P.M. This meeting was held in-person and through the Zoom platform. Upon roll call the following were found to be present:

TOWN COUNCIL: Mayor Arne Jorgensen, Jonathan Schechter, Devon Viehman, Kevin Regan, and Alyson Spery.

STAFF: Tyler Sinclair, Roxanne Robinson, Lea Colasuonno, Kelly Thompson, Floren Poliseo, Johnny Ziem, Michelle Weber, and Riley Hovorka. *Via Zoom*: Susan Scarlata.

FY26 Budget Overview. Tyler Sinclair and Johnny Ziem made staff comment. Council held discussion with staff. Jessica Sell Chambers, Joe Spiegel, Zach Burn, and Perri Stern made public comment.

Council recessed at 2:21 p.m. and reconvened at 3:31 p.m.

Discussion continued. No motions were made.

Adjourn. A motion was made by Jonathan Schechter and seconded by Devon Viehman to adjourn. Mayor Jorgensen called for the vote. The vote showed all in favor. The motion carried. The meeting adjourned at 5:06 p.m.

TOWN OF JACKSON

_____

ATTEST: Arne O. Jorgensen, Mayor

_____

Riley Hovorka, Town Clerk

Minutes: rh. Publish JH News & Guide: May 28, 2025

TOWN COUNCIL PROCEEDINGS - UNAPPROVED

MAY 19, 2025 **JACKSON, WYOMING**

The Jackson Town Council met in regular session in the Town Hall Council Chambers located at 150 East Pearl in Jackson, at 6:00 P.M. This meeting was held in-person and through the Zoom platform. Upon roll call the following were found to be present:

TOWN COUNCIL: Mayor Pro Tempore Jonathan Schechter, Devon Viehman, Kevin Regan, and Alyson Spery. Mayor Arne Jorgensen was absent.

STAFF: Tyler Sinclair, Roxanne Robinson, Lea Colasuonno, Floren Poliseo, Michelle Weber, Paul Anthony, Tanya Anderson, Susan Scarlata, and Lynsey Lenamond.

The Pledge of Allegiance was led by Mayor Pro Tempore Jonathan Schechter. The Land Acknowledgement was read by Mayor Pro Tempore Schechter. Mayor Pro Tempore Schechter proclaimed May Mental Health Awareness Month and introduced Hunter Stevenson, Street Operator.

Public Comment. Jenny May Shervin, Jeff Brazil, Elani Garcia, Shirley Delgado, Maddie Krisula, and Mike Geraci made public comment.

Consent Calendar. A motion was made by Alyson Spery and seconded by Devon Viehman to approve the consent calendar including items A-D as presented with the following motions:

A. **Meeting Minutes.** To approve meeting minutes from the May 5, 2025 regular Town Council meeting and the May 6, 2025 Special Town Council meeting.

B. **Disbursements.** To approve the disbursements as presented. 107 WEST DESIGN, LLC $6,000.00; A43 ARCHITECTURE $243.75; ACE HARDWARE $611.22; ALDER ENVIRONMENTAL LLC $201.25; ALPHAGRAPHICS $403.89; AMAZON $253.48; ANDERS GLASS AND TINT $665.00; BEST BEST & KRIEGER $12,873.00; BISON LUMBER $234.81; BLUE SPRUCE CLEANERS,INC $305.35; BLUEBEAM, INC $1,560.00; BOLAND, ANITA $2,263.80; BRIGGS, ERIC L $1,900.12; BURKHOLDER, SHAWN $2,039.63; CARQUEST AUTO PARTS INC. $24.82; CASELLE INC. $1,973.00; CENTURYLINK $118.75; CHARLIE'S PLUMBING OF JH $850.00; CHITWOOD, JESSICA $170.00; CMI $10,000.00; COMMUNITY ENTRY SERVICES $45,000.00; CONWAY, LARS $2,500.00; CORE & MAIN LP $243.66; CREATIVE ENERGIES, LLC $4,880.00; DEAN'S PEST CONTROL LLC $370.00; DECKERS AUTO CARE $470.58; DEX IMAGING $383.65; DIVISION OF CHILD SUPPORT ENFORCEMENT $509.23; DIVISION OF VICTIM SERVICES $300.00; E.R. OFFICE EXPRESS $43.30; ENERGY 1 $2,687.79; ENERGY LABORATORIES INC. $405.00; ETNA TRADE PARK LLC $4,062.00; FIRE SERVICES OF IDAHO $2,245.00; FLAT CREEK APARTMENTS, LLC $14,675.36; FLEETPRIDE $3,263.94; FRONTIER FENCE INC $5,500.00; FUNDAMENTALS LEARNING CENTER $700.00; GABLE, MICHAEL $80.00; GILLIG LLC $5,301.20; GRIFFITH PARTNERSHIP LLC $3,350.00; GWALTNEY, WOODROW $100.00; HAWLEY, FLAVIANNA $96.83; HD FOWLER COMPANY $2,405.34; HIGH COUNTRY LINEN $845.25; HUB INTERNATIONAL $2,211.50; IDAHO TRAFFIC SAFETY, INC. $922.50; IHF ENTERPRISES LLC $81.00; IMMIGRANT HOPE $2,000.00; INTERSTATE BATTERY $501.85; IVY OUTDOOR SERVICES LLC $8,548.50; JACKSON GROUP LOCKBOX $885.58; JACKSON HOLE HISTORICAL SOCIET $9,396.26; JACKSON HOLE LAW, PC $3,505.00; JACKSON HOLE NEWS & GUIDE $5,527.85; JACKSON LUMBER INC $65.00; JORGENSEN ASSOCIATES, PC $20,771.95; KEENAN, PETER $2,357.50; KJ'S SERVICES INVESTMENTS LLC $2,975.00; LEGEND HYDROVACING, INC $6,350.00; LOCAL GOV'T LIABILITY POOL $2,500.00; LOWER VALLEY ENERGY INC $41,594.78; MACY'S SERVICES $300.00; MSC INDUSTRIAL SUPPLY CO $291.63; NAPA AUTO PARTS INC. $837.14; NELSON ENGINEERING $4,676.61; ONE CALL OF WYOMING $665.70; PATRICK MAROLD STUDIOS INC $75,000.00; PIC N STITCH $4,500.74; PLATT $11,176.02; POINT S REXBURG $14,475.20; PREMIER TRUCK- SALT LAKE CITY -$1,907.08; PV HOLDING CORP. $40.00; QUICK BROWN FOX LLC $345.00; R & A SAFETY LLC $477.50; RAMANATHAN, BRINDA $2,500.00; ROSS, TY $1,302.39; SAFETY SUPPLY & SIGN CO., INC. $4,130.09; SANCHEZ-MACHUCA, ROSA $2,700.00; SCHMIDL, HEIDI $549.00; SCHOLES, CONNOR $240.98; SCHWARTZ, ANDY $4,583.33; SHERWIN-WILLIAMS CO. $89.32; SIGN IT NOW INC $299.11; SILVER CREEK SUPPLY $23.59; SILVERSTAR $3,606.93; SKIDATA, INC. $88,640.50; SPACE EXPLORATION TECHNOLOGIES CORP $165.00; SPSC POA - SOUTH PARK SERVICES CTR POA $303.82; STANARD & ASSOCIATES, INC $612.50; STONE, KIRK $3,087.00; TETON COUNTY $3,000.00; TETON COUNTY CLERK $570,414.66; TETON COUNTY INTEGRATED SOLID WASTE/RECY $29,237.08; TETON COUNTY-FUND 10 $74,657.08; TETON COUNTY-FUND 13 $13,405.71; TETON COUNTY-FUND 19 $3,915.66; TETON MOTORS INC $4,118.97; TETON TRASH REMOVAL, INC. $114.00; THE AFTERMARKET PARTS COMPANY, LLC $236.45; THE TIRE RACK, INC. $1,751.00; THOMPSON LOGGING, INC $5,102.00;

THYSSEN KRUPP ELEVATOR CORP. $3,238.40; T-MOBILE $31.15; TMSC LLC $5,395.79; TRAFFIC SAFETY STORE $1,878.23; TREFREN, TRACEY $387.00; ULINE $848.23; USA BLUE BOOK $471.02; VOICES JACKSON HOLE $5,000.00; WAMCO LAB, INC. $550.00; WATTS STEAM STORE ROCKY MT. INC $651.98; WBC PROPERTIES $2,150.00; WEBER WATER & WELL $83,670.23; WEBER, MICHELLE $522.40; WESTERN STATE $158.80; WHITE GLOVE CLEANING, INC. $3,696.36; WILSON, JOHN $2,200.00; WILSON, JOSH $175.00; WSP USA INC. $11,951.25; WYOMING DEPARTMENT OF TRANSPO $26.00; WYOMING LAW ENFORCEMENT $160.00; WYOMING LAW ENFORCEMENT ACADEMY $4,076.00; WYOMING.COM INC $5.00; XYLEM CCI $348.29; YELLOW IRON WASTE, LLC $2,823.00

C. **April Municipal Court Report.** To accept the April Municipal Court Report into record.

D. **Framework Agreement for Professional Engineering Services.** To approve the Framework Agreement for Professional Services and authorize the Mayor to execute such agreements for repeatedly hired consultants, contractors, and vendors, subject to minor changes by staff, and to approve the Project Agreement Form and authorize the Department Director to execute the Project Agreements.

There was no public comment on the consent calendar. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Dissolution of the Equity Task Force. Susan Scarlata made staff comment. Council held discussion with staff. There was no public comment. A motion was made by Devon Viehman and seconded by Kevin Regan to direct staff to draft and present a resolution to dissolve the Equity Task Force. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Special Malt Beverage Permits. Lynsey Lenamond made staff comment. Council held discussion with staff. There was no public comment. A motion was made by Devon Viehman and seconded by Alyson Spery to direct staff to present a draft ordinance establishing a Special Malt Beverage Permit for public auditoriums, civic centers, or event centers at the next available Town Council meeting. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Demolition Permit DEM25-002 Located at 255 E. Peal Ave. Paul Anthony, Tyler Sinclair, and Ryan Hostetter made staff comment. Council held discussion with staff. Katie Wilson and Randy Lusky made comment on behalf of the applicant. Michael Stern made public comment. A motion was made by Kevin Regan and seconded by Devon Viehman to approve a stay of 60 days on the demolition of the existing single-family home as presented in this staff report and located at 255 E. Pearl Avenue. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried. A motion was made by Devon Viehman and seconded by Kevin Regan to direct staff to work with the applicant and run an ad in the newspaper at the earliest opportunity alerting the public through the stay and the opportunity to move the structure within the timeline. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Scoping Report on Town Long Range Planning Amendments to the Town Land Development Regulations (PM25-001). Paul Anthony made staff comment. Council held discussion with staff.

Council recessed at 7:53 pm and reconvened at 8:01 pm.

Amy Kuszak made public comment. Council continued discussion with staff. No action was taken.

WYDOT Reconnaissance Report for Willow and Gill Streets Reconstruction Projects. Floren Poliseo made staff comment. Council held discussion with staff. There was no public comment. A motion was made by Kevin Regan and seconded by Devon Viehman to approve and authorize the Mayor to sign the Reconnaissance Report for North Willow Street and East Gill Avenue. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Ordinances. A motion was made by Devon Viehman and seconded by Kevin Regan to read ordinances in short title. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Ordinance T. An Ordinance Regarding Fee Scheduled Set by Resolution.

AN ORDINANCE AMENDING SECTION 1.01.120, FEE SCHEDULES ALLOWED TO BE CHANGED BY RESOLUTION SUBJECT TO PUBLIC HEARING, , OF TITLE 1, GENERAL PROVISIONS, OF THE MUNICIPAL CODE OF THE TOWN OF JACKSON, WYOMING.

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JACKSON, WYOMING:

There was no public comment. A motion was made by Devon Viehman and seconded by Kevin Regan to approve Ordinance T, an ordinance regarding fee schedules set by resolution, on third and final reading as presented and designate it Ordinance 1438. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Ordinance V. An Ordinance Extending the Franchise Granted to CenturyLink.

AN ORDINANCE AMENDING ORDINANCE 1243 EXTENDING THE TERM OF THE FRANCHISE GRANTED TO QWEST CORPORATION D/B/A CENTURYLINK QC ON BEHALF OF ITSELF TO OPERATE AND MAINTAIN A TELECOMMUNICATIONS SYSTEM FOR THE PURPOSE OF SUPPLYING SERVICE TO THE TOWN OF JACKSON AND GRANTED ON DECEMBER 18, 2019.

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JACKSON, WYOMING, IN REGULAR SESSION DULY ASSEMBLED, THAT:

There was no public comment. A motion was made by Devon Viehman and seconded by Alyson Spery to approve Ordinance V, an ordinance granting an extension of the current CenturyLink Franchise to July 31, 2025, on second reading. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Matters from Mayor and Council. Public Art Taskforce Appointment/Reappointments. Mayor Pro Tempore Jonathan Schechter nominated Tammi Hanawalt and Katy Ann Fox to the Public Art Task Force for three-year terms, which shall expire April 30, 2028. A motion was made by Alyson Spery and seconded by Kevin Regan to consent to the appointment of Tammi Hanawalt and Katy Ann Fox to the Public Art Task Force for three-year terms, which shall expire April 30, 2028. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried. Mayor Pro Tempore Schechter appointed Tammi Hanawalt and Katy Ann Fox to the Public Art Task Force for three-year terms, which shall expire April 30, 2028. Mayor Pro Tempore Schechter nominated John Stricklin to the Public Art Task Force as the representative of Jackson Hole Public Art. A motion was made by Alyson Spery and seconded by Kevin Regan to consent to the appointment of John Stricklin to the Public Art Task Force as the representative of Jackson Hole Public Art. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried. Mayor Pro Tempore Schechter appointed John Stricklin to the Public Art Task Force as the representative of Jackson Hole Public Art. Council discussed their service on the Town Council during the first quarter of 2025. Michelle Weber made staff comment regarding the Farmer's Market. A motion was made by Devon Viehman and seconded by Alyson Spery to direct staff to bring the Jackson Hole Farmer's Market special event application before Town Council as soon as practicable. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried. Council discussed sister cities, including displaying artwork from Tlaxcala in the Council Chambers. A motion was made by Alyson Spery and seconded by Devon Viehman to direct the Town Manager or their designee to draft a brief scoping staff report about our sister city relationship with Tlaxcala to be added to an agenda within the next 60 days. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Town Manager's Report. Tyler Sinclair made staff comment. The Town Manager's report contained updates on Temporary Sign Permits, a request from Tumbleweed Creative Arts, a Summary of Large Upcoming Projects, a Budget Open House, and the Delegate for WAM Summer Convention. Staff presented an addition to the Town Manager's report regarding an Amendment to the JH Public Art Contract that, with the approval of the Town Manager's report, an amendment to the grant contract for the NEA Grant be executed by the Mayor that terminates the grant by May 31, 2025 and provides for invoicing for all outstanding match funds prior to termination. A motion was made by Devon Viehman and seconded by Kevin Regan to approve the Town Manager's Report. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried.

Adjourn. A motion was made by Alyson Spery and seconded by Kevin Regan to adjourn. Mayor Pro Tempore Schechter called for the vote. The vote showed all in favor. The motion carried. The meeting adjourned at 9:16 p.m.

TOWN OF JACKSON

_____

ATTEST: Jonathan Schechter, Mayor Pro Tempore

_____

Lynsey Lenamond, Deputy Town Clerk

Minutes: ll. Publish JH News & Guide: May 28, 2025

Report Criteria:
Detail report.
Invoices with totals above $0 included.
Paid and unpaid invoices included.

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
51	ACE HARDWARE	894809	CRACK REPAIR	01/09/2025	8.99	.00	
51	ACE HARDWARE	895514	KEYS	01/16/2025	16.47	.00	
51	ACE HARDWARE	900283	GORILLA GLUE	03/12/2025	9.99	.00	
51	ACE HARDWARE	904804	DRILL BITS	04/29/2025	34.47	.00	
51	ACE HARDWARE	904962	BATTERIES	04/30/2025	14.99	.00	
51	ACE HARDWARE	905114	HINGE	05/01/2025	19.99	.00	
51	ACE HARDWARE	905670	SCREWS	05/06/2025	1.89	.00	
51	ACE HARDWARE	905760	SHOVEL	05/07/2025	48.98	.00	
51	ACE HARDWARE	905851	TOWELS	05/07/2025	47.96	.00	
51	ACE HARDWARE	905936	SCREWS	05/08/2025	2.46	.00	
51	ACE HARDWARE	905953	SCREWDRIVER	05/08/2025	14.99	.00	
51	ACE HARDWARE	905978	LAG BOLTS	05/08/2025	10.67	.00	
51	ACE HARDWARE	906292	MULTITOOL	05/11/2025	139.99	.00	
51	ACE HARDWARE	906440	SCREWS	05/13/2025	33.96	.00	
51	ACE HARDWARE	906779	HEDGE TRIMMER	05/15/2025	312.48	.00	
51	ACE HARDWARE	906870	HOLE PLUG	05/15/2025	7.19	.00	
51	ACE HARDWARE	907022	HEX SELF	05/16/2025	1.89	.00	
51	ACE HARDWARE	907308	COMPRESION CONN	05/19/2025	43.45	.00	
51	ACE HARDWARE	907641	garbage bags	05/22/2025	16.99	.00	
	Total 51:				787.80	.00	
7652	ACTION EXCAVATION	050125	WATER HYRANT FILL REFND	05/01/2025	502.84	.00	
	Total 7652:				502.84	.00	
6900	ALDER ENVIRONMENTAL LLC	4824	SURFACE WATER TESTING	05/02/2024	7,088.50	.00	
	Total 6900:				7,088.50	.00	
6524	ALPHAGRAPHICS	IX-466919	CARDSTOCK	05/16/2025	175.51	.00	
	Total 6524:				175.51	.00	
5726	AMAZON	16TF-FHTT-JX	CHAFING FUEL	05/15/2025	24.99	.00	
5726	AMAZON	171V-RQCC-6J	TIE DOWN STRAPS	05/14/2025	232.60	.00	
5726	AMAZON	1CL1-JJQP-DN	LYSOL WIPES	05/09/2025	28.92	.00	
5726	AMAZON	1CY6-FPJD-JV	PAPER CUPS	05/15/2025	25.18	.00	
5726	AMAZON	1MTG-9WCM-	HANDCUFFS	05/21/2025	99.46	.00	
5726	AMAZON	1T9V-Q1WM-4	FISH FOOD, THERMOMETER	05/17/2025	70.78	.00	
	Total 5726:				481.93	.00	
7654	AMERICAN PUMP AND DRILLIN	050125	WATER HYDRANT FILL REFUN	05/01/2025	29.81	.00	
	Total 7654:				29.81	.00	
3500	BISON LUMBER	2505-875582	2X6 MATERIAL	05/12/2025	853.54	.00	
	Total 3500:				853.54	.00	
1560	BLUE SPRUCE CLEANERS,INC	050125SJ	DRY CLEANING SAM JEWISON	05/01/2025	40.54	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 1560:					40.54	.00	
7655	BORTEK UTILITIES	050125	WATER HYDRANT FILL REFUN	05/01/2025	139.93	.00	
Total 7655:					139.93	.00	
7653	BRIGGS UNDERGROUND	050125	WATER HYRANT FILL REFUND	05/01/2025	62.89	.00	
Total 7653:					62.89	.00	
6727	BRIGGS, ERIC L	35946	ADAPTER	05/01/2025	76.14	.00	
6727	BRIGGS, ERIC L	36101	STAR IMP	05/08/2025	7.56	.00	
Total 6727:					83.70	.00	
544	CENTURYLINK	333897059 052	Monthly bill for account 33389705	05/07/2025	2,642.37	.00	
544	CENTURYLINK	334064254 041	Monthly CHARGES 334064254	04/13/2025	60.42	.00	
544	CENTURYLINK	334064254 052	Monthly CHARGES 334064254	05/13/2025	60.42	.00	
544	CENTURYLINK	33897059 0507	Monthly CHARGES 333897059	05/07/2025	2,642.37	.00	
544	CENTURYLINK	732732230	ACCT 75912352	04/20/2025	118.75	.00	
544	CENTURYLINK	736226500	Monthly bill for account 33389705	05/01/2025	8,140.55	.00	
Total 544:					13,664.88	.00	
6257	CERTIFIED LABORATORIES	9143454	PREMALUBE GREEN	05/05/2025	905.85	.00	
Total 6257:					905.85	.00	
7089	CHARLIE'S PLUMBING OF JH	14577	250 N CACHE	05/15/2025	295.00	.00	
7089	CHARLIE'S PLUMBING OF JH	14590	126 ASPEN	05/12/2025	425.00	.00	
Total 7089:					720.00	.00	
5967	CITY OF DRIGGS	BBSTART2025	BUS BARN RENT	05/06/2025	1,976.34	.00	
Total 5967:					1,976.34	.00	
514	CONRAD & BISCHOFF INC.	IN-683701-25	DSL FUEL	05/06/2025	16,866.95	.00	
514	CONRAD & BISCHOFF INC.	IN683708-25	FUEL	05/06/2025	8,638.83	.00	
514	CONRAD & BISCHOFF INC.	IN-698184-25	DEF BULK	05/16/2025	461.70	.00	
514	CONRAD & BISCHOFF INC.	IN-702586-25	FUEL	05/20/2025	14,470.13	.00	
Total 514:					40,437.61	.00	
7663	COOK GRADING AND PAVING, L	052125	RETAINAGE	05/21/2025	35,806.99-	.00	
7663	COOK GRADING AND PAVING, L	052125	SPRING PATCHING	05/21/2025	680,332.87	.00	
7663	COOK GRADING AND PAVING, L	052125	RETAINAGE	05/21/2025	35,806.99	.00	
Total 7663:					680,332.87	.00	
7664	COPS FOR KIDS JH	20250522	SHOP WITH A COP CHARITABL	05/22/2025	7,465.57	.00	
Total 7664:					7,465.57	.00	
7111	DAWSON INFRASTRUCTURE S	INV215480	SEAL ASSEMBLY	05/14/2025	2,055.28	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 7111:					2,055.28	.00	
7649	DECKER GLASS	IRSW008393	WINDSHIELD	05/13/2025	217.25	.00	
Total 7649:					217.25	.00	
7372	DIRECT AUTOMOTIVE DIST	06104177	TRANSMISSION OIL	05/09/2025	171.21	.00	
Total 7372:					171.21	.00	
6883	DIVISION OF CHILD SUPPORT	051625	DCSE CASE #0005405448	05/16/2025	509.23	509.23	05/15/2025
Total 6883:					509.23	509.23	
7167	DOVER DRILLING	050125	WATER HYDRANT FILL STATIO	05/01/2025	33.12	.00	
Total 7167:					33.12	.00	
6939	DYNAMIC CONTROLS, LLC	39511	WORK STATION LICENSES	05/02/2025	1,799.00	.00	
Total 6939:					1,799.00	.00	
7656	E & S CONSTRUCTION, LLC	050125	WATER FILL HYDRANT REFUN	05/01/2025	143.09	.00	
Total 7656:					143.09	.00	
7665	EDUCATION AND OUTREACH C	25-617	STICKER SHEETS	05/21/2025	989.00	.00	
Total 7665:					989.00	.00	
1134	ENERGY LABORATORIES INC.	705809	EFFLUENT	05/08/2025	172.00	.00	
1134	ENERGY LABORATORIES INC.	707055	INFLUENT AND EFFLUENT	05/14/2025	172.00	.00	
Total 1134:					344.00	.00	
6753	ESRI, INC	900012788	ONLINE CREATER SUBSCRIPTI	05/01/2025	700.00	.00	
Total 6753:					700.00	.00	
3885	EVIDENT	249872A	GLOVES	04/04/2025	825.00	.00	
Total 3885:					825.00	.00	
6802	FALL RIVER PROPANE	2697216	PROPANE	05/14/2025	703.75	.00	
Total 6802:					703.75	.00	
7168	FALL RIVER RURAL ELECTIC	51773001 0525	CHATHAM LOOP ELECTRIC	05/20/2025	82.60	.00	
Total 7168:					82.60	.00	
7316	FC EXCAVATION, LLC	2148	NORTH CACHE WATER MAIN	09/23/2024	29,794.99	.00	
7316	FC EXCAVATION, LLC	2417	MOVE 85 GLENWOOD GILL	05/20/2025	4,356.50	.00	
Total 7316:					34,151.49	.00	
3195	FERGUSON ENTERPRISES, IN	3679140	REPAIR KIT	05/08/2025	5.81	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
3195	FERGUSON ENTERPRISES, IN	3679476	SPUD	05/08/2025	12.12	.00	
3195	FERGUSON ENTERPRISES, IN	3693688	WAX RING	05/14/2025	20.86	.00	
Total 3195:					38.79	.00	
7629	FIREHOSE SUPPLY	25884	FIRE HOSE	04/15/2025	309.70	.00	
Total 7629:					309.70	.00	
4709	FLEETPRIDE	125673899	PLUG KIT	05/12/2025	119.81	.00	
Total 4709:					119.81	.00	
668	FREEDOM MAILING SERVICE I	50380	UTILITY BILLING	05/05/2025	916.23	.00	
668	FREEDOM MAILING SERVICE I	50380	UTILITY BILLING	05/05/2025	916.22	.00	
668	FREEDOM MAILING SERVICE I	50380	WATER CONSERVATION INSER	05/05/2025	43.76	.00	
Total 668:					1,876.21	.00	
4394	FREMONT MOTOR CO.	4075 0425	FORD F150	04/08/2025	49,902.00	.00	
4394	FREMONT MOTOR CO.	4255 0425	FORD F150	04/08/2025	54,902.00	.00	
Total 4394:					104,804.00	.00	
6452	FROG CREEK PARTNERS, LLC	1313	CAMP SERVICE	04/28/2025	1,596.00	.00	
Total 6452:					1,596.00	.00	
324	GFOA	3182500	Structuring Local Government Fin	05/12/2025	50.00	.00	
Total 324:					50.00	.00	
4212	GILLIG LLC	41252980	FILTER	12/17/2024	1,600.80	.00	
Total 4212:					1,600.80	.00	
1609	GRAINGER	9488559015	TRAFFIC CONE SIGN	04/28/2025	34.96	.00	
1609	GRAINGER	9489230517	STEEL STAMPS	04/29/2025	129.41	.00	
1609	GRAINGER	9490129880	WATER THREAD AT BOTH END	04/29/2025	31.58	.00	
1609	GRAINGER	9490531242	INSTRUMENTAL FITTINGS	04/29/2025	426.32	.00	
1609	GRAINGER	9490567881	SS ELBOW	04/30/2025	135.82	.00	
1609	GRAINGER	9490567899	COIL TUBING	04/30/2025	168.16	.00	
1609	GRAINGER	9491428273	GAS N2404	04/30/2025	132.58	.00	
Total 1609:					1,058.83	.00	
7612	HALPIN, MICHAEL	052025	IRRIGATION PARTS REIMBURS	05/20/2025	56.97	.00	
Total 7612:					56.97	.00	
7651	HAZ-TECH DRILLING	050125	WATER HYDRANT FILL REFUN	05/01/2025	11.00	.00	
Total 7651:					11.00	.00	
4988	HD FOWLER COMPANY	I6999631	IRON SADDLE	05/07/2025	501.66	.00	
4988	HD FOWLER COMPANY	I7001215	WATER PARTS	05/08/2025	339.70	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 4988:					841.36	.00	
96	HIGH COUNTRY LINEN	0498108	UNIFORMS FOR SHOP	04/07/2025	79.94	.00	
96	HIGH COUNTRY LINEN	0499242	UNIFORMS FOR SHOP	04/14/2025	36.97	.00	
96	HIGH COUNTRY LINEN	0500211	UNIFORMS FOR SHOP	04/21/2025	79.94	.00	
96	HIGH COUNTRY LINEN	0501188	UNIFORMS FOR SHOP	04/28/2025	60.97	.00	
96	HIGH COUNTRY LINEN	0501833	FACILITY	05/01/2025	9.77	.00	
96	HIGH COUNTRY LINEN	0501833	ADMIN	05/01/2025	6.65	.00	
96	HIGH COUNTRY LINEN	0501833	ADMIN	05/01/2025	6.65	.00	
96	HIGH COUNTRY LINEN	0501833	SEWER	05/01/2025	15.75	.00	
96	HIGH COUNTRY LINEN	0501833	STREET	05/01/2025	13.06	.00	
96	HIGH COUNTRY LINEN	0501833	WATER	05/01/2025	20.53	.00	
96	HIGH COUNTRY LINEN	0501833	WWTP	05/01/2025	13.30	.00	
96	HIGH COUNTRY LINEN	0501833	BUILD MAINT	05/01/2025	129.03	.00	
96	HIGH COUNTRY LINEN	0501833	FACILITY	05/01/2025	.01-	.00	
96	HIGH COUNTRY LINEN	0502358	MATS @ 155 E PEARL	05/05/2025	11.17	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	6.65	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	13.06	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	20.53	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	13.30	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	59.56	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	9.76	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	6.65	.00	
96	HIGH COUNTRY LINEN	0502952	UNIFORMS FOR SHOP	05/08/2025	15.75	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	6.65	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	20.53	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	15.75	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	25.12	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	9.76	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	13.30	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	23.37	.00	
96	HIGH COUNTRY LINEN	0504166	UNIFORMS FOR SHOP	05/15/2025	6.65	.00	
96	HIGH COUNTRY LINEN	0504685	MATS @ START	05/19/2025	202.85	.00	
96	HIGH COUNTRY LINEN	S0503149	TOWELSD	05/08/2025	45.00	.00	
96	HIGH COUNTRY LINEN	S0504083	CLEANING SUPPLIES @ TOWN	05/14/2025	173.56	.00	
Total 96:					1,171.52	.00	
7657	INGERG-MILLER	050125	WATER HYDRANT FILL REFUN	05/01/2025	3.96	.00	
Total 7657:					3.96	.00	
106	INTERSTATE BATTERY	950005610	BATTERIES	05/05/2025	1,367.55	.00	
106	INTERSTATE BATTERY	950005690	BATTERIES	05/12/2025	79.00	.00	
Total 106:					1,446.55	.00	
2	JACKSON CURBSIDE INC.	00032756	RECYCLING	05/05/2025	795.00	.00	
2	JACKSON CURBSIDE INC.	00032777	RECYCLING	05/05/2025	255.00	.00	
2	JACKSON CURBSIDE INC.	00032789	RECYCLING	05/05/2025	1,831.00	.00	
Total 2:					2,881.00	.00	
7163	JACKSON GROUP LOCKBOX	688081IF	FILTERS	01/28/2025	650.82	.00	
7163	JACKSON GROUP LOCKBOX	CM695001IF	RETURN FILTER	05/22/2025	97.55-	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 7163:					553.27	.00	
6477	Jackson Hole Childrens Museum	285	4TH QUARTER PAYMENT	05/19/2025	100.00	.00	
Total 6477:					100.00	.00	
67	JACKSON HOLE HISTORICAL S	790004408054	remove invoice	04/29/2025	2,177.51-	2,177.51-	05/20/2025
Total 67:					2,177.51-	2,177.51-	
131	JACKSON HOLE NEWS & GUID	376694	AD 437191	04/30/2025	179.10	.00	
131	JACKSON HOLE NEWS & GUID	376952	AD 437192	05/07/2025	120.37	.00	
131	JACKSON HOLE NEWS & GUID	377191	AD#437802	05/14/2025	40.00	.00	
131	JACKSON HOLE NEWS & GUID	377192	AD#437801	05/14/2025	30.00	.00	
131	JACKSON HOLE NEWS & GUID	377193	AD#437800	05/14/2025	35.00	.00	
131	JACKSON HOLE NEWS & GUID	377209	AD#437806	05/14/2025	672.00	.00	
Total 131:					1,076.47	.00	
115	JACKSON PAINT AND GLASS, I	I1375296	LABOR START BUS	03/07/2025	1,400.00	.00	
115	JACKSON PAINT AND GLASS, I	I138062	GLASS	05/12/2025	755.91	.00	
Total 115:					2,155.91	.00	
7658	JCB UNDERGROUND	050125	WATER HYDRANT FILL REFUN	05/01/2025	11.97	.00	
Total 7658:					11.97	.00	
7659	JKL ASSOCIATES, INC	050125	WATER REFUND FILL STATION	05/01/2025	27.27	.00	
Total 7659:					27.27	.00	
7118	JONES SIMKINS	65545	Preparation of 990-T for tax credit	04/30/2025	600.00	.00	
Total 7118:					600.00	.00	
139	JORGENSEN ASSOCIATES, PC	050125	REFUND WATER HYDRANT	05/01/2025	90.32	.00	
Total 139:					90.32	.00	
217	MATTHEWS, TONY	050925	TRAVEL reimbursement	05/09/2025	573.33	.00	
Total 217:					573.33	.00	
7660	MERRILL INC	051525	REFUND WATER FILL STATION	05/15/2025	63.52	.00	
Total 7660:					63.52	.00	
998	METROQUIP INC	031619	SPRAY	04/09/2025	1,022.73	.00	
998	METROQUIP INC	032117	DIRT SHOE RUNNER	05/01/2025	139.18	.00	
998	METROQUIP INC	121237	CEMETARY	04/30/2025	64.00	.00	
998	METROQUIP INC	P32181	SPRAY FREIGHT	05/06/2025	952.79	.00	
Total 998:					2,178.70	.00	
4623	MSC INDUSTRIAL SUPPLY CO	7634238003	WHEEL WEIGHT	04/23/2025	29.40	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 4623:					29.40	.00	
257	NAPA AUTO PARTS INC.	293421	ADAPTERS	03/14/2025	11.13	.00	
257	NAPA AUTO PARTS INC.	296384	HOSE	03/31/2025	12.16	.00	
257	NAPA AUTO PARTS INC.	304019	SENSOR	05/05/2025	119.32	.00	
257	NAPA AUTO PARTS INC.	304617	FILTERS	05/07/2025	36.83	.00	
257	NAPA AUTO PARTS INC.	304627	FILTERS	05/07/2025	85.58	.00	
257	NAPA AUTO PARTS INC.	304736	WIPER BLADES	05/07/2025	230.32	.00	
257	NAPA AUTO PARTS INC.	304739	FILTERS	05/07/2025	86.89	.00	
257	NAPA AUTO PARTS INC.	304787	Filters	05/07/2025	23.85	.00	
257	NAPA AUTO PARTS INC.	304966	SPARK PLUGS	05/08/2025	32.36	.00	
257	NAPA AUTO PARTS INC.	305077	FILTERS	05/08/2025	53.28	.00	
257	NAPA AUTO PARTS INC.	305084	FILTERS	05/08/2025	17.77	.00	
257	NAPA AUTO PARTS INC.	305956	JB WELD	05/12/2025	13.49	.00	
257	NAPA AUTO PARTS INC.	306109	SENSOR	05/13/2025	17.29	.00	
257	NAPA AUTO PARTS INC.	306124	FILTERS	05/13/2025	18.89	.00	
257	NAPA AUTO PARTS INC.	306127	FILTERS	05/13/2025	56.67	.00	
257	NAPA AUTO PARTS INC.	306183	AIR FILTER	05/13/2025	20.63	.00	
257	NAPA AUTO PARTS INC.	306194	WIPERS	05/13/2025	12.95	.00	
257	NAPA AUTO PARTS INC.	306248	OIL	05/13/2025	155.86	.00	
257	NAPA AUTO PARTS INC.	306281	FILTERS	05/13/2025	60.00	.00	
257	NAPA AUTO PARTS INC.	306390	FILTERS	05/14/2025	36.83	.00	
257	NAPA AUTO PARTS INC.	306478	AIR FILTER	05/14/2025	32.39	.00	
257	NAPA AUTO PARTS INC.	306550	FLEET PADS	05/14/2025	235.54	.00	
257	NAPA AUTO PARTS INC.	306562	GLYDE LUBE	05/14/2025	18.89	.00	
257	NAPA AUTO PARTS INC.	306693	BATTERY	05/15/2025	18.80	.00	
257	NAPA AUTO PARTS INC.	306766	red 20 amp	05/15/2025	6.49	.00	
257	NAPA AUTO PARTS INC.	307602	SUPER DUTY	05/19/2025	13.98	.00	
257	NAPA AUTO PARTS INC.	307604	O RINGS	05/19/2025	1.16	.00	
257	NAPA AUTO PARTS INC.	307844	ULTRA GREY GASKET	05/20/2025	38.98	.00	
257	NAPA AUTO PARTS INC.	308002	CHASER	05/21/2025	9.49	.00	
257	NAPA AUTO PARTS INC.	308183	TOUCH UP TUBE	05/21/2025	22.99	.00	
Total 257:					1,500.81	.00	
3761	NOBLE TREE INC	43 0525	boardwalk reconstruction	05/20/2025	12,395.00	.00	
3761	NOBLE TREE INC	43 0525	boardwalk reconstruction	05/20/2025	11,605.00	.00	
Total 3761:					24,000.00	.00	
6182	NORMAND, JACOB	050125	TRAVLE REIMB	05/01/2025	102.00	.00	
Total 6182:					102.00	.00	
7661	OLESON, ZACH	051525	BAIL REFUND	05/15/2025	1,500.00	.00	
Total 7661:					1,500.00	.00	
513	ON SIGHT LAND SURVEYORS I	052025	P25-071 1220 GREGORY LANE	05/20/2025	600.00	.00	
Total 513:					600.00	.00	
4398	PALAZZOLO, MICHAEL	051925	MONTHLY IT HARDWARE	05/19/2025	77.83	.00	
Total 4398:					77.83	.00	
7591	POINT S REXBURG	1264512	TIRES	05/12/2025	4,211.70	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 7591:					4,211.70	.00	
6483	PREMIER TRUCK- SALT LAKE C	CM775238342	CORE RETURN	05/15/2025	107.07-	.00	
6483	PREMIER TRUCK- SALT LAKE C	CM775702354	CORE RETURN	05/15/2025	374.06-	.00	
Total 6483:					481.13-	.00	
4922	PREMIER VEHICLE INSTALLATI	46348	streamlight stinger	01/15/2025	482.31	.00	
4922	PREMIER VEHICLE INSTALLATI	47521	intersector under mirror mount	05/17/2025	229.20	.00	
Total 4922:					711.51	.00	
6613	QUADIENT FINANCE USA, INV	790004008054	postage	05/12/2025	2,177.51	2,177.51	05/20/2025
Total 6613:					2,177.51	2,177.51	
4723	RON'S TOWING LLC	25-39384	2015 ford taurus	05/12/2025	325.00	.00	
Total 4723:					325.00	.00	
2597	RUSCHILL, RUSSELL	050125	TRAVEL REIMBURSEMENT	05/01/2025	102.00	.00	
Total 2597:					102.00	.00	
7248	SEASONS HANDYWORKS AND	2518	250 N CACHE PARKING WILLO	05/18/2025	2,850.00	.00	
Total 7248:					2,850.00	.00	
231	SHERVIN'S INDEPENDENT OIL	62150	ALIGHMENT	05/07/2025	173.34	.00	
231	SHERVIN'S INDEPENDENT OIL	62151	ALIGHMENT	05/07/2025	144.45	.00	
Total 231:					317.79	.00	
4359	SHERWIN-WILLIAMS CO.	2264-8	HIGHWAY PAINT	05/06/2025	95.34	.00	
Total 4359:					95.34	.00	
7435	SHORELINE CONSULTING	0000284	equity task force	05/07/2025	2,272.72	.00	
Total 7435:					2,272.72	.00	
4548	SILVER CREEK SUPPLY	0020160834-0	DETECTABLE TAPE PURPLE	04/10/2025	65.64	.00	
4548	SILVER CREEK SUPPLY	0020814954-0	centennial poly	05/13/2025	100.00	.00	
Total 4548:					165.64	.00	
6136	SOLV BUSINESS SOLUTIONS-S	447619	EVIDENCE ENVELOPES	04/23/2025	526.25	.00	
Total 6136:					526.25	.00	
7050	SOSA'S JANITORIAL SERVICE	0000149	TOWN HALL	04/01/2025	5,580.00	.00	
7050	SOSA'S JANITORIAL SERVICE	0000150	155 E PEARL	04/01/2025	540.00	.00	
Total 7050:					6,120.00	.00	
3961	SPECTRUM	173067801050	MONTHLY SERVICES 17306780	05/07/2025	100.01	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 3961:					100.01	.00	
7650	SPORTWORKS GLOBAL LLC	158922	FAT BIKE RACKS	04/30/2025	13,240.20	.00	
Total 7650:					13,240.20	.00	
241	ST JOHN'S HOSPITAL	50001016	Jh police	05/01/2025	130.00	.00	
Total 241:					130.00	.00	
7227	STEPHENS, TALON	052025	MONTHLY IT HARDWARE	05/20/2025	77.83	.00	
Total 7227:					77.83	.00	
1054	SUNRISE ENVIRONMENTAL	153447	ASSAULT ANDURO LUBE	04/30/2025	177.90	.00	
Total 1054:					177.90	.00	
7076	SUSTAINABLE STRATEGIES DC	4434	may 2025 consulting	05/07/2025	7,500.00	.00	
Total 7076:					7,500.00	.00	
7059	TAYLOR, RILEY	052325	TRAVEL EXPENSES	05/23/2025	1,267.93	.00	
Total 7059:					1,267.93	.00	
7662	TEN POINT SALES AND MARKE	32445	SUPER FLOW PLUG	03/24/2025	984.32	.00	
Total 7662:					984.32	.00	
6678	TETON COUNTY FAIR	000597	rodeo grounds managment agree	05/13/2025	80,000.00	.00	
Total 6678:					80,000.00	.00	
55	TETON COUNTY SHERIFF'S-JAI	699	APRIL INMATES	05/05/2025	1,925.00	.00	
Total 55:					1,925.00	.00	
268	TETON MOTORS INC	5113020	SENSOR	05/06/2025	306.00	.00	
268	TETON MOTORS INC	5113035	BATTERY	05/07/2025	112.00	.00	
268	TETON MOTORS INC	5113036	PUMP	05/07/2025	292.98	.00	
268	TETON MOTORS INC	5113041	ISOLATOR	05/07/2025	103.24	.00	
268	TETON MOTORS INC	5113050	FUSE	05/08/2025	28.86	.00	
268	TETON MOTORS INC	5113070	pANEL	05/09/2025	277.31	.00	
268	TETON MOTORS INC	5113087	CREDIT	05/13/2025	272.31-	.00	
268	TETON MOTORS INC	5113108 1	shipping	05/15/2025	5.00	.00	
268	TETON MOTORS INC	5113110 1	cover	05/15/2025	39.25	.00	
268	TETON MOTORS INC	5113146 1	pretensionor	05/20/2025	481.93	.00	
268	TETON MOTORS INC	5113153 1	gasket,seal,nutss,clamps	05/20/2025	100.99	.00	
268	TETON MOTORS INC	5113166 1	remanufactured trans	05/21/2025	6,480.66	.00	
Total 268:					7,955.91	.00	
270	TETON RENTAL CENTER	160352	GRASS SEED	05/01/2025	66.50	.00	
Total 270:					66.50	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
2694	TETON VALLEY NEWS	637762	TETON VALLEY COMMUTER AD	05/22/2025	124.10	.00	
Total 2694:					124.10	.00	
3237	THE AFTERMARKET PARTS CO	83784219	HOUSING	05/15/2025	152.09	.00	
3237	THE AFTERMARKET PARTS CO	83784330	WINDSHIELD	05/15/2025	1,155.21	.00	
3237	THE AFTERMARKET PARTS CO	83787801	LAMPS	05/15/2025	70.82	.00	
Total 3237:					1,378.12	.00	
6363	TMSC LLC	2025-005-08F	FAC MAINT	05/18/2025	4,878.47	.00	
Total 6363:					4,878.47	.00	
6000	TRAFFIC SAFETY STORE	INV912924	SIGNAGE	05/05/2024	296.38	.00	
Total 6000:					296.38	.00	
3727	TREFREN, TRACEY	051925	TRAVEL EXPENSES	05/19/2025	102.00	.00	
Total 3727:					102.00	.00	
706	USA BLUE BOOK	INV00689621	HYDRANT SUPPLIES	04/23/2025	7,964.86	.00	
706	USA BLUE BOOK	INV00696619	BALL VALVE	04/30/2025	134.38	.00	
706	USA BLUE BOOK	INV00696657	BALL VALVE	04/30/2025	115.56	.00	
706	USA BLUE BOOK	INV00702914	TUBING CUTTER	05/06/2025	130.97	.00	
Total 706:					8,345.77	.00	
3979	UTAH SAFETY COUNCIL	40949	MEMBERSHIP RENEWAL- GEN	02/12/2025	250.00	.00	
Total 3979:					250.00	.00	
7093	VASIN, PAVEL	050725	DOT PHYSICAL	05/07/2025	100.00	.00	
Total 7093:					100.00	.00	
1949	VERIZON WIRELESS	6112460916	police deparment	05/01/2025	10,298.39	.00	
Total 1949:					10,298.39	.00	
6319	VIRGINIAN VILLAGE CONDO H	1267	Q2 HOA DUES	04/02/2025	625.00	.00	
6319	VIRGINIAN VILLAGE CONDO H	1267	Q2 HOA DUES	04/02/2025	625.00	.00	
Total 6319:					1,250.00	.00	
6226	WEST COAST CODE CONSULT	UT25-579B-00	PLAN REVIEW SERVICES	05/05/2025	2,495.00	.00	
6226	WEST COAST CODE CONSULT	UT25-579N-00	INSPECTION SERVICES	05/02/2025	2,950.00	.00	
Total 6226:					5,445.00	.00	
1640	WESTERN STATE	15C0209411	ELEMENT	05/02/2025	235.28	.00	
Total 1640:					235.28	.00	
2802	WESTWOOD CURTIS	051625	2024 W JACKSON WATER PROJ	05/16/2025	11,604.91	.00	
2802	WESTWOOD CURTIS	051625	2024 W JACKSON WATER PROJ	05/16/2025	232,098.21	.00	
2802	WESTWOOD CURTIS	051625	2024 W JACKSON WATER PROJ	05/16/2025	11,604.91-	.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	Amount Paid	Date Paid
Total 2802:					232,098.21	.00	
472	WHITE GLOVE CLEANING, INC.	13033	BUNK HOUSE	03/31/2025	125.00	.00	
472	WHITE GLOVE CLEANING, INC.	2245B	WSK#4	04/24/2025	99.00	.00	
Total 472:					224.00	.00	
5489	WRENCH IT PLUMBING & HEATI	12936	HOME RANCH RESTROOMS	04/29/2025	555.00	.00	
Total 5489:					555.00	.00	
Grand Totals:					1,347,804.57	509.23	

Dated: _____

Mayor: _____

City Council: _____

_____

_____

_____

_____

_____

City Recorder: _____

City Treasurer: _____

Report Criteria:
Detail report.
Invoices with totals above $0 included.
Paid and unpaid invoices included.

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Council Regular Meeting – Consent
Submitting Department:	Planning	**Presenter:**	Katelyn Page
Agenda Item:	Partial Vacation without Replat at 410 E Gill Avenue (P25-056)	**Public Comment:**	Yes

Purpose & Policy Considerations.
Partial Vacations without Replat, according to the Town of Jackson Land Development Regulations (LDR) Section 8.2.13.C.5, require acknowledgement by the Town Council.

Requested Action.
The applicant requests Town Council acknowledgement of a Partial Vacation without Replat at the property addressed as 410 E Gill Avenue legally known as LOTS 1, 2 & 3, BLK 5, Gill Addition to the Town of Jackson.

Specifically, the applicant requests acknowledgement to vacate the interior lot lines between LOTS 1, 2 & 3, BLK 5, Gill Addition to the Town of Jackson.

Recommendation.
The Planning Director recommends that Town Council **acknowledge** the Partial Vacation without Replat at the property addressed as 410 E Gill Avenue legally known as LOTS 1, 2 & 3, BLK 5, Gill Addition to the Town of Jackson.

Background.
The property addressed as 410 E Gill Avenue is located within the Neighborhood Low Density-3 (NL-3) zone is approximately 22,500 sf. An aerial image of the property is shown below:



Analysis & Key Policy Questions.
The Gill Addition subdivision is a recorded plat that may be amended through the vacation process as authorized by Wyoming state statute. The Partial Vacation without Replat process requires applications to meet the below standards of LDR Section 8.2.13.C.5 which include a statement that the proposed partial vacation does not "abridge or destroy any rights and privileges of other proprietors in the plat."

The applicant requests to vacate the interior lot line between Lots 1, 2, & 3, BLK 5, to accommodate construction of a single detached dwelling and ARU that would otherwise span all three lots and cross over the dividing lot lines. Under the International Building Code, structures may not span multiple lot lines.

Staff confirm that the applicant's request for a Partial Vacation without Replat meets the required standards as outlined below. A draft affidavit to be signed by the Planning Director – serving as the required "instrument" for the Partial Vacation without Replat – along with an exhibit for the County Clerk is attached hereto.

Section 8.2.13.C.5. Partial Vacation without Replat. Vacation of one or more building envelopes, notes, a lot line for the purpose of combining one or more lots, or a private road or utility easement does not require a new plat provided the following standards are met:

a) ***Instrument Required*** *- An instrument shall be filed with the County Clerk stating that the proposed partial vacation does not abridge or destroy any rights and privileges of other proprietors in the plat, and it shall include an acknowledgement by all parties affected by the vacation and an acknowledgement by Town Council;*

   Complies. The applicant has provided an appropriate instrument to be recorded with the County Clerk that the proposed vacation should not have any significant or adverse impact on the other lots in the subdivision. Staff agrees that the submitted instrument meets the requirements of Sec. 8.2.13.C.5.a.

b) ***Annotation*** *- If approved, the County Clerk shall make the appropriate annotation on the plat referencing the vacated notations and shall also include on said plat, the volume and page in which the instrument of partial vacation is recorded;*

   Complies. The applicant's instrument and accompanying exhibit provide direction to the County Clerk to make the necessary changes to the plat to affect the described vacation and lot combination.

c) ***Building Envelope Vacation*** *- a map may need to be provided for a building envelope vacation;*

   Not Applicable. Staff finds that a map exhibit with a building envelope is not needed to communicate the requested vacation and the provided instrument will sufficiently advise the County Clerk to make the necessary edits to the plat.

d) ***Lot Combination*** *- For a lot combination, language shall be included in the partial vacation instrument that states that the combined lots shall be treated as one lot for purposes of the LDRs and cannot be re-subdivided without further approval from the Town.*

Complies. Staff finds the applicant has provided an appropriate instrument and exhibit to be recorded with the County Clerk that includes the language as outlined above.

Alternatives (Optional).
N/A

Fiscal Impact.
None.

Staff Impact.
Staff impact for this project including review, drafting staff report, and recording documents is estimated at 8 hours.

Attachments or Links.
Department Reviews
Applicant Submittal
Draft Acknowledgement Instrument

Suggested Motion. *Council always has the option to adopt, approve with conditions, continue, or deny items*.

I move to **acknowledge** a Partial Vacation without Replat for LOTS 1, 2 & 3, BLK 5, Gill Addition to the Town of Jackson subject to the Town LDRs, the departmental reviews, minor changes by staff, and this staff report dated June 2, 2025.

PERMIT NOTES

Report Run On: Friday, 02 May 2025 10:23

Permit # P25-056 **Parcel # :** 22-41-16-27-3-08-002

Site Address: 410 E GILL STREET

Project Name: 410 E Gill Partial Vacation of Lot Lines

Note Type	Note Code	Text	Created By	Begin Date	End Date
CONDITIONS		Add signature line to the Affidavit Affecting Title	MTIPPETTS@JACKSONWY.GOV	05/01/25	5/1/25
DEFICIENCY		See attached affidavit edits provided by staff for informational purpose. No updates needed by applicant. This document will be signed by the Planning Director. As a result, Paul Anthony, rather than the property owner shall be listed as Affiant. Please update Exhibit to include title bar with "Exhbit A" thus matching the reference in the affidavit letter. Revise Exhibit to be a more simple version rather than using a survey. This helps avoid confusion with the Clerks office when providing too much information on the Exhibit. Simple is better. Staff has provided an example to the applicant.	KPAGE@JACKSONWY.GOV	04/25/25	4/25/25

PLANNING PERMIT APPLICATION
Planning & Building Department

150 E Pearl Ave.
P.O. Box 1687
Jackson, WY 83001

ph: (307) 733-0440
www.townofjackson.com

For Office Use Only

Fees Paid_____ Date & Time Received _____

Application #s _____ _____ _____

Please note: *Applications received after 3 PM will be processed the next business day.*

PROJECT.

Name/Description: Tome Residence - Partial Vacation of lot lines

Physical Address: 410 E GILL STREET, JACKSON, WY 83001

Lot, Subdivision: LOTS 1,2,3, BLK. 5, L.G. GILL SUBDIVISION PIDN: 22-41-16-27-3-08-002

PROPERTY OWNER.

Name: Cowboy Country, LLC Phone: 404.421.9888

Mailing Address: 600 PEACHTREE ST NE STE 3000, ATLANTA, GA ZIP: 30308-2305

E-mail: carol_tome@thetomegroup.com

APPLICANT/AGENT.

Name: Kinsey, LLC - Cornelius Kinsey Phone: 413.2485

Mailing Address: P.O. Box 12258, Jackson, WY ZIP: 83002

E-mail: kinseycornelius@yahoo.com

DESIGNATED PRIMARY CONTACT.

_____Property Owner X_____Applicant/Agent

TYPE OF APPLICATION. *Please check all that apply; review the type of application at www.townofjackson/200/Planning*

Use Permit

_____Basic Use

_____Conditional Use

_____Special Use

Relief from the LDRs

_____Administrative Adjustment

_____Variance

_____Beneficial Use Determination

_____Appeal of an Admin. Decision

Physical Development

_____Sketch Plan

_____Development Plan

_____Design Review

Subdivision/Development Option

_____ Subdivision Plat

_____Boundary Adjustment (replat)

X_____Boundary Adjustment (no plat)

_____Development Option Plan

Interpretations

_____Formal Interpretation

_____Zoning Compliance Verification

Amendments to the LDRs

_____LDR Text Amendment

_____Map Amendment

Miscellaneous

_____**Other:** _____

_____ Environmental Analysis

PRE-SUBMITTAL STEPS. *To see if pre-submittal steps apply to you, go to www.townofjackson.com/200/Planning and select the relevant application type for requirements. Please submit all required pre-submittal steps with application.*

Pre-application Conference #: _____ Environmental Analysis #: _____

Original Permit #: _____ Date of Neighborhood Meeting: _____

SUBMITTAL REQUIREMENTS. *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant. Go to www.townofjackson.com/200/Planning and select the relevant application type for submittal requirements.*

Have you attached the following?

X **Application Fee.** Fees are cumulative. Go to www.townofjackson.com/200/Planning and select the relevant application type for the fees.

X **Notarized Letter of Authorization.** A notarized letter of consent from the landowner is required if the applicant is not the owner, or if an agent is applying on behalf of the landowner. Please see the Letter of Authorization template at http://www.townofjackson.com/DocumentCenter/View/845/LetterOfAuthorization-PDF.

X **Response to Submittal Requirements**. The submittal requirements can be found on the TOJ website for the specific application. If a pre-application conference is required, the submittal requirements will be provided to applicant at the conference. The submittal requirements are at www.townofjackson.com/200/Planning under the relevant application type.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

	14 March 2024
Signature of Property Owner or Authorized Applicant/Agent	Date
Roy Cornelius Kinsey, IV	Agent
Name Printed	Title

Town of Jackson
150 E Pearl Avenue
PO Box 1687, Jackson, WY 83001
P: (307)733-3932 F: (307)739-0919
www.jacksonwy.gov

Date: 3/21/2025

LETTER OF AUTHORIZATION

NAMING APPLICANT AS OWNER'S AGENT

PRINT full name of property owner as listed on the deed when it is an individual OR print full name and title of President or Principal Officer when the owner listed on the deed is a corporation or an entity other than an individual: Carol Tome Title: Trustee

Being duly sworn, deposes and says that Cowboy Country LLC is the owner in fee of the premises located at:
Name of legal property owner as listed on deed

Address of Premises: 410 E Gill Street, Jackson, WY 83001

Legal Description: see attached, LOTS 1,2,3 BLK. 5, L.G. Gill Subdivision
Please attach additional sheet for additional addresses and legal descriptions

And, that the person named as follows: Name of Applicant/agent: Kinsey, LLC - Cornelius Kinsey

Mailing address of Applicant/agent: P.O. Box 12258, Jackson, WY 83002

Email address of Applicant/agent: Kinseycornelius@yahoo.com

Phone Number of Applicant/agent: 413.2485

Is authorized to act as property owner's agent and be the applicant for the application(s) checked below for a permit to perform the work specified is this(these) application(s) at the premises listed above:

☐ Development/Subdivision Plat Permit Application ☐ Building Permit Application

☐ Public Right of Way Permit ☐ Grading and Erosion Control Permit ☐ Business License Application

☐ Demolition Permit ☐ Home Occupation ☐ Other (describe)_____

Under penalty of perjury, the undersigned swears that the foregoing is true and, if signing on behalf of a corporation, partnership, limited liability company or other entity, the undersigned swears that this authorization is given with the appropriate approval of such entity, if required.

_____
Property Owner Signature

Trustee
_____
Title if signed by officer, partner or member of corporation, LLC (secretary or corporate owner) partnership or other non-individual Owner

STATE OF Georgia)
) SS.
COUNTY OF Cherokee)

The foregoing instrument was acknowledged before me by Carol Tome this 21 day of March 2025. WITNESS my hand and official seal.

_____
Notary Public

My commission expires:

Amy Hawkins
NOTARY PUBLIC
Cherokee County, Georgia
My Commission Expires July 5, 2028

AFFIDAVIT AFFECTING TITLE

STATE OF)
) ss.
COUNTY OF)

I, _Carol Tome, ("Affiant") being duly sworn, and upon oath deposes and states: as follows:

1. This Affidavit is made with respect to real property known and situation at 410 East Gill Street, Jackson, WY, which is legally described as Lot 1, 2 and 3, BLK 5, L.G. Gill Subdivision, Plat No. 0139 as recorded in the Office of the Teton County, Wyoming Clerk on 14th day of June 1950 with the 22-41-16-27-3-08-002 ("Property").
2. As of the record date of this Affidavit, the record owner(s) of the Property is Cowboy Country, LLC.
3. On 14 March, 2025, the record owner(s) requested the vacation of the Lot Line between Lot 1,2 and 3 of the Property.
4. On _____ , 20__, the Jackson Town Council met to consider a request to vacate the Lot Line between Lot _____ and _____ of the Property.
5. On _____ , 20__, the Jackson Town Council determined the requested vacation/lot combination does not abridge or destroy any of the rights and privileges of the other proprietors in the said plat and approved the vacation/lot combination.
6. As a result, the Teton County Clerk shall write, "Vacated" across the lot line between Lot _____ and Lot _____ as shown on Exhibit A attached hereto, and make a reference of said plat of the book and page in which this instrument of partial vacation has been recorded.
7. As a result, the combined lots should be referred to as "Lots _____ and _____ of BLK _____ Subdivision recorded in the Office of the Teton County Clerk on _____as Plat _____," subject to that Partial Vacation of Plat and Lot Combination recorded in the Office of the Teton County Clerk as Document Number _____.
8. As a result, the combined lots cannot be re-subdivided without first receiving subdivision approval from the Town of Jackson, the combination of lots shall be treated as one for all purposes under the Town of Jackson Land Development Regulations in effect at that time, and the combined lots shall be treated as one lot for all purposes under the Town of Jackson Land Development Regulations.

FURTHER AFFIANT SAYETH NAUGHT.

Dated: _____,

STATE OF WYOMING)

) ss.

COUNTY OF TETON)

The foregoing instrument was acknowledged before me by _____, Town of Jackson Planning Director, on this ____ day of _____, 20__.

WITNESS, my hand and official seal.

_____

Notary Public

My Commission Expires:

AFFIDAVIT AFFECTING TITLE

STATE OF)

) ss.

COUNTY OF)

I, Paul Anthony, ("Affiant") being duly sworn, and upon oath deposes and states: as follows:

1. This Affidavit is made with respect to real property known and situation at 410 East Gill Street, Jackson, WY, which is legally described as Lot 1, 2 and 3, BLK 5, L.G. Gill Subdivision, Plat No. 0139 as recorded in the Office of the Teton County, Wyoming Clerk on 14th day of June 1950 with the 22-41-16-27-3-08-002 ("Property").
2. As of the record date of this Affidavit, the record owner(s) of the Property is Cowboy Country, LLC.
3. On March 24, 2025, the record owner(s) requested the vacation of the Lot Lines between Lot 1,2 and 3 of the Property.
4. On June 2, 2025, the Jackson Town Council met to consider a request to vacate the Lot Line between Lot Lines between Lot 1,2 and 3 of the Property.
5. On June 2, 2025, the Jackson Town Council determined the requested vacation/lot combination does not abridge or destroy any of the rights and privileges of the other proprietors in the said plat and approved the vacation/lot combination.
6. As a result, the Teton County Clerk shall write, "Vacated" across the lot line between Lot 1 and Lot 2 and between Lot 2 and Lot 3 as shown on Exhibit 1 attached hereto, and make a reference of said plat of the book and page in which this instrument of partial vacation has been recorded.
7. As a result, the combined lots should be referred to as "Combined Lots 1, 2, and 3 BLK 5, L.G. Gill Subdivision recorded in the Office of the Teton County Clerk on _____as Plat No.0139," subject to that Partial Vacation of Plat and Lot Combination recorded in the Office of the Teton County Clerk as Document Number _____.
8. As a result, the combined lots cannot be re-subdivided without first receiving subdivision approval from the Town of Jackson, the combination of lots shall be treated as one for all purposes under the Town of Jackson Land Development Regulations in effect at that time, and the combined lots shall be

DRAFT

treated as one lot for all purposes under the Town of Jackson Land Development Regulations.

FURTHER AFFIANT SAYETH NAUGHT.

Dated: _____,

_____

Paul Anthony, Town of Jackson Planning and Building Director

STATE OF WYOMING)

) ss.

COUNTY OF TETON)

The foregoing instrument was acknowledged before me by _____, Town of Jackson Planning and Building Director, on this ____ day of June, 2025.

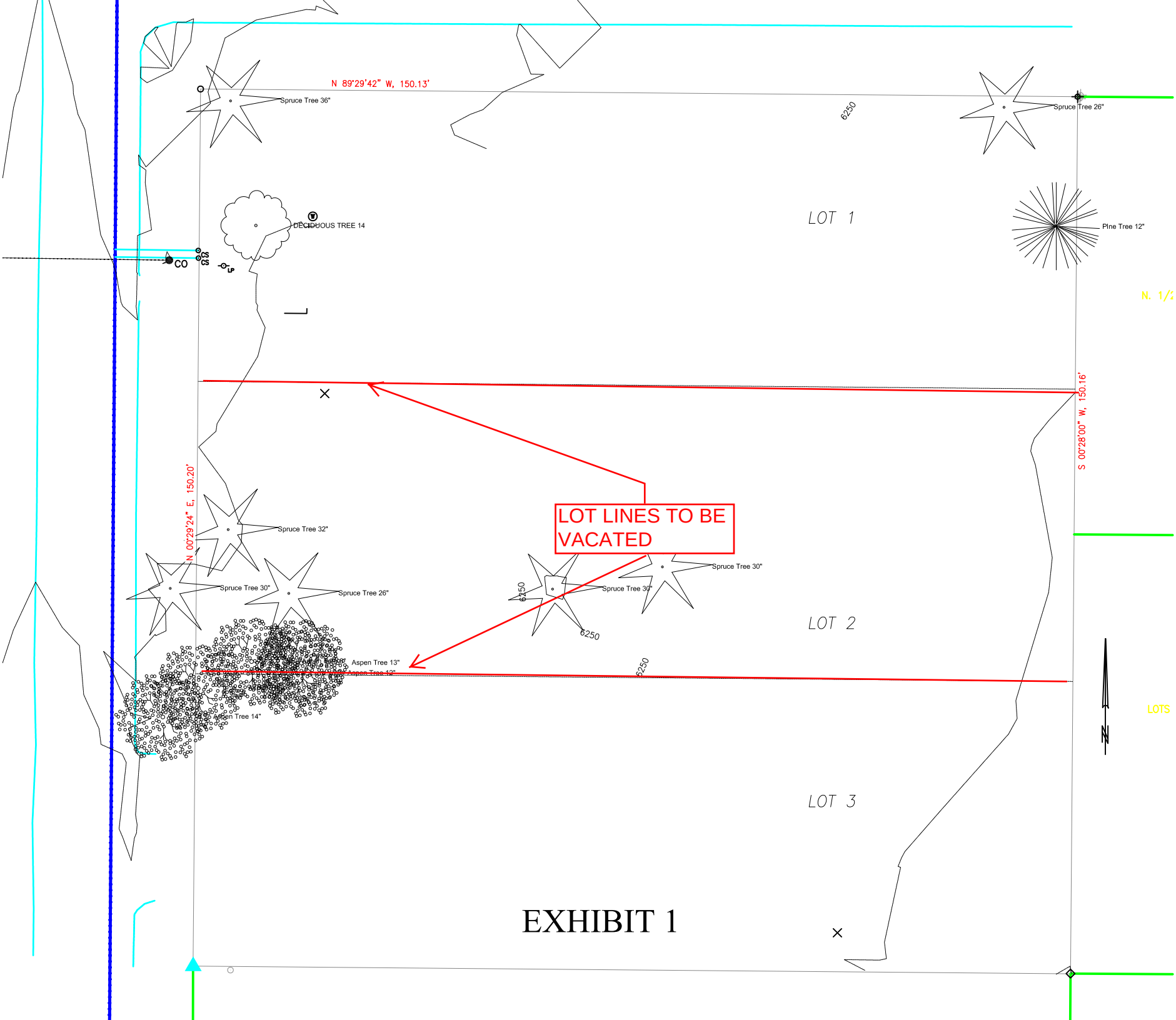
WITNESS, my hand and official seal.

_____

Notary Public

My Commission Expires:

DRAFT


N 89°29'42" W, 150.13'
Spruce Tree 36"
Spruce Tree 26"
6250
DECIDUOUS TREE 14
LOT 1
Pine Tree 12"
N. 1/
CO
S 00°28'00" W, 150.16'
N 00°29'24" E, 150.20'
LOT LINES TO BE VACATED
Spruce Tree 32"
Spruce Tree 30"
Spruce Tree 26"
Spruce Tree 30"
Spruce Tree 30"
6250
6250
6250
LOT 2
Aspen Tree 13"
Aspen Tree 14"
LOTS
LOT 3
EXHIBIT 1

Meeting Date:	June 2, 2025	**Meeting Title:**	Regular Town Council Meeting - Consent
Submitting Department:	Administration	**Presenter:**	Tanya Anderson
Agenda Item:	Acceptance of Bid for Purchase and Relocation of the Mercer Cabin	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for Council to review a proposal to purchase the Mercer Cabin, remove it from Karns Meadow, and relocate it.

Requested Action.
Consider and accept proposal to purchase, remove, and relocate the Mercer Cabin from Karns Meadow.

Recommendations.
Staff recommends accepting the proposal and selling the Mercer Cabin to Zach Stern for $100 for relocation to 234 E. Pearl Avenue.

Background.
The Mercer Cabin was originally built on Cache Street in 1938 by Phil Baux. The Cabin was moved by the Mercer family to the Sagebrush Motel and then to 265 E. Broadway where they ran the Alpine Pawn Shop. In 2014, the Teton County Historic Preservation Board determined the Cabin had historical significance because of its connection to Phil Baux, its unique design characteristics including a steep roof and wavy shingles, and because it was featured in Life Magazine in 1948. The Cabin's materials and design retain historical integrity from its original construction and historic era. It is 17 feet deep by 20 feet tall by 23 feet long.

In 2014, the Cabin was moved to Karns Meadow temporarily, with discussion of moving it to May Park to be a cross-country ski warming hut. The plan to move the Cabin never came to fruition. Storage of the Cabin at Karns Meadow is in violation of the restrictive covenants for the property.

On July 17, 2023, staff presented an RFP for removal of the Mercer Cabin from Karns Meadow. Council did not approve the release of the RFP and directed staff to incorporate the cabin into the Karns Meadow Park Plan. Staff proceeded to work with the Historic Preservation Board to incorporate the cabin into the property and began discussions with the Jackson Hole Land Trust. The Historic Preservation Board spent time, money, and energy seeking grant funding to preserve the cabin and working with staff involved in the planning of Karns Meadow Park.

Incorporation of the Mercer Cabin into the park plan requires approval by the Jackson Hole Land Trust Board of Directors, which is contingent upon support from the Karns Family. On April 4, 2024, Pete Karns wrote a letter to the Jackson Town Council expressing disapproval for the incorporation of the Mercer Cabin into Karns Meadow Park. Follow-up discussions with Mr. Karns yielded the same response.

On July 1, 2024, Council approved release of an RFP to purchase and relocate the Mercer Cabin. Evaluation criteria prioritized preserving the historic cabin, keeping it local, and keeping it visible to the public. The Town received one proposal. While the proposal scored very highly using our evaluation criteria, the proposer asked for their proposal to be removed from consideration a few days after they submitted it. Council approved rereleasing the RFP at the Regular Town Council meeting on September 16, 2024. Again, only one proposal was received. This one was submitted by the Historic Preservation Board and proposed moving the cabin to another Town property. Staff from START, Public Works,

Engineering, Planning, and Ecosystem Stewardship reviewed the proposal and deemed the site, a retention basis, unsuitable for the relocation. The proposal was rejected.

At the Town Council retreat February 12-13, 2025, the Ecosystem Stewardship Administrator proposed relocating the historic cabin as one of the priorities to bring back before Council in 2025. Council did not prioritize this item. Thus, the next step would be to release a revised RFP calling for removal of the cabin by any means, including demolition and salvage. Staff planned to do so in June of 2025.

A new proposal was received on April 30th for purchase and relocation of the cabin. The RFP team reviewed the proposal using the scoring rubric in the RFP that was released on September 17th and deemed it sufficient. The review team members unanimously agreed that the proposal met all requirements and was preferable to demolition. Additionally, the proposer will preserve the cabin, relocate it to a location close to downtown, and situate the cabin so that it is visible to the public. These elements were scored highly using the scoring rubric from the previous RFP. According to the proposal, the cabin will be renovated to ensure structural integrity; however, it will not be open to the public.

Analysis.

The Town must remove the cabin from Karns Meadow and should do so prior to the start of construction of Karns Meadow Park, currently scheduled for the spring of 2026. Removal of the cabin prior to snowfall is preferred. Past efforts to find an interested party to relocate the cabin have failed, and staff is prepared to release an RFP for removal of the cabin from Karns Meadow by any means, including, but not limited to, relocation, demolition, or salvage. Demolition of the cabin would result in the loss of a historic building and the western character it embodies. Demolition will also be an added cost for the Town. Thus, relocation of the cabin is preferred. Staff recommends accepting the proposal and selling the Mercer Cabin to the proposer, Zach Stern, for $100.

Possible Alternatives.

Possible alternatives for this item include:

1. Not accepting the proposal and directing staff to write an RFP for removal of the cabin by any means, including relocation, demolition, or salvage.
2. Not accepting the proposal and directing staff to do a scoping report of alternative locations for the Mercer Cabin on Town property.

Comprehensive Plan & Priority Alignment.

<u>Principle 1.4 – Protect and steward open space.</u>

Protecting open space preserved habitat and scenery and maintains our western agricultural heritage. Avoiding development in critical wildlife areas and providing recreational opportunities that reduce pressure on habitat help maintain a healthy ecosystem. Agriculture, conservation easements, and other methods to protect open space from development while providing active stewardship of the land should continue to be encouraged.

<u>Character Defining Feature 4.5 - Karns Meadow</u>

This PRESERVATION Subarea should continue to serve as wildlife habitat and a key wildlife movement corridor in the future. Moving forwards wildlife needs will need to be carefully balanced with providing the recreational and other amenities envisioned in the original landowner's conveyance of the property. The future addition of a street connection through this district will improve connectivity for all modes of transportation and create a separation between the developed and undeveloped portions of the area.

Fiscal Impact.

The purchaser agrees to buy the Mercer Cabin for $100.00 and will assume full financial responsibility for all associated costs, including the relocation, new site preparation, costs for required permits, and any modifications needed to ensure structural integrity. No financial assistance is requested from the Town.

Staff Impact.
It will take an estimated 16 to 20 hours of staff time from Administration, Legal, Parks & Recreation, and Public Works to communicate with the proposer, draft a sales agreement and waiver, and work with the applicant to arrange logistics to remove the Cabin. Staff invested 6 hours to draft and revise the three previous RFPs and staff reports. It took staff approximately 12 hours to work with the Historic Preservation Board, the Jackson Hole Land Trust, and other stakeholders to investigate incorporation of the Cabin into Karns Meadow. The Historic Preservation Board, the Jackson Hole Land Trust, and EcoConnect Consulting also dedicated time to considering the incorporation of the Cabin into Karns Meadow Park. It took staff from Ecosystem Stewardship, Parks and Rec, Planning, Public Works, START, and the Historic Preservation Board a combination of 20 hours to review and discuss proposals received last summer, in the fall, and this spring, and for the Ecosystem Stewardship Administrator to communicate with proposers.

Attachments or Links.
Proposal from Zach Stern

Suggested Motion.
I move to accept the proposal from Zach Stern to purchase the Mercer Cabin for $100 and relocate it to 234 East Pearl Avenue, and authorize the Mayor to sign the legal documents necessary to effectuate the sale and removal from Karns Meadow.

BRYAN GLEASON ARCHITECTS
P.O. Box 12271
Jackson, WY 83002

April 30, 2025
Riley Taylor, Town Clerk
Town of Jackson
150 East Pearl Avenue
P.O. Box 1687
Jackson, WY 83001

Dear Ms. Taylor,

We are pleased to submit our proposal for the relocation and preservation of the historic Mercer Cabin. The Mercer Cabin will be relocated to 234 E Pearl Ave, a property located within the heart of Jackson and adjacent to other historic structures. This setting offers a contextually appropriate backdrop that honors the cabin's architectural and cultural significance. This location not only provides a fitting and respectful environment for the structure but also ensures its continued care and preservation in a neighborhood that reflects Jackson's historic character. We have thoroughly reviewed the Request for Proposals and accept the terms and conditions as described.

Sincerely,



Bryan Gleason
Architect

Proposer:
Zach Stern, BLAZ LLC
212 East Pearl
P.O.Box 7944
Jackson, WY 83002

Project Approach

Our project approach centers on relocating the Mercer Cabin to a private residence at 234 E Pearl Ave., a historically compatible site within the Town of Jackson. Upon relocation, the cabin will be thoughtfully adapted to meet the contemporary needs of the new owner while retaining its historical character ensuring the integrity of the original log construction and period-defining details—including the steep roofline, wavy shingles, and rustic craftsmanship—is fully preserved. This approach ensures the Mercer Cabin remains both functional and historically authentic in its new setting.

Our team will hire professional building movers from Lemons House Moving, Inc. skilled in relocating historic structures with over 100 years of experience.

The project timeline is as follows:

- **May & June 2025:** Purchase the cabin and secure ownership. Develop building plans and submit for building permit. Removal of cabin could occur once ownership is transferred and can be stored onsite at 234 E Pearl Ave until the foundation is completed.
- **July & August 2025:** Town of Jackson review documents for building permit, issue building permit.
- **September – December 2025:** Complete construction and renovation of single family residence

We will work closely with Town staff to ensure minimal disruption, maintain safety, and meet preservation standards.

Qualifications

The team consists of several qualified entities:

Architect: Bryan Gleason Architects
P.O. Box 12271
Jackson WY 83002
bryangleasonarchitects.com

Builder: New West Building Company
P.O. Box 13308
Jackson WY 83002
newwestbc.com

In addition to Architectural Design, BGA will hire qualified structural, civil, mechanical, electrical and plumbing engineers. The Contractor, New West Building Company, will hire qualified subcontractors including the qualified building mover.

Budget

The purchaser agrees to buy the Mercer Cabin for $100.00 and will assume full financial responsibility for all associated costs, including the relocation (staff, freight, fuel, and insurance), new site preparation, and any necessary new construction at the destination site as well as costs for required permits, and any and all modifications needed to ensure the cabin's successful integration at 234 E Pearl Ave. No financial assistance or reimbursement is requested from the Town of Jackson; the entire scope of the project will be privately funded by the purchaser.

Activity	Dollar Amount
Cabin Bid	$100.00
Relocation Cost	$0
Other Costs (please explain)	$0
Total Bid Client to pay Town of Jackson	$100.00
Total Project Cost to Town of Jackson	$0

Relocation

The relocation will be carried out by experienced professionals specializing in historic structures, Lemons House Moving, Inc. It will be placed locally at 234 E Pearl Ave. on street edge where it is still visible to the public. This location is ideally situated at the property adjacent to 235 Pearl E Pearl Ave. which currently also has a log cabin structure. The relocation will be managed by both Bryan Gleason Architects and New West Building Company.

Future Use

The cabin will be sensitively adapted for use as a private residence, occupied by the property owner and their guests. Interior updates will be carefully integrated to provide modern comfort without compromising the structure's architectural significance.

Thank you for your consideration of our proposal.

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Regular – Consent
Submitting Department:	Legal	**Presenter:**	Lea Colasuonno
Agenda Item:	Contract Update: Amendments to the Two Agreements Governing the Compressed Natural Gas Station located at Lower Valley Energy Property	**Public Comment:**	

Purpose & Policy Considerations.
The purpose of this item is for Council to consider amendments to the two agreements that govern the Town and Lower Valley Energy's ("LVE") relationship for the Compressed Natural Gas ("CNG") station located on LVE's Property.

Requested Action.
Staff request the Council consider the amendments.

Recommendations.
Staff recommend the Council approve the amendments.

Background.
In 2013, with Town support, Energy Conservation Works (then called JH Energy Sustainability Project) submitted and won a Community Readiness Business Grant that provided $766,665 dollars toward a $901,165 dollar project to build a CNG fueling station. Ultimately the station was located at LVE's property south of Town and the parties entered two agreements: 1) Ground Lease for Compressed Natural Gas Fueling Station (the lease for the land) and 2) Agreement Regarding Compressed Natural Gas Fueling Station (about the equipment).

These Agreements have identical language regarding insurance and they have the same inadequacies, which the amendments were drafted to fix.

Analysis & Key Policy Questions.
The amendments address the issues identically in these Agreements for a few reasons: **First**, as mentioned they suffered the same issues; **second**, it is only sensible to have the same standards for the two documents governing one facility; and **third**, it is administratively beneficial to keep these simple by keeping them identical.

The changes are as follows:

1) *Property Insurance*: This was added *clearly* by separating liability and property insurance requirements.
2) *Coverage Amounts*:
    - LVE's liability insurance must be "adequate" in LVE's judgment.
    - Town's liability insurance will be consistent with the Governmental Claims Act.
    - Town's property insurance policy will cover a $1 million replacement cost of the facility (the amount is from the construction/application documents).
3) *Insurance Proceeds in the Event of Catastrophic Event*: This was not in the agreements and, because the Agreement Regarding Compressed Natural Gas Fueling Station provides that removal and rehabilitation costs shall be split equally, that is how insurance proceeds in the event of a catastrophe will be split.

4) *Additional Insureds Provision*: The requirement that the parties add each other as additional insureds was removed (the Town cannot achieve that under its Local Government Liability Pool policy).

5) *Providing Policies to Each Other*: Changed from this being mandatory and self-executing to be upon request.

Possible Alternatives.
Council could elect not to implement these amendments.

Comprehensive Plan & Priority Alignment.
This item aligns with Section 8, quality service delivery to the public, as reliable and quality communications infrastructure is critical to, not only economic health, but general health, safety, and welfare of residents and visitors alike.

Fiscal Impact.
Neutral. These corrections are important to correctly insure the facility and set out the expectations for the parties in this relationship, but the change in negligible financially speaking.

Staff Impact.
The staff impact of this item has been focused in the Legal Department, estimated at 15 hours, and Finance and Administration, estimated at a combined 5 hours.

Attachments or Links.
1) First Amendment to Ground Lease for Compressed Natural Gas Fueling Station
2) First Amendment to Agreement Regarding Compressed Natural Gas Fueling Station

Suggested Motion.
I move to approve the First Amendment to Ground Lease for Compressed Natural Gas Fueling Station and the First Amendment to Agreement Regarding Compressed Natural Gas Fueling Station, subject to minor changes by staff.

FIRST AMENDMENT TO GROUND LEASE FOR COMPRESSED NATURAL GAS FUELING STATION

This First Amendment To Ground Lease for Compressed Natural Gas Fueling Station ("**First Amendment**") is entered into and effective on _____, ___, 2025 by and made by and between the Town of Jackson, a municipal corporation of the State of Wyoming, ("**Town**") and Lower Valley Energy, Inc., a Wyoming Cooperative Utility Corporation ("**LVE**"), together "**Parties**.".

WHEREAS, on the 28th day of August 2017 the Town and LVE entered into a Ground Lease for Compressed Natural Gas Fueling Station built with the Wyoming Business Council Community Readiness Grant and Loan Program; and

WHEREAS, the Parties wish to amend the Ground Lease for Compressed Natural Gas Fueling Station as set forth in this First Amendment; and

NOW, THEREFORE, in consideration of the mutual covenants, agreements, undertakings, and benefits to the Parties, the Parties hereto agree as follows:

A. Paragraph 16, *Liability Insurance.* Paragraph 16 of the Ground Lease is rewritten as follows:

16. Liability and Property Insurance

A. Liability Insurance: Throughout the term of this Agreement, the Town will maintain liability insurance in accordance with the Governmental Claims Act, and LVE will maintain an adequate commercial general liability policy.
B. Property Insurance. Throughout the Term of this Agreement, the Town will maintain a property insurance policy that will cover a $1 million replacement cost of the facility.
C. Property Insurance Proceeds: If there is a catastrophic event and the facility is not rebuilt, the parties hereto agree to expend their respective insurance proceeds to rehabilitate the site to its condition prior to the installation of the facility, sharing equally in the cost of rehabilitation consistent with Paragraph 7 of the *Agreement Regarding Compressed Natural Gas Fueling Station* executed by the Parties and dated August 28, 2017.

Upon request, LVE and Town shall provide each other evidence of these required insurance policies.

B. Terms of the Ground Lease. Any terms of the Ground Lease not modified herein shall remain as is and unaffected by this First Amendment.

Remainder of page intentionally blank, signatures follow.

Town of Jackson

By:_____
Arne Jorgensen

Its: Mayor

ATTEST: _____

Riley Hovorka, Town Clerk

LVE

By: _____
James Webb

Its: CEO

FIRST AMENDMENT TO THE AGREEMENT REGARDING COMPRESSED NATURAL GAS FUELING STATION

This First Amendment to the Agreement Regarding Compressed Natural Gas Fueling Station ("**First Amendment**") is entered into and effective on _____, ___, 2025 by and made by and between the Town of Jackson, a municipal corporation of the State of Wyoming, ("**Town**") and Lower Valley Energy, Inc., a Wyoming Cooperative Utility Corporation ("**LVE**"), together "**Parties**."

WHEREAS, on the 28th day of August 2017 the Town and LVE entered into an Agreement Regarding Compressed Natural Gas Fueling Station built with the Wyoming Business Council Community Readiness Grant and Loan Program; and

WHEREAS, the Parties wish to amend the Agreement Regarding Compressed Natural Gas Fueling Station as set forth in this First Amendment; and

NOW, THEREFORE, in consideration of the mutual covenants, agreements, undertakings, and benefits to the Parties, the Parties hereto agree as follows:

A. Paragraph 12, *Liability Insurance.* Paragraph 12 of the Ground Lease is rewritten as follows:

12. Liability and Property Insurance

A. Liability Insurance: Throughout the term of this Agreement, the Town will maintain liability insurance in accordance with the Governmental Claims Act, and LVE will maintain an adequate commercial general liability policy.
B. Property Insurance. Throughout the Term of this Agreement, the Town will maintain a property insurance policy that will cover a $1 million replacement cost of the facility.
C. Property Insurance Proceeds: If there is a catastrophic event and the facility is not rebuilt, the parties hereto agree to expend their respective insurance proceeds to rehabilitate the site to its condition prior to the installation of the facility, sharing equally in the cost of rehabilitation consistent with Paragraph 7 of the *Agreement Regarding Compressed Natural Gas Fueling Station* executed by the Parties and dated August 28, 2017.

Upon request, LVE and Town shall provide each other evidence of these required insurance policies.

B. Terms of the Agreement Regarding Compressed Natural Gas Fueling Station. Any terms of the Agreement Regarding Compressed Natural Gas Fueling Station not modified herein shall remain as is and unaffected by this First Amendment.

Remainder of page intentionally blank, signatures follow.

Town of Jackson

By:_____
Arne Jorgensen

Its: Mayor

ATTEST: _____

Riley Hovorka, Town Clerk

LVE

By: _____
James Webb

Its: CEO

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Regular Town Council – Consent
Submitting Department:	Joint Affordable Housing	**Presenter:**	Kristi Malone
Agenda Item:	Consideration of Deed Restrictions for Workforce Housing at The Glenwood Condos Phase 2 Units #22, 23, 24 at 165 N. Glenwood	**Public Comment:**	Yes

Purpose & Policy Considerations.
The Town Council ("Council") will consider Workforce Deed Restrictions ("Restrictions") for two ownership condos and one rental condo located in Phase 2 of The Glenwood at 165 N. Glenwood (Units 22, 23, 24). These Restrictions use the template restriction approved by Town Council in February 2023.

Requested Action.
Approval of the Restrictions and authorization of Mayor Jorgensen to sign the Restrictions.

Recommendations.
Staff recommends approval of the Restrictions.

Background.
Development of this site used the Workforce Housing Floor Area Bonus tool to produce bonus unrestricted housing units in exchange for Workforce Restrictions on three new housing units in Phase 2 of the project. To satisfy a condition of approval for the Development Plan, Building Permit and Final Plat (P25-013 which was previously approved by Town Council on May 5, 2025), Deed Restrictions for Workforce Housing were required to be recorded on three units. Phase 1 of the project, completed in 2022, includes four Workforce restricted homes also required by use of the Workforce Housing Floor Area Bonus.

Analysis.
Per the Jackson/Teton County Housing Department Rules & Regulations, the developer/owner of a development using the Workforce Floor Area Bonus tool has the option of placing either an Ownership (owned and occupied by Qualified Household) or Rental (owned by employer/investor and rented to Qualified Household) Restriction type on the bonus Workforce units. In this case, the developer has elected to restrict Units 22 (two-bedroom) and 23 (three-bedroom) as ownership and Unit 24 (three-bedroom) as a rental.

Comprehensive Plan & Priority Alignment.
This item is in alignment with Section 5 of the Comprehensive Plan by providing workforce housing (Principle 5.1), strategically locating a variety of housing types (Principle 5.2), reducing the shortage of housing affordable to the workforce (Principle 5.3), and using a balanced set of tools to meet our housing goal (Principle 5.4).

Fiscal Impact.
N/A

Staff Impact.
Housing Staff spent approximately 2 hours on this item.

Attachments or Links.
1. Restriction for Workforce Ownership Housing Located at 165 N. Glenwood Unit 22
2. Restriction for Workforce Ownership Housing Located at 165 N. Glenwood Unit 23
3. Restriction for Workforce Rental Housing Located at 165 N. Glenwood Unit 24

Suggested Motion.
I move to approve the Restrictions for The Glenwood Workforce Housing located at 165 N. Glenwood Units 22, 23, and 24.

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Regular Town Council Consent
Submitting Department:	Legal	**Presenter:**	Lea Colasuonno
Agenda Item:	Lease Amendment: Sweet Spirits Child Care Lease	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for the Council to review and consider an amendment to the Sweet Spirits Child Care Lease to memorialize recent updates to the access to the leased space from a key system to tenant identification cards ("First Amendment").

Requested Action.
Staff request the Council review and consider the First Amendment and ultimately approve it.

Recommendations.
Staff recommend the Council approves the First Amendment.

Background.
On September 27, 2023 the Town and Sweet Sprits Child Care LLC ("Sweet Spirits") entered a Lease Agreement to operate a day care on the first floor of the Si Ferrin Building. In recent months, the Town converted access to the leased portion of Si Ferrin from a key system to tenant identification cards and key fobs. This change necessitates the issuance of tenant ID cards and key fobs to Sweet Spirits and the memorialization of appropriate policies for lost or damaged tenant ID cards and key fobs.

Analysis & Key Policy Questions.

Key Policy Question: Does the Council approve of the attached First Amendment to the Lease Agreement?

- ✓ **Pros**: The First Amendment appropriately documents and sets expectation for the policies for lost or damaged tenant ID cards and key fobs for Sweet Spirits as a tenant of the Town.
- ✓ **Cons**: There are no downsides to entering into the First Amendment with the tenant.

Possible Alternatives.
Council could elect not to enter into the First Amendment, thus leaving uncertainty with respect to the parties conduct around tenant ID cards and key fobs at the Si Ferrin Building.

Comprehensive Plan & Priority Alignment.
This item aligns with Section 8, quality service delivery to the public with respect to the Town's decision to provide affordable say care space to a provider in the community that, while prioritizes Town employees, also adds capacity to the community day care space generally.

Fiscal Impact.
There is no fiscal impact associated with this particular item. The Town's choice to upgrade security at all of its buildings and facilities is not associated with this particular site and, second, the cost of lost or damaged tenant ID cards and key fobs that are the fault of the tenant is recouped via the First Amendment.

Staff Impact.

The staff impact of this item has been focused in the Internal Services Department mostly, as it coordinated and managed this update with the tenant directly (2 hours), with second impact in the Legal Department to draft the First Amendment and this staff report (2 hours).

Attachments or Links.
First Amendment to Lease Agreement with Sweet Spirits Child Care LLC

Suggested Motion.
I move to approve the First Amendment to Lease Agreement with Sweet Spirits Child Care LLC, subject to minor changes by staff.

FIRST AMENDMENT TO LEASE AGREEMENT
(Sweet Spirits Child Care Lease)

This First Amendment to Lease Agreement (the "**First Amendment**") is made effective as of this 30th day of April, 2025 (the "**Effective Date**") by and between the Town of Jackson ("**Town**"), whose address is P.O. Box 1687, Jackson, Wyoming 83001 and Sweet Spirits Child Care LLC, whose address is 211 East Kelly Avenue, P.O. Box 4623, Jackson, Wyoming 83001("**Lessee**").

Recitals

WHEREAS, Town and Lessee entered into that certain Lease Agreement (Sweet Spirits Child Care Lease), dated September 27, 2023 ("Lease Agreement") to operate a day care on the first floor of a property owned by Town, known as the Si Ferrin Building ("Property"); and

WHEREAS, Town recently converted access to the Property from a key system to tenant identification cards ("Tenant ID Cards") and key fobs ("Key Fobs"), thereby requiring the issuance of Tenant ID Cards and Key Fobs to Lessee and the adoption of new policies associated with lost or damaged Tenant ID Cards and Key Fobs.

NOW, THEREFORE, the Town and the Lessee for good and valuable consideration, the sufficiency and receipt of which is acknowledged, do hereby agree to amend the Lease Agreement as follows:

A. Any capitalized term not specifically defined herein shall have the meaning ascribed to such capitalized term in the Lease Agreement.

B. Add Sections 16 and 17 to the Lease Agreement. Sections 16 and 17 shall be added to the Lease Agreement as follows:

16. KEYS. The Town issued Lessee twelve r (12) keys (6 Tenant ID Cards and 6 Key Fobs, together "Keys") on the 30th day of April, 2025. The following apply to the Keys during the Base Term and any Renewal Terms:

a. Additional Keys. Lessee may request additional Keys at a cost of $8.00 for each additional Tenant ID Card and $20.00 for each additional Key Fob.

b. Lost Keys. Lessee must immediately notify Town of a lost Key

c. Recoding or Replacement Keys. If Lessee requires the recoding of a Key, or the replacement of a lost, damaged, or inoperative Key, Lessee will be charged the following fees:

1. First instance of recoding or replacement = $25.00 fee.
2. Second instance of recoding or replacement = $50.00 fee.
3. Third or subsequent instance of recoding or replacement = $200.00 fee for each recoding or replacement.

d. Return of Keys. Lessee must return all Keys to Town within 24 hours of vacating the Property. If all Keys are not returned timely, Lessee will be charged $25.00 per unreturned Key, whether a Tenant ID Card or Key Fob, which amount is due within 72 hours of vacating the Property.

17. LOCKOUTS. If Lessee is locked out of the Property, Lessee must contact Town to gain entry. Lessee will not be charged a fee for the first instance of lockout, but will be charged a fee for each subsequent lockout as follows:

a. Second lockout = $25.00 fee
b. Third lockout = $50.00 fee
c. Four or more lockouts = $200.00 fee for each instance of lockout.

Lessee shall pay the fee with the next rent payment that is due following the lockout.

C. Terms of the Lease Agreement. Any terms of the Lease Agreement not otherwise modified herein shall remain as is and unaffected by this First Amendment.

IN WITNESS WHEREOF, Town and Lessee have executed this First Amendment through their duly authorized representatives as of the date first written above.

Sweet Spirits Child Care LLC

211 East Kelly Avenue
P.O. Box 4623
Jackson, WY 83001

By: _____

Name: Jennifer L. Wolf

Title: Manager

Town of Jackson

C/O Town Clerk
P.O. Box 1687
Jackson, WY 83001

By_____

Name: Arne Jorgensen

Title: Mayor

ATTEST

_____

Riley Hovorka

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Regular Council Meeting - Consent
Submitting Department:	Internal Services	**Presenter:**	Lynsey Lenamond
Agenda Item:	Employee Sublease at Aspen Drive	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for Council to consider an employee sublease agreement for a primary leased unit on Aspen Drive in Jackson.

Requested Action.
Staff requests the Council consider the sublease agreement for the Aspen Drive unit.

Recommendations.
Staff recommends Council approve the sublease agreement.

Background.
Pursuant to Wyo. Stat. § 15-1-108(a)(v) unless otherwise provided by statute, the mayor shall sign "all bonds, contracts and other obligations to be signed in the name of the city or town." As a result, contracts for the Town are reviewed and considered by the Council.

Analysis & Key Policy Questions.
Upon a final offer of employment being made to a new hire, Internal Services will inform the employee of available housing options. Once the employee decides to move forward with Town housing and selects the option that best suits them, Internal Services drafts a lease for the Mayor's signature. Upon approval from Council, the lease will then be signed by the employee.

Possible Alternatives.
Council could:

1) Not enter the sublease agreement.
2) Direct staff to negotiate different terms and conditions for the sublease agreement.
3) Continue action to the next available meeting.

Comprehensive Plan & Priority Alignment.
This item is in alignment with Section 5 Local Workforce Housing by providing workforce housing.

Fiscal Impact.
The rent the employee pays at this Aspen Drive unit fully offsets the amount the Town is paying under the primary lease agreement with the property owner and utilities.

Staff Impact.
Staff spent approximately 3 hours drafting the lease and preparing this staff report, including time spent by the Internal Services and Legal Department.

Attachments or Links.
Sublease Agreement

Suggested Motion.
I move to approve the sublease agreement for a unit on Aspen Drive subject to minor changes by staff.

SUBLEASE AGREEMENT

This Sublease Agreement ("**Sublease**") is made and entered into __May26_____, 20_25_, by and between the Town of Jackson, a municipal corporation of the State of Wyoming, ("**Sublandlord**" or "Town") and [redacted] _____ ("**Sublessee**"). Sublandlord and Sublessee are each a "**Party**" to the Sublease and are collectively the "**Parties**."

RECITALS

WHEREAS, Sublandlord leases certain real property and improvements located at _[redacted] Jackson WY 83001_____ ,(collectively the "**Premises"**);

WHEREAS, Sublandlord desires to sublease the Premises as is authorized under the Primary Lease Agreement ("**Primary Lease**") between Sublandlord and primary Landlord ("**Landlord**");

WHEREAS, Sublessee desires to sublease the Premises; and

WHEREAS, the Parties desire to enter into a written agreement providing the terms, covenants and conditions for the sublease and occupancy of the Premises by Sublessee.

NOW, THEREFORE, in consideration of the mutual covenants, agreements, undertakings and benefits to the parties, the parties agree as follows:

1. SUBLEASE. Sublandlord agrees to sublease to Sublessee and Sublessee agrees to sublease from Sublandlord the Premises according to the terms and conditions of this Sublease.

2. OCCUPANTS. Only Sublessee and any individual agreed to and listed below, or as further modified or agreed to in writing by Sublandlord, will occupy and reside in the Premises. The rights of any permitted occupants are governed by the terms and conditions of this Sublease and such rights shall expire or terminate at the same time Sublessee's rights expire or terminate hereunder.

   i. Name: _____
   ii. Name: _____
   iii. Name: _____

3. TERM. The Sublease shall commence on __June 3_____, 2025___, and end on __June 30_____, 2026___, both dates inclusive, unless sooner terminated as provided herein. Upon the expiration of the initial one-year term of this Lease, if neither Sublandlord nor Subleasee provides written notice of termination in accordance with the termination provisions set forth in this Lease, the tenancy shall continue on a month-to-month basis. During such month-to-month tenancy, all terms, covenants, and conditions of this Lease shall remain in full force and effect, unless otherwise modified by written agreement signed by both parties. Either party may terminate the month-to-month tenancy by providing the other party with written notice of termination in accordance with the notice period specified in this Lease.

4. RENT. Sublessee agrees to pay Sublandlord monthly rent in the amount of $[redacted]_.00, payment for which will begin on _June 3_____, 20_25___. Sublandlord may increase the rent amount once every calendar year provided Sublandlord gives Sublessee at least sixty (60) days written notice prior to any rent increase. In the event the term of this Subleasebegins on a day other than the first day of the

month, or the initial term of the Sublease ends on a day other than the last day of the month, the rent shall be prorated for as many days as Sublessee occupies the Premises for that month.

(_x__) Sublessee is an employee of Town. All rental payments, including any late payment fees, shall be paid in accordance with Section 6 below (paycheck deduction).

(___) Sublessee is not an employee of Town. All subsequent rent payments are due and payable on the first day of each month. If rent is not paid by the third day of each month ("Grace Period"), a late charge of $50.00 shall be due. Late charges shall continue to accrue after the third day at the rate of $10.00 per day for every day, or portion thereof, that the rent is not paid in full. Any late charges due will be considered additional rent. If a check is returned by Sublessee's bank for any reason, there will be a $50.00 returned check fee that will be applied and due in addition to the outstanding rent and, if applicable, any late charges.

All Sublessees: If Sublessee fails to pay rent or any other fees due and payable under this Sublease on or before the applicable due date specified in this Sublease, and after the Grace Period has expired, Sublandlord reserves the right to terminate this Sublease and require Sublessee to vacate the premises in accordance with Sublandlord's notice of termination and default as set forth in Section 31. Failure to vacate the Premises may result in legal action for eviction as permitted by Wyoming law.

5. SECURITY DEPOSIT. Sublessee shall pay a security deposit equal to one (1) month's rent. The security deposit shall be paid at the time of execution of this Sublease, or it may be deducted from the Sublessee's paycheck as outlined in Section 6. The security deposit shall be retained by the Sublandlord to be used for: (i) any damages, other than normal wear and tear, caused by Sublessee, (ii) any missing or damaged furnishings, furniture, or items, other than normal wear and tear, from the Premises, (iii) any unpaid rent, utility bills, or charges, (iv) abandonment of the Premises, (v) cleaning expenses required to return the Premises to as good a condition as it was upon commencement of this Sublease, and/or (vi) to the extent permitted by Wyoming law, any other costs or damages sustained by the Sublandlord by reason of the failure of the Sublessee to comply with any terms, provisions, covenants, or agreements contained in this sublease. It is understood that the security deposit is not pre-payment of rent and is not applicable toward the last month's rent. The Sublandlord shall not be obligated (although it may do so at its option) to apply the security deposit to any unpaid rent, charges, or portion thereof. Sublandlord shall return that portion of the security deposit not used for one of the above-listed deductions no later than thirty (30) days following vacation of the Premises by Sublessee provided that, if the security deposit is being applied to any permissible circumstance, this time period shall be extended by an additional thirty (30) days. Sublessee shall be liable for any damages or expenses owed in excess of the security deposit. Sublandlord shall promptly provide Sublessee written notice of the amount owed by Sublessee, and Sublessee shall pay said amount within three (3 days of notice by remitting payment to Town's payment drop box located at the north entrance to Town Hall, by mailing it to Town of Jackson, P.O. Box 1687, Jackson, WY 83001, or by ACH or credit card payment set up through the Town Finance Department.

6. PAYCHECK DEDUCTION AUTHORIZATION. If Sublessee is an employee of Town, Sublessee agrees and authorizes Town, as its employer, to deduct rent, utility costs, security deposit, and fees from their bi-weekly paychecks (each of which is from a "pay period" that is a time frame of fourteen (14) days) as follows:

a. Rent. Half (½) of the rent amount due for that month shall be deducted from the Sublessee's paycheck with the first pay period of the month, and the second half (½) of the rent for that month shall be deducted from Sublessee's paycheck with the second pay period of the month.
b. Utility costs. If Sublessee is required to reimburse Sublandlord for the costs of utilities, such costs shall be deducted from Sublessee's paycheck with the second pay period of the month.

c. Security Deposit. If Sublessee does not pay the security deposit at the time of execution of the Sublease, then $200.00 shall be deducted from Sublessee's paycheck each month. Half (½) of this amount ($100.00) shall be deducted from the Sublessee's paycheck with the first pay period of the month, and the second half (½) of this amount ($100.00) shall be deducted from the Sublessee's paycheck with the second pay period of the month.

d. Pet Deposit. If Sublessee does not pay the pet deposit at the time of the execution of the Sublease, then $200.00, or an alternative amount authorized by Sublandlord, shall be deducted from Sublessee's paycheck each month until the pet deposit is paid in full. Half (½) of this amount ($100.00) shall be deducted from the Sublessee's paycheck with the first pay period of the month, and the second half (½) of this amount ($100.00) shall be deducted from the Sublessee's paycheck with the second pay period of the month.

e. Fees. Any fees charged to Sublessee shall be deducted from Sublessee's paycheck with the pay period following the charged fee.

f. Insufficient Income. If Sublessee does not have sufficient income in their paychecks to cover the rent payments, utility costs, the security deposit, or fees as outlined above, the outstanding amount due with each pay period shall be remitted by check (unless agreed otherwise by Sublandord) no later than the Monday following the payday for the insufficient paycheck.

g. Late Fees. If rent is not paid in full by the twenty-fifth day of the month, a late fee of $50.00 will be applied, and is due in addition to the outstanding rent. Late charges shall continue to accrue after the twenty-fifth day at the rate of $10.00 per day for every day, or portion thereof, that the rent is not paid in full. If a check is returned by Sublessee's bank for any reason, there will be a $50.00 returned check fee that will be applied and is due in addition to the outstanding rent and, if applicable, any late charges.

h. Final Paycheck. Sublandlord reserves the right to withhold and deduct from Sublessee's final paycheck any unpaid amounts that are overdue including, but not limited to, rent, fees, security deposit, damage costs, utilities, or cleaning costs. Sublandlord may further withhold and deduct from Sublessee's final paycheck any rent that will become due after Sublessee's final pay period. If Sublessee does not have sufficient income in their final paycheck to cover the amount required to be deducted, then Sublandlord shall promptly provide Sublessee written notice of the outstanding amount owed, and Sublessee shall pay the outstanding amount within three (3) days of notice.

i. Failure to Pay Rent. In the event Sublessee fails to pay the rent due and payable on or before the due date specified herein, and after the Grace Period has expired, Sublandlord reserves the right to terminate this Sublease and proceed in accordance with Section 31 herein.

j. Outstanding Payments. Any outstanding rent, costs, or fees may be paid through Town's payment drop box located at the north entrance to Town Hall, by mailing it to Town of Jackson, P.O. Box 1687, Jackson, WY 83001, or by ACH or credit card payment set up through the Town Finance Department.

7. CONTINUED EMPLOYMENT. (Check One)

(x___) A condition precedent to Sublessee leasing the Premises is continued employment at full-time or at least thirty (35) hours a week with Town or Teton County, Wyoming, or continued status as an active volunteer or probationary status with the Jackson/Teton County Fire/EMS. If Sublessee's employment terminates voluntarily, then the Sublease will terminate immediately, and Sublessee shall vacate the Premises within fifteen (15) days of their last day of work, or by the end date of the Sublease, whichever is sooner. If Sublessee's employment terminates involuntarily, then the Sublease will terminate immediately, and the Sublessee will have three (3) days from their last day of work to vacate the Premises, unless Sublandlord agrees in writing to extend the time to vacate to fifteen (15) days.

(___) The Sublessee's employment is not a condition precedent to Sublessee leasing the Premises.

8. SOLE RESIDENCE. Sublessee shall use the Premises only as their sole, year-round residence. Sublessee shall not directly own or own through a marriage, partnership, corporation, or any other means any other residential housing unit within the Town of Jackson limits, within Teton County limits, or in any outlying community from which an employee could reasonably commute. By signing this Sublease, Sublessee affirms they do not own a residential housing unit under any of these circumstances. If Sublessee is found to be in violation of this provision, Sublandlord will provide written notice of the violation and the Sublease will terminate the Premises in accordance with Section 31.

9. MOVE IN INSPECTION WORKSHEET. Sublessee shall complete and execute a Move In Inspection Worksheet ("Worksheet") within fourteen (14) days of the commencement of the Sublease. The Worksheet shall provide a detailed accounting of the condition of the Premises, including, but not limited to, repairs needed, damages, or material defects. If there are any furnishings, furniture, or items contained in the Premises, the Worksheet shall also document an inventory and the conditions of such furnishings, furniture, and items. If a Worksheet is not completed by Sublessee in the time specified, this may result in Sublessee being held responsible for any and all issues noted by Sublandlord at move out.

10. USE OF PREMISES. Sublessee agrees and acknowledges that their use of the Premises is conditioned upon the following, and any violation thereof shall be deemed a violation of this Sublease:

a. Do not place auxiliary structures of any kind on the Premises without the express written consent of Sublandlord.
b. Do not sublease the Premises during the term of this Sublease.
c. May not use the Premises as a business address or for the purpose of conducting any type of business, profession, or trade ("Business Activities") without the prior express written consent of Sublandlord. If Sublessee obtains consent to conduct Business Activities at the Premises, Sublessee shall conduct such Business Activities in a manner that is lawful and does not create any nuisance, or interfere with, annoy, or disturb any neighbors or other residents at the Premises. Sublessee, at their own expense, shall be responsible for duly procuring and maintaining any governmental license or permit that is required for the Business Activities. Consent for the Business Activities may be rescinded at any time by providing thirty (30) days written notice to Sublessee for Business Activities to cease.
d. Shall keep radios, televisions, stereos, etc., at a level of sound that does not annoy or interfere with other residents or neighbors.
e. Shall comply with all requirements of any governmental authorities, housing authorities, or homeowner associations concerning the Premises now or hereafter in force.
f. Shall comply with rules or regulations made by Sublandlord from time-to-time for the safety, care, upkeep, and cleanliness of the Premises.
g. Do not install any satellite dishes on the Premises.
h. Do not permit any liens or security interests be filed against the Premises.
i. Promptly deliver to Sublandlord at the end of this Sublease all keys for the Premises.

11. NO ILLEGAL OR PROHIBITED CONDUCT. Sublessee shall not use or permit the use of the Premises contrary to any federal, state, or local law or engage in any activity in or on the Premises that is illegal under any federal, state, or local law. Nor shall Sublessee permit others to engage in illegal activities in or on the Premises. Sublessee shall not engage in or permit in or on the Premises disruptive conduct, noisy disturbances, abusive language, intimidating behavior, bullying behavior, threatening behavior, violent acts, any other conduct that jeopardizes the health, safety, and/or welfare of Sublandlord,

Sublandlord's agents, other tenants, neighbors, or property, or otherwise disturb or interfere with the rights of other tenants or neighbors. If Sublessee violates this section, the Lease may be immediately terminated by the Sublandlord in accordance with Section 31.

12. ALTERATIONS AND IMPROVEMENTS. Sublessee shall not make any alterations or improvements to the Premises without the advance express written consent of Sublandlord.

13. REPAIR AND MAINTENANCE. Sublessee shall keep the interior of the Premises in as good order as it was at the time of the commencement of this Sublease, reasonable wear and tear, damage by elements, accidental fire or other casualty excepted. Sublessee will immediately notify Sublandlord of any damage to the Premises or its contents, or to any inoperable equipment or appliances and such damage or inoperable equipment or appliance shall be promptly repaired at no expense to Sublessee, except as indicated below. Sublessee will be responsible for any damage caused by Sublessee, or Sublessee's family members, invitees, or guests. Sublessee agrees to be responsible for the following maintenance of the Premises, and acknowledges that any violation thereof shall be deemed a violation of this Sublease:

a. Keep all windows, glass, window treatments, doors, locks, and hardware in good, clean order and repair.
b. Do not obstruct or cover the windows or doors, with the exception of conventional window treatments.
c. Do not leave windows or doors in an open position during inclement weather.
d. Do not hang laundry, clothing, sheets, etc. from any window, rail, porch, or balcony, nor air or dry any of same within any yard area.
e. Do not cause or permit any locks or hooks to be placed upon any door, except for child locks.
f. Take reasonable precautions to avoid freezing pipes and plumbing fixtures, including adhering to any preventive measures stipulated by Sublandlord.
g. Keep all lavatories, sinks, toilets, and all other water and plumbing apparatus in good order and repair and use the same only for the purposes for which they were constructed. No sweepings, rubbish, sand, rags, ashes, or other substances shall be thrown or deposited therein. Any damage to any such apparatus and the cost of clearing stopped plumbing resulting from misuse shall be borne by Sublessee.
h. Deposit all trash, garbage, rubbish, and refuse in the locations provided therefor and not allow any trash, garbage, rubbish, or refuse to be deposited or permitted to stand on the exterior of any building.
i. Keep the Premises, both inside and out, in good, clean, orderly, and sanitary condition.
j. Do not paint any portion of the Premises without express written consent of Sublandlord.
k. Do not permit any hazardous, toxic, or flammable substances to be stored or used in or about the Premises.
l. Do not disconnect the smoke/fire alarm and/or any other detectors in the Premises.
m. Promptly deliver to Sublandlord at the end of this Sublease all keys for the Premises.
n. Utilize the exhaust fans in the bathroom and kitchen areas at a level sufficient to prohibit the growth of mold in these areas or other areas prone to condensation.
o. Do not store or accumulate items along the exterior walls.
p. Shall be responsible for the arrangement and cost of rekeying the Premises if Sublessee becomes locked out of the Premises after business hours, which is between 5:00 p.m. and 8:00 a.m. on Monday through Friday and all times on Saturday and Sunday.
q. Shall be responsible for the arrangement, completion, and funding of any minor repair or maintenance that costs up to $100.00 to complete.

14. SNOW REMOVAL. (Check One)

(___) All snow removal will be provided with no obligation to Sublessee.

(___) Sublessee is responsible for all ice and snow removal at the Premises from any steps, walkways, entrances, and driveways. Sublandlord will be responsible for any ice and snow removal from the roof.

(___) Sublessee shall have a shared responsibility with any other tenants of a shared housing unit for ice and snow removal at the Premises from any steps, walkways, entrances, and driveways. Sublandlord will be responsible for any ice and snow removal from the roof.

(x___) Sublessee shall be responsible for ice and snow removal from the _front steps_____. All other removal will be provided with no obligation to Sublessee, including removal from the _____.

15. YARD MAINTENANCE. (Check One)

(x___) All yard maintenance will be provided with no obligation to Sublessee.

(___) Sublessee is responsible for maintaining the yard, including appropriate mowing and watering of the lawn. If there is a sprinkler system on the Premises, Sublessee may use the sprinkler system to water the lawn. The maintenance and service of the sprinkler system, including the spring startup and winterization of the system, will be provided with no obligation to the Sublessee. Sublessee will be responsible for any repair or damage caused by misuse, abuse, or neglect of the sprinkler system. Sublessee shall promptly notify Sublandlord of any yard or sprinkler system issues.

(___) Sublessee shall have a shared responsibility with any other tenants of a shared housing unit for maintaining the yard, including appropriate mowing and watering of the lawn. If there is a sprinkler system on the Premises, Sublessee may use the sprinkler system to water the lawn. The maintenance and service of the sprinkler system, including the spring startup and winterization of the system, will be provided with no obligation to Sublessee. Sublessee will be responsible for any repair or damage caused by misuse, abuse, or neglect of the sprinkler system. Sublessee shall promptly notify Sublandlord of any yard or sprinkler system issues.

(___) Sublessee shall be responsible for the following yard maintenance: _____. All other yard maintenance will be provided with no obligation to Sublessee.

16. UTILITIES. (Check All That Apply)

(_x__) All utilities are included with rent. Except Internet

(___) The following utilities are included with rent: _____. Sublessee is responsible and shall pay for any other utilities that may be necessary or desirable.

(___) Sublessee is responsible and shall pay for all utilities that may be necessary or desirable, including but not limited to power, gas, water, sewer, internet, and garbage removal.

(___) If Sublessee is an employee of Town, Sublandlord will maintain the following utilities in Sublandlord's name: _____. Sublandlord will pay the costs for such utilities used by Sublessee directly to the respective company during the term of this Sublease. Sublessee shall reimburse Sublandlord for the costs of the utilities, which will be deducted from their paycheck as outlined herein.

17. CARPET CLEANING. Sublessee shall either clean the carpets with a carpet shampooer/steamer or have the carpets professionally cleaned prior to vacating the Premises. If Sublessee fails to clean the carpets satisfactorily or altogether, Sublandlord reserves the right to deduct from the security deposit the cost to have the carpets professionally cleaned.

18. CONVENANT OF QUIET ENJOYMENT. Sublessee, upon paying rent and performing the covenants upon its part to be performed hereunder, shall peaceably and quietly have, hold and enjoy the Premises hereby leased during the term hereof.

19. OVERNIGHT GUESTS. Overnight guests may stay in or on the Premises for no more than seven (7) consecutive nights. No overnight visitation by a guest who has visited for a seven (7) night period may occur more than twice during each year of the Sublease. For purposes of enforcing these terms, Sublessee agrees to maintain current license plate information for all occupants residing in the unit.

20. ANIMALS. (Check All That Apply)

(___) No pets are allowed except service animals or assistance animals.

(___) Sublessee intends to occupy the Premises with a service animal(s) or assistance animal(s). Service animals and assistance animals are allowed in accordance with Wyoming State and Federal law. A pet deposit is not required for a service animal or assistance animal. Sublessee may be liable for any damage caused by the service animal or assistance animal to the extent allowed under Wyoming State and Federal law.

(_x__) In addition to any service animals or assistance animals, Sublandlord consents to allow Sublessee to have the following pet(s): _1 dog_____. Sublessee agrees that no other pet shall be kept on the Premises. The unauthorized presence of any pet will subject Sublessee to termination of this Sublease pursuant to the termination section herein. Sublessee must pay an additional $_500__.00 pet deposit. The pet deposit shall be paid at the time of the execution of this Sublease, pursuant to a payment plan agreed to in writing by Sublandlord, or it may be deducted from Sublessee's paycheck as outlined in Section 6. The pet deposit is refundable unless there are damages or cleaning costs related to the pet(s). If the cost for the repair of the damages or cleaning exceeds the amount of the pet deposit, then Sublessee will be responsible and charged for the additional costs for repair or cleaning. Sublessee's pet(s) shall not be loud or disturb any neighbors or other residents in the building.

If Sublessee entered the Sublease with no pet and later seeks to acquire a pet during the term of the Sublease, or if Sublessee seeks an additional pet to what Sublandlord consented to above, advanced written consent from Sublandlord is required for the pet. Sublandlord's written consent shall contain an accounting of any additional pet deposit required for the pet, which deposit shall be paid in advance of Sublessee keeping the pet on the Premises.

21. SMOKING. No smoking is permitted in or on the Premises at any time.

22. PARKING. Sublessees shall only park in designated spaces, as follows__1_space marked by unit_____.

23. INSPECTION/ENTRY. Landlord and Sublandlord shall have the right to enter the Premises for reasonable inspections, to make any agreed upon or necessary repairs/improvements, to show the Premises to prospective tenants or contractors, if believed the Premises have been abandoned, or where other good cause exists to enter. Sublessee shall be given at least twenty-four (24) hours advance notice of entry, except in the event of an emergency or where other good cause exists. For major repairs or improvements that will disrupt the occupancy of the Premises for more than one (1) day, Sublessee shall be given at least three (3) days advance notice of entry. Notwithstanding the foregoing, Landlord and Sublandlord shall have the right to enter and inspect the Premises and take appropriate action without advance notice in the event of any emergency.

24. RENTER'S INSURANCE. Landlord and Sublandlord shall not be responsible for loss, destruction, or damage to Sublessee's personal property regardless of the cause. Sublessee has the option to obtain a renter's insurance policy at their own cost.

25. TERMINATION. Except in the event of any default by Sublessee, which termination is governed by Section 31 and state statute and in addition to other termination provisions set forth in different sections of the Lease, either Party may terminate this Sublease at any time upon giving thirty (30) days written notice. If the Sublease is terminated pursuant to this section, or pursuant to any other section of the Sublease, Sublessee will be responsible to pay rent for the entire month in which they last occupy the Premises, even after they have vacated the Premises. However, if after the Sublessee vacates the Premises and the Sublandlord places another sublessee into the Premises during that month, then Sublessee will be obligated to pay prorated rent only up to the date the new sublessee takes occupancy of the Premises. In the event of any termination, Sublessee and any occupants are bound and shall abide by the terms and conditions of this Sublease until they vacate the Premises.

26. PRIMARY LEASE AND TERMINATION OF PRIMARY LEASE. Sublessee hereby agrees to be subject to and bound by the terms and conditions of the Primary Lease between Sublandlord and the Landlord. The Primary Lease is attached hereto, and all of the terms, covenants, and conditions thereof are hereby incorporated herein with the same force and effect as if set forth in full. The Sublease is subordinate to the Primary Lease and any conflicting provisions will be governed by the Primary Lease. In the event the Primary Lease terminates for any reason, this Sublease and all rights of Sublessee in and to the Premises shall automatically terminate on the date the Primary Lease terminates. Sublandlord shall have no liability to Sublessee as a result of such termination.

27. SURRENDER AND CLEANING. Upon the termination of this Sublease, Sublessee shall quit and surrender the Premises in as good condition and repair as it was at the date of the commencement of this Sublease, reasonable wear and tear excepted. Sublessee is responsible for cleaning so that at surrender the Premises are in as good of a condition and repair as at the commencement of this Sublease and, if cleaning is required to meet this standard, Sublandlord will deduct the cost of such from the security deposit. If the cost of cleaning exceeds the amount of the security deposit, Sublessee will be responsible and charged for the additional cleaning costs.

28. BINDING EFFECT. All the terms, covenants and conditions of this Sublease shall be binding upon and inure to the benefit of the Parties hereto, their respective heirs, assigns, and legal representatives.

29. REPRESENTATIONS. It is mutually agreed that no representations, warranties, covenants, or agreements, expressed or implied, have been made other than those set forth herein.

30. WAIVER. The waiver by the Parties of any breach of any term, covenant, or condition herein contained shall not be deemed to be a waiver of such term, covenant or condition or any subsequent breach of the same or any other condition herein contained. None of the terms hereof can be waived by either the of the Parties, except by appropriate written agreement duly executed by both Parties.

31. DEFAULT. Sublessee shall be in default if Sublessee fails to pay any part of the rent herein provided, or any other sum required by the Sublease to be paid at the times or in the manner provided under this Sublease or otherwise, or where any other covenant, term or condition of this Sublease is

materially violated. In the event of a default by Sublessee, Sublandlord may provide Sublessee with a notice of termination and default and notice to quit ("**Default Notice**"), at its sole discretion. A Default Notice shall include a request to cure the default within three (3) days of the written notice, and the specific date on which the lease will terminate if Sublessee fails to timely cure the default. If by its nature the default cannot be cured within three (3) days, but Sublessee commences the cure within that time period and perfects it thereafter, no immediate termination may be effectuated. If Sublessee is in default with respect to the same or substantially same covenant, term, or condition of the Sublease two (2) or more times during any three (3) month period during the term of the Sublease, notwithstanding any prior cure of default, Sublandlord may elect to immediately terminate the Sublease and Sublessee will not have the opportunity to cure the default. If the Sublease is terminated pursuant to this Section, Sublandlord shall provide Sublessee written notice of the termination and Sublessee will have three (3) days from the date of the notice to vacate the Premises, unless Sublandlord agrees in writing to extend the time to vacate. Sublandlord reserves all rights and remedies available to them under the law in the event of default, including commencement of eviction proceedings.

32. INDEMNIFICATION. The Parties shall not be liable for any injury, or loss to person or persons occurring on the Premises unless such act is the result of the negligence of either Party. The Parties agree to jointly hold each other harmless from any claims for damages for any injury or loss to person or persons occurring on the Premises, except for injury or loss caused by the negligence of each respective Party.

33. GOVERNMENTAL IMMUNITY. Sublandlord does not waive their governmental immunity by entering into this Sublease, and fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this Sublease.

34. ATTORNEY'S FEES. The Parties agree that in the event either party incurs court costs or attorney's fees by reason of default or breach by the other Party, the prevailing Party in any such court action shall be entitled to reasonable attorney's fees and court costs from the other.

35. NOTICES. Any notice, request, demand, consent, approval, or other communication required or permitted under this Lease shall be in writing and shall be deemed duly given (i) when delivered personally to the recipient, (ii) when sent by certified mail, return receipt requested, to the address specified below, or (iii) when sent by email to the email address specified below, provided that the sender has not received a delivery failure notification. A notice sent by email shall be deemed received on the date and time the email is sent, provided that (a) the email is sent to the recipient's designated email address as set forth below, (b) the sender does not receive a bounce-back or delivery failure notification, and (c) if the notice is sent outside of normal business hours (9:00 AM to 6:00 PM on business days), the notice shall be deemed received at 9:00 AM on the following business day. Either Party may change its address or email address for notice purposes by providing written notice to the other Party in accordance with the terms of this provision.

SUBLESSEE
[redacted]
_____
_____

SUBLANDLORD
Town of Jackson
P.O. Box 1687
Jackson, WY 83001
employeehousing@jacksonwy.gov

Sublessee Cell Phone: _____

Sublessee Email: _____
Sublessee Vehicle Make/Model/Description: _____
Sublessee Vehicle License Plate: _____
Sublessee Vehicle Make/Model/Description: _____
Sublessee Vehicle License Plate: _____

36. SEVERABILITY. If any part of this Sublease shall be construed to be unenforceable, invalid, or illegal, such unenforceability, invalidity, or illegality shall not affect any other provisions and they shall remain in full force and effect.

37. ENTIRE AGREEMENT. This Sublease constitutes the complete and entire agreement between the Parties and may be modified only in writing duly signed by the Parties.

38. LAW AND JURISDICTION. This Sublease shall be construed in accordance with the laws of the State of Wyoming. Any litigation arising under the terms of the Sublease shall be in the state courts of the State of Wyoming, Ninth Judicial District. Any forcible entry and detainer action shall be brought in the Circuit Court of Teton County, Wyoming.

39. CONSTRUCTION. Whenever used, the singular shall include the plural, the plural the singular, and the use of any gender shall include all genders when the context so requires. This Sublease was negotiated by both Parties and thus it shall not be construed against or in favor or any Party by virtue of which Party drafted it or any portion thereof.

40. HEADINGS. The headings used in this Sublease are for convenience only and are not to be used in its construction.

41. COUNTERPARTS; ELECTRONIC SIGNATURES. This Sublease may be executed simultaneously in two or more counterparts, each of which shall be deemed an original and all of which, when taken together, constitute one and the same document. The signature of any Party to any counterpart shall be deemed a signature to, and may be appended to, any other counterpart. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the federal ESIGN Act of 2000, e.g., www.docusign.com) or other transmission method, and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. At the request of either Party, each Party agrees to execute an original of this Sublease as well as any facsimile or other reproduction hereof.

42. INCORPORATION OF RECITALS. All the recitals hereof are incorporated by this reference and are made a part hereof as though set forth at length herein.

IN WITNESS WHEREOF, each Party acknowledges they have read and understood all the terms of this Sublease and hereby agree to be bound thereby. The Parties further acknowledge that they were under no duress in signing this Sublease and had full opportunity to negotiate the terms contained herein and to consult independent counsel.

SUBLESSEE:

_____

By:

_____

_____

SUBLANDLORD:

Town of Jackson

By:

_____

Arne Jorgensen, Mayor

Attest:

_____

Riley Hovorka, Clerk

Sublessee _____

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	TOJ Regular Meeting - Consent
Submitting Department:	Parks and Recreation	**Presenter:**	Max Moran
Agenda Item:	Budget Amendment – Rec Center Sauna	**Public Comment:**	Yes

Purpose & Policy Considerations.
Consideration of a budget amendment for the reconstruction of the Teton County Recreation Center sauna in the amount of $49,128.00, to be paid from the Teton County Parks and Recreation fund balance—a jointly held account managed by Teton County and shared between the County and the Town of Jackson.

Requested Action.
Approval of the budget amendment in the amount of $49,128.00.

Recommendations.
Staff recommends the approval of the budget amendment in the amount of $49,128.00.

Background.
The Teton County Recreation Center sauna is a highly valued recreational amenity for the community. Originally constructed in the 1990s, it has served the public for decades. Following an extensive cleaning and inspection in Spring 2025, significant rot and a deteriorated, nonfunctioning vapor barrier were discovered, necessitating a complete repair and rehabilitation of the space. In addition, the Teton County–adopted International Building Code requires proper ventilation in saunas and accessibility for individuals with disabilities—both of which the existing facility lacked. This project was not included in the Fiscal Year 2025 Parks and Recreation approved budget.

Teton County Parks and Recreation released a Request for Qualifications (RFQ) on April 9, 2025, via Public Purchase to select a design-build contractor for the sauna replacement. A public notice of the RFQ was published in the Jackson Hole News & Guide on April 9 and April 16. An RFQ review team consisting of Parks and Recreation staff—Max Moran, Cody Daigle, Kasey O'Neil, and Janice Bushnell—reviewed the two proposal submissions. RFQs were scored based on project approach, qualifications, project schedule, capacity, proposal quality, and cost. The results of the RFQ scoring are summarized below.

RFQ Applicant	Total RFQ Score	Construction Cost Estimate
FH WY LLC	155	$112,793
TUBZZ Wellness LLC	225	$34,790 (Negotiated to $49,128.00)

Following the scoring of the RFQs, the selection team negotiated additional items with TUBZZ LLC to incorporate expanded design elements into the proposal, including ADA accessibility, trim detailing around the sauna exterior, and a 20% force account for unanticipated construction expenses. It should be noted that the difference in construction cost estimates between the two applicants is largely due to the fact that TUBZZ is a design-build company, while the other applicant is a project management general contractor who relies on outside subconsultants for design and subcontractors for construction.

Pending approval of a signed contract, TUBZZ LLC anticipates a project completion date of **July 30, 2025.**

Analysis & Key Policy Questions.

Does the replacement of the Rec Center sauna serve as an appropriate use of the jointly owned Town and County Parks and Recreation fund balance?

Possible Alternatives.
The No Build alternative is an option, but it is not recommended by Parks and Recreation, as the sauna facilities are a highly desirable and valued public amenity at the Rec Center.

Comprehensive Plan & Priority Alignment.
The replacement of the Recreation Center sauna aligns with the department's purpose by enhancing a valued amenity that supports healthy lifestyles, community well-being, and quality of life for both residents and guests. **Parks and RECREATION PURPOSE STATEMENT**: *Provide and manage quality of life programs and resources that encourage healthy lifestyles, social and cultural engagement, and community pride according to the needs of our residents and guests.*

Fiscal Impact.
Funding for this project will be drawn from the jointly owned Parks and Recreation fund balance. As of May 6th, 2025, the Parks and Recreation Fund 19 had a balance of $6,335,763.50.

Staff Impact.
Staff will oversee the implementation of the design elements of the contract and provide on-site oversight of the construction.

Attachments or Links.
None

Suggested Motion.
I move to approve the use of the Parks and Recreation fund balance (Teton County Fund 19) in the amount of $49,128.00 for the Rec Center sauna replacement.

STAFF REPORT

Meeting Date:	2 June 2025	**Meeting Title:**	Town Council Regular - Consent
Submitting Department:	County Public Works	**Presenter:**	Charlotte Frei
Agenda Item:	Payment Processor Parking Access Revenue Control System (PARCS) at Millward/Simpson Garage	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for Council to consider entering into contract agreements with Windcave to process payments at the Millward/Simpson Garage.

Requested Action.
Staff requests that Council review and consider the contract agreements for processing payments.

Recommendations.
Staff recommends that Council authorize the mayor to sign the agreements.

Background.
At the March 18, 2024 Town Council Workshop, staff described a number of challenges and unintended uses occurring at the Millward/Simpson Parking Garage. The staff report can be viewed here: https://jacksonwy.portal.civicclerk.com/event/2060/files/attachment/5544. The primary challenges include rental car companies and private individuals using the parking garage to store their vehicles; overnight campers relieving themselves in the garage (not in restrooms) when restrooms lock overnight; and other criminal activity including drug sales and prostitution that Jackson PD responds to.

Staff released an RFP and recommended negotiating a contract with SKIDATA to Town Council on December 2, 2024. On December 2, 2024, staff was directed to:

1. Implement an hourly fee structure and revise code/ordinances consistent with the new fee structure ($2 per hour from 10 pm to 4 am);
2. Negotiate a contract with SKIDATA, or the second-place vendor should the negotiation be unsuccessful; and
3. Present the contract at a future council meeting.

Council approved the contract on February 18, 2025. That staff report noted that 'Prior to going live, staff will bring forth a separate contract between the payment processor and the Town of Jackson; the costs for the payment processor were factored into prior fiscal analysis.' Today's item is the payment processor contract.

Staff will also bring forth changes to the municipal code related to the new garage management at a future meeting.

NOTE: The Town Finance Manager will need to complete the information at the bottom of page 2 of the **Merchant Application**. The Town should sign the Merchant Application as 'MERCHANT' and the Windcave Agreement as 'Town of Jackson, Wyoming'.

If the contract is signed on June 2, 2025, staff can continue to work with SKIDATA and Windcave toward a go-live date of June 25, 2025. Staff will also begin the public information campaign about the changes once the installation date is confirmed.

Analysis & Key Policy Questions.

Several policy questions have been discussed in March 2024 and December 2024 (Staff Report: https://jacksonwy.portal.civicclerk.com/event/2214/files/attachment/6170). This contract reflects discussions and direction shared by council.

Staff is working with the Town's public information team to notify the public of these changes if the payment processor contract is approved. If the contract is not approved today, installation may be delayed until the fall.

Possible Alternatives.

- If the contract is not signed, staff will need to negotiate with another payment processor. The installation would also be delayed until the fall as the equipment must be tested and installed with the payment processor agreement in place.

Comprehensive Plan & Priority Alignment.
The guiding vision and chapter goal for Multimodal Transportation (Chapter 7) of the Comprehensive Plan is:

Travel by walk, bike, carpool, or transit will be more convenient than travel by single-occupancy vehicle.

Several strategies support improving enforcement at the garage; specifically, managing levels of service by evaluating parking occupancy and coordinating service levels across Town and County departments are identified by the plan in two strategies:

"Strategy 7.2.S.4: Reevaluate parking standards and other regulations that currently promote travel by single-occupancy motor vehicles." Introducing technology to support enforcement will also provide data on turnover and occupancy that staff can use to re-evaluate existing standards and regulations.

"Strategy 8.1.S.1: Define desired service levels from government service providers that address all policies of Principle 8.1 [Maintain Current, Coordinated Service Delivery]." The parking access technology is anticipated to reduce the burden on staff in Town Facilities and Jackson Police Department, allowing staff to redirect their time to higher and better uses that technology cannot perform.

Staff Impact.
The Regional Transportation Planning Administrator and staff from Town Police, Public Works, and Planning Departments have contributed approximately **80** hours in total to this project since Council's direction to pursue procurement of the Parking Access Revenue Control System (PARCS). The staff resources needed to operate and maintain the system (after installation) include:

- Town Public Works, Facilities and Street Divisions – 50 hours per year to repair or troubleshoot maintenance issues and to ensure entrance and parking information signs and pavement markings are maintained. Currently Town Public Works staff spends 100-150 hours per year for cleaning after routine incidents.
- Town Police Department – 325 hours per year to address violations, issue refunds, and check the garage for stays over 30 days. Currently CSOs spend approximately 600 hours per year in the garage (this does not include patrol officers' time in the garage).
- Town Hall and Dispatch – 30 hours per year to help customers experiencing issues; customers can press a button for support; this number will call Town Hall during business hours and dispatch after hours. Clear instructions at entry and exit can reduce the customer calls.
- Transportation Planning Functions – 40 hours per year to review reports, evaluate data and make recommendations for parking management.
- Director of External Affairs – 12 hours to develop communications around the program change initially, and regular communications about parking locations in future years. Seeing the armbar may deter people from

parking, so staff anticipates the need to pre-emptively educate the public that the garage is still free from 4 am – 10 pm but paid overnight.

Additionally, the equipment is expected to reduce staff time monitoring, enforcing, and cleaning the garage. The ability to pay on exit is expected to reduce the number of tickets in municipal court and thus reduce the workload among PD and legal staff related to violations. The time CSOs previously spent monitoring and enforcing the 48-hour limit in the garage can be spent on other activities.

Fiscal Impact.
The estimated cost of the payment processor is roughly $55 per month, which will be deducted from payments collected. Because the Town does not currently have managed parking, staff used data from Jackson PDs December 2023 data collection to make assumptions about user behavior and overnight stays. Staff estimates that projected annual revenue, if charging $2 per hour from 10 pm to 4 am, could be $30,000-$130,000 yearly.

Attachments or Links.
Contract documents: Windcave Agreement and Merchant Agreement.

Suggested Motion.
I move to approve both the Windcave Agreement and the Merchant Agreement, subject to minor changes by staff.



Windcave

Merchant Application

Merchant Information

Legal Name:	Town of Jackson, Wyoming			
Merchant Trading Name:	Town of Jackson, Wyomiing			
Location Address: (No P.O. Box)	**Address**	**City**	**State**	**Zip Code**
	150 East Perl Avenue	Jackson	WY	83001
Postal Address:	**Address**	**City**	**State**	**Zip Code**
	PO Box 1687	Jackson	WY	83001
Email Address:	cfrei@tetoncountywy.gov and clerk@jacksonwy.gov	**Phone Number:**	307-732-8498	
Website:		**EIN/TIN Number:**		

Type of Business:	☐ Corporation	☐ Limited Liability Company	☐ Individual/ Sole Proprietor
	☐ 501(c)(3) Non-Profit	☐ Partnership	**X Government**
	☐ Publicly Traded	If publicly traded, what is your ticker symbol? _____	
Description of Services:			

Nature of Business:	☐ Administrative	☐ Arts and Recreation	☐ Construction	☐ Education	☐ Financial Services
	☐ Food Services	☐ Health Care	☐ Hospitality/Lodging	☐ Manufacturing	☐ Media
	X Parking/Car Wash	☐ Retail	☐ Technical Services	☐ Utility Services	☐ Wholesale

Have you ever had legal action taken against you by any federal or local regulatory agency?	☐ No	☐ Yes, Please Explain_____
Have you ever been fined or had services suspended by a card network?	☐ No	☐ Yes, Please Explain_____

Transaction Details

Transaction Volume:	Average Ticket:	**$6**	High Ticket:	**$12**	Total Monthly Card Volume: **$13200**
Do you schedule/hold/ sponsor future-dated events?	☐ Yes		X No		
Method of Card Acceptance (Total 100%):	Swipe, Contactless, or Inserted:	**100%**	Mo/To (Hand Keyed):	**%**	
	E-commerce:	**%**	Subscription or Recurring:	**%**	

Which POS or Shopping Cart are you currently using? SKIDATA gates

If your total "Swipe, Contactless, or Inserted" method of Card Acceptance is less than 100%, please complete the questionnaire below.

What percentage of sales are to:	Business Consumers: **%**	**Who processes the order?**	☐ Merchant	☐ Fulfilment Center
	Individual Customers: **%**		☐ Other _____	
Do you own the product/inventory?	☐ Yes ☐ No	**Is the product stored at your business location?**	☐ Yes	☐ No
			If no, where is it stored? _____	
Who enters credit card information into the processing system?	☐ Merchant ☐ Consumer	**Who ships the product?**	☐ Merchant	☐ Fulfilment Center
			If fulfilment center, please provide name and address:	
	☐ Fulfilment Center ☐ Other	**How long until the product ships after charge authorization?**	_____ Days	

Principal/Beneficial Owners (25% or greater ownership)

Principal Owner #1

First Name:	n/a	**Last Name:**		**Title:**	
Home Phone:		**Email Address:**		**Percent Ownership**	
SSN:		**Date of Birth:**		**DL #/State:**	
Home Address:	**Address**	**City**	**State**	**Zip Code**	

Principal Owner #2

First Name:	n/a	**Last Name:**		**Title:**	
Home Phone:		**Email Address:**		**Percent Ownership**	
SSN:		**Date of Birth:**		**DL #/State:**	
Home Address:	**Address**	**City**	**State**	**Zip Code**	

Principal Owner #3

First Name:	n/a	**Last Name:**		**Title:**	
Home Phone:		**Email Address:**		**Percent Ownership**	
SSN:		**Date of Birth:**		**DL #/State:**	
Home Address:	**Address**	**City**	**State**	**Zip Code**	

Principal Owner #4

First Name:	n/a	**Last Name:**		**Title:**	
Home Phone:		**Email Address:**		**Percent Ownership**	
SSN:		**Date of Birth:**		**DL #/State:**	
Home Address:	**Address**	**City**	**State**	**Zip Code**	

not applicable/see W9

Windcave

Controlling Position					
First Name:	Kelly or Successor	Last Name:	Thompson or Successor	Title:	Town Finance Manager
Home Phone:	307-734-3482	Email Address:	kthompson@jacksonwy.gov	Percent Ownership	n/a
SSN:	n/a	Date of Birth:	n/a	DL #/State:	n/a
Home Address:	Address: See Town Address above	City	State	Zip	

Rates and Fees

Payment network interchange, card scheme fees, and online debit network cost will be charged in addition to:

Card Fees	Credit:	Debit:	Other Fees	
			Chargeback Fee –Per Occurrence	$25.00
Interchange Discount Rate	0.30%	0.30%	Retrieval Request Fee –Per Occurrence	$10.00
Blended Discount Rate			Authorization Fee	$0.08
			Batch Fee –Per Occurrence	$0.75
Interchange Fees	pass through	pass through	Statement Fee –Monthly	$10.00
Card Scheme Fees	pass through	pass through	PCI-DSS Fee –Monthly	$20.00

You, as Merchant, have the option of accepting MasterCard credit and debit cards, Visa credit and debit cards, and Discover Network cards. .If Merchant does not specifically indicate otherwise, the Merchant Application will be processed to accept ALL MasterCard, Discover Network, and Visa card types

Elected Visa, Discover Network, or MasterCard Card types NOT to accept: _____

MERCHANT APPLICATION AND AGREEMENT ACCEPTANCE

Capitalized terms not defined in this section have the meanings set forth in the Terms and Conditions. By executing this Merchant Application ("Merchant Application"), on behalf of the merchant described above ("Merchant"), the undersigned authorized individual represents, warrants, acknowledges, and agrees that:

i. all information supplied by Merchant to Windcave and Synovus Financial Corporation ("Bank") and contained in this Merchant Application is true, correct and complete as of the date of this Merchant Application;

ii. if Merchant is a corporation, limited liability company, or partnership, the individual(s) executing this Merchant Application have the requisite legal power and authority to complete and submit this Merchant Application on behalf of Merchant and to make and provide the acknowledgements, authorizations and agreements set forth herein on behalf of Merchant and individually and to bind Merchant to the terms of this Merchant Application, the Guaranty and the attached Terms and Conditions, as may be amended from time to time (collectively, the "Agreement");

iii. the information contained in this Merchant Application is provided for the purpose of obtaining, or maintaining, a merchant account for Merchant with the Bank and Bank and Windcave will rely on the information provided herein in its approval process and in setting the applicable discount rate, approved average ticket, and approved monthly Card volume;

iv. Bank is authorized to investigate, either through its own agents or through credit bureaus/agencies, the credit of Merchant and each person listed on this Merchant Application;

v. Bank will determine all rates, fees and charges and notify Merchant of the approved fees and by Merchant's submission and acceptance of Merchant's first settled transaction, Merchant agrees to pay such fees in accordance with the terms of theAgreement;

vi. the Agreement will not take effect until Merchant has been approved by Bank and a merchant identification number has been issued to Merchant. Merchant acknowledges that Windcave and Bank will conduct due diligence on Merchant before determining eligibility to receive services from Provider, and both Windcave and Bank may request further due diligence on Merchant at any time during the Term of the Agreement;and

vii. Merchant and the undersigned have received, read and understood the Agreement, and Merchant agrees to be bound by the terms of the Agreement. Merchant acknowledges that this Agreement is being submitted to Bank, as the member bank of the Card Networks, and Windcave is also a party to this Agreement.

Merchant acknowledges that Windcave will rely on the representations and warranties set forth in this Agreement and unless otherwise specified or prohibited by the Network Rules or Law, Windcave will have certain rights under this Merchant Application and Agreement.

To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to verify and record your identity. What this means for you: Windcave will ask for your name, address, date of birth, identifying documents, and other information that will allow us to identify you. We may also ask to see your driver's license or other identifying documents. Further, to help the government fight financial crime, Federal regulation requires certain financial institutions to obtain, verify, and record information about the beneficial owners of legal entity customers. Legal entities can be abused to disguise involvement in terrorist financing, money laundering, tax evasion, corruption, fraud, and other financial crimes. Requiring the disclosure of key individuals who own or control a legal entity (i.e., the beneficial owners) helps law enforcement investigate and prosecute these crimes. By signing below, you attest that you have accurately provided the name, address, date of birth and Social Security Number (SSN) for the following individuals (i.e. the beneficial owners):

i. Each individual, if any, who owns directly or indirectly, 25 percent or more of the equity interests of the legal entity customer (e.g., each natural person that owns 25 percent or more of the shares of a corporation); and

ii. An individual with significant responsibility for managing the legal entity customer (e.g., a Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, Managing Member, General Partner, President, Vice President, or Treasurer).

The number of individuals that satisfy this definition of "beneficial owner" may vary. Under section (i), depending on the factual circumstances, up to four individuals (but as few as zero) may need to be identified. Regardless of the number of individuals identified under section (i), you must provide the identifying information of one individual under section (ii). It is possible that in some circumstances the same individual might be identified under both sections (e.g., the President of Acme, Inc. who also holds a 30% equity interest). Thus, a completed form will contain the identifying information of at least one individual (under section (ii)), and up to five individuals (i.e., one individual under section (ii) and four 25 percent equity holders under section (i)).

BANK ACCOUNT INFORMATION: ☐ Checking Account ☐ Savings Account Bank Name:_____

Attach voided check for the Account where funds are to be deposited

Transit #(ABA Routing):_____Account #(DDA):_____Contact:_____

Phone #: _____

* By providing the above referenced information, you are authorizing Bank to initiate ACH debit and credit transactions to said account

Windcave

CONTINUING PERSONAL GUARANTY PROVISION ("GUARANTY") – PERSONAL GUARANTOR (Capitalized terms not defined in this Guaranty have the meanings set forth below in the Terms and Conditions) By signing below, each individual or entity ("Guarantor") jointly and severally (if there is more than one Guarantor) and unconditionally guarantees to Windcave and Bank the prompt payment and full and complete performance of all obligations of Merchant identified above under the Agreement, as amended from time to time, including, without limitation, all promises and covenants of the Merchant, and all amounts payable by Merchant under the Agreement, including, without limitation, charges, interest, costs and other expenses, such as attorneys' fees and court costs. This Guaranty means, among other things, that Windcave or Bank can demand performance or payment from any Guarantor if Merchant fails to perform any obligation or pay any amount Merchant owes under the Agreement. Each Guarantor agrees that his or her liability under this Guaranty will not be limited or canceled because: (1) the Agreement cannot be enforced against Merchant for any reason, including, without limitation, the initiation of bankruptcy proceedings; (2) either Windcave or Bank agrees to changes or modifications to the Agreement, with or without notice to Guarantor; (3) Windcave or Bank releases any other Guarantor or Merchant from any obligation under the Guaranty or Agreement, as applicable; (4) any Law affects the rights of either Windcave, Merchant, or Bank under the Agreement; and/or (5) anything else happens that may affect the rights of either Windcave or Bank against Merchant or any other Guarantor. Each Guarantor further agrees that: (a) Windcave and Bank each may delay enforcing any of their rights under this Guaranty without losing such rights; (b) Windcave and Bank each can demand payment from such Guarantor without first seeking payment from Merchant or any other Guarantor or from any security held by Bank; and
(c) such Guarantor will pay all court costs, attorneys' fees, and collection costs incurred by either Windcave or Bank in connection with the enforcement of the Agreement or this Guaranty, whether or not there is a lawsuit, and such additional fees and costs as may be directed by a court. If Merchant is a corporation, limited liability company, partnership or other entity, this Guaranty must be executed by a principal of Merchant.

Principal #1 Signature: not applicable/see W9 Principal #2 Signature: _____

Print Name: _____ Print Name: _____

Date: _____ Date: _____

Bank Disclosure: Member bank information: Synovus Financial Corporation, 1111 Bay Avenue, Columbus, GA 31901 Phone: 888-796-6887

Important bank responsibilities:

1. Synovus Financial Corporation is the only entity approved to extend acceptance of Visa and MasterCard products under this Agreement directly to a Merchant
2. Synovus Financial Corporation is responsible for educating merchants on pertinent Visa and MasterCard Network Rules with which Merchants must comply
3. Synovus Financial Corporation, not Windcave, must hold, administer, and control all reserve funds derived from settlement
4. Synovus Financial Corporation, not Windcave, must hold and administer funds for Merchant.
5. Synovus Financial Corporation must be a party to the Agreement

Important Merchant Responsibilities:

1. Complying with Cardholder data security and storage requirements
2. Maintaining fraud and chargebacks below established thresholds
3. Reviewing and understanding the Agreement
4. Complying with the Network Rules

The responsibilities listed above do not supersede terms of the Agreement and are provided to ensure Merchant understands some important obligations of each party that Synovus Financial Corporation, as the member bank, is the ultimate authority should Merchant have any problems.

MERCHANT:

Merchant Signature: _____

Print Name: _____ Date: _____

WINDCAVE:

By: _____

Print Name: _____ Date: _____

BANK:

By: _____ Date: _____

Name and Title _____

MERCHANT SERVICES TERMS

As provided by the Merchant Application, Merchant, Windcave Inc. ("Windcave") and Synovus Financial Corporation ("Bank") have agreed to be bound by these terms and conditions. Bank and Windcave are collectively referred to herein as the "Provider" and, subject to the requirements of the Network Rules, Windcave and Bank allocate the duties and obligations allocated to Provider as they deem appropriate in their sole discretion and may jointly or individually assert or exercise the rights or remedies provided to Provider hereunder. Further to the foregoing, notwithstanding the foregoing or any other provision hereof, Merchant understands and agrees (A) that Bank does not sponsor Windcave into the American Express or Diners Club/Carte Blanche or JCB Network, is not providing or agreeing to provide Merchant any services hereunder with respect to American Express or Diners Club/Carte Blanche or JCB Network Card transactions, does not determine or approve or agree upon any fees, charges, pricing, or any other terms and conditions, relating to American Express or Diners Club/Carte Blanche or JCB Network Card transactions, and has no responsibility or liability to Merchant for American Express or Diners Club/Carte Blanche or JCB Network Card transactions; and (B) that Merchant Bank does not provide or agree to provide Merchant any services hereunder or have any responsibility or liability to Merchant with respect to any PIN-based debit or stored value or electronic benefit transfer transactions (except only to the extent, if any, required under Visa's or MasterCard's or Discover's or PayPal's {In-Store Checkout} Operating Rules or under any mandatory provisions of applicable law), or any other Card type transactions (other than Visa and MasterCard and Discover and PayPal {In-Store Checkout}credit and non-PIN based debit/stored value Card transactions), or any other services specified in the Application as covered in whole or in part by this Agreement but as not being provided by Bank; and (C) that to the extent applicable to American Express or Diners Club/Carte Blanche or JCB Network Cards or transactions, or to any of the other types of Cards, transactions or services referred to above or in the Application as not being provided by Bank, any reference herein or in any of the other documents constituting part of the "Agreement" (as defined below) to the terms "Provider" or "Bank" (except only to the extent the reference constitutes a complete disclaimer of responsibility or liability on the part of the Provider or Bank, or constitutes an obligation on the part of Merchant to indemnify, defend or hold harmless the Provider or Bank from or against any responsibility or liability) means Windcave only.

Bank, Windcave and Merchant agree as follows:

ARTICLE I – DEFINITIONS

In addition to terms otherwise defined in this Agreement, capitalized terms shall have the meaning ascribed to them in this Article I.

1.01 "**Account**" means a commercial checking or demand deposit account maintained by Merchant for the crediting of collected funds and the debiting of fees and charges under this Agreement.

1.02 "**ACH**" means the Automated Clearing House paperless entry system controlled by the Federal Reserve Board.

1.03 "**Agreement**" means the Merchant Application, the Guaranty and these Terms and Conditions, and any supplementary documents referenced herein, and schedules, exhibits and amendments to the foregoing.

1.04 "**American Express**" means the Cards bearing the Marks of, and Card Network operated by, American Express Travel Related Services Company, Inc. or its affiliates.

1.05 "**Authorization**" means a computerized function or a direct phone call to a designated number to examine individual Transactions to obtain approval from the Card Issuer to charge the Card for the amount of the sale in accordance with the terms of this Agreement and the Network Rules.

1.06 "**Bank**" has the meaning set forth on the Merchant Application.

1.07 "**Card**" means (i) a valid credit card or debit card in the form issued under license from a Card Network. ("Bank Card"); or (ii) any other valid credit card or debit card or other payment device approved by Bank and accepted by Merchant.

1.08 "**Card Issuer**" means the financial institution or company which has provided a Card to a Cardholder.

1.09 "**Card Network**" means Visa U.S.A., Inc., MasterCard International, Inc., American Express Travel Related Services Company, Inc., DFS Services LLC (the owner of Discover) and their affiliates, or any other payment networks approved by Bank and Windcave that provide Cards accepted by Merchant.

1.10 "**Card Not Present" or "CNP**" means transactions where the Cardholder and the Card are not present when processing a transaction.

1.11 "**Cardholder**" (sometimes referred to as "Card Member" in certain Card Network materials) shall mean any person authorized to use the Cards or the accounts established in connection with the Cards.

1.12 "**Cardholder Information**" means any non-public, sensitive information about a Cardholder or related to a Card, including, but not limited to, any combination of Cardholder name plus the Cardholder's social security number, driver's license or other identification number, or credit or debit card number, or other bank account number.

1.13 "**Chargeback**" means the procedure by which a Transaction (or disputed portion thereof) is returned to Provider by a Card Issuer for any reason, including, but not limited to, cases where such item does not comply with the applicable Network Rules.

1.14 "**Credit Voucher**" means a document executed by a Merchant evidencing any refund or price adjustment relating to Cards to be credited to a Cardholder account.

1.15 **"Discover Card"** means a Card bearing the Discover Marks and accepted as part of the DFS Services Network.

1.16 "**Guarantor**" has the meaning set forth on the Merchant Application.

1.17 "**Guaranty**" has the meaning set forth on the Merchant Application.

1.18 "**Merchant Application**" has the meaning set forth on the Merchant Application.

1.19 "**Network Rules**" means the rules, regulations, releases, interpretations and other requirements (whether contractual or otherwise) imposed or adopted by any Card Networks and related authorities, including without limitation, those of the PCI Security Standards Council, LLC and the National Automated Clearing House Association (including, with respect to EBT, the Quest Operating Rules and with respect to PIN debit cards, the rules, regulations, policies and procedures of the applicable debit network).

1.20 "**Offline"** means the electronic equivalent of an imprint obtained by swiping a Card through a terminal and electronically capturing Card data and printing a Transaction Record.

1.21 "**Provider**" as provided by the introductory paragraph to these Terms and Conditions, means Windcave and Bank together.

1.22 "**Transaction**" means any sale of products or services, or credit for such, from a Merchant for which the Cardholder makes payment through the use of any Card and which is presented to Provider for collection.

1.23 "**Transaction Record**" means evidence of a purchase, rental or lease of goods or services by a Cardholder from, and other payments to, Merchant using a Card, including preauthorized orders and Recurring Transactions (unless the context requires otherwise), regardless of whether the form of such evidence is in paper or electronic form or otherwise.

1.24 "**Voice Authorization**" means a direct phone call to a designated number to obtain credit approval on a Transaction from the Card Issuer, whether by voice or voice-activated systems via interactive voice response, or IVR.

1.25 "**Windcave**" means Windcave Inc., an entity incorporated in California.

1.26 Pass Through: charges levied by card networks (like Visa and Mastercard) and passed down to merchants by their payment processing provider. These fees don't go through Windcave but passed through from Visa and Mastercard.

1.27 Interchange Fee: Interchange is a fee paid by a merchant's acquirer to a cardholder's bank (issuer) as a fee which are set by card brands (Visa, Mastercard, etc.) for each card type.

1.28 Card Brand Fee: This fee is paid to the card scheme (Visa, Mastercard, Discover, AMEX, etc.) by the acquirer to process the transaction.

1.29 Authorization Fee: This fee is to o9set cost incur for processing the transaction

1.30 Discount Fee: This is an acquirer fee

1.31 Batch Fee: This fee is charged each time a merchant batches out the transaction from their EMV Terminal, mobile terminal, or software which is normally at the end of every working day and the acquirer processes them for funding to the merchant's nominated bank account.

1.32 PCI – DSS Fee: A fee charged to cover the cost incurred from assisting merchants in becoming PCI DSS compliant. PCI DSS compliance is designed to reduce card payment compromises and data theft by helping secure sensitive information and reduce vulnerability to attacks.

1.33 Statement Fee: A monthly fee for providing a statement that gives an overview of the volume and fees paid over the past month.

1.34 Chargeback Fee: A per occurrence fee charged when processing a chargeback claim.

1.35 Retrieval Fee: A per occurrence fee for when a merchant requests a copy of a sales draft in order to verify a transaction.

ARTICLE II - CARD ACCEPTANCE

2.01 **Honoring Cards.** Merchant will accept all valid Cards when properly presented by Cardholders in payment for goods or services, pursuant to this Agreement and subject to applicable Network Rules requiring Merchant to elect whether it will accept credit only, debit only or both debit and credit cards. Merchant's election is set forth in the Merchant Application. Except to the extent explicitly provided by the Network Rules, Merchant may not establish minimum or maximum amounts for Card sales as a condition for accepting any Card. Merchant may, subject to applicable Law and the Network Rules,
(i) impose a surcharge, under certain conditions and with proper disclosure to a Cardholder who elects to use a Card in lieu of payment by cash, check or other method of payment, or (ii) offer cash discounts to Cardholders making payment by cash or check. Merchant shall not engage in any acceptance practice that discriminates against or discourages the use of a Card Network's Cards in favor of any other Card Network's Cards, or favor any particular Card Issuer over any other Card Issuers. Note, many states prohibit or limit cases where Merchant may surcharge a Cardholder or offer cash discounts and the Card Networks impose restrictions on surcharging and cash discounting. Therefore, Provider strongly recommends that Merchant carefully consider and comply with all applicable Law and the Network Rules before Merchant begins to surcharge Cardholders or offer any cash discount. Merchant may not engage in a Transaction (other than a mail, internet, telephone order, or preauthorized sale to the extent permitted under this Agreement) if (i) the person seeking to charge the purchase to his or her Card account does not present the Card to permit Merchant to compare the signature on the Card to the signature on the Transaction Record; or
(ii) the Merchant does not obtain an Offline or otherwise use the physical Card to complete the Transaction.

2.02 **Advertising.** Subject to the Network Rules, Merchant will prominently display the promotional materials provided by Provider in its place(s) of business. Merchant's use of promotional materials and use of any trade name, trademark, service mark or logo type (collectively, the "Marks") associated with a Card is limited to informing the public that the Card will be accepted at Merchant's place(s) of business. During the term of this Agreement, Merchant may use promotional materials and Marks pursuant to and in strict compliance with the terms of this Agreement and the Network Rules. Upon notification by any Card Network or Provider, or upon termination of this Agreement, Merchant shall discontinue the use of such Card Network's Marks and return any inventory or promotional materials to Provider. Merchant may not use any promotional materials or Marks associated with the Card Network in any way which suggests or implies that a Card Network endorses any goods or services other than Card payment services. Merchant's website, if any, must prominently display the name of the Merchant and the name that will appear on the Cardholder statement.

2.03 **Card Acceptance.** When accepting a Card, Merchant will follow the steps and guidelines set forth in the Network Rules or otherwise provided by Provider from time to time for accepting Cards and in particular, will: (a) determine in good faith and to the best of its ability that the Card is valid on its face; (b) obtain Authorization from the Card Issuer to charge the Cardholder's account; (c) comply with the additional terms set forth in in this Agreement with respect to Telephone Orders, Mail Orders, Internet, Preauthorized Orders and Installment Orders and with respect to any Card Not Present Transactions;
(d) document the approved Transaction in accordance with this Agreement and the Network Rules; and (e) deliver a true and completed copy of the Transaction Record to the Cardholder at the time the goods are delivered or services performed or, if the Transaction Record is prepared by a point-of-sale terminal, at the time of the sale. Except to the extent otherwise provided for in this Agreement, each Transaction Record must contain the following information: (i) Merchant's legal name and/or registered trade name, Merchant's location, and the Merchant's merchant identification number designated by the Provider; (ii) the truncated version of the Card number as provided in the Network Rules; (iii) a brief description of the goods or services involved in the Transaction; (iv) the selling price, together with applicable taxes, other charges or gratuities, and the total amount of the Transaction; (v) signature of the Cardholder or authorized user as described in this Agreement, date of the Transaction and the Transaction approval number; (vi) any additional requirements of the Card Networks that may be applicable to specific merchant or transaction types, as amended from time to time; and (vii) such additional information which may from time to time be required by Provider, the Card Networks, or Card Issuers. Merchant will not transmit a Transaction Record to Provider until such time as: (i) the Transaction is completed; (ii) the goods or services have been shipped or provided, except as set forth in this Agreement and the Network Rules; or (iii) a Cardholder consent is obtained for a Recurring Transaction in accordance with terms of this Agreement and the Network Rules.

2.04 **Authorization.** Merchant will obtain an Authorization for all Transactions using a means approved by Provider. If Merchant cannot, for any reason, obtain an electronic Authorization through the use of a terminal, Merchant will request a Voice Authorization from Provider's designated authorization center and will legibly print the authorization number on the Transaction Record. Merchant will not obtain or attempt to obtain Authorization from Provider's authorization center unless Merchant intends to submit to Provider a Transaction for the authorized amount if Authorization for the Transaction is given. Merchant may not divide a single Transaction between two or more Transaction Records on a single Card to avoid Authorization limits that may be set by the Card Issuer. Merchant acknowledges that an Authorization provides only that the Cardholder account has sufficient credit available to cover the amount of the current sale and that an Authorization is not a guarantee that the Transaction will not be subject to dispute or Chargeback and does not

warranty the Cardholder's identity. Merchant may not attempt to obtain an authorization by successively decreasing the sale amount. Provider may refuse to process any Transaction Record presented by Merchant: (a) unless a proper authorization number or approval code has been recorded on the Transaction Record; (b) if Provider determines that the Transaction Record is or is likely to become uncollectible from the Cardholder to which the Transaction would otherwise be charged; or (c) if Provider has reason to believe that the Transaction Record was prepared in violation of any provision of this Agreement or the Network Rules. Merchant will use, and may not circumvent, fraud identification tools requested by Provider, including address verification system processing and CVV2 processing, and acknowledges that the use of these tools may prevent Merchant from accepting certain Cards as payment. Merchant acknowledges that its use of fraud identification tools may not prevent fraudulent Card usage, and agrees that any fraudulent Transaction may ultimately result in a Chargeback, for which Merchant retains full liability under this Agreement.

2.05 **Retention and Retrieval of Cards.** Merchant will use its best efforts, by reasonable and peaceful means, to retain or recover a Card when receiving such instructions when making a request for Authorization or if Merchant has reasonable grounds to believe the Card is counterfeit, fraudulent or stolen. Merchant's obligations under this section do not authorize a breach of the peace or any injury to persons or property, and Merchant will hold Provider harmless from any claim arising from any injury to person or property or other breach of the peace in connection with the retention or recovery of aCard.

2.06 **Multiple Transaction Records; Partial Consideration.** Merchant may not prepare more than one Transaction Record for a single sale or for a single item, but will include all goods and services purchased in a single Transaction in the total amount on a single Transaction Record except under the following circumstances: (a) for purchases in separate departments of a multiple department store; (b) for partial payment, installment payment, delayed delivery or an advance deposit; or (c) for delayed or amended charges governed by Network Rules for travel and entertainment merchants and related Transactions.

2.10 **Cash Payments.** Merchant may not receive any payments from a Cardholder for charges included in any Transaction resulting from the use of any Card nor receive any payment from a Cardholder to prepare and present a Transaction for the purpose of effecting a deposit to the Cardholder's account.

2.11 **Cash Advances; Scrip Purchase.** Unless otherwise approved in advance by Provider, Merchant may not deposit any Transaction for the purpose of obtaining or providing a cash advance either on Merchant's Card or the Card of any other party and may not accept any Card at a scrip terminal, and either action will be grounds for Provider's immediate termination of this Agreement.

2.12 **Duplicate Transactions.** Merchant may not deposit duplicate Transactions. Provider may debit Merchant for any adjustments for duplicate Transactions and Merchant is liable for any Chargebacks resulting therefrom.

2.13 **Deposit of Fraudulent Transactions.** Merchant may not accept or deposit any fraudulent or unauthorized Transactions and may not under any circumstances present for processing or credit, directly or indirectly, a Transaction which originated with any other merchant or any other source other than Transactions arising from bona fide purchases from Merchant for the goods and services for which Merchant has been approved under this Agreement. If Merchant deposits any such fraudulent or unauthorized Transaction, Provider may: (a) immediately terminate this Agreement; (b) withhold funds and demand an escrow as provided in this Agreement; or (c) report Merchant to the applicable Card Network. Merchant's employees' and agents' actions are chargeable to Merchant under this Agreement.

2.14 **Collection of Pre-Existing Debt.** Merchant may not prepare and present to Provider any Transaction representing the refinancing of an existing Cardholder obligation, including, but not limited to, obligations: (a) previously owed to Merchant; (b) arising from the dishonor of a Cardholder's personal check or relating to a Chargeback; or (c) representing the collection of any other pre-existing indebtedness, including collection of delinquent accounts on behalf of third parties.

2.15 **Data Security/Personal Cardholder Information.** Except as otherwise provided by the Network Rules, Merchant may not, as a condition of sale, impose a requirement on Cardholders to provide any personal information as a condition for honoring Cards unless such information is required to provide delivery of goods or services or Merchant has reason to believe the identity of the person presenting the Card may be different than that of the Cardholder. Merchant will not, under any circumstances, release, sell or otherwise disclose any Cardholder Information to any person other than Provider or the applicable Card Network, except as expressly authorized in writing by the Cardholder, or as required by Law or the Network Rules.

(a) Safeguards. Merchant will maintain appropriate administrative, technical and physical safeguards for all Cardholder Information. These safeguards will (i) ensure the confidentiality of Cardholder Information; (ii) protect against any anticipated threats or hazards to the security or integrity of Cardholder Information; (iii) protect against unauthorized access to or use of Cardholder Information that could result in substantial harm or inconvenience to any Cardholder; and (iv) properly dispose of all Cardholder Information to ensure no unauthorized access to Cardholder Information. Merchant will maintain all such safeguards applicable to Merchant in accordance with applicable Law and the Network Rules.

(b) Compliance with Card Network Rules. Merchant represents, warrants and covenants that it is and will remain throughout the Term of this Agreement in compliance with (i) Network Rules related to data security, data integrity and the safeguarding of Cardholder Information, including the Payment Card Industry Data Security Standard ("PCI"), Discover Information Security Compliance ("DISC"), MasterCard's Site Data Protection Program ("SDP"), the American Express Data Security Requirements ("DSR"), and Visa's Customer Information Security Program ("CISP"), in effect and as may be amended, supplemented or replaced from time to time, and (ii) any data security guidelines or operating guide that Provider may provide to Merchant, as the same may be amended, supplemented or replaced from time to time. Merchant will cause all of its service providers, subcontractors and agents to comply with PCI, SDP, DISC, DSR and CISP requirements and any data security guidelines or operating guide provided by Provider at all times. Merchant will report any non-compliance immediately to Provider. To accomplish the foregoing, Merchant will encrypt all debit, credit or stored value card numbers whether in storage, transport or backup and will not store data security codes on its systems, network or software.

(c) Confirmation of Compliance. Merchant will complete a Self-Assessment Questionnaire (SAQ) regarding its PCI DSS compliance status via the PCI Manager Portal which Windcave will give the Merchant access to.

(d) Information Use Limitations. Merchant may not sell, disclose, or otherwise make Cardholder Information available, in whole or in part, in a manner not provided for in this Agreement, without Provider's prior written consent. Merchant may, however, disclose Cardholder Information to its service providers, subcontractors and agents who have a need to know such information to provide the services described in this Agreement, provided that those individuals or entities have assumed confidentiality obligations in accordance with this Agreement, or when such disclosure is required by legal process or applicable Law,

and Merchant and its relevant service provider, subcontractor, or agent have entered into a written agreement containing Merchant's and such individual's or entity's agreement to the foregoing data security provisions, including compliance with the Network Rules.

(e) Response to Unauthorized Access. Merchant will notify Provider within twenty four (24) hours after it becomes aware of any actual or potential breach in security resulting in an unauthorized access to Cardholder Information. Merchant will provide any assistance that Provider, Card Issuer, regulators, governmental authority or any Card Network deems necessary to contain and control the incident to prevent further unauthorized access to or use of Cardholder Information. Such assistance may include, but not be limited to, preserving records and other evidence and compiling information to enable Provider and the issuing bank(s) or the Card Network to investigate the incident and provide assistance and cooperation to:
(a) file suspicious activity reports (as applicable); (b) notify their regulators (as applicable); and (c) notify the affected Cardholder (as required). Unless the unauthorized access was due to Provider's acts or omissions, Merchant will bear the cost of notifying affected Cardholder.

(f) Miscellaneous. Merchant may not make a claim against Provider or hold Provider liable for the acts or omissions of other merchants, service providers, Card Issuers, Card Network, financial institutions or others that do not have a written contractual relationship with Provider or over which Provider has no control. These provisions supplement, augment and are in addition to obligations of indemnification, audit, confidentiality and other similar provisions contained in this Agreement. This Section and each of its subsections will survive this Agreement's termination. Merchant may not store in any system or in any manner discretionary Card read data including without limitation CVV2 data, PIN data, address verification data or any other information prohibited by Network Rules. Merchant agrees that Provider may disclose to any Card Network information regarding Merchant and Merchant's Transactions to any Card Network, and that such Card Network may use such information to perform its responsibilities in connection with its duties as a Card Network, promote the Card Network, perform analytics and create reports, and for any other lawful business purposes, including commercial marketing communications purposes within the parameters of Card Network Card acceptance, and transactional or relationship communications from a Card Network. A Card Network may use the information about Merchant obtained in this Agreement at the time of setup to screen and/or monitor Merchant in connection with the Card Network marketing and administrative purposes. Merchant agrees it may receive messages from a Card Network, including important information about Card Network products, services, and resources available to its business. These messages may be sent to the mailing address, phone numbers, email addresses or fax numbers of Merchant. Merchant may be contacted at its wireless telephone number and the communications sent may include autodialed short message service (SMS or "text") messages or automated or prerecorded calls. Merchant agrees that it may be sent fax communications.

2.16 **Compliance with Laws and Network Rules.** Merchant will comply with and conduct its Card activities in accordance with all applicable local, state, and federal statutes, regulations, ordinances, rules and other binding law, as the same may be enacted or amended from time to time (collectively, "Laws") as well as all Network Rules. Merchant may not: (a) accept Cardholder payments for previous Card charges incurred at the Merchant location; (b) require a Cardholder to complete a postcard or similar device that includes the Cardholder's account number, card expiration date, signature, or any other card account data in plain view when mailed; (c) add any tax to transactions, unless applicable Law expressly requires that Merchant be permitted to impose a tax (any tax amount, if allowed, must be included in the transaction amount and not collected separately); (d) enter into interchange any Transaction Record for a Transaction that was previously the subject of a Chargeback to Provider and subsequently returned to Merchant, irrespective of Cardholder approval (Merchant may pursue payment from the Cardholder outside the Card Network system); (e) request or use an account number for any purpose other than as payment for its goods or services; (f) disburse funds in the form of travelers cheques, if the sole purpose is to allow the Cardholder to make a cash purchase of goods or services from Merchant; (g) disburse funds in the form of cash, unless:
(i) Merchant is a lodging or cruise line merchant disbursing cash to a Cardholder, (ii) Merchant is dispensing funds in the form of travelers cheques, Cards, or foreign currency, or (iii) Merchant is participating in the Card Network cash back or Cash Over service; (h) accept a Card for manual cash disbursement;
(i) accept a Card to collect or refinance existing debt that has been deemed uncollectible by Merchant providing the associated goods or services; (j) enter into a Transaction that represents collection of a dishonored check; or (k) accept a Card for an unlawful Internet gambling transaction. Merchant will pay all Card Network fines, fees, penalties and all other assessments or indebtedness levied by Card Network to Provider which are attributable, at Provider's discretion, to Merchant's Transaction processing or business. The Card Network may require that Bank limit Merchant's participation in the applicable Card Network and/or terminate this Agreement.

2.17 **Merchant's Representations and Warranties.** Merchant represents and warrants that: (a) all information contained in the Merchant Application or any other documents delivered to Provider in connection therewith is true and complete and properly reflects Merchant's business, financial condition and principals, partners, owners or officers (as applicable); (b) Merchant has power to execute, deliver and perform this Agreement, and this Agreement is duly authorized, and will not violate any provisions of Law, or conflict with any other agreement to which Merchant is subject; (c) Merchant holds all licenses, if any, required to conduct its business and is qualified to do business in every jurisdiction where it is required to do so; and (d) there is no action, suit or proceeding at law or in equity now pending or, to Merchant's knowledge, threatened by or against or affecting Merchant which would substantially impair its right to carry on its business as now conducted or adversely affect its financial condition or operations.

2.18 **Merchant's Covenants.** Merchants covenants that: (a) each Transaction Record presented to Provider for collection is genuine and is not the result of any fraudulent activity, or a Transaction prohibited by a Card Network, or is not being deposited on behalf of any business other than Merchant as authorized by this Agreement; (b) each Transaction Record is the result of a bona fide purchase of goods or services from Merchant by the Cardholder in the total amount stated on the Transaction Record; (c) Merchant will perform all of its obligations to the Cardholder in connection with the Transaction evidenced thereby; (d) Merchant will comply with Provider's procedures for accepting Cards, and the Transaction itself will not involve any element of credit for any other purposes other than as set forth in this Agreement, and will not be subject to any defense, dispute, offset or counterclaim which may be raised by any Cardholder under the Network Rules, the Consumer Credit Protection Act (15 USC §1601) or other Law; and any Credit Voucher which Merchant issues represents a bona fide refund or adjustment on a Transaction by Merchant with respect to which a Transaction Record has been accepted by Provider.

2.19 **Third Parties.** Merchant may desire to use a third-party service provider to assist Merchant with its Transactions. Merchant shall not utilize any such third parties unless Merchant has disclosed such use to Provider previously in writing, and unless such third party is fully compliant with all Laws and Network Rules. Any third party used by Merchant must be registered with the Card Network prior to the performance of any contracted services on behalf of Merchant. Further, as between the parties to the Agreement, Merchant will be bound by the acts and omissions of any third-party service provider and Merchant will be responsible for compliance by such third-party service provider with all Laws and Network Rules. Merchant will indemnify and hold harmless Provider from and against any loss, cost, or expense incurred in connection with or by reason of Merchant's use of any third parties, including third-party service providers. Provider is not responsible for any third-party service provider used by Merchant, nor is Provider required to process any Transaction which Provider receives from Merchant or its service providers in any format not approved by Provider. Provider has no responsibility for, and shall have no liability to Merchant in connection with, any hardware, software or services Merchant receives subject to a direct agreement (including any sale, warranty or end-user license agreement) between Merchant and a third party.

2.20 **Recourse.** Merchant acknowledges that Windcave performs the services contemplated by this Agreement and Windcave is responsible to Merchant for any failure to perform such services in accordance with the terms of this Agreement. While Bank satisfies settlement files pursuant to instructions provided by Windcave, Bank is not responsible for independently verifying the accuracy of such settlement files. Accordingly, to the greatest extent permitted by the Network Rules, Merchant's sole recourse for any failure by Provider under this Agreement is against Windcave (and not Bank).

2.21 **Limited Acceptance.**

(a) If appropriately indicated on the Merchant Application, Merchant shall be a limited acceptance merchant, which means that Merchant has elected to accept only certain Visa and MasterCard Card types as indicated on the Merchant Application, or via later notification. The Visa or MasterCard credit acceptance option on the Merchant Application refers to Visa credit and business transactions, and is what MasterCard refers to as "Other Card" transactions. Notwithstanding anything to the contrary in the Merchant Application, Merchant can elect (i) to accept only Visa or MasterCard non-PIN based debit/stored value/electronic benefit transactions (sometimes referred to as "signature debit" transactions, whether or not an actual signature is required), (ii) to accept only Visa or MasterCard Credit transactions, or (iii) to accept all Visa or MasterCard credit and signature debit transactions; provided, however, that a Merchant who accepts any Visa or MasterCard Card types must accept all valid Visa or MasterCard Card types issued by a non-U.S. issuer. Merchant is not required to accept Cards of Card Networks other than Visa or MasterCard in order to accept Visa or MasterCard Cards (except that transactions using Diner's International Cards which also carry the MasterCard Mark must be accepted if Merchant accepts MasterCard Card transactions of the same type). Provider has no obligation other than those expressly provided under the Network Rules and applicable Law as they may relate to limited acceptance. Provider's obligations do not include policing card types at the point-of-sale. Merchant will be solely responsible for the implementation of its decision for limited acceptance including but not limited to policing the Card Network type(s) of transactions at the point-of-sale submitted for processing by Provider. Should Merchant submit a Transaction for processing for a card type it has indicated it does not wish to accept, Provider may process that Transaction and Merchant will pay the applicable fees, charges, and assessments associated with that Transaction. Merchant will comply with any applicable Laws and Network Rules and other applicable rules and regulations for the Card Network type processed.

(b) If Merchant has chosen to accept Discover Cards in the Merchant Application, Merchant must accept Discover Cards at all Merchant establishments, including in payment for purchases of goods and services, for charitable contributions and for Cash Over Transactions (subject to the terms of the Network Rules and other applicable rules and regulations), when properly presented for payment by a Cardholder. Subject to this section, Merchant must create a Transaction Record for each Discover Card Transaction and deliver at least one copy of the Transaction Record to the Cardholder. A Merchant may issue a Cash Over (subject to the terms of the Network Rules) in connection with a Discover Card Transaction. Merchant must deliver a single Authorization request for the aggregate total of the goods/services purchase amount and the Cash Over amount. In addition, the Transaction Record must include both the purchase amount and the Cash Over amount.

ARTICLE III - PRESENTMENT, PAYMENT, CHARGEBACK

3.01 **Acceptance.** Provider will accept from Merchant all Transaction Records deposited by Merchant under the terms of this Agreement and will present the same to the appropriate Card Issuers for collection against Cardholder accounts. Merchant must transmit Transaction Records and Credit Vouchers to Provider or its processing vendor on the same or next business day immediately following the day that such Transaction Records and Credit Vouchers have been originated. All presentment and assignment of Transaction Records, collection therefor and reassignment or rejection of such Transaction Records are subject to the terms of this Agreement and the Network Rules. Provider will only provisionally credit the value of collected Transaction Records to Merchant's Account and reserves the right to adjust amounts collected to reflect the value of Chargebacks (actual and anticipated), fees, penalties, late submission charges, reserve deposits, negative Transaction Record batch deposits and items for which Provider did not receive final payment.

3.02 **Endorsement.** By presenting Transaction Records to Provider for collection and payment, Merchant agrees to sell and assign all its right, title and interest in each Transaction Record completed in conformity with Provider's acceptance procedures. Merchant's presentment of Transaction Records to Provider constitutes an endorsement by Merchant to Provider of such Transaction Records. Provider may supply such endorsement on Merchant's behalf. **Prohibited Payments.** Provider may receive payment of any Transaction Record presented by Merchant and paid by Provider unless and until there is a Chargeback. Unless specifically authorized in writing by Provider, Merchant may not collect or attempt to collect any Transaction Record, including Chargebacks, and will hold in trust for Provider and promptly deliver in kind to Provider any payment Merchant receives, in whole or in part, of the amount of any accepted Transaction, together with the Cardholder's name and account number and any corresponding accompanying payment.

3.03 **Chargebacks.** Merchant will accept responsibility for all Chargebacks related to Merchant's Transactions. Accordingly, Merchant will be liable to Provider in the amount of any Transaction disputed by the Cardholder or Card Issuer for any reason under the Network Rules. Merchant authorizes Provider to offset from funds due to Merchant or to debit the Account or, if applicable, the Reserve Account for the amount of all Chargebacks. Merchant agrees to fully cooperate with Provider in complying with the Network Rules regarding all Chargebacks. Merchant may not initiate a sale Transaction in an attempt to collect a Chargeback. Merchant will pay the current published fees for each Chargeback as listed on the Merchant Application and any other fines, fees, or assessments imposed by any Card Network or Card Issuer. Bank will make good faith, reasonable efforts to defend the position of Windcave and Merchant with respect to Chargebacks.

3.04 **Reserve Account.** Notwithstanding anything to the contrary in this Agreement and in addition to any other legal rights or remedies available to Provider, Bank may establish (without notice to Merchant) and Merchant agrees to fund and/or allow Provider to fund from the Account or by way of offset of funds otherwise due to Merchant, a non-interest bearing Chargeback reserve account (the "Reserve Account") in an amount determined by Bank in its sole discretion. Such Reserve Account may be funded by all or any combination of the following, as determined by Bank: (i) one or more debits to Merchant's Account or any other accounts held by Bank or any of its affiliates in Merchant's name or on Merchant's behalf; (ii) one or more deductions or offsets to any payments otherwise due to Merchant; (iii) Merchant's delivery to Bank of a letter of credit; (iv) if Bank so agrees, Merchant's pledge to Bank of a freely transferable and negotiable certificate of deposit; or (v) Bank's demand of other security or increase of any discount rate, transaction fees or other fees. Any such letter of credit or certificate of deposit shall be issued by a financial institution reasonably acceptable to Bank. The Reserve Account may be established at any time or for any reason. Specific examples of reasons include: (a) Merchant engages in any Transaction processing that creates an overcharge to a Cardholder by duplicating Transactions; (b) any activity designed by Merchant to circumvent a "call center" message when attempting to process a Transaction; (c) Merchant breaches this Agreement, violates any representation, covenant or warranty herein, or violates any Network Rule or Law; (d) the Merchant Application is in any way inaccurate or becomes inaccurate subsequent to Provider's approval of the Merchant Application; (e) Merchant changes its type of business without Provider's prior written approval; (f) fraud, Merchant processes an unauthorized charge, or other action that violates Provider's applicable risk management standards or is likely to cause a loss; (g) Merchant has Chargebacks exceeding one percent (1%) of the

total number of transactions completed by Merchant in any thirty (30) calendar day period; (h) excessive numbers of requests from Cardholders or Card Issuers to retrieve documentation; (i) Merchant's financial stability is in question or Merchant ceases doing business; or (j) Merchant terminates this Agreement. Once the Reserve Account is established, collected funds will be placed in the Reserve Account by Bank. Before releasing funds after this Agreement is terminated, Merchant will pay any equipment cancellation fees and any outstanding charges, losses or amounts, and Chargebacks for which Merchant has provided indemnification under this Agreement. Further, Bank may require Merchant to deposit additional amounts based upon Merchant's processing history and/or anticipated risk of loss to Bank into the Reserve Account. Once established, unless Bank determines otherwise at its sole discretion, the Reserve Account will remain in place for the later of (i) twelve (12) months, or (ii) such period thereafter during which Cardholder disputes may remain valid under the Network Rules. **The provisions of this Agreement relating to account debits and credits apply to the Reserve Account and survive this Agreement's termination until Bank terminates the Reserve Account. Any balance remaining after Chargeback rights have expired and all of Bank's other anticipated expenses, losses and damages have been paid will be disbursed to Merchant.**

ARTICLE IV - TERMINATION AND EFFECT OF TERMINATION

4.01 **Term.** This Agreement will be effective once Provider accepts it and, unless otherwise terminated, will continue for two (2) years (the "Initial Term") with automatic two (2) year renewal terms thereafter (each a "Renewal Term," and together with the Initial Term, the "Term") unless and until Merchant provides written notice of non-renewal to Provider not less than ninety (90) days before the end of the then-current Term.

4.02 **Termination.**

(a) Without Cause. Provider, or Bank separately, or Windcave separately may terminate this Agreement, without cause, upon thirty (30) days' advance written notice to Merchant. Notwithstanding any terms to the contrary, if Windcave terminates this Agreement pursuant to this clause 4.02(a), Windcave may at its discretion determine that Merchant will not be required to pay termination penalties.

(b) For Cause. Provider may terminate this Agreement in its sole discretion, effective immediately, upon written or verbal notice, or by closing Merchant's point-of-sale terminal, if Provider reasonably determines that any of the following conditions exists: (i) Merchant has violated any provision of this Agreement or Provider is otherwise entitled to terminate this Agreement pursuant to any provision of this Agreement; (ii) there is a material adverse change in Merchant's financial condition; (iii) if any case or proceeding is commenced by or against Merchant, its affiliates or principals under any Law dealing with insolvency, bankruptcy, receivership or other debt relief; (iv) any information which Merchant provided to Provider, including in the Merchant Application, was false, incomplete or misleading when received; (v);
(vi) an overdraft in the Account exists for more than three (3) days; (vii) Merchant or any of Merchant's officers or employees has been involved in processing Transactions arising from fraudulent or otherwise unauthorized Transactions; (viii) Merchant is or will be unable or unwilling to perform its obligations under this Agreement or applicable Law; or the Network Rules (ix) Merchant has failed to timely pay Provider any amount due; (x) Merchant has failed to promptly perform or discharge any obligation under its Account or the Reserve Account; (xi) any of Merchant's representations or warranties made in connection with this Agreement was not true or accurate when given; (xii) Merchant has defaulted on any agreement it has with Provider; (xiii) Provider is served with legal process seeking to attach or garnish any of Merchant's funds or property in Provider's possession, and Merchant does not satisfy or appeal the legal process within fifteen (15) days of such service; (xiv) any Network Rules are amended in any way so that the continued existence of this Agreement would cause Provider to be in breach of those rules; (xv) any guaranty supporting Merchant's obligations is revoked, withdrawn, terminated or altered in any way; (xvi) if any circumstances arise regarding Merchant or its business that create harm or loss of goodwill to any Card Network; (xvii) termination is necessary to prevent loss to Provider or Card Issuers; (xviii) Merchant's type of business indicated on the Merchant Application or as conducted by Merchant could endanger Bank's safety or soundness; (xix) Merchant's owner, officer, Guarantor, or corporate entity has a separate relationship with Bank and that relationship is terminated, (xx) Merchant appears on any Card Network's security reporting; or (xxi) Provider's security for repayment becomes impaired.

4.03 **Effect of Bankruptcy.** Any account or security held by Provider will not be subject to any preference, claim or stay by reason of bankruptcy or similar Law. The parties expressly agree that the acquisition of Transactions hereunder is a financial accommodation and if Merchant becomes a debtor in any bankruptcy or similar proceeding, this Agreement may not be assumed or enforced by any other person and Provider will be excused from performance hereunder.

4.04 **Effect of Termination; Early Termination Fee.** If this Agreement is terminated, regardless of cause, Provider may withhold and discontinue the disbursement for all Cards and other Transactions in the process of being collected and deposited. If the Agreement is terminated for cause, Merchant acknowledges that Provider may be required to report Merchant's business name and the names and other identification of its principals to various Card Network and industry databases, including the Terminated Merchant File and the Merchant Alert to Control High Risk Merchants File ("MATCH"). **Merchant expressly agrees and consents to such reporting if Merchant is terminated for any reason requiring listing on the MATCH file.** Merchant waives and will hold harmless Provider from any claims that Merchant may raise as a result of Provider's MATCH file reporting. Upon termination of the Agreement, Merchant will immediately cease requesting Authorizations. If Merchant obtains any Authorization after termination, the fact that any Authorization was requested or obtained will not reinstate this Agreement. Further, Merchant will return all Provider property, forms, or equipment. All obligations for Transactions prior to termination (including payment for Chargebacks and Provider's expenses relating to Chargebacks) survive termination. Provider is not liable to Merchant for damages (including prospective sales or profits) due to termination. Following termination, Merchant will, upon request, provide Provider with all original and electronic copies of Transaction Records and Credit Vouchers, if any, that have been retained by Merchant as of the date of termination. Notwithstanding any terms to the contrary, if Windcave terminates this Agreement, Windcave may at its discretion determine that Merchant will not be required to pay early termination fees, and in such instance Merchant will not be required to pay early termination fees. Otherwise, upon termination, any amounts due to Provider will accelerate and be immediately due and payable, without any notice, declaration or other act whatsoever by Provider. The parties agree that if this Agreement is terminated before completion of the Initial Term for any reason other than a material uncured breach by Provider, Merchant will pay Windcave an early termination fee determined by multiplying (a) the number of months remaining from the date of termination to the end of the current Term, by (b) the average monthly processing fees paid by Merchant to Provider, plus Provider's costs and attorneys' fees incurred in connection with Merchant's termination of this Agreement. Merchant agrees that these damages are not a penalty but are a reasonable computation of the financial harm caused by the early termination of this Agreement.

ARTICLE V - MISCELLANEOUS

5.01 **Account Monitoring.** Merchant acknowledges that Provider will monitor Merchant's Transaction activity. In addition to Provider's right to fund a Reserve Account as set forth in Section 3.05, Provider may upon reasonable grounds suspend disbursement of Merchant's funds for any reasonable period of time required to investigate suspicious or unusual Transaction activity. Provider will make good faith efforts to notify Merchant promptly following such suspension. Provider is not liable to Merchant for any loss, either direct or indirect, which Merchant may attribute to any suspension of funds disbursement.

5.02 **Forms.** Merchant will use only the forms or modes of transmission of Transaction Records and Credit Vouchers that are provided or approved in advance by Provider, and Merchant may not use such forms other than in connection with Transactions.

5.03 **Indemnification.** Subject to State law applicable to the Merchant, the Merchant will defend, indemnify and hold Provider and its officers, directors, members, shareholders, partners, employees, agents, subcontractors and representatives harmless from and against any and all fines, penalties, claims, damages, expenses, liabilities or fees of any nature whatsoever, including attorneys' fees and costs (collectively, "Damages"), asserted against or incurred by Provider arising out of, relating to or resulting from, either directly or indirectly:

(a) a breach of the security of the system safeguarding Cardholder Information resulting in unauthorized access to Cardholder Information; (b) a breach of any representation, warranty or term of this Agreement, including, but not limited to, the data security provisions by Merchant, or any service provider, subcontractor or agent of Merchant; (c) the negligence, gross negligence or willful misconduct of Merchant in the performance of its obligations under this Agreement, including, but not limited to, the data security provisions; (d) any violation of applicable Law or Network Rules by Merchant; and (e) all third- party claims arising from the foregoing. Notwithstanding the preceding, Merchant is not liable to Provider if Damages are caused by, related to or arise out of Provider's gross negligence or willful misconduct, or Provider's breach of this Agreement. Merchant will promptly reimburse Provider for any assessments, fines, fees or penalties imposed by any Card Network in connection with this Agreement, including the data security provisions, and authorizes Bank to deduct any such sums from the Account, the Reserve Account or amount to otherwise be cleared and settled with Merchant.

5.04 **Records.** In addition to any records Merchant routinely furnishes to Provider under this Agreement, Merchant will preserve Transaction Records and Credit Vouchers and any written authorization of the Cardholder for the longer of the following: (a) two years after the Transaction is completed, (b) the period required by Law or the Network Rules, (c) if a dispute is pending, until such dispute is resolved.

5.05 **Requests for Copies.** Immediately after Merchant receives the request by Provider, Merchant will provide to Provider either the original or a legible copy

(in a size comparable to the actual Transaction Record) of the paper Transaction Record and any other documentary evidence available to Merchant that Provider reasonably requests to meet Provider's obligations under Law (including its obligations under the Fair Credit Billing Act) or otherwise to respond to questions concerning Cardholder accounts.

5.06 **Exclusivity.** Merchant agrees that, unless Merchant receives written permission to do so from Windcave, during the Term, Merchant will not enter into an agreement with any other entity that provides processing services similar to those provided by Provider and that Provider shall be Merchant's exclusive provider of all Card processing services as set forth in this Agreement.

5.07 **Fees and Charges.** Merchant will pay to Provider the fees and charges set forth on the Merchant Application including any additional charges applied to transactions that fail to meet Card Network requirements for the lowest interchange levels. The fees and charges will either be debited from the Account through ACH or withheld from daily payments to Merchant for such amounts and for any other fees, charges or adjustments incurred by Merchant and associated with processing services. Provider may change fees, including adding fees for additional services utilized by Merchant, upon thirty (30) days' written notice to Merchant. If Merchant disputes any charge or funding, Merchant must notify Windcave within 60 days of the date of the statement where the charge or funding appears.

5.08 **Security Interest.** This Agreement constitutes a security agreement under the Georgia Commercial Code. To secure payment of Merchant's obligations under this Agreement, Merchant grants to Provider a security interest in all now existing or hereafter acquired: (a) Transactions, Transaction Records, Credit Vouchers and other items submitted to Provider for processing by or for Merchant; (b) accounts receivable and payment rights relating to or arising from this Agreement, including all amounts due Merchant (including any rights to receive credits or payments hereunder); (c) accounts maintained with Bank or any institution other than Bank, including without limitation the Account and the Reserve Account, in the name of or for the benefit of, Merchant or any Guarantor of Merchant's obligations under this Agreement; (d) deposits, regardless of source, to Merchant's or any Guarantor's accounts with Bank or any institution other than Bank, including the Account and the Reserve Account; (e) all deposits and all other property and funds deposited by Merchant or withheld by Bank, including funds and property withheld as the result of security monitoring; and (f) proceeds of the foregoing. If Provider reasonably determines that Merchant has breached any obligation under this Agreement, or that proceeds of Merchant's future Transactions are unlikely to cover anticipated Chargebacks, credits, fees and adjustments, as reasonably determined by Provider (whether because this Agreement has been terminated or for any other reason), Provider may setoff or otherwise exercise its security interest without notice or demand by immediately withdrawing from or freezing any account or otherwise exercising its rights under this Agreement or those rights available under the Network Rules, applicable Laws, including the Georgia Commercial Code, or in equity. In addition to the collateral pledged above, Provider may require Merchant to furnish such other and different security as Provider deems appropriate in its sole discretion to secure Merchant's obligations under this Agreement. Bank may fully or partially prohibit withdrawal by Merchant of funds from Merchant's Account with Bank or financial institutions other than Bank, pending Bank's determination from time to time to exercise its rights as a secured party against such accounts in partial or full payment of Merchant's obligations to Bank. Merchant will execute any documents and take any actions required to comply with and perfect any security interest under this paragraph, at Merchant's cost. Merchant represents and warrants that no other party has a security interest or lien in any of the collateral pledged above, and Merchant will obtain Bank's written consent before it grants a lien or security interest in that pledged collateral to any other person. Merchant shall not assign to any third party any payments due to it under this Agreement, and all indebtedness arising from Transactions will be for bona fide sales of goods and services (or both) at its business locations and free of liens, claims, and encumbrances other than ordinary sales taxes; provided, however, that Merchant may sell and assign future Transaction receivables to Provider, its affiliated entities and/or any other cash advance funding source that partners with Provider or its affiliated entities, without consent from any Card Network. Notwithstanding the foregoing, Provider prohibits Merchant from selling or assigning future Transaction receivables to any third party without Provider's prior written consent.

5.9 **Modifications to Agreement.** From time to time Provider may amend any provision or provisions of this Agreement, including, without limitation, those relating to the discount rate or to other fees and charges payable by Merchant by mailing or emailing written notice to Merchant of the amendment at least thirty (30) days prior to the effective date of the amendment, and the amendment will become effective unless Provider receives Merchant's written notice of termination of this Agreement before such effective date. If Merchant continues to submit Transaction Records to Provider or otherwise continues to process Transactions with Provider after such thirty (30) day period (even if notice of objection was provided to Provider), then Merchant shall be deemed to have accepted and agreed to such amendment. In addition, Merchant acknowledges and agrees that this Agreement is subject to amendment by Provider to conform to the Network Rules

and Law and that amendments required due to changes in either the Network Rules, Law or judicial decision may become effective on such shorter period of time as Provider may specify if necessary to comply with the applicable Network Rule, Law or decision. As a matter of clarification, Merchant may not terminate this Agreement if Provider amends the Agreement as necessary to comply with applicable Network Rules, Law or a judicial decision.

5.10 **Warranty Disclaimer.** PROVIDER MAKES NO WARRANTIES REGARDING THE USE, OPERATION OR PERFORMANCE OR NON- PERFORMANCE OF SOFTWARE AND SYSTEMS UTILIZED FOR THIS AGREEMENT, WHETHER EXPRESS OR IMPLIED, AND PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

5.11 **Limitation of Liability.** Provider's liability with respect to any Transaction may not exceed the amount of the Transaction Record in connection with that Transaction less any applicable fees and charges. Merchant will be liable for all costs associated with Offline transactions, including but not limited to Chargeback costs. **In no event will Provider or its agents, officers, directors or employees be liable to Merchant for any indirect, incidental, exemplary, punitive, special or consequential damages whatsoever, including, but not limited to, lost profits**. Merchant waives all claims against Provider for any loss, claim, demand, penalty, action, delay, cost or expense (including reasonable attorneys' fees) of any kind unless Merchant provides written notice to Provider of the occurrence that gave rise to the alleged liability within thirty (30) days after Merchant knew or should have known of the occurrence. Merchant will indemnify and hold Provider harmless from any claim relating to any Transaction Record paid for by Provider as may be made by anyone by way of defense, dispute, offset, counterclaim or affirmative action, or for any damages of or losses that Provider may incur as a result of Merchant's

breach of this Agreement. Further, Merchant will reimburse Provider for all expenses and costs, including attorneys' fees, with regard thereto. Merchant acknowledges that the fees for the services provided to Merchant by Provider are very small in relation to the funds advanced to Merchant for Transactions and consequently Provider's willingness to provide these services is based on the liability limitations contained in this Agreement. Therefore, in addition to greater limitations on Provider's liability that may be provided elsewhere (including the per Transaction Record limitation above), any liability of Provider under this Agreement, whether to Merchant or any other party, whatever the basis of the liability, will not exceed, in the aggregate, an amount equal to the lesser of (a) the fees paid by Merchant to Provider during the last three (3) months, exclusive of fees and variable costs incurred by Provider to process Transactions, such as interchange costs, assessments and fees imposed by a third party or (b) **fifty thousand dollars ($50,000).**

5.12 **Waiver.** Provider's failure by Provider to enforce one or more of the provisions of this Agreement will not constitute a waiver of the right to enforce the same or other provision in the future.

5.13 **Written Notices.** All written notices and other written communications required or permitted under this Agreement will be deemed delivered immediately when hand-delivered or sent via facsimile or email and the sender obtains a fax or email confirmation receipt, and upon mailing when sent first class mail, postage prepaid, addressed as follows:

(a) If to Bank: At the email or address provided at the top of the Merchant Application.

(b) If to Windcave: At the email address, or address provided at the top of the Merchant Application.

(b) If to Merchant: At the email address, or address provided as the billing address and to the contact listed on the Merchant Application.

5.14 **Choice of Law; Jurisdiction; Waiver of Jury Trial.** Wyoming law governs this Agreement. To the extent permitted by applicable Law, Merchant and Provider waive any right to trial by jury in any action or proceedings regarding any litigation related to this Agreement and each agree that any such actions or proceedings will be tried by a judge without a jury.

5.15 **Entire Agreement; Assignability.** This Agreement expresses the entire understanding of the parties with respect to the subject matter hereof. This Agreement may be assigned by Bank without Merchant's or Windcave's consent. This Agreement may not be assigned, directly or by operation of law by either Merchant or Windcave, without Bank's prior written consent. This Agreement will be binding upon and inure to the benefit of the parties' respective heirs, personal representatives, successors and assigns.

5.16 **Deposit Account.** Merchant will at all times maintain an Account at a bank that is a member of the Federal Reserve ACH system and approved by Provider and will provide Provider with proper authorization to debit the Account. All credits for collected funds and debits for fees, payments and Chargebacks and other amounts for which Merchant is liable under the terms of this Agreement will be made to the Account. During the term of this Agreement and for a period of one (1) year after the termination of this Agreement, Merchant may not close or change the Account without prior written approval by Provider, which approval may not be unreasonably withheld. Merchant will be solely liable for all fees and costs associated with the Account and for all overdrafts. Merchant hereby grants to Provider a security interest in the Account to the extent of any and all fees, payments and Chargebacks and other amounts due which may arise under this Agreement, and Merchant will execute any document and obtain any consents or waivers from the bank at which the Account is maintained as requested by Provider to protect its security interests therein. Merchant will maintain sufficient funds in the Account to accommodate all Transactions contemplated by this Agreement and all other fees, charges, credits or other payments or amounts due under this Agreement.

5.17 **Credit and Financial Inquiries; Additional Locations; Inspections.** Provider may make, at any time, any credit inquires which it may consider necessary to accept or review acceptance of this Agreement or investigate Merchant's deposit or Card acceptance activities subsequent to acceptance of this Agreement. Such inquiries may include, but are not limited to, a credit and/or criminal check of Merchant and business including its proprietor, partners, principals, owners or shareholders or officers. Upon Provider's request, Merchant will provide the written consent of any person for which an inquiry has been or is to be made if such person has not executed this Agreement and will provide any financial statements, income tax and business tax returns and other financial information as Provider may consider necessary to perform initial or periodic reviews of Merchant's financial stability and business practices. Merchant may accept Cards only at locations approved by Provider. Additional locations may be added, subject to Provider's prior consent. Provider or Merchant may remove locations by providing notice as provided herein. Merchant will permit Provider, at any time and from time to time, to inspect locations to confirm that Merchant has or is adhering to the terms of this Agreement and is maintaining the proper facilities, equipment, inventory, records and license or permits (where necessary) to conduct its business. However, nothing in this paragraph may be deemed to waive Merchant's obligation to comply in all respects with the terms of this Agreement or the Network Rules. Provider, its internal and external auditors, and its regulators may audit compliance with this Agreement, compliance with Laws and Network Rules, including, but not limited to, relating to Card acceptance and Transaction processing, data security provisions and Card Network compliance. Merchant will make available its records maintained and produced under
this Agreement, and Merchant's facilities will be made accessible, upon notice during normal business hours for examination and audit and shall cooperate with such audits or examinations. Nothing in this section may be construed to require Merchant to give access to its facilities, personnel or records in a manner that

unreasonably interferes with its business operations. Each party will bear its own expenses of any audit.

5.18 **Marketing of Non-Card Services.** From time to time, Provider may offer to Merchant certain additional products and services which may or may not be related to the processing of credit card and debit card Transactions. If such offers are made, Merchant may decline the offers or be deemed to have accepted the offers and be liable for payment therefor. If any additional product or service is offered by Windcave independently of Bank, then Windcave (and not Bank) shall be responsible to deliver and perform such product and service and, accordingly, Merchant may not assert any claim against Bank as it relates to such additional product or service provided by Windcave. Likewise, if any additional product or service is offered by Bank independently of Windcave, then Bank (and not Windcave) shall be responsible to deliver and perform such product and service and, accordingly, Merchant may not assert

any claim against Windcave as it relates to such additional product or service provided by Bank.

5.19 **Force Majeure.** The parties will be released from liability hereunder if they fail to perform any obligation where the failure occurs by reason of any act of God, fire, flood, storm, earthquake, tidal wave, communications failure, sabotage, war, military operation, terrorism, national emergency, mechanical or electronic breakdown, civil commotion or the order, requisition, request or recommendation of any governmental authority, or either party's compliance therewith, or governmental regulation, or priority, or any other similar cause beyond either party's reasonable control.

5.20 **No Third-Party Beneficiary.** No other person or entity may be deemed to be a third-party beneficiary of this Agreement.

5.21 **Severability; Conflict with Network Rules.** If any provision in this Agreement is for any reason held to be invalid or unenforceable, no other provision shall be effected thereby, and this Agreement shall be construed as if the invalid or unenforceable provision had never been a part of it. In the event of a conflict between this Agreement and the Network Rules, the Network Rules shall govern and control.

5.22 **IRS Reporting Information.** Pursuant to Section 6050W of the Internal Revenue Code, merchant acquiring entities such as Bank and third-party settlement organizations are required to file an information return reflecting all payment card transactions and third-party network transactions occurring in a calendar year. This requirement applies to returns for all calendar years after December 31, 2010 and Merchant will receive a form 1099-K reporting Merchant's gross transaction amounts for each calendar year. In addition, amounts payable under Section 6050W are subject to backup withholding requirements. Merchant acquirers such as Bank, either itself or through third parties, are required to perform backup withholding by deducting and withholding income tax from reportable transactions if (a) the payee fails to provide the payee's taxpayer identification number (TIN) to the merchant acquirer; or (b) if the IRS notifies the merchant acquirer that the TIN (when matched with the name) provided by the payee is incorrect. Accordingly, to avoid backup withholding, it is very important that Merchant provides Bank with the correct name and TIN that Merchant uses when filing its income tax return that includes the transactions for Merchant's business. In addition to the fees set forth on the Merchant Application, if Merchant fails to comply with the obligations set forth in this section, Provider may charge Merchant additional amounts determined by Provider and may pass through any additional fines, costs or expenses incurred by Provider.

5.23 **Confidentiality.** Merchant shall protect all information or other items proprietary to Provider that Merchant obtains knowledge of or access to as a result of Provider's provision of the services pursuant to this Agreement (collectively, "Provider Confidential Information") from unauthorized disclosure, publication, or dissemination with the same standard of care and discretion Merchant uses to protect similar confidential information of Merchant's own, but in no event less than reasonable care. Furthermore, Merchant shall not use, reproduce, distribute, disclose, or otherwise disseminate Provider Confidential Information, except in connection with the performance of Merchant's obligations under this Agreement. The Provider Confidential Information described in the previous sentence, shall include, but not be limited to, the following types of information and other information of a similar nature (whether or not reduced to writing): scientific, technical, or business information, product makeup lists, ideas, concepts, designs, drawings, techniques, plans, calculations, system designs, formulae, algorithms, programs, software (source and object code), hardware, manuals, test procedures and results, identity and description of computerized records, identity and description of suppliers, customer lists, processes, procedures, trade secrets, "know-how," marketing techniques and material, marketing and development plans, price lists, pricing policies, and all other financial information. The obligations of non-disclosure provided hereunder shall continue during the Term and, (i) with respect to Provider Confidential Information that does not constitute a trade secret, for a period of three (3) years thereafter and, (ii) with respect to Provider Confidential Information that rises to the level of a trade secret under applicable Law, for such period of time thereafter as the Provider Confidential Information shall retain its status as a trade secret under applicable law, and no less than three (3) years thereafter.

5.24 **Governmental Immunity.** Notwithstanding anything contrary herein or that may be interpreted as such, the Town of Jackson does not waive its governmental immunity by entering into this Agreement, and fully retain all immunities and defenses provided by law with respect to any action based on or occurring as a result of this Agreement.

The Terms below will only apply for American Express transactions that Windcave settles to Merchant's Account. The Terms Below Are Additional Terms Applicable Specifically to American Express Card Acceptance (capitalized terms below not defined elsewhere in the Agreement shall have the meanings assigned in the American Express Network Rules and American Express OptBlue Program Operating Regulations ("Operating Regulations")). With respect to participation in an American Express acceptance program, in the event of a conflict between the terms below and other terms of this Agreement, the terms below shall control with respect to American Express transactions only. Merchant shall be bound by American Express Network Rules, including the Merchant Operating Guide which explains the policies and procedures related to accepting American Express Cards: www.americanexpress.com/merchantopguide as may be amended from time to time. The Merchant Operating Guide is incorporated into this Agreement by reference.

A5.24 **Transaction Data**. Merchant authorizes Windcave and/or its affiliates to submit American Express Transactions to, and receive settlement on such Transactions from, American Express or Bank on behalf of Merchant.

A5.25 **Marketing Message Opt-Out**. Merchant may opt-out of receiving future commercial marketing communications from American Express by contacting Windcave. Note that Merchant may continue to receive marketing communications while American Express updates its records to reflect this choice. Opting out of commercial marketing communications will not preclude Merchant from receiving important transactional or relationship messages from American Express.

A5.26 **Conversion to American Express Direct Merchant**. Merchant acknowledges that it may be converted from American Express Card OptBlue program to a direct relationship with American Express if and when it becomes a High CV Merchant. A Merchant becomes a High CV Merchant due to (i) growth in Charge Volume after it signs to participate in the Program: (ii) Windcave signing a Merchant that does not meet the eligibility criteria in Section 2.2, "Qualification Requirements" of the Operating Regulations; or (iii) any other reason. If this occurs, upon such conversion, (i) Merchant will be bound by American Express' then-current Card Acceptance Agreement; and (ii) American Express will set pricing and other fees payable by Merchant for Card acceptance.

A5.27 **American Express as Third Party Beneficiary**. Notwithstanding anything in the Agreement to the contrary, American Express shall have third-party beneficiary rights, but not obligations, to the terms of this Agreement applicable to American Express Card acceptance to enforce such terms against Merchant.

A5.28 **American Express Opt-Out**. Merchant may opt out of accepting American Express Cards at any time without directly or indirectly affecting its rights to accept Cards bearing Marks of other Card Networks and Other Payment Products. Merchants may elect to accept Other Payment Products without also accepting American Express Cards.

A5.29 **Refund Policies**. Merchant's refund policies for American Express purchases must be at least as favorable as its refund policy for purchase on any other Card Network or any Other Payment Products, and the refund policy must be disclosed to Cardholders at the time of purchase and in compliance with Applicable Law. Merchant may not bill or attempt to collect from any Cardholder for any American Express Transaction unless a Chargeback has been exercised, Merchant has fully paid for such Chargeback, and it otherwise has the right to do so.

A5.30 **Establishment Closing**. If Merchant closes any of its Establishments, Merchant must follow these guidelines: (i) notify Windcave immediately; (ii) policies must be conveyed to the Cardholder prior to completion of the Transaction and printed on the copy of a receipt or Transaction record the Cardholder signs; (iii) if not providing refunds or exchanges, post notices indicating that all sales are final (e.g., at the front doors, by the cash registers, on the Transaction record and on websites and catalogs); (iv) return and cancellation policies must be clearly disclosed at the time of sale; and (v) for Advance Payment Charges or Delayed Delivery Charges, Merchant must either deliver the goods or services for which Merchant has already charged the Cardholder or issue Credit for any portion of the Transaction for which Merchant has not delivered the goods or services.

A5.31 **Disclosure and Consents**. Merchant hereby consents (i) for Windcave to collect and disclose Transaction Data, Merchant Data, and other information about the Merchant to American Express; (ii) for American Express to use such information to perform its responsibilities in connection with the Program, promote the American Express Network, perform analytics and create reports, and for any other lawful business purposes, including commercial marketing communications purposes within the parameters of the Program Agreement, and important transactional or relationship communications from American Express; and (iii) for American Express to use the information obtained in the Merchant's application at the time of setup to screen and/or monitor Merchant in connection with Card marketing and administrative purposes.

A5.32 **Data Quality**. Merchant agrees to cooperate with Provider as required to ensure data quality and that Transaction Data and customer information is processed promptly, accurately and completely, and complies with American Express Technical Specifications.

A5.33 **No assignment of payments.** Merchant agrees not to assign to any third party any payments due to it under this Agreement, and all indebtedness arising from Charges will be for bona fide sales of goods and services (or both) at its Establishments and free of liens, claims, and encumbrances other than ordinary sales taxes; provided, however, that the Merchant may sell and assign future Transaction receivables to Provider, its affiliated entities and/or any other cash advance funding source that partners with Provider or its affiliated entities, without consent of American Express.

A5.34 **Termination.** Provider may terminate the Merchant's right to accept American Express Cards if it breaches any of the provisions in this Agreement related to American Express or the Operating Guide. Provider has the right to immediately terminate a Merchant for cause or fraudulent or other activity, or upon American Express' request.

A5.35 **Compliance with Applicable Law.** Merchant must comply with all Applicable Laws, rules and regulations relating to the conduct of the Merchant's business. Merchant is responsible for being aware of and adhering to privacy and data protection laws and providing specific and adequate disclosures to Cardholders of collection, use, and processing of personal data.

A5.36 **Compliance with Security Requirements and Data Incidents.** Merchant must comply with the American Express Data Security Requirements (DSR) and Payment Card Industry Data Security Standard (PCI DSS), each as described in Chapter 15, "Data Security" of the Operating Regulations. Merchant must report all instances of a Data Incident immediately to Windcave after discovery of the incident.

A5.37 **American Express Licensed Marks.** Merchant must cease all use of, and remove American Express Licensed Marks from the Merchant's website and wherever else they are displayed upon termination of this Agreement or the Merchant's participation in the American Express OptBlue Program.

WINDCAVE AGREEMENT FOR
Town of Jackson, Wyoming

DATED this 22nd day of May 2025

PARTIES

WINDCAVE INC. (**Windcave**)

Contact Details for Notices:

Physical Address: 1601 N. 7th St., Suite 420, Phoenix, AZ 85006

Postal Address: 1601 N. 7th St., Suite 420, Phoenix, AZ 85006

Email: contracts@windcave.com

Phone: +1 310 670 7299

Fax: +1 310 670 7298

CustID: 136479

Town of Jackson, Wyoming (**Customer**)

Contact Details for Notices:

Physical Address: 150 East Pearl Avenue Jackson, WY 83001

Postal: PO Box 1687 Jackson, WY 83001

Phone: 307-732-8498

Email: cfrei@tetoncountywy.gov and clerk@jacksonwy.gov

AGREEMENT

1. Windcave is a provider of real time payment processing solutions in the USA. Windcave has agreed to supply solutions to Customer in accordance with the terms and conditions set out in this Agreement.
2. This Agreement is structured in two parts, namely Part A (Specific Terms) and Part B (General Terms). Part A contains the specific terms relevant to each supply of solutions to Customer and may include one or more Schedules. Part B sets out Windcave's general terms and conditions which will apply to all supplies of solutions.
3. It is intended that further supplies of solutions may be made and will be governed by this Agreement by way of the parties signing a further Part A Schedule for each supply. The attached schedules, or any schedules completed and signed after the date of this Agreement but referring to this Agreement, are a part of this Agreement. All purchase orders between the parties are subject to this Agreement's terms.
4. Windcave grants to Customer a non-exclusive, non-transferable licence to use the Windcave Solution for the Term solely for the purposes of the Permitted Use. Customer must not sub-license, transfer, assign, rent or sell the Windcave Solution or the right to use the Windcave Solution.

EXECUTION

SIGNED for and on behalf of **WINDCAVE INC.** by:	**SIGNED** for and on behalf of **Town of Jackson, Wyoming**
_____ Signature	_____ Signature
_____ Name/Title	_____ Name/Title (Director / Authorized Signatory)
_____ Date	_____ Date

PART A – SPECIFIC TERMS

SCHEDULE 1 – SERVICES ACCESS ARRANGEMENT

1. SERVICES ACCESS ARRANGEMENT

(a) **Windcave:** Windcave grants to Customer a non-exclusive, non-transferable licence to use the Windcave Solution for the Term solely for the purposes of the Permitted Use. Customer must not sub-license, transfer, assign, rent or sell the Windcave Solution or the right to use the Windcave Solution.

2. TERM

(a) **Commencement Date: May 31, 2025,** Such Commencement Date may be postponed in writing, at Windcave's sole discretion, until the date. Windcave receives a copy of the Agreement countersigned by Customer.

(b) **Initial Term: 24** months beginning on the Commencement Date, unless earlier terminated under Part B, clause 12.

(c) **Renewal Term: 24** consecutive months, unless earlier terminated under Part B, clause 12, subject to automatic renewal pursuant to Part B, clause 2 if neither party gives three month's advance notice of nonrenewal..

3. FEES

(a) **Establishment Fee: $100.00**

(b) **Minimum Monthly Fee: $0** per calendar month. Includes **0** Transactions per calendar month. Additional Transactions in each calendar month charged at the rate of **$0.06** per Transaction.

(c) **Additional Fees:** Additional users to the Payment Manager can be set up, but will incur a one-time fee of **$30.00**. If Windcave needs to configure or change additional electronic merchant numbers on the Windcave Host, there is a fee of **$100.00** per merchant account. Customer will be charged a **$5.00** SAP fee per calendar month charge per connected card reader for unattended and attended card reader devices.

(d) **Price Adjustment**: Windcave shall have the right to vary the Fees enumerated in Part A of this Agreement at the maximum of 5% for each fee during the Renewal Term of this Agreement by providing Customer at least 30 calendar days' written notice before or during the Renewal Term. If Windcave exercises its right to modify the Fees, Customer shall thereafter have the right to terminate the Agreement with 30 days' written notice to Windcave within 60 days of Windcave's written notice that it is modifying the Fees.

4. PAYMENT TERMS

(a) **Direct Debit or Automatic Credit Card Payments:** Customer will pay Windcave the Fees by fees by Direct Debit or Automatic Credit Card on the dates specified below.

(b) **Due Date for Payment of Set Up Fees:** Customer will pay Windcave the Establishment Fee immediately when Windcave makes the Windcave Solution available to customer.

(c) **Due Date for Payment of Monthly Fees and Additional Fees:** Customer will pay Windcave the Monthly Fees and Additional Fees within 30 days of the date of Windcave's invoice for those Fees

5. SUPPORT SERVICES

(a) **Online Help and General Support:** Windcave will provide the Support Services to Customer as set out in Part B.

6. SPECIAL CONDITIONS

(a) **This agreement is applied to Town of Jackson, Wyoming | CID: 136479**

7. EXECUTION

The parties acknowledge and agree that this Schedule is governed by the Agreement between the parties containing Windcave's General Terms and Conditions.

SIGNED for and on behalf of **WINDCAVE INC.** by:	**SIGNED** for and on behalf of **Town of Jackson, Wyoming** by:
_____	_____
Signature	Signature
_____	_____
Name/Title	Name/Title (Director / Authorized Signatory)
_____	_____
Date	Date

PART B – GENERAL TERMS & CONDITIONS

1. Definitions and Interpretation (Not all defined terms are applicable to all goods and services provided under the Agreement)

1.1 Definitions: In this Agreement, unless the context indicates otherwise:

Acquirer means a bank or any financial institution or a card issuer of financial or non-financial transactions which receives and transmits Transactions via the Windcave Solution;

Agreement means this Agreement, including the Application Form, each of Part A and its Schedule(s) and Part B, and any attachments that may be agreed between the parties, as each may be amended in writing from time to time;

Application Form means Customer's online the Windcave Solution application form submitted to Windcave via the Windcave Website. Where no separate Part A is entered into, the Application Form will constitute Part A of this Agreement for the purposes of this Part B;

Business Day means any day of the week except Saturday, Sunday or a day on which banks are authorized or required to be closed in Arizona;

Chargeback means the procedure by which a sales record or other indicia of a card transaction (or disputed portion thereof) is denied or returned to Acquirer or the card issuer after it was entered into the appropriate settlement network for payment, in accordance with the rules of Visa, MasterCard or a similar card association ("Rules"), for failing to comply with the Rules, including, without limitation by reason of cardholder disputes, the liability for which is Customer's responsibility and Customer agrees to pay.

Commencement Date means the commencement date recorded in Part A in one or more Schedules; Such Commencement Date may be postponed in writing, at Windcave's sole discretion, until the date Windcave receives a copy of the Agreement countersigned by Customer.

Confidential Information means, in relation to either party, any information:

(a) as defined in Wyo. Stat. ss 16-4-201 *et.seq*.;
(b) relating to the terms of this Agreement;
(c) relating directly or indirectly to research or development by, accounting for, or the marketing of, the business of that party or its suppliers or customers;
(d) disclosed by that party to the other party on the express basis that such information is confidential; or
(e) which might reasonably be expected by the other party to be confidential in nature;

Customer means the customer specified in this Agreement and where applicable includes its employees, contractors and agents.

Default Interest Rate means interest at the rate of 2% above the base lending rate charged by Windcave's bankers to Windcave from time to time;

Delivery takes place when the Customer receives the Goods from Windcave, or, in the case of returns, when the Goods arrive at Windcave's premises;

Documentation means any user, training or system manuals for the Windcave Solution (whether in printed or electronic form) which describes and provides guidance on the use of the Windcave Solution (or any aspect of the Windcave Solution);

Emergency Support Services means telephone support that Windcave may provide (but is not obligated to provide unless it agrees to do so in a separate written agreement) for emergency breakdowns resulting in repeated failures in the transmission of Transactions and is available 24 hours a day, seven days a week by calling 310 670 7299 outside of Support Hours. If applicable, Windcave will use reasonable efforts to respond to any emergency phone call within 30 minutes of receiving the support request;

Fees means and includes each of the fees detailed in the Schedule(s) contained in Part A;

Goods means the Goods and/or Devices (if any) recorded in Part A in one or more Schedules;

Intellectual Property means registered and unregistered trade marks (including logos and trade files), domain names, copyright, patents, petty patents, utility models, registered and unregistered designs, circuit layouts, rights in computer software, databases and lists, Confidential Information, software (whether in object code or source code), and all other rights anywhere in the world resulting from intellectual activity;

Payline Manager means Payline Portal which Customer is able to access by logging onto the Windcave Website with an assigned username and password;

PCI Standards means the Payment Card Industry standards, requirements and guidelines issued by the Payment Card Industry Data Security Council from time to time including the Payment Card Industry Data Security Standard PIN Entry Device requirements and guidelines, and the Payment Application Data Security Standard;

Permitted Use means the transmission to, and receipt from, an Acquirer of data relating to Windcave Supported Transactions and expressly excludes, without limitation, use for the processing of transactions of, or for the benefit of, any person other than Customer;

Security Standards means each of:

(a) any data protection or data security standards issued by an Acquirer which receives and accepts Windcave Supported Transactions from Customer; and
(b) the PCI Standards;

Software means the software and other related Windcave products which:

(a) form part of the Windcave Solution; and
(b) is owned or licensed by or developed by, or on behalf of, Windcave and supplied to Customer, including all upgrades, updates, alterations and modifications and other changes to such software by or on behalf of Windcave from time to time, but excluding any third party software and firmware forming part of, or supplied with, the Windcave Solution;

Special Conditions means the special conditions (if any) recorded in Part A in one or more Schedules;

Support Hours means the period from 8am to 9pm (PST) on any Business Day and 9am to 5pm (PST) on non-Business Days;

Support Services means and includes:

(a) Online Help: from time to time Windcave may display Frequently Asked Questions and Answers on the Windcave Website;
(b) General Support: enquiries may be sent to: support@windcave.com or made by telephone to 310 670 7299. Windcave will respond to such enquiries during Support Hours;

Term means the Initial Term recorded in Part A in one or more Schedules and includes any Renewal Terms as recorded in Part A in one or more Schedules and defined in clause 2(b);

Tokenized Data means data for which Windcave has substituted a sensitive data element with a non-sensitive equivalent that has no extrinsic or exploitable meaning or value; and

Transaction means a message pair consisting of a message relating to a Windcave Supported Transaction transmitted by Customer to an Acquirer through the Windcave Solution and a response to that message from the Acquirer to Customer through the Windcave Solution;

Windcave means Windcave Inc., a California corporation with offices in Phoenix, Arizona;

Windcave Host means the host server known as Windcave Host to which Customer may be connected using the Software and which is in turn linked to an Acquirer to enable Windcave Supported Transactions to be processed in real time;

Windcave Logo means the Windcave logo supplied (in electronic format) by Windcave to Customer (as may be updated from time to time by Windcave);

Windcave Solution means the solution provided by Windcave for the transmission of data relating to Windcave Supported Transactions between a Customer and an Acquirer, incorporating the Software and including access (via the internet) to the Windcave Host and the Support Services;

Windcave Supported Transactions means transactions from Customers:

(a) accepting payment for goods and services by means of credit card, debit card, prepaid card, gift card or any other means of payment which Windcave agrees to support through the Windcave Solution from time to time;
(b) accepting loyalty cards, rewards cards, points cards, discount cards or club cards; or
(c) providing services in relation to the sale and use of any of the cards referred to in paragraphs (a) and (b) above including the issue of such cards and the crediting or debiting of value to such cards;

Windcave Website means the website maintained by Windcave and accessible by Customer for viewing Transactions, data entry, refunding, report generating and other features related to Transactions;

1.2 Interpretation: In this Agreement, unless the context indicates otherwise:

(a) the singular includes the plural and vice versa;
(b) clause and other headings are for ease of reference only and will not affect this Agreement's interpretation;
(c) the term **includes** or **including** (or any similar expression) is deemed to be followed by the words without limitation;
(d) references to a **person** include an individual, company, corporation, partnership, firm, joint venture, association, trust, unincorporated body of persons, governmental or other regulatory body, authority or entity, in each case whether or not having a separate legal identity;
(e) any obligation not to do anything includes an obligation not to suffer, permit or cause that thing to be done;

(f) all monetary amounts are stated exclusive of applicable taxes if any and in US dollars; and

(g) in the event of any inconsistency between the terms of any of the following, they will have precedence in the descending order of priority set out below:

(i) Part A – Specific Terms and Schedules;

(ii) Part B – General Terms and Conditions;

(iii) The Application Form.

2. Term

2.1 **Initial Term:** This Agreement commences on the Commencement Date and will continue for the Initial Term, unless earlier terminated under Part B, clause 12.

2.2 **Renewal:** Upon expiry of the Initial Term, this Agreement will automatically continue for further periods of the number of consecutive months recorded in Part A in one or more Schedules (each such further period being a **Renewal Term**) on the same terms and conditions unless either party gives the other party not less than 3 months' notice in writing prior to the expiry of the Initial Term or the then current Renewal Term that it does not wish this Agreement to continue beyond the Initial Term or that Renewal Term as the case may be.

3. Payment

3.1 **Fees:** Customer will pay Windcave the Fees without setoff or deduction within 30 days of the date of Windcave's invoice for those Fees.

3.2 **Taxes**: Customer is responsible for all applicable taxes, duties and levies on the rental, loan or purchase or sale of goods and services (other than Windcave's income tax) assessed in connection with its use of the Windcave Solution and the provision of services under this Agreement. To the extent that any Fees paid by Customer under this Agreement exclude any taxes or duties payable in respect of the Goods or Services provided under this Agreement in the jurisdiction where the payment is either made or received, where any such taxes or duties are payable by Windcave, Customer agrees to pay to Windcave the amount of such taxes or duties in addition to any Fees owed under this Agreement. Notwithstanding the foregoing, you may have obtained an exemption from relevant taxes or duties as of the time such taxes or duties are levied or assessed. In that case, you will have the right to provide to Windcave with evidence of any such exemption information, in which case Windcave will use reasonable efforts to provide such invoicing documents as may enable you to obtain a refund or credit for the amount so paid from any relevant revenue authority if such a refund or credit is available.

3.3 **Default Interest for Late Payment:** Subject to Part B, clause 3.4(c)(ii), Customer must pay Windcave interest at the Default Interest Rate on any overdue amounts under this Agreement, calculated daily from the due date until the actual date of payment, provided that Default Interest will not accrue on an invoice until and unless the invoice remains unpaid for at least 45 days after the date of the invoice.

3.4 **Disputed Invoices:** Where Customer has reasonable grounds to dispute any portion of any amount invoiced by Windcave to Customer under this Agreement (**disputed portion**):

(a) Customer will notify Windcave of such dispute and the grounds for such dispute within 5 Business Days of receiving the invoice;

(b) any undisputed portion of the invoice will remain payable on the due date for payment;

(c) provided that Customer has complied with clause 3.4(a), Customer will not be required to pay:

(i) the disputed portion until the parties' dispute has been resolved by agreement between the parties or in accordance with Part B, clause 19.2; or

(ii) any interest under clause 3.3 on the disputed portion unless the dispute is resolved with the effect that Customer is required to pay all (or part) of the disputed portion, in which case Customer will pay the interest on the disputed portion (or that part of that disputed portion) in accordance with clause 3.3. Interest will be payable from the date that payment would have been due under clause 3.1 but for the dispute until the date that disputed portion is paid to Windcave in full.

3.5 **Termination and Suspension:** If Customer does not timely pay Fees due and owing pursuant to this Agreement, Windcave may terminate this Agreement under Part B, Clause 12.2. Alternatively, Windcave may temporarily suspend the provision of the Windcave Solution to Customer. Customer agrees that Windcave will have no liability for such termination or suspension.

4. Mutual Responsibilities

Each party represents and agrees:

4.1 **Power and Authority:** that it has full power and authority necessary to validly enter into and perform all its obligations under this Agreement; and

4.2 **Requirements:** to comply with the other party's reasonable security, confidentiality and operational requirements of which it has been given reasonable notice.

5. Customer Responsibilities

Customer represents and agrees that it:

5.1 **Suitability:** has made, and will continue to make, its own assessment of the suitability, adequacy, compatibility and appropriateness of the Windcave Solution for its purposes;

5.2 **Comply with Instructions:** will comply with Windcave's restrictions, instructions and Documentation in relation to the use of the Windcave Solution, including those set out in this Agreement;

5.3 **Use by Others:** will ensure that only authorized persons use the Windcave Solution and that the Windcave Solution is used only for the Permitted Use and as expressly authorized under this Agreement;

5.4 **Responsibility for Use:** will accept all responsibility for the reliance on and use of the Windcave Solution by Customer and its employees, contractors and agents;

5.5 **Obtain Equipment etc.:** will obtain and maintain all equipment, software and services needed to enable it to receive and use the Windcave Solution;

5.6 **Accurate Customer Information:** warrants that all information provided by Customer to Windcave in the Application Form is accurate and correct, and that Customer will notify Windcave in writing if such information changes or ceases to be accurate in any way;

5.7 **Provide Sufficient Information:** will ensure that sufficient information is given to Windcave to enable Windcave to comply with its obligations under this Agreement and that such information is timely, complete and accurate;

5.8 **Personal Information:** acknowledges that any personal information concerning Customer or its personnel which is provided to Windcave by or on behalf of Customer may be:

(a) used by Windcave for the purpose of providing the Windcave Solution, the Support Services and any other services to Customer; and

(b) disclosed by Windcave to its affiliates and other services providers to enable Windcave to provide the Windcave Solution, the Support Services and any other services to Customer;

5.9 **Notify of Third Party Infringement:** will immediately notify Windcave upon becoming aware of any third party infringing Windcave's Intellectual Property rights in any manner;

5.10 **Responsible for Connecting to Windcave Host:** is responsible for all charges and costs associated with connecting to the Windcave Host to operate the Windcave Solution. Windcave will provide Customer with reasonable technical information and Software necessary to enable Customer to connect to the Windcave Host;

5.11 **Requisite Review of Payline Portal:** Customer shall be required, on a daily basis, to review with due care Customer's payline portal, established by Windcave, to review Transactions for errors. If an error is discovered by Customer, Customer must notify Windcave in writing within three (3) Business Days of the date an error occurs; provided, that Windcave will have no liability or obligations of any kind with respect to errors that are not reported to Windcave within such three (3) Business Day period. In addition, Customer shall be required to, on a daily basis review with due care bank settlement files to ensure deposits occur without error. If an error is discovered by Customer, Customer must notify Windcave in writing within three (3) Business Days of the date an error occurs; provided, that Windcave will have no liability or obligations of any kind with respect to errors that are not reported to Windcave within such three (3) Business Day period. Windcave's liability under this Section 5.11 (Requisite Review of Payline Portal) of the Agreement is governed by, and fully subject to, the terms of Section 10 of this Agreement.

5.12 **Comply with Law Generally:** will comply with all relevant laws in its use of the Windcave Solution and carrying out its obligations under this Agreement.

5.13 **Improperly Deposited Funds:** will return funds that Windcave deposits in Customer's bank account(s) that do not rightfully belong to Customer ("Improperly Deposited Funds") without offset or delay. Customer will return all Improperly Deposited Funds to Windcave within five (5) calendar days of a written request to do so by Windcave. If Customer fails to comply with the terms of this Section, Windcave may immediately suspend services to Customer until Customer returns the Improperly Deposited Funds. Customer will be liable to Windcave for the Improperly Deposited Funds, and costs incurred by Windcave in recovering the Improperly Deposited Funds.

5.14 **Return of Old Goods:** For Goods that Customer ceases using for the Permitted Use ("Unused Goods"), Customer will return such Unused Goods to Windcave within 30 calendar days. Unused Goods include, but are not limited to, Goods Customer has ceased using due to the Goods becoming obsolete, Goods that no longer operate, and Goods that are replaced per the warranty

set forth in Part B, clause 7.3 of this Agreement. Customer will pay all shipping and restocking fees and costs associated with returning the Unused Goods to Windcave. Alternatively, instead of returning Unused Goods to Windcave, Customer may provide Windcave a secure destruction certificate evidencing that the Unused Goods were destroyed in compliance with the Security Standards within the same 30 calendar day period.

6. Windcave's General Responsibilities

Windcave agrees that it will:

6.1 Good Faith: comply with all relevant laws and co-operate with Customer (and Customer's service providers) in connection with the Windcave Solution;

6.2 No Requirement to Decrypt Tokenized Data: be under no obligation to decrypt and transmit Tokenized Data to Customer or any third party.

7. Windcave Warranties

7.1 Security Standards: Windcave confirms that Windcave will throughout the term of this Agreement comply with the requirements of the Security Standards.

7.2 Limitations on Warranties: To the fullest extent permitted by law, except as expressly set out in this Agreement, Windcave disclaims and excludes all warranties, conditions, terms, representations or undertakings, whether express, implied, statutory or otherwise, including any condition or warranty of merchantability or fitness for a particular purpose. Windcave does not warrant that:

(a) the Windcave Solution, the Goods, the Software or the Documentation will meet Customer's requirements; or

(b) the Windcave Solution the Goods, the Software and the Documentation will be uninterrupted or error free, or that all errors will be corrected; or

(c) that the Goods will be free of defects in design, materials or workmanship or will comply with any applicable equipment manufacturer's or software developer's specifications.

Customer understands and acknowledges that an authorization obtained through the Windcave Solution only confirms the availability of the cardholder's credit at the time of the authorization. It does not warrant that the person presenting the card is the rightful cardholder, nor is it an unconditional promise, guarantee or representation by Acquirer, processor or Windcave that a transaction is or will be deemed valid and not subject to dispute, debit or chargeback.

7.3 Supply Warranty: Windcave warrants that the Goods to be delivered under this Agreement will be free from defects in workmanship (labour and parts included, but transport excluded) during a warranty period commencing on the Commencement Date and concluding twelve (12) calendar months later ("Original Warranty Period). As to repaired or exchanged Goods, during the Original Warranty Period here above mentioned, the warranty period on the exchanged or repaired Goods shall expire at the conclusion of the Original Warranty Period. With respect to Windcave's supply warranty:

(a) Any defective Goods, under warranty, shall be replaced or repaired, free of charge, at Windcave's discretion (to the exclusion of compensation for any other damage), and the work shall be carried out at Windcave or its partner's or subcontractor's premises. Customer will pay the costs of transport of the Goods (including insurance) to Windcave.

(b) Windcave has the choice to repair the Goods with spare parts or new parts. The defective elements, repaired, will become the property of Windcave.

(c) The time when the Goods are repaired or unavailable during the warranty period will not give rise to an extension of the warranty period as set forth in this Section, subject to legal mandatory provisions.

(d) Customer must return warranted Goods that are replaced subject to this warranty back to Windcave within 30 calendar days of replacement Goods being shipped to Customer. Customer shall pay the shipping and restocking fees to return the old, warranted Goods back to Windcave.

7.4 Exclusions to Supply Warranty: Windcave will have no liability under the Supply Warranty described in Section 7.3 in respect of:

(a) Defects, breakdowns, or malfunctions due to failure to properly follow the installation process and instructions for use or an external cause to the Goods (including, but not limited to, shock, lightning fire, vandalism, malicious action, contacts with various liquids or vermin or water damage of any nature, and inappropriate electric voltage); or modifications to the Goods made without the written approval of Windcave; or a lack of every day maintenance (as described in the Documentation); or a lack of supervision or care; or improper storage or poor environmental conditions, particularly those related to temperature and hygrometry effects of variations of electric voltage from the electric network; or from the earth or repair work; or maintenance of the Goods by persons not authorized by Windcave;

(b) Damage due to insufficient or bad packaging of the Goods when returned to Windcave;

(c) Wear and tear from normal use of the Goods and accessories;

(d) Communication problems related to an unsuitable environment, including problems accessing the Internet, transmission faults, local network faults, and modification of the parameters of the relevant cellular network after sale of the Goods;

(e) Supply of new versions of Software. If, for example, Windcave produces new Software that is not necessary to fulfil its obligations under this Agreement, Windcave is not required to make such Software available to Customer;

(f) Malfunction due to the use of products or accessories that are non-compatible with the Goods;

(g) Goods returned to Windcave without Windcave's prior consent or that Windcave has not had an opportunity to troubleshoot;

(h) Defects, breakdowns, or malfunctions due to **obstructing material** being placed on or into the Goods. Examples of obstructing material include, but is not limited to, paper, plastic, and metal objects.

8. Intellectual Property

All Intellectual Property rights in the Windcave Solution, the Goods, the Software, the Documentation and any work or thing developed or created by or on behalf of Windcave under or in connection with this Agreement (such work or thing being **Developed Works**), are exclusively owned by Windcave (or Windcave's licensors or suppliers). Customer acknowledges that there is no transfer of title, Intellectual Property rights or ownership of:

(a) the Windcave Solution, the Goods, the Software, the Documentation or any part thereof; or

(b) any Developed Works; to Customer under this Agreement and Customer will not dispute Windcave's (or Windcave's licensors or suppliers) ownership of the property referred to in this clause 8.

9. Not used

Not used.

10. Liability

To the fullest extent permitted by applicable law:

10.1 Remedy: Subject to clauses 10.2 and 10.3, Customer's sole and exclusive remedy for breach of any warranty or of any of Windcave's obligations under this Agreement is (at Windcave's option) the supply or re-supply of the Windcave Solution, the Goods, the Software, or the Documentation or the refund or waiver of Fees for the relevant part of the Windcave Solution, the Goods, the Software, or the Documentation which is the subject matter of, or directly related to, the breach.

10.2 Limitation: In no event will Windcave's total liability to Customer under this Agreement for any one or more defaults as described in clause 10.1 exceed the amount paid by Customer to Windcave under this Agreement in the 3 months following execution of this Agreement.

10.3 Exclusion: In no event will Windcave be liable to Customer whether in contract, tort (including negligence) or otherwise in respect of any:

1. punitive, incidental, indirect or consequential damages, damages for loss of profits, business interruption, loss of data, loss of goodwill, arising out of, or in connection with, this Agreement, in each case even if such party has been advised of the possibility of such damages;

2. loss, damage, cost or expense suffered or incurred by Customer, to the extent this results from any act or omission by Customer; or

3. any event described in Part B, clause 14 (Force Majeure).

11. Commercial Purpose

It is expressly acknowledged and agreed by Customer that the Windcave Solution, the Goods, the Software and the Documentation are supplied to Customer for business and commercial purposes.

12. Termination

12.1 Termination Upon Notice:

(a) Windcave may terminate this Agreement at any time on not less than 3 months' prior written notice to Customer.

(b) Customer may terminate this Agreement at any time on not less than 3 months' prior written notice to Windcave, provided during the Initial Term, Customer will be liable for the Fees for the remainder of the Term, which, notwithstanding clause 3.1, shall be payable immediately on giving such notice.

12.2 Termination for Cause: Either party (the **First Party**) may terminate this Agreement at any time and with immediate effect by written notice to the other party (**Second Party**) if the Second Party:

(a) is in material breach of any of its obligations under this Agreement, and has failed to remedy the breach within 10 Business Days of receiving written notice from the First Party to remedy the breach; or

(b) goes into voluntary or involuntary bankruptcy or liquidation or has a receiver appointed; or

(c) is unable to pay its debts as they fall due.

12.3 Breach of License Terms: Without limiting clause 12.2, any use of the Windcave Solution, the Goods, the Software, or the Documentation by Customer for any purpose other than the Permitted Use, or any breach by Customer of the provisions of Part B, clause 16 will be deemed to be a material breach of this Agreement which is not reasonably capable of remedy.

12.4 Consequences:

(a) Not used.

(b) Expiry or termination of this Agreement will not affect the rights or obligations of the parties which have accrued prior to or accrue on termination or which by their nature are intended to survive termination (including Part B, clauses 3, 5, 7, 8, 9, 10, this 12.4, 13, 16, 17 and 19, together with those clauses which are incidental to, and required in order to give effect to, those clauses).

13. Confidentiality

13.1 Confidential Information: Both parties agree to hold Confidential Information in confidence and protect such Confidential Information in strict conformity with applicable law.

13.2 Windcave's Intellectual Property: Customer acknowledges and agrees that the computer programs, computer software, specifications, databases, images, designs, codes, and configurations, ("Software") contained in or utilized by the Equipment and Windcave's network are proprietary and confidential to Windcave and protected under United States copyright law. Customer shall not copy, modify, adopt, translate, merge, reverse engineer, decompile, or disassemble, the equipment or Software, or create any derivative works based on the Equipment, Windcave network or Software. Without limiting the effect of clause 13.1, Customer will treat information about Windcave's Intellectual Property as the Confidential Information of Windcave.

14. Force Majeure

14.1 Customer acknowledges that Windcave relies on third-party providers in the delivery of its services, including, but not limited to, wireless data network providers, cellular radio service provided by third parties that is available only when within the operating range of cellular systems, and cellular service is subject to transmissions limitations and dropped or interrupted transmissions. Cellular service may be temporarily refused, limited, interrupted, or curtailed because of government regulations or orders, atmospheric and/or topographical conditions, and cellular system modifications, repairs, and upgrades. Customer agrees that Windcave shall not be liable for, and to hold Windcave harmless for any losses, damages, or business interruptions sustained as a result of interruptions caused by its wireless data network providers or any other third-party provider.

14.2 Neither party (the "**Affected Party"**) shall be liable for any default or delay in the performance of its obligations under this Agreement if and to the extent such default or delay is caused, directly or indirectly, by

(a) fire, flood, elements of nature or other acts of God;

(b) any outbreak or escalation of hostilities, war, riots or civil disorders in any country;

(c) any act or omission of the other party or any government authority;

(d) any labor disputes (whether or not employees' demands are reasonable or within the party's power to satisfy); or

(e) the nonperformance by a third party for any similar cause beyond the reasonable control of such party, including without limitation, failures or fluctuations in telecommunications or other equipment such as described in clause 14.1.

14.3 In any such event, the Affected Party shall be excused from any further performance and observance of the obligations so affected only for as long as such circumstances prevail and such party continues to use commercially reasonable efforts to recommence performance or observance as soon as practicable, provided that:

(a) Notice: whenever the Affected Party becomes aware that such a result has occurred or is likely to occur, the Affected Party will, as soon as practicable, notify the other party by written notice accordingly;

(b) Continued Performance: each party will continue to use commercially reasonable efforts to perform its obligations as required under this Agreement; and

(c) No Deemed Acceptance of Extra Costs: neither party will be deemed to have accepted any liability to pay or share any extra costs which may be incurred by the other party in complying with this clause or otherwise resulting from such act, omission or failure; and

(d) Charges: this clause 14 will not apply in respect of Customer's obligation to pay any charges or Fees payable under this Agreement.

15. License

15.1 Grant of License: Windcave grants to Customer a non-exclusive, non-transferable license to use the Windcave Solution, the Goods, the Software and the Documentation for the Term of this Agreement solely for the Permitted Use. Any other use or dealings with the Windcave Solution, the Goods, the Software or the Documentation without the prior written consent of Windcave will be a material breach of this Agreement. Except to the extent specifically authorized under this Agreement, Customer must not sub-license, transfer, assign, rent or sell any of the Windcave Solution, the Goods, the Software or the Documentation or the right to use the Windcave Solution, the Goods, the Software or the Documentation.

15.2 Windcave Warranty: Windcave warrants that Windcave has the right and authority to grant to Customer the license set out at clause 15.1, in accordance with the terms of this Agreement.

16. Terms of Use

16.1 Adequacy: Customer must satisfy itself as to the adequacy, appropriateness and compatibility of the Windcave Solution and/or the Goods for its requirements. Without limiting the foregoing, Customer acknowledges that it has not relied on any statements or representations on the part of Windcave as to performance or functionality, verbal or otherwise, except as expressly recorded in this Agreement.

16.2 Windcave Logo: If Customer uses a capture method for credit or debit card processing using a system which is not hosted by Windcave, Customer agrees to display the Windcave Logo in a readily visible position on the user interface of Customer's system where the credit or debit card data is captured. The Windcave Logo must not be altered or used for any other purpose without the prior written consent of Windcave.

16.3 Compliance: If Customer is not compliant with one or more of the Security Standards, Customer must not capture or store any credit or debit card number or expiry date locally on Customer's or a non-compliant third party's system.

16.4 No Right to Copy, Alter or Modify: Customer may make a reasonable number of copies of the Software for backup and disaster recovery purposes only. Except for such back-up copies, Customer must not, and must not permit any other person to, copy, reproduce, translate, adapt, vary, repair or modify all or any part of the Windcave Solution, the Goods, the Software or the Documentation by any means or in any form without Windcave's prior written consent.

16.5 Permitted Use: Customer may not:

(a) use the Windcave Solution, the Goods, the Software or the Documentation for any purpose other than the Permitted Use; or

(b) use the Software independently of the other components of the Windcave Solution unless Windcave has given prior written consent to do so.

If this Agreement is terminated, Customer's right to use the Windcave Solution, the Software and the Documentation will automatically terminate and Customer must immediately remove all copies of the Software from its system(s) and return the Windcave Solution, the Goods, the Software and the Documentation to Windcave

16.6 Reverse Engineering: Customer must not, and must not permit any other person to, reverse assemble or decompile the whole or any part of the Software.

16.7 No Third Party Use: Except as expressly provided for in this Agreement, the Customer must not provide, or otherwise make available, the Windcave Solution the Goods, the Software or the Documentation or any component thereof in any form to any person (a "**Third Party"**) without the prior written consent of Windcave. If Windcave grants such consent, Customer must ensure that the Third Party complies with the provisions of clauses 8, 13, 15 and 16 (so far as those provisions relate to Customer) as if the Third Party were a party to this Agreement. Customer will be liable to Windcave for all acts or omissions of any Third Party in contravention of the provisions of clauses 8, 13, 15 and 16.

16.8 Installation: Customer will be responsible for, and all bear all costs associated with, the installation, operation, maintenance and support of the Goods.

16.9 Windcave Testing Prior to Launch: Prior to any permitted use of Windcave products and/or Software by Customer or any third party, Windcave shall be entitled to test all Windcave products and Software that Customer purchases, rents, or intends to use for at least seven (7) Business Days ("Pre-launch Testing"). Such Pre-launch Testing shall also entitle Windcave to at least three (3) Business Day to test transaction processing and settlement.

16.10 Labels: Customer will not remove or deface any labels affixed by Windcave to the Goods. Customer will not affix any label to the Goods.

17. Rental/Loan of Goods

Where Customer agrees to rent or borrow Goods from Windcave, the following terms and conditions apply:

(a) **Ownership:** Legal and beneficial ownership of, and title to, the Windcave Solution, the Goods, the Software and the Documentation remains at all times with Windcave;

(b) **Risk:** Customer will bear the risk of, and be responsible for, all loss (including theft) of or damage to, the Goods from the time that they are first delivered to Customer until the time that they are delivered back to Windcave;

(c) **Maintain Goods**: Customer must take reasonable steps to avoid exposure of the Goods to excessive heat, dust and moisture, liquids and electrical and physical shock;

(d) **License Terms:** Customer must comply with all manufacturer's license terms applicable to the Goods (as supplied with the Goods or otherwise notified by Windcave to Customer from time to time);

(e) **Theft, Seizure, Loss, Damage, Repairs:** If for any reason the Goods are stolen, seized, lost, damaged or require repairs, Customer must immediately advise Windcave of the theft, seizure, loss, damage or repairs required. Customer must pay all costs and comply with Windcave's directions in connection with replacing or recovering the Goods, repairing any damage or the replacing of any parts (fair wear and tear excepted). Customer must continue to pay the Fees while the Goods are being replaced or repaired or, in the event of theft, seizure or loss, while the Goods are missing. Windcave will not be liable for any loss or damage in relation to the unavailability of the Goods;

(f) **No Dealing or Modifying or Security Interests:** Customer must not sell, lend, lease, transfer, modify or otherwise deal with the Goods without first obtaining Windcave's written consent. Customer must not create, or allow to be created, a security interest over the Goods;

(g) **Inspection:** Customer must allow Windcave to inspect the Goods at any time during normal business hours, provided that Windcave first gives Customer not less than 2 Business Days notice;

(h) **Return of Goods:** When this Agreement ends (either by completion of the Term or by way of termination), Customer will, at Customer's expense, return the Goods, in good working order and undamaged condition (fair wear and tear excepted) to Windcave's place of business. If the Customer fails to return the Goods within 14 Business Days of the end of the Agreement, Customer will pay Windcave the fair value of the Goods as at the completion of the Term;

(i) **Repossession:** If Customer does not return the Goods when required hereunder, Windcave may (subject to compliance with applicable law)

enter any premises where Windcave reasonably believes that the Goods may be located and Customer will provide all reasonable authority and assistance to enable recovery of those Goods by Windcave. Customer will be liable to Windcave for costs incurred by Windcave in recovering the Goods; and

(j) **Further supply**: The rental of Goods by Windcave to Customer does not guarantee Customer that Windcave will supply Goods beyond the Initial Term.

18. Windcave Support Services

18.1 Support: Windcave will provide the Support Services to Customer.

18.2 Emergency Support Services and Other Services: Windcave may make available the Emergency Support Services. If Customer requires Emergency Support Services and/or services additional to the Support Services Windcave may, if it agrees to provide those services to Customer, charge Customer for those services on a time and materials basis and on such other terms and conditions as may be agreed between the parties.

18.3 Alterations to Software: Windcave may, at its sole discretion, alter, upgrade, update or change the Windcave Solution at any time during the Term of this Agreement. Customer acknowledges and agrees that, if Customer fails to promptly install all updates to any software forming part of the Windcave Solution supplied by Windcave in connection with this Agreement, Customer may be unable to process Transactions and that:

(a) Windcave will not be liable to Customer under this Agreement in respect of such inability; and

(b) Windcave will be released from any obligation to supply the Support Services during any period which Customer has failed to install any such update.

18.4 Windcave Website: Customer acknowledges and agrees that Windcave may, at its sole discretion, determine what information, data, features and functionality is made available to Customer via the Windcave Website. Customer agrees to comply with any terms that Windcave may specify in relation to Customer's use of the Windcave Website. In the event of any inconsistency between the terms and conditions of this Agreement and those on the Windcave Website, the terms and conditions of this Agreement will apply to the extent of that inconsistency. Windcave will supply user names and passwords to enable authorized users of Customer to access the Windcave Website. Customer must keep such user names and passwords secure and made known only to authorized users and will be responsible for all use of the Windcave Website through use of Customer's user names and passwords. If Customer breaches any term of this Agreement or the terms of use of the Windcave Website, Windcave may disable Customer's user names and passwords.

18.5 Refunds: Customer authorizes Windcave to process repayment transactions to its patrons, who have previously made payment using the Windcave solution, on a one-to-one matching basis ("Refund Transactions"). Customer shall be solely responsible for auditing Refund Transactions and determining that a one-to-one match is made between a transaction and its matching Refund Transaction. Customer accepts all liability for Refund Transactions. Windcave shall not be liable for any losses or damages incurred as a result of a Refund Transaction.

18.6 Offline Mode: Customer authorizes Windcave to enable processing of credit cards offline in the event of an internet failure ("Offline Mode"). In addition, Customer authorizes Windcave to enact service in Offline Mode until internet service is restored for a maximum of 4 hours per event. Transactions in Offline Mode are capped at $50 dollars maximum per transaction per card and a maximum of 500 transactions processed per device per Offline Mode event. Transactions in Offline Mode are also capped at $1,000 per device per Offline Mode event. Customer and Windcave agree and acknowledge that Windcave is not liable for unsuccessful transactions that are a result of Offline Mode transaction processing. Customer is responsible with acquiring approval from its banking partner for operation of Offline Mode. Windcave is not liable if the terms of this Clause or the operation of Offline Mode causes Customer's account to be downgraded, shut down, disrupted, or otherwise adversely impacted in any way.

19. General

19.1 Entire Agreement: This Agreement including all schedules hereto records the entire arrangement between the parties relating to all matters dealt with in this Agreement and supersedes all previous arrangements, whether written, oral or both, relating to such matters.

19.2 Disputes: The parties shall attempt in good faith to resolve any dispute arising out of or relating to this Agreement promptly by negotiation between executives who have authority to settle the controversy and who are at a higher level of management than the persons with direct responsibility for

administration of this Agreement. Any party may give the other party written notice of any dispute not resolved in the normal course of business. Within 15 days after delivery of the notice, the receiving party shall submit to the other a written response. The notice and response shall include with reasonable particularity (a) a statement of each party's position and a summary of arguments supporting that position, and (b) the name and title of the executive who will represent that party and of any other person who will accompany the executive. Within 30 days after delivery of the notice, the executives of both parties shall meet at a mutually acceptable time and place. If the parties fail to negotiate a resolution to a dispute within a reasonable time (not exceeding 20 Business Days from formal notice of the dispute being given by one party to the other), either party may require that the dispute be submitted to mediation through JAMS, such mediation to take place in Phoenix, Arizona. A mediator shall be selected by mutual agreement or through procedures provided by JAMS. In such case:

(a) the mediator will not be acting as an expert or as an arbitrator;
(b) the mediator will determine the procedure and timetable for the mediation; and
(c) the parties will share equally the cost of the mediation.

All offers, promises, conduct and statements, whether oral or written, made in the course of the negotiation by any of the parties, their agents, employees, experts and attorneys are confidential, privileged and inadmissible for any purpose, including impeachment, in arbitration or other proceeding involving the parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the negotiation.

Neither party may issue any legal proceedings (other than for urgent interlocutory relief) relating to any dispute, unless that party has first taken all reasonable steps to comply with the dispute resolution process above. All applicable statutes of limitation and defenses based upon the passage of time shall be tolled while the procedures specified in this clause 19.2 above are pending and for 15 calendar days thereafter. The parties will take such action, if any, required to effectuate such tolling.

19.3 Waiver: No waiver of any breach, or failure to enforce any provision, of this Agreement at any time by either party shall in any way limit or waive the right of such party to subsequently enforce and compel strict compliance with the provisions of this Agreement.

19.4 Severance: Any provision in this Agreement which is or becomes unenforceable, illegal or invalid for any reason shall be severed and shall not affect the enforceability, legality, validity or application of any other provision which shall remain in full force and effect.

19.5 Assignment: Windcave may assign all or any of its rights and obligations under this Agreement to any person without Customer's consent. Customer may not transfer or assign any of its liabilities or rights under this Agreement to any other person without Windcave's prior written consent (such consent not to be unreasonably withheld, provided Windcave is satisfied as to the suitability of the assignee and Customer pays to Windcave its reasonable costs incurred in connection with the assignment).

19.6 Amendment: Except as expressly provided for in this Agreement, no amendment to this Agreement will be valid unless recorded in writing and signed by a duly authorized senior representative of each party.

19.7 Governing Law and Jurisdiction: This Agreement is governed by the laws of Wyoming.

19.8 Remedies: The rights, powers and remedies provided in this Agreement are not exclusive of any rights, powers or remedies provided by law.

19.9 Subcontracting: Windcave may appoint subcontractors to perform any of its obligations under this Agreement.

19.10 Counterparts and Copies: This Agreement may be signed in any number of counterpart copies which, read together, will constitute one and the same document. Any facsimile copy of this agreement or copy of this agreement sent via email in PDF format (including any facsimile copy or copy sent via email in PDF format, of any document evidencing either party's signature of this agreement) may be relied upon by the other party as if it were an original copy. This Agreement may be entered into on the basis of an exchange of such facsimile or PDF copies.

19.11 Notices: Any notice or other communication to be given under this Agreement must be in writing and must be served by one of the following means and in respect of each is deemed to have been served as described:

(a) By personal delivery – when received by the party.
(b) By post by registered or ordinary mail – on the second working day following the date of posting in the United States mail to the addressee's registered office.
(c) By email – when acknowledged by the party orally or by return email or otherwise in writing.

The addresses for the parties for Notices shall be as set out on Page 1 of this Agreement or such other address as either party specifies by notice in writing to the other given in accordance with this clause 19.11.

19.12 Conflicts: In the event of any conflict or inconsistency between this Agreement and the terms of a purchase order made by Customer to Windcave, this Agreement shall govern and control.

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Regular Council Meeting
Submitting Department:	Internal Services	**Presenter:**	Lynsey Lenamond
Agenda Item:	Application for Transfer of a Restaurant Liquor License from ChinaTown Lee Inc. to New Chinatown Restaurant WY LLC at 850 W. Broadway Ste. A	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is to consider the transfer of a Restaurant liquor license. The Town Council is the local liquor licensing authority with the ability to regulate liquor licenses within the corporate limits of the Town of Jackson.

It is a statutory requirement for the Mayor to OPEN A PUBLIC HEARING on the transfer of liquor licenses. In accordance with our notice, and per Wyoming Statute, protests will be heard against the transfer during this hearing on before the Town Council. Additionally, staff presentation, public comment, Council discussion, and any voting will take place during this hearing on the application. The procedure for this item is as follows:

1. The Mayor opens the public hearing.
2. The Mayor calls for the staff presentation on the application.
3. The Mayor calls for any and all public comment, protest comment included.
4. Council discusses the application.
5. The Mayor calls for a motion on the application and the vote on the motion.
6. The Mayor closes the public hearing.

Requested Action.
Staff requests that Council conduct the public hearing and consider the transfer of a Restaurant liquor license.

Recommendations.
Staff recommends approval of the application.

Background.
On May 2, 2025, the Town Clerk's office received an application for transfer of a Restaurant liquor license from ChinaTown Lee Inc. to New Chinatown Restaurant WY LLC at 850 W. Broadway, Suite A.

Wyoming State Statutes allow for the Transfer of Ownership or Location on certain license types, including Restaurant liquor licenses.

The current Restaurant liquor license has no existing conditions to consider.

Analysis & Key Policy Questions.
The Town Council should consider the following from Wyoming Statute §12-4-104(b) regarding the transfer of a liquor license:

> *(b) A license or permit shall not be issued, renewed or transferred if the licensing authority finds from evidence presented at the hearing:*
>
> *(i) The welfare of the people residing in the vicinity of the proposed license or permit premises shall be adversely and seriously affected;*
>
> *(ii) The purpose of this title shall not be carried out by the issuance, renewal or transfer of the license or permit;*

(iii) The number, type and location of existing licenses or permits meet the needs of the vicinity under consideration;
(iv) The desires of the residents of the county, city or town will not be met or satisfied by the issuance, renewal or transfer of the license or permit; or
(v) Any other reasonable restrictions or standards which may be imposed by the licensing authority shall not be carried out by the issuance, renewal or transfer of the license or permit.

Possible Alternatives.
The public hearing must be conducted or at least opened at this Council meeting. Alternatives to that include:

1. Continue the public hearing to gain further public comment or information on issues related to the findings.
2. Approve the application.
3. Deny the application.

Comprehensive Plan & Priority Alignment.
This application relates to the Comprehensive Plan Policy 8.1.a, the delivery of quality levels of service to the community. It also relates to the health, safety and welfare of the community as discussed in section 8.

Fiscal Impact.
The fee for the transfer of a restaurant liquor license is $100. Upon approval, the fee for this transfer will be deposited to the Town's general fund.

Staff Impact.
The impact on the Clerk's office will total approximately 3 hours, including time spent with the applicant reviewing the license and application requirements, processing the application, reviewing the application and license with the Wyoming Liquor Division, and preparing the license. The Town Attorney, Administration, Planning and Building, and Fire Department spent time reviewing the application as well. Should this application be approved, the Police Department would include the applicant in their compliance checks.

Attachments or Links.
Application for Transfer of a Restaurant Liquor License

Suggested Motion.
Having considered Wyoming Statute 12-4-104(b) statutory factors for this application, I move to approve the transfer of the restaurant liquor license from ChinaTown Lee Inc to New Chinatown Restaurant WY LLC at 850 W. Broadway, Suite A, subject to the following conditions, and further direct the Town Clerk's office to issue the license upon confirmation that the conditions of approval have been met within the timeframe set forth in Wyoming Statute 12-4-103(a)(iv):

1. The Clerk's office shall not issue the license until all required Town licenses and permits have been obtained.
2. Any additional minor corrections deemed necessary by staff and the Wyoming Liquor Division.

(7/23)

NEW OR TRANSFER LIQUOR LICENSE OR PERMIT APPLICATION

FOR LIQUOR DIVISION USE ONLY		
Customer #:		
Trf from:		
Reviewer:	Initials	Date
Agent:		/ /
Mgr:		/ /

To be completed by City / Town / County Clerk

Local License #: 207

License Fees

Annual Fee: $_____

Prorated Fee: $_____

Transfer Fee: $ 100.00

Publishing Fee: $ 100.00

Date filed with clerk: 5 / 2 / 25

Advertising Dates: (2 Consecutive Weeks Prior to Hearing) 5/21 & 5/28/25

Public Hearing Date: 6 / 2 / 25

Publishing Fee Direct Billed to Applicant: ☐

License Term: 6 / 3 / 25 (Month / Day / Year) Through 3 / 31 / 26 (Month / Day / Year)

LICENSING AUTHORITY: Begin publishing promptly. As W.S. 12-4-104(d) specifies: **NO LICENSING AUTHORITY SHALL APPROVE OR DENY THE APPLICATION UNTIL THE LIQUOR DIVISION HAS CERTIFIED THE APPLICATION IS COMPLETE.**

Applicant (Business Name): New Chinatown Restaurant WY LLC.

Doing Business As (DBA) / Trade Name:

Building to be licensed / Building Address: 850 W. Broadway
(Address Number, and Suite or Unit Number, and Street or Road Name)
Jackson (City) WY (State) 83001 (Zip) the USA. (County)

Local Mailing Address: PO Box 10340
(Address Number or PO Box, and Suite or Unit Number, and Street or Road Name)
Jackson (City) WY (State) 83002 (Zip) the USA (County)

Local Business Telephone Number: 307-733-8856 Fax Number:

Business E-Mail Address: liu.yanxin41@gmail.com.

Business Primary Contact: Yanxin (First Name) Liu (Last Name)

FILING FOR

☐ NEW LICENSE

☐ TRANSFER OF LOCATION

☒ TRANSFER OF OWNERSHIP
☐ ASSIGNMENT LETTER MUST BE ATTACHED

FORMERLY HELD BY: Chinatown Lee Inc.

FILING IN (CHOOSE ONLY ONE)

☒ CITY / TOWN OF: Jackson

☐ COUNTY OF:

FILING AS (CHOOSE ONLY ONE)

☐ INDIVIDUAL
☐ PARTNERSHIP
☐ LP ☐ LLP ☐ LLLP
☒ LLC ☐ LC
☐ CORPORATION (INC)
☐ POLITICAL SUDIVISION
☐ ORGANIZATION
☐ OTHER

TYPE OF LICENSE OR PERMIT (CHOOSE ONLY ONE)

☐ **RETAIL LIQUOR LICENSE**

PRIMARY BUSINESS TYPE (CHOOSE ONLY ONE)
☐ ON-PREMISE BAR
☐ OFF-PREMISE PACKAGE STORE
☐ ON & OFF PREMISE BAR & PACKAGE STORE

☒ RESTAURANT LIQUOR LICENSE
☐ BAR AND GRILL LIQUOR LICENSE
☐ RESORT LIQUOR LICENSE

LIMITED RETAIL LIQUOR LICENSE (CLUB)
☐ VETERANS CLUB
☐ FRATERNAL CLUB
☐ GOLF CLUB
☐ SOCIAL CLUB

☐ MICROBREWERY PERMIT
☐ WINERY PERMIT
☐ MANUFACTURER SATELLITE PERMIT
☐ WINERY SATELLITE PERMIT
☐ COUNTY MALT BEVERAGE PERMIT
☐ SPECIAL MALT BEVERAGE PERMIT

SPECIAL STATUTORY DESIGNATIONS (CHOOSE ONLY ONE)

☐ COMMERCIAL AIRPORT (W.S. 12-4-201(d)(iv))
☐ GOLF CLUB (W.S. 12-5-201(f))
☐ GUEST RANCH (W.S. 12-5-201(f))
☐ RESORT (W.S. 12-4-401(iv) / 12-5-201(f))
☐ GOLF CLUB-POLIT. SUBDIVISION (W.S. 12-4-301(e) / 12-5-201(f))
☐ Other:

OPERATIONAL STATUS (To Assist the Liquor Division with scheduling inspections (W.S. 12-1-101(a)(xxi) / 12-2-301(c) / 12-4-103(a)(iv)))

☒ FULL TIME
☐ SEASONAL
☐ NON-OPERATIONAL / PARKED

MONTHS OF OPERATION from Close April & November to ☐ All Year (Jan-Dec)

DAYS OF WEEK OF OPERATION from ____ to ____ ☒ Every Day (Mon-Sun)

HOURS OF OPERATION from 11am to 8pm ☐ 24 Hours a Day

(7/23)

ALL APPLICANTS MUST COMPLETE QUESTIONS 1- 3

1. BUILDING OWNERSHIP: W.S. 12-4-103(a)(iii)
Does the Applicant own or lease the licensed building?

(a) The Applicant **OWNS** the licensed building. ☐ YES (own)
(b) The Applicant **LEASES** the licensed building. ☒ YES (lease)

If the building is leased, please submit a copy of the lease and indicate:

(i) Lease term expiration date; located on page 1 paragraph 7.

Note: The lease term **MUST** continue at least through the term of the liquor license or permit

(ii) **Sales** provision for alcoholic or malt beverages: located, on page _____ paragraph see amendment.

Note: The lease **MUST** contain a provision for **SALE OF ALCOHOLIC or MALT BEVERAGES.**

---

2. LIQUOR BUSINESS CONTROL: W.S. 12-4-601(b)

(a) To operate the liquor business, has the business or license/permit been assigned, leased, transferred or contracted with any other person (entity) to operate and assert total or partial control of the license or permit or the licensed building? ☐ YES ☒ NO

(b) If the answer was **YES** to 2(a) above, explain fully and submit any documents in connection there within.

---

3. INTEREST IN LICENSE OR PERMIT: W.S. 12-5-401, 12-5-402, 12-5-403 -

Does any alcohol manufacturer, brewer, rectifier, wholesaler, or through a subsidiary affiliate, officer, director or member of any such firm:

(a) Hold any interest in the license/permit applied for? ☐ YES ☒ NO
(b) Furnish by way of loan or any other money or financial assistance for purposes hereof in the business? ☐ YES ☒ NO
(c) Furnish, give, rent or loan any equipment, fixtures, interior decorations or signs other than standard brewery or manufacturer's signs? ☐ YES ☒ NO
(d) If the answer was **YES** to any of the above, explain fully and submit any documents in connection there within.

---

4. RETAIL LIQUOR LICENSE-COUNTY LOCATIONS ONLY: W.S. 12-4-201(f)(ii)

Is the licensed building within five (5) miles of an incorporated town or city? ☐ YES ☐ NO

---

5. RETAIL LIQUOR LICENSE-COMMERCIAL SERVICE AIRPORTS ONLY: W.S. 12-4-201(m)

(a) Will food and beverage services be contracted or subcontracted? ☐ YES ☒ NO
1. If **YES**, is a copy of the food and beverage contract or lease attached? ☐ YES ☒ NO

---

6. BAR AND GRILL LICENSE OR RESTAURANT LIQUOR LICENSE ONLY: 12-4-413(a) / W.S. 12-4-407(a)

Is a copy of the valid food service permit or the approved permit application attached? ☒ YES ☐ NO

---

7. RESORT LIQUOR LICENSE: W.S. 12-4-401 through W.S. 12-4-403(b)

Does the resort complex:

(a) Have an actual valuation of at least one million dollars, or have committed or expended at least one million dollars ($1,000,000.00) on the complex, excluding the value of the land? W.S. 12-4-401(b)(i) ☐ YES ☐ NO
(b) Include a restaurant and a convention facility; a convention facility that will seat at least one hundred (100) persons? W.S. 12-4-401(b)(ii) ☐ YES ☐ NO
(c) Include motel, hotel or privately owned condominium, town house or home accommodations approved for short term occupancy with at least one hundred (100) sleeping rooms? W.S. 12-4-401(b)(iii) ☐ YES ☐ NO
(d) If no on question (c), have a ski resort facility open to the general public in which has been committed or expended not less than 10 million dollars ($10,000,000.00)? W.S. 12-4-401(b)(iv) ☐ YES ☐ NO
(e) Will food and beverage services be contracted or subcontracted? W.S. 12-4-403(b) ☐ YES ☐ NO
1. If **YES** to (e), is a copy of the food and beverage contract or lease attached? ☐ YES ☐ NO

---

8. MICROBREWERY PERMIT ONLY: WHOLESALE DISTRIBUTION: W.S. 12-2-201(a)

(a) Will the microbrewery self-distribute its products or distribute through a licensed wholesaler? ☐ YES ☐ NO

If **YES**, a wholesale malt beverage license from the Liquor Division will be required.

9. LIMITED RETAIL (CLUB) LIQUOR LICENSE:

FRATERNAL CLUBS W.S. 12-1-101(a)(iii)(B)

(a) Has the fraternal organization been actively operating in at least thirty-six (36) states? ☐ YES ☐ NO

(b) Has the fraternal organization been actively in existence for at least twenty (20) years? ☐ YES ☐ NO

10. LIMITED RETAIL (CLUB) LIQUOR LICENSE:

VETERANS CLUBS W.S. 12-1-101(a)(iii)(A):

(a) Does the Veteran's organization hold a charter by the Congress of the United States? ☐ YES ☐ NO

(b) Is the membership of the Veteran's organization comprised only of Veterans and its duly organized auxiliary? ☐ YES ☐ NO

11. LIMITED RETAIL (CLUB) LIQUOR LICENSE:

GOLF CLUBS W.S. 12-1-101(a)(iii)(D) / W.S. 12-4-301(e):

(a) Does the golf club have more than fifty (50) bona fide members? ☐ YES ☐ NO

(b) Does the Applicant, maintain, or operate a bona fide golf course together with a clubhouse? ☐ YES ☐ NO

(c) Is the Applicant a Political Subdivision of the state that owns, maintains, or operates this golf course? ☐ YES ☐ NO

1. Will food and beverage services be contracted or subcontracted? W.S. 12-4-301(e) ☐ YES ☐ NO
2. If **YES**, is a copy of the food and beverage contract or lease attached? ☐ YES ☐ NO

12. LIMITED RETAIL (CLUB) LIQUOR LICENSE:

SOCIAL CLUBS W.S. 12-1-101(a)(iii)(E) / W.S. 12-4-301(b):

(a) Does the club have more than one hundred (100) bona fide members who are residents of the county in which the club is located? ☐ YES ☐ NO

(b) Is the club incorporated and operating solely as a nonprofit organization under the laws of this state? ☐ YES ☐ NO

(c) Is the club qualified as a tax-exempt organization under the Internal Revenue Service? ☐ YES ☐ NO

(d) Has the club been in continuous operation for a period of not less than one (1) year? ☐ YES ☐ NO

(e) Has the club received twenty-five dollars ($25.00) from each bona fide member as recorded by the secretary of the club and are club members at the time of this application in good standing by having paid at least one (1) full year in dues? ☐ YES ☐ NO

(f) Does the club hold quarterly meetings and have an actively engaged membership carrying out the objectives of the club? ☐ YES ☐ NO

(g) Is a true copy of the club bylaws attached to this application? ☐ YES ☐ NO

(h) Has at least fifty one percent (51%) of the membership signed a petition indicating a desire to secure a Limited Retail Liquor License? (Petition(s) Attached) ☐ YES ☐ NO

13. Applicant is Filing As <u>Individual, Partnership, Political Subdivision, Organization or Other</u>: W.S. 12-4-102(a)(ii) & (iii)

Each individual, partner or officer (as applicable) must complete all of the information below.
(If more information is required, list on a separate piece of paper and attach to this application.)

True and Correct Name	Date of Birth	Residence Address No. & Street City, State & Zip ***DO NOT LIST PO BOXES***	Residence Phone Number	Have you been a DOMICILED resident for at least 1 year and not claimed residence in any other state	Have you been convicted within the previous 10 years of: a Felony Violation Relating to Alcoholic Liquor or Malt	Have you been convicted within the previous 10 years of: any Violation Relating to Alcoholic Liquor or Malt
[redacted]						
				YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
				YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

(7/23)

14. Applicant is Filing As a Corporation, Limited Company, Limited Liability Company, Limited Liability Partnership or Limited Partnership: W.S. 12-4-102(a)(iv) & (v)

Each stockholder holding, either jointly or severally, ten percent (10%) or more of the outstanding and issued capital stock or ownership of the corporation, limited liability company, limited liability partnership, or limited partnership.

Each Officer, Director or LLC member must complete all of the information below.
(If more information is required, list on a separate piece of paper and attach to this application)

True and Correct Name	Date of Birth	Residence Address No. & Street City, State & Zip ***DO NOT LIST PO BOXES***	Residence Phone Number	No. of Years in Corp or LLC	% of Corporate Stock or Ownership Held	Have you been convicted within the previous 10 years of: a Felony Violation Relating to Alcoholic Liquor or Malt	Have you been convicted within the previous 10 years of: any Violation Relating to Alcoholic Liquor or Malt
Guohui Liu	[redacted]						
Yanxin Liu							
						YES ☐ NO ☐	YES ☐ NO ☐
						YES ☐ NO ☐	YES ☐ NO ☐
						YES ☐ NO ☐	YES ☐ NO ☐

REQUIRED ATTACHMENTS:

- ☐ A statement indicating the financial condition and financial stability of the Applicant. W.S. 12-4-102(a)(vi).
- ☐ If transferring a license or permit to another Applicant, attach a form of assignment from the current licensee to the new Applicant authorizing the transfer. W.S. 12-4-601(b).
- ☑ A copy of any lease agreements. W.S. 12-4-103(a)(iii)
- ☐ Bar & Grill and Restaurant liquor license Applicants: attach a copy of the current Food Service Permit or the approved permit application for the Applicant and for the licensed building location. 12-4-413(a) / W.S. 12-4-407(a)
- ☒ If food and beverage services will be contracted or subcontracted attach a copy of the contract or lease agreement W.S. 12-4-201(m) / W.S. 12-4-301(e) / W.S. 12-4-403(b)
- ☑ If filing for a Golf Club or Social Club liquor license attach a copy of the club's bylaws W.S. 12-4-301(c)

OATH OR VERIFICATION

*Requires signatures by **ALL** Individuals, **ALL** Partners, **ONE (1)** LLC Member, or **TWO (2)** Corporate Officers or Directors except that if all the stock of the corporation is owned by **ONE (1)** individual then that individual may sign and verify the application upon his oath, or **TWO (2)** Club Officers. W.S. 12-4-102(b)*

Under penalty of perjury, and the possible revocation or cancellation of the license, I swear the above stated facts, are true and accurate.

STATE OF WYOMING)
) *SS.*
COUNTY OF Teton)

Signed and sworn to before me on this 2nd day of May, 2025 that the facts alleged in the foregoing instrument are true by the following:

	(Signature)	(Printed Name)	Title
1)		Yanxin Liu	owner
2)			
3)			
4)			
5)			

Witness my hand and official seal: Mary A Hurst

Signature of Notary Public

(SEAL)

MARY A HURST
NOTARY PUBLIC
STATE OF WYOMING
COMMISSION ID: 166083
MY COMMISSION EXPIRES: 10/06/2027

My commission expires: 10/06/2027

租赁合同书（注：申请酒店使用）
饭馆

Commercial Lease Agreement
New Chinatown Restaurant WY, LLC / Ly Investments, Inc.

This Lease Agreement (the "Lease") is made and entered into to be effective as of May 1, 2025. (the "Effective Date"), by and between Salomon and Molly Ly, dba Ly Investments, LLC with a mailing address of P.O. Box 10576 Jackson, WY 83002 ("Landlord"), and New Chinatown Restaurant WY, LLC ("New Chinatown"), a limited liability company restaurant based in Teton County, Wyoming, with a mailing address of P.O. 198 Heron Drive, West Yellowstone, MT 59758 ("Tenant").

Recitals:

- Landlord is the owner of real property and improvements located at 850 West Broadway, Jackson, WY, including the space known as the former Chinatown restaurant, (being the easternmost suite in the commercial property, and having a common wall with current tenant Habitat for Humanity ReStore), a total of 4,000 square feet, more or less, (the "Leased Premises"); and

- Landlord and Tenant mutually agree that both parties wish to enter into this Lease Agreement for the Leased Premises;

- Landlord and Tenant have agreed to cooperate to construct the Leased Premises in a manner satisfactory to Tenant and have set forth the Landlords' and Tenants' respective responsibilities hereinbelow.

In consideration of the foregoing recitals, together with the covenants and agreements contained herein, the parties agree as follows:

1) Lease of Leased Premises. Landlord agrees to lease to Tenant and Tenant agrees to lease from Landlord the Leased Premises (as defined in the recitals above), on the terms and conditions set forth in this Lease.

2) Term of Lease. The term of this Lease shall be five (5) years, beginning on the Effective Date and ending at 12 noon on April 30, 2030, unless sooner terminated under the provisions of this Agreement (the "Term"). As set forth hereinbelow, the rate of rent for the first twelve (12) months of the first term, which period shall end on April 30, 2030, shall be [redacted] per month.

3) Options to Extend Lease. On terms to be determined at a later date, Tenant shall have the option to renew this lease for one (1) additional term of five (5) years. If Tenant wishes to pursue a lease extension, Tenant is advised to notify Landlord in writing at least 180 days prior to the expiration of the term of this lease. That timely written notification date is hereby declared to be Monday, January 1, 2030. Tenant's failure to timely notify Landlord in writing of Tenant's desire to negotiate a subsequent lease term shall constitute a waiver of the prospect of a subsequent lease term.

4) Rent and Payment. Tenant agrees and covenants to pay as rent (the "Rent") to Landlord the following amounts per month in advance on the first of each month during the term of this lease on a monthly basis, except that no monthly rent shall be due during the initial lease term until a certificate of occupancy for the Leased Premises is issued by the Town of Jackson:

Term:



a. Payment Terms. All Rent payments shall be tendered in lawful United States currency, without any set-off or deduction whatsoever, made payable to Landlord, and delivered to Landlord at the mailing address set forth above, or at such other place as Landlord may designate in writing from time to time.
b. Late Payment Charges. If the Rent or any amount due under this Lease from Tenant is not received by Landlord within five (5) days after such amount was due, Tenant shall be in Default and Tenant shall pay Landlord a late charge of twelve percent (12%) of such overdue amount.

5) Personal Property Taxes. Tenant shall be liable for taxes levied against its personal property, trade fixtures and other property placed by Tenant in, on or about the Leased Premises.

6) Taxes and Assessments. Landlord shall pay all real estate taxes and assessments, and any other governmental charges, assessments or taxes pertaining to the Leased Premises during the Term of this Lease.

7) Utilities. The costs of all separately metered utility services (water, electricity, telephone, internet, and gas) will be the responsibility of the tenant.

8) Insurance.

a) Landlord shall maintain fire and extended "all risk" insurance coverage on the Leased Premises in amounts sufficient to replace or rebuild the Leased Premises in a code compliant condition equal to or better than the premises existing at the time of this Agreement. Landlord shall furnish copies of its certificate of insurance for the Leased Premises upon Tenant's request.

b) Tenant shall maintain general commercial liability insurance for its occupancy and use of the leased premises and shall maintain casualty insurance upon the tenant's improvements within the Leased Premises and upon its personal property within the Leased Premises. Tenant shall furnish copies of its certificate of insurance for the Leased Premises upon Landlord's request. Failure to provide proof of insurance within five (5) business days of Tenant's receipt of Landlord's written demand, which Landlord's writing may be via email &/or written letter, shall be an event of default, which default Landlord may declare and enforce at any time.

9) Use of Leased Premises: Tenant shall have the right to utilize the Leased Premises in any manner consistent with or incidental to its business engaged in the commercial sale of prepared food or as a restaurant, **provided, however, that Tenant shall have no more than one hundred (120) seats or persons dining in (excluding persons present to pick up food-to-go)**. Tenant shall use the Leased Premises only for purposes not prohibited by the laws, regulations, covenants and ordinances of all governmental entities having jurisdiction over the Leased Premises. Tenant agrees at its sole expense to comply with and conform

to all of the requirements of all governmental authorities having jurisdiction over the Leased Premises and Tenant's business during the term of this Lease.

10) Right to Sublease/Right of Assignment. Tenant shall have the right to sublease the space subject to Landlord's approval, which approval may be withheld in the sole and absolute discretion of the Landlord. The right to assign the Lease shall be subject to Landlord's approval, which approval may be withheld in the sole and absolute discretion of the Landlord. Landlord may, in Landlord's sole and absolute discretion, withhold approval to Tenant's proposal to sublease or assign the Leased Premises.

11) Repair and Maintenance. Tenant will assume costs associated with repairs and maintenance of the interior of the Leased Premises, except to the extent responsibility for maintaining a portion of the premises is assigned to the Landlord in the following paragraph. Landlord will be responsible for maintenance of the roof, structure, HVAC system, exterior façade and walkways. Tenant shall not commit or permit any act or thing contrary to the laws, ordinances, rules and regulations of any governmental authority having jurisdiction over the Leased Premises. Tenant shall promptly notify Landlord in writing of any accident to, or defects with regards to the Leased Premises.

12) Landlord's Access. Landlord and its representatives may enter the Leased Premises at any reasonable time not during normal business hours after twelve hours phone notice for the purpose of: a) inspecting the Leased Premises to ascertain Tenant's compliance with this Lease; b) in order to make repairs, additions or alterations as Landlord deems necessary; c) to post notices of non-responsibility under mechanics' lien law; d) to show the Leased Premises for sale, lease or mortgage financing; or e) for any other reasonable purposes. In the exercise of its rights under this paragraph, Landlord shall not unreasonably interfere with the conduct of Tenant's business.

13) Alterations. Following reasonable notice to Landlord, and subject to Landlord's right to reasonably object to proposed alterations or additions, Tenant is entitled to make alterations of or additions to the Leased Premises. All additions or improvements made by Tenant, excepting Tenant's trade fixtures, shall be deemed a part of Leased Premises and shall remain upon and be surrendered with the Leased Premises at the termination of this Agreement. Tenant shall be responsible for obtaining all necessary building permits and governmental approvals at Tenant's sole cost, and Landlord shall cooperate to obtain such permits.

14) Signs. Tenant shall have the right to erect and maintain signs in, on or about the Leased Premises, provided, however, that, prior to posting signs on the exterior façade of the Leased Premises, Tenant shall comply with Town of Jackson exterior signage regulations and secure approval from Landlord as to such exterior façade sign's or signs' size, color, material, design, lighting, and location, which approval shall not be unreasonably withheld.

15) Tenant's Covenants. Tenant covenants that it shall:

a. Comply with all laws, orders, regulations, rules, ordinances and covenants of any governmental body having jurisdiction over the Leased Premises;
b. Give to Landlord prompt written notice of any accident, fire or damage occurring on or to the Leased Premises;
c. Keep the Leased Premises sufficiently heated to prevent freezing of pipes, waterlines and fixtures;
d. Keep the Leased Premises orderly, clean, sanitary and free from objectionable odors and insects, vermin, pets, pests or nuisances;

e. Do all things reasonably possible to prevent the filing of any mechanics' or other liens against the Leased Premises or any part thereof by reason of work, labor, services or materials furnished or claimed to have been furnished to Tenant, or anyone holding the Leased Premises or any part thereof, through or under Tenant. If any such lien shall be filed against the Leased Premises, Tenant shall either cause the same to be discharged of record within twenty (20) days after the notice of the filing of same, or if Tenant, in Tenants' discretion and in good faith, determines the lien should be contested, Tenant shall furnish such security as may be necessary or required to prevent any foreclosure against Tenant's or Landlord's interest in the Leased Premises. If Tenant fails to discharge such lien within such period, or fails to furnish adequate security, then in addition to any other right or remedy of Landlord, Landlord may, but shall not be obligated to, discharge the lien either by paying the amount claimed to be due or by procuring the discharge of such lien by obtaining security or in any other manner available to Landlord. Nothing in this section shall imply any consent or agreement on the part of Landlord to subject Landlord's interest in the Leased Premises to liability under any mechanics' or other lien law;
g. Obtain and maintain in force the liability insurance required hereby;
h. Not permit anyone other than employees, agents, servants and business invitees to remain in or loiter upon the Leased Premises;
i. Comply with all reasonable rules and regulations that may be established, from time to time, by Landlord.
k. Permit waste upon the Leased Premises or any other nuisance; and
l. provide seating for **no more than one hundred (120) seats or persons dining inside the restaurant (excluding additional persons present to pick up food-to-go).**

16) Landlord's Covenants of Quiet Enjoyment. Landlord covenants that Tenant, upon paying the Rent and performing the Tenant's covenants, shall peacefully and quietly have, hold and enjoy the Leased Premises during the term hereof, provided, however, that Tenant shall accept the Leased Premises with acceptance of the localized effects, including shared parking resources, associated with adjacent and proximate business operations in enterprises that may include restaurants, furniture vendors, laundromats, and other lawful commercial establishments. Landlord shall maintain the common areas surrounding the building and the exterior of the leasehold premises in good working order and habitable condition. Landlord covenants to refrain from taking action or failing to act in a manner contrary to Tenant's interests, in Landlord's management of the premises.

17) Sale of Leased Premises. Tenant agrees that Landlord is free to sell the Leased Premises during the Term. If Landlord elects to do so, Landlord shall contemporaneously with the execution of the listing agreement for the Leased Premises, notify Tenant that the Leased Premises have been listed for sale. If a contract for the sale of Leased Premises is entered into by Landlord and a buyer during the Term, Landlord shall contemporaneously with the execution of that sales contract notify Tenant that the Leased Premises are under contract for sale (the "Sale Notice"). Any such sale shall be subject to this lease as amended or extended.

18) Surrender of Leased Premises. Upon the termination of this Lease, Tenant shall surrender the Leased Premises to Landlord in as good a condition as at the beginning of the term, reasonable wear and tear excepted, together with all alterations, interior decorations, additions and improvements that may have been made during the term, excepting Tenant's trade fixtures. Any personal property remaining in the Leased Premises following the expiration or termination hereof shall be deemed to be the property of Landlord and may be disposed of by the Landlord in its sole discretion without liability to the Tenant.

19) Damage or Destruction to Leased Premises. If the Leased Premises are damaged by fire, the elements, unavoidable accident or other casualty, and the Leased Premises are not rendered untenantable in Tenant's sole discretion, Landlord shall cause the damage to be repaired timely and rent shall be abated until such repairs are completed. If, by reason of such occurrence, the Leased Premises shall be rendered wholly untenantable, Tenant shall have the option to either: (i) make a demand upon landlord (whose acquiescence and action shall not be unreasonably withheld) that the damage to be repaired and the Rent, during such period of repair, shall be abated in whole or (ii) declare the balance of the term hereof to be null and void. If, by reason of such occurrence, the Leased Premises shall be rendered wholly untenantable for a period of six (6) or more months, Landlord may terminate this Lease without further recourse.

20) Tenant's Property. Landlord shall not be liable for any damage or loss to property of Tenant or of others located on the Leased Premises by theft or otherwise. Landlord shall not be liable for any damage caused by other tenants or persons in the Leased Premises, occupants of adjacent property, or the public, or caused by operations in construction of any private or public work. All property of Tenant or its subtenants kept or stored on the Leased Premises is done so at the risk of Tenant only.

21) Default by Tenant. Failure to pay Rent as set forth above, failure continues for fifteen (15) days from the original due date constitutes a Default. Failure to observe or perform any of the other terms of this Lease for a period of thirty (30) days after written notice of such failure constitutes a Default. In the event of a Default, Landlord may terminate this Lease. In the event of rightful termination by Landlord, Tenant shall vacate the Leased Premises and deliver possession to Landlord within sixty (60) days. All of Landlord's remedies under this Lease are non-exclusive and shall be in addition to all other remedies Landlord may have at law or equity. Landlord's acceptance of any payment by Tenant does not constitute a waiver of any breach by the Tenant.

22) Accord and Satisfaction. No payment by Tenant or receipt by Landlord of an amount less than the amount due and no endorsement or statement on any check or letter accompanying a check shall be deemed an accord and satisfaction and Landlord may accept such check without prejudice to Landlord's rights to recover the balance due or to pursue any other remedy of this Lease.

23) Abandonment of Leased Premises. If Tenant shall abandon (lack of presence for more than three weeks uninterrupted other than due to casualty) or vacate the Leased Premises before the termination of the Lease, or if Landlord re-enters the Leased Premises without termination, Landlord may, at its option and without notice to Tenant, enter the Leased Premises, and re-let the same, or any part thereof, as it may see fit, without thereby voiding or terminating this Lease, and, for the purpose of such re-letting, Landlord is authorized to make any repairs, changes, alterations or additions in or to the Leased Premises, as may, in the sole discretion of Landlord, be necessary or desirable for the purpose of such re-letting.

24) Involuntary Assignment and Bankruptcy. Neither the Lease, nor the Leasehold estate shall be subject to involuntary assignment, transfer or sale, or to assignment or sale by operation of law in any manner (except through testate or intestate succession) and any such attempt shall be void and of no effect. Further and without limiting the foregoing, if Tenant files or is subject to bankruptcy filings, is deemed insolvent or makes an assignment for the benefit of creditors, has a receiver appointed and any of the foregoing are not dismissed, discharged or overturned within twenty (20) days, the above shall constitute a breach of this Lease and at the election of the Landlord, Landlord may terminate this lease and all rights of the Tenant hereunder and any person or entity claiming by or through the Tenant.

25) Waiver of Breach. The waiver of any breach of any term, covenant or condition of this Lease shall not be deemed to be a waiver of item or any subsequent breach of the same or any other item. None of the

terms, covenants or conditions hereof can be waived without the written consent of the party waving the term or condition.

26) Attorneys' Fees. In the event a lawsuit is brought to enforce the terms and conditions of this Lease, the prevailing party shall be entitled to recover its reasonable attorney's fees and costs.

27) Indemnification. Tenant shall indemnify Landlord and save it harmless from and against all claims, actions, damages, liability and expense (including attorneys' fees) in connection with loss of life, personal injury or damage to property occurring in or about, or arising out of or from the Leased Premises and adjacent sidewalks and areas, or the occupancy or use of Leased Premises by Tenant or its sub-tenants, or occasioned wholly or in part by any act or omission of Tenant, its agents, licensees, invitees, and guests. No termination or expiration of this Lease shall affect any indemnities or other obligations of Tenant hereunder, which are incurred during the term or after default. Landlord shall indemnify Tenant and save it harmless from and against all claims, actions, damages, liability and expense (including attorneys' fees) in connection with loss of life, personal injury or damage to property occurring in or about, or arising out of the exterior of the Leased Premises, common areas around the Leased Premises, and adjacent sidewalks and parking areas. No termination or expiration of this Lease shall affect any indemnities or other obligations of Landlord hereunder, which are incurred during the term or after default.

28) Notices. Notices required to be given to the parties to this Lease shall be transmitted by one of the following methods: email; hand delivery; fax; prepaid overnight courier; or by postage paid certified mail, return receipt requested, at the address set forth below for said party; or at such other address as one party notifies the other in writing pursuant to this paragraph. Notice shall be effective when sent via email or fax, when hand delivered, one (1) day after being deposited with an overnight courier or three (3) business days after being placed in the mail.

To Landlord:
Salomon and Molly Ly, dba Ly Investments, LLC,
P.O. Box 10576 Jackson, WY 83002

To Tenant:
New Chinatown Restaurant WY, LLC
198 Heron Drive, West Yellowstone, MT 59758

29) Entire Agreement. This Lease contains the entire agreement of the parties on the subject matters dealt with herein and supersedes all prior and contemporaneous agreements and understandings of the parties. Unless set forth in this Lease and with the exception of the agreement for construction of the Leased Premises, no representations, warranties, covenants, contracts, promises or undertakings shall have been made by any party.

30) Miscellaneous.

a. Time is of the essence.

b. The parties may execute a short-form memorandum of this Lease in recordable form which may, at either party's option, be placed of record in the Teton County land records.

c. No partnership or joint venture is created by this Lease. Landlord and Tenant shall be construed to be that relationship of landlord and tenant only.

d. Paragraph headings in this Lease are for convenience only and are not to be construed as a part hereof or in any way defining, limiting, or amplifying the provisions hereof. The

recitals section of this Lease is a material part of the Lease and is binding upon the Parties to the same extent as all other provisions of the Lease. The words "Landlord" and "Tenant," as herein used, shall include the plural as well as the singular. The neuter gender includes masculine and feminine. Landlord and Tenant agree that if any term, covenant, or condition herein contained is held to be invalid or void by any court of competent jurisdiction, the invalidity of any such term, covenant, or conditions shall in no way affect any other term, covenant, or condition of this Lease.

e. All the terms, covenants, and conditions hereof shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, executors, administrators, permitted successors, permitted assigns and legal representatives.

f. This Lease and its provisions shall be construed and enforced in accordance with and pursuant to governing Wyoming law.

g. Tenant may not set off against Rent or other sums due any claims that Tenant has or thinks it has against Landlord.

h. This Lease may be executed in multiple counterparts and as executed shall constitute one agreement binding on all parties hereto.

J. The parties agree that the venue of any action filed relating to this Lease shall be in the District Court of Teton County, Wyoming, Ninth Judicial District, except that any action for forcible detainer shall be in the Circuit Court of Teton, County, Wyoming.

k. If either party hereto shall be delayed or hindered in or prevented from the performance of any act required hereunder by reason of labor troubles, inability to procure material, failure of power, restrictive governmental laws or regulations, riots, war or other reason of a like nature not the fault of the party delayed in performing work or doing acts required under the terms hereof, then performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.

l. No amendment or modification hereof shall be valid or binding unless expressed in writing and executed by the parties hereto in the same manner as the execution hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Lease to be effective as of the Effective Date.

Landlord:
Salomon Ly and Ly Investments, LLC

4/30/25

By: Salomon Ly, for himself and as Manager of Ly Investments, LLC

Tenant:
New Chinatown Restaurant WY, a Wyoming limited liability company

4/30/2025.

By: Gouhui Lu, as its Manager, and as personal guarantor

By: Molly Ly, for ~~herself~~, and as a member of Ly Investments, LLC

4/30/2025

By: Liu Yanxin , as its Manager and as personal guarantor

AMENDMENT TO LEASE

This amendment is to adjust section 9) Use of Leased Premises to allow tenant to sell alcoholic beverages.

The address should be 850 W. Broadway, Suite A.

sign Landlord

05/2/2025
date

sign Tenant

5/2/2025
date

APPLICATION FOR FOOD LICENSE

FOOD LICENSE: $200.00 Initial Fee; $100.00 Annual Renewal Fee.
(Licenses shall expire one year after date of issuance)

Cheyenne Office Use Only

LICENSE ACCOUNT NUMBER	ACTIVATION DATE	CHECK NO/CASH

LICENSE APPLICATION INFORMATION (to be completed by applicant)

Type of Application:
☐ New ☐ Change of Location ☒ Change of Owner

If change of owner or location, previous establishment name/location: Chinatown

- Establishment Information -

Trade/Business Name (dba): Chinatown **Applicant Name:** Guohu Lu & Yanxin Liu

Physical Address: 850 W. Broadway **Will a Liquor License Be Applied For?** ☐ Yes ☐ No

City: Jackson **State:** WY **Zip:** 83001

Mailing Address: PO Box 10340

City: Jackson **State:** WY **Zip:** 83002

Business Phone Number: 307-733-8856 **Person in Charge on Site Phone:** 406-640-2905

Email: liuyanxin41@gmail.com **Fax:**

- Owner Information -

Name of Owner : New Chinatown Restaurant WY LLC **Form of Organization:**

Name of Company (if applicable): ☐ Individual ☐ Co-Op ☐ Corporation

Parent Company (if applicable) : ☐ Partnership ☒ LLC ☐ Non-Profit

Address: 850 W. Broadway ☐ Other Entity

City: Jackson **State:** WY **Zip:** 83001

Owner Phone Number: 406-640-2905

INDICATE WHERE TO MAIL RENEWAL FORMS ____ (1=ESTABLISHMENT; 2=OWNER)

Type of Establishment (please check applicable box)

☒ Food Service ☐ Grocery ☐ Convenience ☐ Meat Plant ☐ Distributor ☐ Warehouse ☐ Dietary Supplement Processor ☐ Institution
☐ Guest Ranch ☐ Dairy ☐ Bulk Water ☐ Bar ☐ Mobile ☐ Mobile/Commissary Dependent ☐ Retail Processor
☐ Retail Pre-Packaged ☐ Retail Pre-Packaged License Only ☐ School ☐ Hotel ☐ Bed and Breakfast ☐ Seasonal Facility
☐ Manufactured Food Processor; Type of Food:

I ATTEST TO THE ACCURACY AND INFORMATION PROVIDED IN THIS APPLICATION. I AGREE TO COMPLY WITH ALL APPLICABLE WYOMING LAWS AND REGULATIONS AND I UNDERSTAND THAT EACH SECTION OF THE LAWS AND REGULATIONS IS SEPARATELY AND COLLECTIVELY ENFORCEABLE. I AGREE TO ALLOW THE REGULATORY AUTHORITY ACCESS TO MY ESTABLISHMENT. LATE RENEWAL PAYMENTS WILL RESULT IN DEACTIVATION.

SIGNATURE OF APPLICANT	DATE	APPROVING OFFICIAL	COUNTY
	4/30/2025	Brook Nahue	Teton

Make Checks Payable to:
Teton County Health Department
460 E Pearl / PO Box 937
Jackson, WY 83001

(307) 732-8490

Instructions: A plan review must be submitted before this application can be considered, unless this is a change of ownership. Submit this application to your inspector of the WY Department of Agriculture or local County Health Dept. Complete all sections. If a section is not applicable enter "N/A". If additional space is needed for any item, attach additional sheet.

This application shall serve as receipt of payment.

EQUAL OPPORTUNITY IN EMPLOYMENT AND SERVICES

White copy to Cheyenne----Yellow copy inspector----Pink copy establishment

HOUSE COCKTAILS

YOUR FAVORITE COCKTAILS ARE ALSO AVAILABLE



Scorpion Bowl *(for 3 or 4 people)* $17.95

A rare treat-blended of rum, fruit juice and brandy topped with fragrant flowers.

Volcano *(for 3 or 4 people)* $17.95

An eruption is more than this establishment wants, but when you sip from a conjugal volcano bowl with fire in the center, the manager will understand.

Mai Tai $8.49

The old established hearty cocktail of the pacific.

Bansai $7.95

A Japanese splendor in the tummy of "Hotei" God of Happiness.

Banana Daiquiri $7.95

You'll be delighted by its smoothness. Sip it slowly and savor the taste of the tropics.

Blue Hawaii $7.95

The blue color of this creation will conjure up memories of romantic Waikiki nights.

Planter's Punch $7.95

A robust blend of 2 types of rum with tropical juices traditionally enjoyed by tropical plantation owners.

Passion Daiquiri $7.95

A daiquiri made with passion fruit juice. Each savory sip will bring you closer to heaven.



BEER

Bud / Bud Light $3.50
Tsing Tao $3.99
Kirin $3.99
Heineken $3.99
Sierra Nevada $3.99
Corona $3.99
Modelo Especial $3.99

WINE

White $6.99
Burgundy $6.99
Chardonnay $6.99
White Zinfandel $6.99
Plum $6.99
Sake $6.99
Bottle of Wine $26.99
Gold Sake Bottle $28.99



SPECIAL QUICK LUNCHEONS

MONDAY THROUGH FRIDAY 11:00 AM TO 3:00 PM

$12.95

Served with Veggie Egg Roll and Fried Rice
Choice of Egg Drop Soup or Hot & Sour Soup
Soup will not be included in to-go orders

L1.	什錦蔬菜	Vegetable Deluxe
L2.	甜酸肉	Sweet & Sour Pork
L3.	雞炒麵	Chicken Chow Mein
L4.	甜酸雞	Sweet & Sour Chicken
L5.	青椒牛肉	Green Pepper Beef
L6.	杏仁雞	Almond Chicken
L7.	回鍋肉	Szechuan Pork
L8.	魚香肉	Pork in Garlic Sauce
L9.	甜酸蝦	Sweet & Sour Shrimp
L10.	甜酸綜合	Sweet & Sour Combo *(Shrimp, Chicken & Pork)*
L11.	肉絲炒麵	Pork Chow Mein
L12.	蘑菇雞片	Moo Goo Gai Pan
L13.	腰果雞	Cashew Chicken
L14.	四川雞	Szechuan Chicken
L15.	芥蘭牛	Beef with Broccoli
L16.	香菇牛	Beef with Black Mushrooms
L17.	雪豆牛	Beef with Snow Pea Pods
L18.	北京蝦	Peking Shrimp
L19.	芥蘭蝦	Shrimp with Broccoli
L20.	宮保綜合	Kung Pao Three Delights
L21.	魚香蝦	Shrimp in Garlic Sauce
L22.	魚香雞	Chicken in Garlic Sauce
L23.	豆鼓雞	Chicken in Black Bean Sauce
L24.	芝麻雞	Sesame Chicken
L25.	蒙古牛	Mongolian Beef
L26.	宮保牛	Kung Pao Beef
L27.	左宗雞	General Tso Chicken
L28.	四川綜合	Szechuan Combo
L29.	蔬菜豆腐	Vegetable Tofu



L15. Beef w/ Broccoli



L4. Sweet & Sour Chicken



L13. Cashew Chicken



L1. Vegetable Deluxe



L5. Green Pepper Beef



L24. Sesame Chicken



L20. Kung Pao Three Delights



Food images for reference only. No substitutions, please. Hot and Spicy

CHEF'S SPECIAL CHINESE FAMILY DINNER

(A) $19.95 per person

Includes:
Egg Drop Soup or Hot & Sour Soup
Egg Roll & Crabmeat Wonton
Egg Fried Rice

Entree: Choose one of the following
1. Almond Chicken
2. Sweet & Sour Pork
3. Green Pepper Beef
4. Moo Goo Gai Pan
5. Szechuan Pork
6. Kung Pao Chicken

(B) $20.95 per person

Includes:
Egg Drop Soup or Hot & Sour Soup
Crispy Prawns & Crabmeat Wonton
Egg Fried Rice

Entree: Choose one of the following
1. Chicken w/ Snow Pea Pods
2. Sweet & Sour Shrimp
3. Beef w/ Broccoli
4. Shrimp Mix Vegetables
5. Szechuan Beef
6. Sesame Chicken





22. BBQ Pork



20. Pork Pot Stickers



24. Crispy Prawns

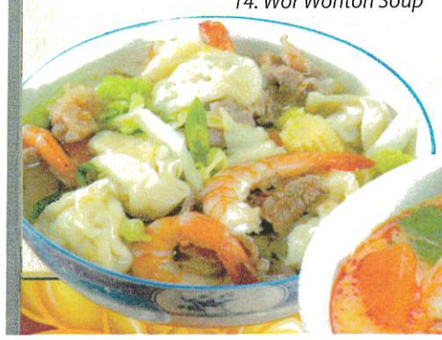
SOUP 湯

		Cup	Bowl
11. 蛋花湯	Egg Drop Soup	$2.50	$10.95
12. 雲吞湯	Wonton Soup	$2.50	$10.95
13. 酸辣湯	Hot & Sour Soup	$2.50	$10.95
14. 窩雲吞湯	Wor Wonton Soup		(L) $13.95
15. 北京湯麵	Peking Noodle Soup		(L) $13.95
16. 紫菜豆腐湯	Vegetable Tofu Soup		(L) $12.95
17. 泰式辣湯	Spicy Tom Yum Soup		(L) $17.95

APPETIZER 頭檯

18. 烤燒牛	BBQ Beef (4)	$7.95
19. 炸蟹餃	Crabmeat Wonton (4)	$7.95
20. 豬肉鍋貼	Pork Pot Stickers (6)	$7.95
21. 炸春卷	Egg Roll (1)	$2.50
22. 叉燒	BBQ Pork	$7.95
23. 叉燒包	BBQ Pork Buns (3)	$7.95
24. 蝴蝶蝦	Crispy Prawns (4)	$7.95
25. 蒸肉丸	Dim Sum (4)	$4.95
26. 烤豬肋	BBQ Spare Ribs (4)	$8.95
27. 綜合拼盤	Assorted Platter 2 egg rolls, 2 crabmeat wontons, 2 spare rib, 2 BBQ Beef	$13.95
28. 蔬菜炸春卷	Veggie Egg Rolls (2)	$2.50

14. Wor Wonton Soup





17. Spicy Tom Yum Soup

Hot and Spicy

Food images for reference only. No substitutions, please.

CHEF'S SPECIALTIES 主廚推薦

D1. 什錦雞蝦 Shrimp & Chicken Delight $19.95
Shrimp and chicken stir fried in brown sauce with Chinese vegetables.

D2. 甜酸綜合 Sweet & Sour Combination $18.95
Tender shrimp, chicken and pork dipped in egg batter and deep fried. Served in tantalizing sweet and sour sauce.

D3. 炒三樣 Sauteed Three Delights $19.95
Beef, chicken and shrimp stir fried in brown sauce with Chinese vegetables.

D4. 乾燒蝦 Szechuan Prawn $19.95
Fresh prawns marinated in egg white and Chinese wine mixture stir fried with onion, ginger and specially prepared Chinese tomato sauce, then topped with a hot pepper oil to give an exquisite flavor.

D5. 椒鹽蝦 Salty Spicy Shrimp *(Shell on)* $22.95

D6. 海鮮牛 Seafood & Beef $19.95
Sauteed beef with jumbo shrimp, scallops and fresh Chinese vegetables in special brown sauce.

D7. 全家福 Happy Family $19.95
Pork, beef, chicken, jumbo shrimp, crab meat and scallops with broccoli, baby corn and Chinese cabbage.

D8. 海鮮大燴 Seafood Sizzling Platter $19.95
Jumbo shrimp, scallops, crab meat, snow peas, baby corn, straw mushrooms with Chinese vegetables.

D9. 宮保蝦 Kung Pao Shrimp $19.95
A real all-time favorite. Shrimp served with water chestnut, mushrooms and peanuts. A hot spicy dish of Szechuan.

D10. 火山蝦 Volcano Shrimp $19.95
Lightly battered shrimp with a hot and spicy Chinese red sauce garnished with broccoli.

D11. 核桃蝦 Walnut Shrimp $19.95
Crispy shrimp. Served in a creamy white wine sauce.

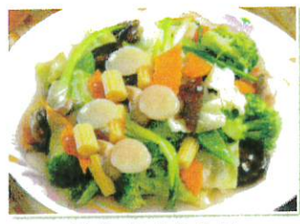
D12. 宮保三樣 Kung Pao Three Delights $19.95
Three kinds of meat: All time favorite. Served with water chestnuts, mushrooms and peanuts. A hot and spicy dish of Szechuan.

D13. 海鮮寶 Spicy Sea Treasures $19.95
Shrimps, scallops, crab meat, napa cabbage, black mushroom. Tofu stir fried with brown sauce.


D5. Salty Spicy Shrimp


D9. Kung Pao Shrimp


D11. Walnut Shrimp


91. Budda's Delight


92. Bean Curd w/ Chinese Vegetables

VEGETABLES · BEAN CURD 青菜·豆腐

91. 素什錦 Buddha's Delight $12.50
Mushrooms, water chestnuts, carrots, baby corn, bamboo shoots and Chinese cabbage. All sauteed in clear sauce.

92. 家常豆腐 Bean Curd w/ Chinese Vegetables $12.50
Deep fried bean curds cooked with Chinese vegetables in a specially prepared sauce. This dish has been greatly liked by many vegetarians.

93. 四川豆腐 Szechuan Bean Curd $12.50
Tender delicious bean curd cooked in hot tomato Szechuan sauce.

94. 蠔油芥藍 Broccoli in Oyster Sauce $12.50
Sauteed broccoli with oyster sauce.

95. 香菇蔬菜 Vegetables w/ Mushroom $12.50
Napa, bamboo, snow peas and mushroom.

96. 木須蔬菜 Moo Shu Vegetables $12.50
A favorite dish of vegetarians. Black fungi, carrots, bamboo shoots and scallions, stir fried with scrambled egg served with four Chinese pancakes.

97. 魚香茄子 Eggplant in Garlic Sauce $12.50

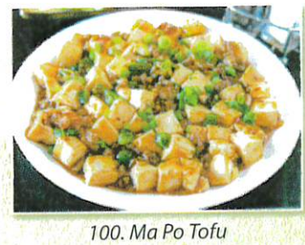
98. 清炒包菜 Stir Fried Cabbage $12.50

99. 素炒飯 Veggie Fried Rice $12.50

100. 麻婆豆腐 Ma Po Tofu $12.50


97. Eggplant in Garlic Sauce


99. Veggie Fried Rice


100. Ma Po Tofu

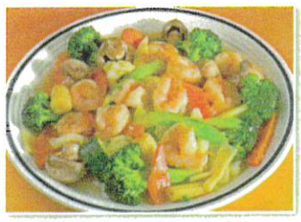
Food images for reference only. No substitutions, please. Hot and Spicy



31. Sweet & Sour Shrimp



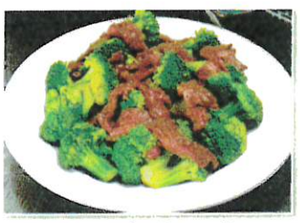
34. Shrimp in Lobster Sauce



36. Shrimp w/ Vegetables



38. Scallops in Garlic Sauce



52. Beef w/ Broccoli



53. Green Pepper Beef



54. Mongolian Beef



59. Beef w/ Snow Pea Pods

SEAFOOD 海鮮

31. 甜 酸 蝦 Sweet & Sour Shrimp $16.95
Tender shrimp dipped in egg batter and deep fried, served in tantalizing sweet and sour sauce.

32. 雪 豆 蝦 Shrimp w/ Snow Pea Pods $16.95
Snow peas, bamboo shoots, carrots and Chinese cabbage delicately sauteed with shrimp in white sauce.

33. 腰 果 蝦 Cashew Shrimp $16.95
Shrimp with cashew nuts, diced water chestnuts and mushroom, green bell pepper.

34. 蝦 龍 糊 Shrimp in Lobster Sauce $16.95
A bundle of shrimp with mushrooms, peas and carrots, chopped onions simmered in egg and white sauce.

35. 芥 蘭 蝦 Shrimp w/ Broccoli 🌶 **..... $16.95**
Flavored shrimp sauteed with broccoli in a delicious garlic sauce. A popular dish.

36. 什 錦 蝦 Shrimp w/ Vegetables $16.95
A specialized recommended dish. Tender shrimp cooked with bamboo shoots, broccoli, water chestnuts, Chinese cabbage and mushrooms in a white sauce.

37. 雪豆干貝 Scallops w/ Snow Pea Pods $19.95
Snow peas, bamboo shoots, carrots and Chinese cabbage delicately sauteed with scallops in white sauce.

38. 魚香干貝 Scallops in Garlic Sauce 🌶 **..... $19.95**
Tasty scallops with mushrooms and water chestnuts simmered in a delicious garlic sauce.

39. 四川干貝 Szechuan Scallops 🌶 **..... $19.95**
Fresh scallops stir fried in a special hot tomato sauce with minced garlic and chopped onions.

40. 洞亭龍蝦 Lobster Cantonese Style ..... *Seasonal Price*
Lobster cut in pieces with mushrooms, green peas, and chopped onions simmered in egg and white sauce.

41. 魚香龍蝦 Lobster in Garlic Sauce 🌶 **..... *Seasonal Price***
Finely cut lobster sauteed in hot and delicious garlic sauce. Sensational!

42. 四川龍蝦 Szechuan Lobster 🌶 **..... *Seasonal Price***
If you like seafood cooked in a hot red sauce, try it.

43. 豆鼓龍蝦 Lobster in Black Bean Sauce 🌶 **..... *Seasonal Price***
Lobster cut in pieces with carrots green pepper and onions, cook with black bean sauce.

BEEF 牛肉

51. 素 菜 牛 Beef w/ Chinese Vegetables $15.95
Tender sliced beef sauteed with snow peas, mushrooms, water chestnuts, bamboo shoots, carrots and Chinese vegetables in a brown sauce.

52. 芥 蘭 牛 Beef w/ Broccoli $15.95
A fine family favorite. Slices of tender beef with broccoli in delicious garlic sauce.

53. 青 椒 牛 Green Pepper Beef $15.95
Tender sliced beef with green peppers and onions. It is a popular dish.

54. 蒙 古 牛 Mongolian Beef 🌶 **..... $15.95**
Tender beef sauteed with green onion and white onion with Hoi Sin sauce and garnished.

55. 辣 椒 牛 Beef w/ Jalapeño 🌶 **..... $15.95**
Sliced beef sauteed with jalapeño, celery with spicy sauce.

56. 宮 保 牛 Kung Pao Beef 🌶 **..... $15.95**
Sliced beef with peanuts, water chestnuts and mushroom in spicy sauce.

57. 湖 南 牛 Hunan Beef 🌶 **..... $15.95**
Tender sliced beef sauteed with snow peas, mushrooms, water chestnuts, bamboo shoots and Chinese vegetables in black bean sauce.

58. 咖 哩 牛 Curry Beef 🌶 **..... $15.95**
Sliced beef with green pepper, onion in curry sauce.

59. 雪 豆 牛 Beef w/ Snow Pea Pods $15.95
Slices of beef sauteed with snow peas, carrots, water chestnuts and Chinese vegetables.

🌶 Hot and Spicy *Food images for reference only. No substitutions, please.*

POULTRY 雞・鴨

61. 甜 酸 雞 **Sweet & Sour Chicken** $14.95
Tender chicken dipped in egg batter and deep fried, served in a tantalizing sweet and sour sauce.

62. 陳 皮 雞 **Orange Chicken** $14.95
Tender chicken dipped in egg batter and deep fried, served in orange sauce.

63. 蘑 菇 雞 **Moo Goo Gai Pan** $14.95
Sliced chicken sauteed with snow peas, mushrooms and Chinese vegetables.

64. 杏 仁 雞 **Almond Chicken** $14.95
Diced chicken sauteed with mushrooms, celery and garnished with almonds

65. 腰 果 雞 **Cashew Chicken** $14.95
Diced chicken sauteed with mushrooms, water chestnuts and garnished with cashews.

66. 雪 豆 雞 **Chicken w/ Snow Pea Pods** $14.95
Sliced chicken, stir fried cooked with snow peas, carrots and water chestnuts.

67. 宮 保 雞 **Kung Pao Chicken** 🌶 $14.95
A real all-time favorite. Diced chicken with peanuts, water chestnuts, mushroom and served as a hot spicy dish.

68. 四 川 雞 **Szechuan Chicken** *(Ta-Chien Chicken)* 🌶 $14.95
Cubed chicken sauteed with carrots, green pepper and scallions plus hot red pepper. An ultimately imaginative Szechuan dish.

69. 檸 檬 雞 **Lemon Chicken** $14.95
Slices of marinated chicken breast, breaded and deep fried.

81. 蘑 菇 雞 **Chicken w/ Mushroom** $14.95
White meat chicken with mushroomin brown sauce.

82. 脆 皮 鴨 **Crispy Duck** (Half) $22.95
Young duckling marinated in spices, deep fried to crackling crispness.

84. 核 桃 雞 **Walnut Chicken** $14.95
Crispy chicken with honey roasted walnuts served in a creamy white wine sauce.

85. 魚 香 雞 **Chicken in Garlic Sauce** 🌶 $14.95
Slice of chicken with snow peas, mushrooms, water chestnuts, bamboo shoots and carrots in a hot and spicy garlic sauce.

86. 咖 哩 雞 **Curry Chicken** 🌶 $14.95
Slices of chicken sauteed with green pepper and onions in a hot spicy curry sauce.

87. 芝 麻 雞 **Sesame Chicken** 🌶 $14.95
Diced chicken dipped in a light batter. Served with hot and spicy sesame sauce.

88. 芥 蘭 雞 **Broccoli Chicken** $14.95
A fine family favorite. Sliced chicken with broccoli in a delicious white wine sauce.

89. 木 須 雞 **Moo Shu Chicken** $14.95
Shredded chicken, scrambled eggs, scallions and bamboo shoots served with four thin pancakes.

90. 湖 南 雞 **Hunan Chicken** 🌶 $14.95
Succulent slices of chicken sauteed with snow peas, mushrooms, water chestnuts, bamboo shoots, carrots and Chinese vegetables in a hot spicy black bean sauce.


64. Almond Chicken


87. Sesame Chicken


67. Kung Pao Chicken


69. Lemon Chicken


82. Crispy Duck


86. Curry Chicken


71. Sweet & Sour Pork


75. Moo Shu Pork

PORK 豬肉

71. 甜 酸 肉 **Sweet & Sour Pork** $14.95
Tender pork dipped in egg batter, deep fried, served in a tantalizing sweet and sour sauce.

72. 雪豆叉燒 **BBQ Roast Pork w/ Chinese Vegetables** $14.95
Lean pork first prepared in a special barbecue sauce, then cut in pieces and sauteed with Chinese vegetables.

73. 魚香肉絲 **Shredded Pork in Garlic Sauce** 🌶 $14.95
Marinated pork cut in string style, sauteed with water chestnuts, carrots and a mixture of garlic sauce.

74. 回 鍋 肉 **Szechuan Pork** 🌶 $14.95
Pork stir cook with cabbage, mushrooms, bamboo, onion in hot and spicy Szechuan sauce.

75. 木 須 肉 **Moo Shu Pork** $14.95
Shredded pork, scrambled eggs, scallions and bamboo shoots served with four thin pancakes.

76. 宮 保 肉 **Kung Pao Pork** 🌶 $14.95
Sliced pork with peanuts, water chestnuts and mushrooms in spicy sauce.

Food images for reference only. No substitutions, please. 🌶 Hot and Spicy

CHOP SUEY 雜碎



107. Chicken Lo Mein

101.	Pork Chop Suey	$13.95
102.	Chicken Chop Suey	$13.95
103.	Beef Chop Suey	$13.95
104.	Shrimp Chop Suey	$13.95
105.	Combination Chop Suey	$13.95

LO MEIN 撈麵



109. Shrimp Lo Mein

106.	Pork Lo Mein	$13.95
107.	Chicken Lo Mein	$13.95
108.	Beef Lo Mein	$13.95
109.	Shrimp Lo Mein	$13.95
110.	Combination Lo Mein	$13.95
	Plain Lo Mein	$9.50

LA NOODLE 洛城麵粉



110. Combination Lo Mein

111.	Pork Noodle	$13.95
112.	Chicken Noodle	$13.95
113.	Beef Noodle	$13.95
114.	Shrimp Noodle	$13.95
115.	Combination Noodle	$13.95

FRIED RICE 炒飯



125. Shrimp Fried Rice

121.	Egg Fried Rice	$10.95
122.	Roast Pork Fried Rice	$12.95
123.	Chicken Fried Rice	$12.95
124.	Beef Fried Rice	$12.95
125.	Shrimp Fried Rice	$12.95
126.	Combination Fried Rice	$12.95
127.	Steamed Rice *(Bowl)*	*(S)* $2.50 ..... *(L)* $5.00



126. Combination Fried Rice

DESSERTS · BEVERAGES 甜品·飲品

Cheese Cake	$4.95	Soft Drinks *(Refill 50c)*	$2.95
Green Tea Ice Cream	$4.95	Milk	$2.95
Sesame Balls (6)	$6.95	Orange Juice	$2.95
		Iced Tea	$2.95



Sesame Balls

Food images for reference only. No substitutions, please.

©2023 FONG'S GRAPHICS & PRINTING • ALL RIGHTS RESERVED • 1-626-307-1898 • WWW.FONGSPRINTING.COM • 版權所有 翻印必究

Liquor License Application
Type:

Plan of Operations

Applicant: New Chinatown Restaurant WY LLC.

DBA: _____

Describe how the premises will be operated? *include nature of business (restaurant, bar, package store), any regular events or special events*

Restaurant
Serving customers beverage & alcohol with food.

What type of alcoholic beverages will be available to customers?

beer, wine, Liquer

Describe the process that a customer will follow to order alcohol or malt beverages, and how an employee will prepare and deliver an alcoholic beverage to the customer.

- check ID.
- place the order
- prepare the order
- serve the customers.

What is the official building capacity? 120

Do you plan to serve alcohol outside on a deck or patio? No.

If so, include a sketch or site plan showing the outside area.

If so, describe the outside area, including egress: _____

What is your plan to keep customers from leaving with open alcohol containers?

Provide the names of up to three (3) people who should receive communication from the Town and Police Department related to liquor operations:

	Name	Position/Title	Email
1)	Yanxin Liu	Owner	Liuyanxin741@gmail.com
2)	Guohui Lu	Owner	guohui.lu15@gmail.com
3)	Chrisan Li	Manager	Liuyanxin@hotmail.com

Completed by: Yanxin Liu Date: 5/2/2025

Chinatown Lee Inc, DBA Chinatown Restaurant

P.O. BOX 10576

JACKSON, WY 83002

LIQUOR LICENSE TRANSFER ASSIGNMENT LETTER

Chinatown Lee Inc, seeks to transfer its Restaurant Liquor License to New Chinatown Restaurant WY<LLC

upon closing of the sale of the business on or before May 1st, 2025

assignment letter accompanies the transfer application and all necessary documentation. Chinatown Lee Inc, is in possession of license number 207 which is in use at 850 West Broadway Suit # A in Jackson, Wyoming•

This assignment is only valid with the successful closing of the sale of the business. Should closing not occur, for whatever reason, this assignment letter and the transfer of Chinatown Lee Inc, liquor license will be withdrawn.

Date _05/02/2025

Hak Kheng Ly (President)

Date _)5/02/2025

Salomon Ly(Member

STATE OF WYOMING * SECRETARY OF STATE
BUSINESS DIVISION

Herschler Bldg East, Ste.100 & 101, Cheyenne, WY 82002-0020
Phone: 307-777-7311 · Website: https://sos.wyo.gov · Email: business@wyo.gov

Filing Information

Please note that this form CANNOT be submitted in place of your Annual Report.

Name	**NEW CHINATOWN RESTAURANT WY LLC**
Filing ID	**2025-001630307**
Type	Limited Liability Company
Status	Active

General Information

Old Name		Sub Status	Current
Fictitious Name		Standing - Tax	Good
		Standing - RA	Good
Sub Type		Standing - Other	Good
Formed in	Wyoming	Filing Date	03/09/2025 12:56 PM
Term of Duration	Perpetual	Delayed Effective Date	
		Inactive Date	

Principal Address

850 W BROADWAY
JACKSON, WY 83001

Mailing Address

C/O 112 BOWERY
FL 1
NEW YORK, NY 10013

Registered Agent Address

GUO HUI LU
850 W BROADWAY
JACKSON, WY 83001

Parties

Type	Name / Organization / Address
Organizer	GUO HUI LU 198 HERON DR. WEST YELLOWSTONE, MT 59758
Organizer	YAN XIN LIU 198 HERON DR. WEST YELLOWSTONE, MT 59758

Notes

Date	Recorded By	Note

Annual Report History

Num	Status	Date	Year	Tax

Amendment History

ID	Description	Date

Filing Information



Please note that this form CANNOT be submitted in place of your Annual Report.

Name	**NEW CHINATOWN RESTAURANT WY LLC**		
Filing ID	**2025-001630307**		
Type	Limited Liability Company	Status	Active

See Filing ID	Initial Filing	03/09/2025

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Town Council
Submitting Department:	Planning Department	**Presenter:**	Andrew Bowen
Agenda Item:	P25-041 Development Plan (St Johns Health, Hitching Post Housing Development Project)	**Public Comment:**	Yes

Purpose & Policy Considerations.
A Development Plan and associated review is required for this application as a result of a condition of approval of the June 20, 2022, Zoning Map Amendment (ZMA P22-053) that rezoned this property to Public/Semi-Public (P/SP) from Neighborhood Medium-Density (NM-1). This condition was included to ensure that the contemplated 70-plus unit development using Specific Purpose Excise Tax (SPET) funds would go through a full public review process to ensure neighborhood compatibility. Without the condition the application being 100% deed-restricted, would not require a Sketch Plan or Development Plan.

Requested Action.
The Applicant, HH Land Strategies (Hal Hutchinson), on behalf of the Teton County Hospital District, is requesting approval of a Development Plan for a project located at 460 East Broadway Avenue. The proposed development includes an 83,300-square-foot building with 72 residential units and will also include ancillary residential support uses (described in more detail in the Background section of this staff report), along with property management offices for St. John's Health.

Key Issues/Policy Question

1. *Requested Modifications to Deed Restricted Unit Requirements:* Does the Town Council support the Applicant's proposed amendments to the Housing Department's template Workforce Deed Restriction to adjust the 75% local income requirement and 60-day vacancy limit?
2. *Pedestrian Connectivity Issues:* The current proposal does not include a crosswalk on East Broadway to access the main hospital campus or a continuous sidewalk to the shared parking areas east on Redmond Street. Does the Town Council support a design that lacks this critical infrastructure, or should an eastern sidewalk extension be required?

Recommendation.
The Planning Director recommends **approval** of Development Plan P25-041 for a 72-unit residential development located at 460 East Broadway Avenue, subject to the departmental review comments attached and this staff report dated June 2, 2025 with four (4) recommended conditions:

1. As part of the Building Permit submission, the Applicant shall include a sidewalk design on the south side of East Broadway, either attached or detached, to provide continuous pedestrian access to Redmond Street to be reviewed and approved by the Town Engineer. This sidewalk shall be constructed prior by the applicant to the issuance of a Certificate of Occupancy.
2. As part of the Building Permit submission, the Applicant shall provide a signage plan or other strategy acceptable to the Planning Director that demonstrates how the 32 off-site parking spaces will be reserved exclusively for the residents of the Hitching Post.
3. To ensure compliance with the standards of the Town of Jackson Land Development Regulations and the Housing Department Rules & Regulations, all dwelling units (Accessory Residential Units) shall be subject

to a deed restriction for Workforce Rental housing, in perpetuity, in a form established and approved by the Housing Department. This deed restriction shall be recorded prior to the issuance of a Certificate of Occupancy.

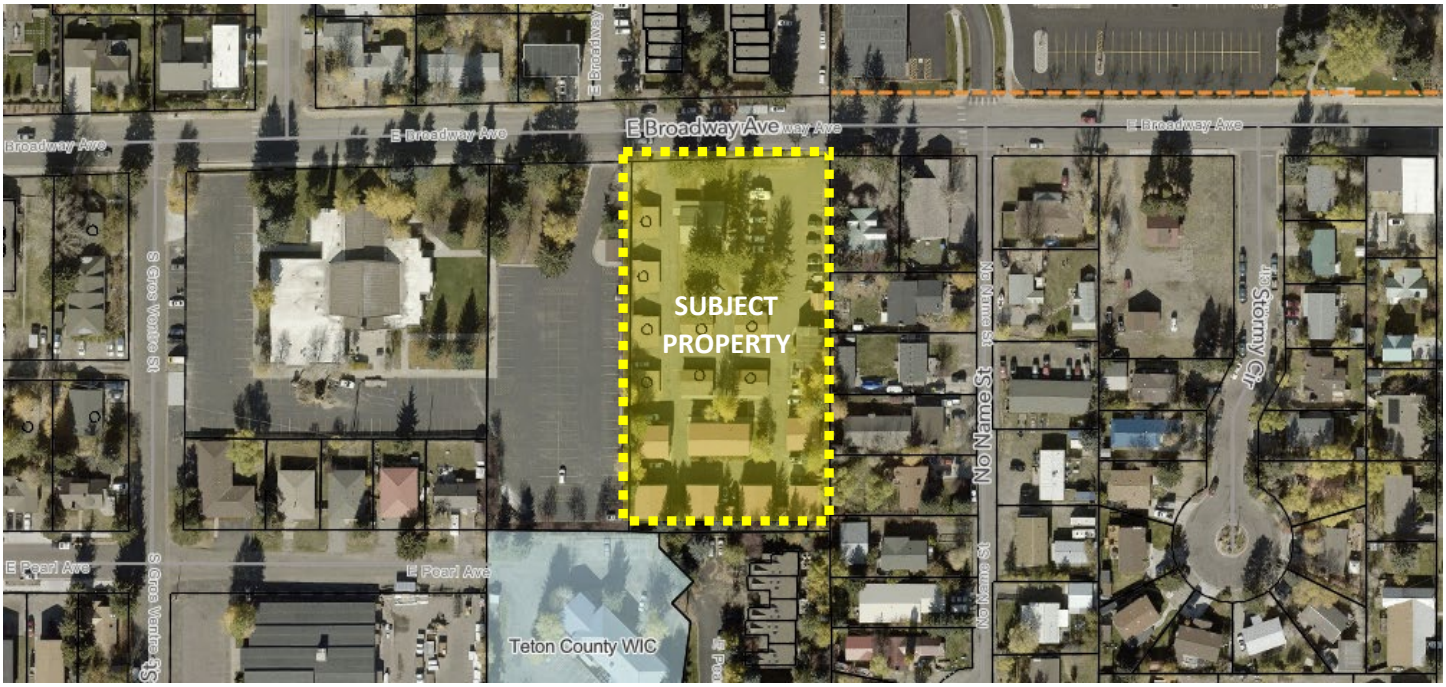
4. All proposed modifications to housing deed restrictions shall be submitted to the Jackson/Teton County Housing Department for final review and approval by the Town Council.

Note: The conditions provided above were added after the Planning Commission meeting and thus were not directly part of the Commission's consideration.

The Planning Commission recommends **approval** of Development Plan P25-041 for a 72-unit residential development located at 460 East Broadway Avenue, subject to the departmental review comments attached and this staff report dated June 2, 2025.

Project Location.
The subject property is located at 460 East Broadway Avenue (PDIN: 22-41-16-34-2-00-001)

TC 2024 Aerial



Background/Project Description.
Per the Applicant's narrative, St. John's Health acquired the Hitching Post Lodge in 2001 and has since used the property to provide long-term employee housing and short-term lodging for patients, their families, and employees.

<u>Zoning Map Amendment:</u>
In March of 2022, St. John's Health applied for a Zoning Map Amendment (ZMA P22-053) to rezone the site from Neighborhood Medium Density 2 (NM-2) to Public/Semi-Public (P/SP). The stated intent of this map amendment was to enable more efficient and cost-effective employee housing. Under NM-2 zoning, development was limited to eight units per building, which required multiple structures to reach the desired project density. The P/SP zoning designation removes this restriction, allowing higher-density development within a single structure.

The Town Council approved ZMA P22-053 on June 20, 2022, with the following three (3) conditions.

As part of the approval, any future Development Plan must comply with specific dimensional standards from the NM-2 zone.

1. *The 1.65-acre subject property located at 460 East Broadway shall be subject to the following dimensional standard requirements of the NM-2 District, as modified in this recommendation, and as the NM-2 Zone may be amended from time to time:*

   a. Structure setbacks;
   b. Building height of up to 39' but with consideration for the dimensional standards of neighboring zones;
   c. 3 story limit;
   d. Site development setbacks;
   e. Parking setbacks;
   f. LSR of 21% but not 70% in first 1/3 of property;
   g. Parking; and
   h. Design review.

2. Neither the entire parcel nor any individual units (whether an ARU, apartment, or otherwise), nor any interest of either of the foregoing, can be sold separately from the St. John's Health campus, which for purposes of this condition means the property currently addressed as 625 East Broadway Avenue.
3. The future redevelopment of the site shall be subject to a Development Plan process as provided in the LDRs.

SPET Funding:
In the fall of 2022, voters approved $24 million in specific purpose excise tax funds (SPET) for this redevelopment project.

Property Description:
The Hitching Post Lodge property is a primarily flat, rectangular lot with approximately 196 feet of frontage along East Broadway Avenue, extending about 365 feet to the south and encompassing roughly 1.65 acres.

To the east, the site is bordered by five individual lots. The northernmost is zoned Office Residential (OR), while the remaining four are zoned Neighborhood Low Density 5 (NL-5). To the south, the property adjoins land zoned NM-2, which is developed with residential uses. A 30-foot portion of the southern boundary also borders a Teton County-owned lot containing the Teton County Health facility. On the west, the property is adjacent to an NM-2-zoned lot owned by the Church of Jesus Christ of Latter-day Saints, currently used as a parking lot.

Current Site Development:
The Hitching Post Lodge currently consists of 17 buildings that support both residential and short-term rental uses for St. John's Health. These buildings contain a total of 34 units, including 15 employee housing units with 30 bedrooms. Additionally, the property includes 19 short-term stay rooms that accommodate patients, their families (established on another site), and on-call staff.

Project Description:

As previously stated, the proposed Hitching Post project involves the redevelopment of the existing Hitching Post Lodge. The project will replace the existing lodge and cabins with a new three-story, 72-unit apartment building designed to house St. John's Health employees. A summary of the project is provided below:

Building Design:

- Approximately 83,300 square feet in size, with a wood-framed structure and a concrete basement for storage.
- Includes three stairwells and a service elevator.
- Residential unit mix: 22 one-bedroom, 48 two-bedroom, and 2 three-bedroom apartments.

Site Features:

- 76 on-site parking spaces (mix of both surface and tuck-under). A Shared Parking Agreement for 32 off-site parking spaces has been proposed and is outlined in the Analysis section of this staff report. This plan provides at least one space per unit.
- Open spaces will feature courtyards, a plaza, gardens, and green areas for recreation and pets.
- Resident amenities include storage, a common gathering area, and a gear shop for cleaning and maintaining recreational equipment.

Additional Uses:

- The building will also include property management offices for St. John's Health.
- A dedicated laundry area will support maintenance and housekeeping needs.

Building & Site Design:

Rendered View of the Northeast Corner from E. Broadway



Proposed Site Plan



Note: As requested, the midblock crosswalk has been removed, and the sidewalk now is proposed to be developed along the entire northern property line. This change is not reflected in the renderings.

Analysis.

Purpose of a Development Plan:

Per LDR Sec. 8.3.3.A the purpose of a Development Plan is *"to review a physical development or development option that is large and complex enough to benefit from a public review at a sufficient level of detail to determine compliance with these LDRs prior to preparation of final construction or plat documents."*

After reviewing the Applicant's submittal, staff finds that the proposed project complies with the LDR requirements of the P/S-P zone, and those aspects conditioned under ZMA P22-053. Below is an LDR Compliance table for the zone:

Development Standard	P/SP and Conditional Standards	Proposed	Compliance
Primary Building Setbacks			
Primary street setback (min)	20'	20'	Complies
Secondary street setback (min)	10'	10'	Complies
Side interior (min)	10'	10'	Complies
Rear (min)	10'	20'	Complies
Site Development Setbacks			
Primary/Secondary Street (min)	20'	>20'	Complies
Side/Interior (min)	5'	10'	Complies
LSR			
Apartments	.21 excl. 70% in first 1/3 of lot	.288	Complies
Vehicular Access Standards			
Curb Cut Width (max)	n/a	24'	Complies
Driveway Width	n/a	24'	Complies
Parking Setbacks			

Development Standard	P/SP and Conditional Standards	Proposed	Compliance
Primary Street (min)	0’	>approx. 20’	Complies
Side interior (min)	1’	10’	Complies
Rear (min)	5’	20’	Complies
Height			
Height @ > 6/12 (max)	39’ but with consideration to neighbors to east.	39' maximum for pitched roof elements, and the flat roof portions, including parapet walls, have been adjusted to adhere to the 35' requirement of NM-2	Complies
Stories	3	3	Complies
FAR			
	n/a	1.0 (approx.)	Complies

Development Plan Process Only:
As previously stated, a Sketch Plan and Development Plan are required for projects with more than 10 non-deed-restricted dwelling units in the Public/Semi-Public Zone, per LDR Section 8.3.3. While this proposal will deed-restrict 100% of the units, typically exempting it from both a Sketch Plan and Development Plan, a Development Plan is still required because this review process was made a condition of approval for ZMA P22-053. However, approval of a Sketch Plan was not included as a condition of that amendment.

Height:
As previously noted, the building must conform to NM-2 zoning height standards for each roof type. The current design complies with the 39-foot maximum height for pitched roof elements. Flat roof sections, including parapet walls, have been designed to meet the 35-foot height limit of NM-2.

Affordable & Workforce Housing:
Key Issues/Policy Question 1.
Requested Modifications to Deed Restricted Unit Requirements: **Does the Town Council support the Applicant’s proposed amendments to the Housing Department’s template Workforce Deed Restriction to adjust the 75% local income requirement and 60-day vacancy limit as explained below?**

The conditional P/SP zoning permits Accessory Residential Units (ARUs) as a Basic Use. During the Zoning Map Amendment (ZMA P22-053), it was determined that ARUs on the subject property are considered accessory to St. John's Health's hospital operations on adjacent land owned by the Teton County Hospital District.

ARUs must comply with occupancy requirements under LDR Section 6.1.11.B, which stipulates that tenants must be employed in Teton County according to the Jackson/Teton County Housing Rules and Regulations.

- A minimum of 75% of the household's income is earned from a local business.
- Tenants physically occupy the unit for at least 80% of their lease term.
- Annual requalification or requalification upon lease renewal.
- No unit remains vacant for more than 60 days.
- Rent is set by the owner.

The Hitching Post Apartment project is designed to provide employee housing for St. John's Health, supporting its efforts to recruit and retain healthcare professionals who may otherwise struggle to find housing in the area.

Given the unique challenges of healthcare recruitment, St. John's Health has requested two modifications to the ARU occupancy rules:

Applicant Request no 1:

1. *Income Requirement:* The 75% minimum local income rule should apply only to the St. John's Health employee, not their entire household. Many healthcare professionals have partners who earn income outside Teton County, and this restriction could hinder recruitment.

   Housing Department Response:
   The Housing Department has reviewed this request and recommends approval.

Applicant Request no 2:

2. *Vacancy Allowance:* Units may remain vacant for more than 60 days. Hiring skilled employees often involves a delay between job acceptance and relocation, which frequently exceeds 60 days.

   Housing Department Response:
   The Housing Department has reviewed this request and does not recommend the requested 60 day exemption for all units, however, would consider exemptions on a case-by-case basis for individual units.

The Applicant states that these modifications will ensure St. John's Health can continue providing high-quality care while addressing the workforce housing needs of its employees. During a meeting held between Housing staff and the Applicant on May 21, 2025, the following topics were discussed in response to the original housing comments.

The five main topics stated by the Applicant were as follows:

1. How will the 75% minimum local income rule be applied to Hitching Post deed restrictions
2. How will the 60-day minimum vacancy rule be applied to the Hitching Post deed restrictions
3. How will the 6-month minimum lease requirement be handled in the Hitching Post Deed restrictions
4. How will the sale of property, or individual units be handled under the Hitching Post deed restriction?

5. In the event St. John's leases any Hitching Post units to non-St John's employees, what Workforce deed restriction requirements apply?

After meeting with the Housing Department, the Applicant provided the following summary (in italics) to which the Housing Department agreed per an email dated May 27, 2025 (attached).

> *"Based on discussions during the meeting, I [the applicant] understand St John's Health and the staff of the Jackson/Teton County Housing department agree in principle on the following details for each of the above listed main topics.*
>
> ***Regarding #1:*** *The Housing Department agrees, and St. John's Health accepts that the Hitching Post deed restrictions will be modified to exempt Hitching Post units rented to a full-time employee at St. John's Health from the 75% local income rule. If a unit is rented to a household without a full-time St. John's Health employee, the tenant household will be required to meet all the requirements of the Workforce Program as outlined in the deed restriction and the Housing Department Rules and Regulations. For the purpose of the deed restriction, St. John's Health's Full Time Employee will meet the requirement that they work, at a minimum, 1,560 hours per year.*
>
> *Furthermore, because St. John's Health's organizational structure includes contracting with separate but linked entities to provide service in furtherance of St. John's Health mission (such as pharmacy services) the deed restriction will clearly indicate that employees of these separate but linked entities qualify as employees of St. John's Health for the purpose of qualifying for occupancy of Hitching Post deed restricted units. To achieve this purpose, the deed restriction will indicate that qualified employees include "Employees of St. John's Health or employees of entities that provide full time services to St. John's Health" or similar agreed upon language achieving this purpose.*
>
> ***Regarding #2:*** *The Hitching Post deed restrictions will include a maximum 60-day vacancy requirement. However, because of the unique circumstances facing St. John's Health employee recruitment and retention, should St. John's Health anticipate that a deed restricted unit will be vacant for more than 60 days they will report this along with a brief description of the reasons for greater than a 60 -day vacancy. Such reports are deemed to be requests for an exemption to the 60-days vacancy rule and the deed restriction will include a statement that "Housing Department's acceptance of the extension of the 60-day vacancy rule will not unreasonably be withheld" or similar agreed upon language.*
>
> ***Regarding #3:*** *Due to the unique circumstances associated with St. John's Health and entities providing full time services filling essential positions there may arise some need for St. John's Health to provide housing to employees serving in these positions on a short-term basis. In these situations, St. John's Health will seek from the Housing Department an exemption to the 6-month minimum lease of deed restricted units and the deed restriction will include language that "such exemption will not be unreasonably withheld" to similar agreed upon language achieving this purpose.*
>
> ***Regarding #4:*** *In no anticipated scenario will St. John's Health sell either the Hitching Post property or the planned Hitching Post Apartments project. However, the deed restrictions will be placed on the units in perpetuity and should reflect and/or anticipate any eventuality, however unlikely. Therefore, the deed restriction should anticipate sale of the property. In this eventuality, the deed restriction will indicate*

that, in the event of sale of the property, the exceptions listed above in items #1, #2 and #3 will be eliminated from the deed restriction.

Regarding #5: *In the unlikely event that St John's Health leases any units within the Hitching Post Apartments project to a non-St. John's Health or employees of entities that provide full time services to St. John's Health the exemptions identified in items #1, #2, and #3 shall not apply and the rules within the Workforce Housing Deed Restriction shall apply."*

Note: This Response Letter is attached to this staff report.

Planning staff defers to the Housing Department's comments and position and have no additional comments. Please note that the Applicant will be required to submit a draft deed restriction with the Building Permit submittal.

Vehicular Access:

All vehicular access to the site will be from East Broadway Avenue. Neither the base P/SP zoning nor the conditional P/SP standards restrict driveway or access widths. While the previous NM-2 zoning limited curb cuts to 20 feet per 100 feet of frontage, this restriction no longer applies. The Applicant proposes a 24-foot curb cut, which they state will provide appropriate site access.

Vehicular Parking and Pedestrian Access to Parking:

Key Issues/Policy Question 2.

Pedestrian Connectivity: **The current proposal does not include a crosswalk on East Broadway to access the main hospital campus or a continuous sidewalk to the shared parking areas east on Redmond Street. Does the Town Council support a design that lacks this critical infrastructure, or should an eastern sidewalk extension be required?**

Under the P/SP zoning designation, Accessory Residential Units (ARUs) require 1.25 parking spaces per unit. However, Planning staff have determined that the proposed use of the property is more appropriately classified as an "Apartment" use for the purposes of parking calculations. This is because ARUs in the P/SP do not have any size limit, so they function more like typical apartment units than typical ARU units that are limited in maximum size to either 500 or 800 square feet. Accordingly, the applicable requirement is 1.5 spaces per unit. With 72 units proposed, the Hitching Post Apartments project is required to provide 108 parking spaces (72 units x 1.5 = 108). The Applicant proposes to meet this requirement by providing parking both on and off-site as shown below:

On-site

The project will provide 76 of the required spaces on-site, including:

- 38 standard parking spaces
- 5 ADA spaces (2 van-accessible, 3 standard)
- 33 EVSE-capable spaces, 6 of which will include installed EV charging equipment (complies with LDR Section 6.2)

Off-Site

The remaining 32 required spaces will be provided off-site on land owned by St. John's Health, located approximately 810 feet (approximately 2 blocks) from the project site, near the southeast corner of East Broadway and Redmond Street. Per the LDRs, offsite parking may be permitted if it is within 1,000 feet of the subject property. This area is labeled as Shared Parking Location #8 in *Exhibit A: Hitching Post Apartments Plan Set, Sheet DEV-03*.

Proposed Shared Parking Area Location



A Shared Parking Agreement is required to formalize the use of the off-site spaces. A draft agreement specifying the number of shared spaces is included in *Exhibit C: Shared Parking and Access Easement Agreement*. Although the off-site parking area is currently used for hospital campus operations, a parking study by St. John's Health confirms that the hospital campus will continue to maintain a surplus of parking spaces.

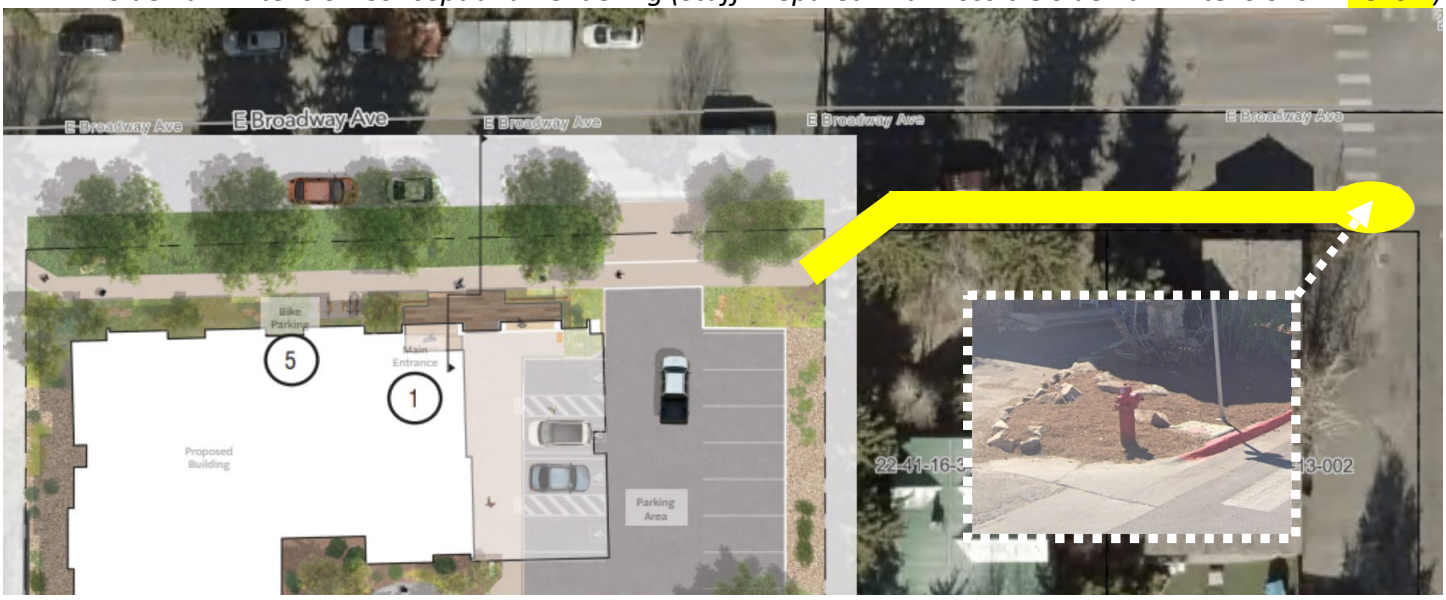
Staff generally support the proposed off-site parking area, however, safe access to this parking lot for residents of the Hitching Post should be provided by the Applicant.

The current pedestrian design lacks a safe, designated crosswalk across East Broadway to the hospital campus and shared parking areas. As a result, residents are likely to cross informally or walk along fragmented sidewalks. Using the nearest crosswalk at North Gros Ventre Street adds about 0.2 miles to the hospital and 0.36 miles to the parking lot. Staff assumes residents will take the more direct route, walking along the south shoulder of East Broadway rather than crossing twice at the designated crosswalk.

To reduce pedestrian conflicts on East Broadway (i.e., Hitching Post residents "jay walking" to and from the hospital by crossing East Broadway mid-block with no crosswalk), staff is recommending that the applicant construct a sidewalk extension (approx. 130') to the existing crosswalk at No Name Street. In addition, to ensure that Hitching Post residents can safely walk to and from their remote parking lot on Redmond Street, staff is recommending that the applicant construct a new sidewalk (also approx. 130') from No Name Street to the existing sidewalk that is mid-block between No Name and Stormy Circle. Further study is needed to confirm if both sections can fit within the Town's right-of-way. The project may also encounter practical

difficulties and costs due to topography, existing trees, utilities, and a fire hydrant along the route. Staff have provided concept renderings on the following page that show the off-site sidewalk extensions recommended by staff.

Sidewalk Extension Concept and Rendering (Staff Prepared with Possible Sidewalk Extensions in Yellow)





Bicycle Parking:
The project meets the newly adopted bicycle parking standards, providing a total of 93 bike parking spaces, based on 0.75 spaces per bedroom (124 bedrooms x 0.75 = 93). The breakdown of long-term and short-term facilities is shown below:

- Long-term bike parking will be located in basement storage areas assigned to each apartment
- Short-term bike parking for 24 bicycles will be available on-site

Details are provided in *Exhibit A: Hitching Post Apartments Plan Set, Sheet DEV-04* and the Landscape Plan.

Onsite Pedestrian Improvements:
Neither the conditional P/SP zoning nor the former NM-2 zoning includes specific pedestrian frontage standards. The proposed site plan includes a 5 ft detached sidewalk with a 6-foot landscape buffer. The property line sits approximately 8 feet south of the existing curb along East Broadway.

To enhance the streetscape, the project proposes a 7.5 ft landscape strip within the property boundary, creating a total buffer of 15.5 feet from the existing curb. A 6 ft-wide sidewalk will be installed south of this buffer which spans the frontage of East Broadway. As requested by the Pathways Department, the Applicant has designed the streetscape to allow for a future cycle track.

Note: For discussion of off-site pedestrian improvements please see pages 11-12.

Lighting:
Exterior lighting standards have been reviewed in accordance with the Town's LDRs. The proposed fixtures and lighting design, as shown on *Sheet DEV-16: Exterior Light Fixture Cutsheets* in *Exhibit A: Hitching Post Apartments Plan Set*, are compliant with all applicable requirements.

Landscaping:
The conditional P/SP zoning requires a minimum Landscape Surface Ratio (LSR) of 0.21, matching NM-2 standards for apartments. The property is exempt from the 70% front-lot LSR requirement. The proposed design provides 20,681 square feet of landscaping (28.8% LSR), exceeding the requirement, as shown in Exhibit A: Hitching Post Apartments Plan Set.

Trash Enclosure:
The project includes a single, centrally located trash enclosure along the eastern property line, designed for convenient access and will be screened per LDR requirements.

Design Review Committee Review (DRC).
On March 12, 2025, the Design Review Committee reviewed the design proposal for this Development Plan and *approved* the project as presented with one Condition of Approval.

Condition of Approval, The DRC shall verify the proposed material samples.
Note: This condition has been met.

Planning Commission Review and Recommendation (PC).
On May 7, 2025, the Planning Commission reviewed this Development Plan and *recommended approval* for this project as presented with no recommended conditions of approval.

During discussions of the Development Plan, the Planning Commission (PC) made the following observations:

- The PC supported the proposed concept of off-site shared parking.
- The PC generally supported the proposed modifications to the Housing Department's rules and regulations; however, they expressed concern that Modification No. 1 could set a precedent and create a "slippery slope" for future requests from other employers.
- The PC was generally supportive of the proposed pedestrian plan, noting that it could encourage future sidewalk development along the south side of East Broadway.
- The PC supported the inclusion of a heated on-site parking lot and agreed with the Applicant's rationale that this approach would reduce noise pollution and, over time, be more efficient than traditional snow storage and removal methods.
- The PC expressed support for the proposed project density.
- The PC raised concerns about the width of the proposed curb cut.

Public Comment.
Notice of this meeting and application was provided to the public on May 14, 2025, at the time of writing this staff report, no public comment has been received.

Development Plan Findings.
All Development Plan proposals may be approved only if all of the following findings are made:

1. ***Is consistent with the purposes and organization of the LDRs;***
   Complies. The proposed development aligns with the requirements of the existing Public/Semi-Public (P/SP) zoning designation and with all applicable purposes and organization of the LDRs.

2. ***Achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable;***
   Finding not applicable.

3. ***Does not have significant impact on public facilities and services, including transportation, potable water and wastewater facilities, parks, schools, police, fire, and EMS facilities;***
   Complies. The Hitching Post Apartments provide convenient housing for St. John's Health employees, reducing commutes and supporting essential services. While the project is more intensive than existing development and may increase demand for public services, it uses existing utility infrastructure and is not expected to significantly impact Town resources as conditioned.

4. ***Complies with the Town of Jackson Design Guidelines, if applicable;***
   Complies. As noted, The Design Review Committee (DRC) reviewed the design for this structure twice. On March 12, 2025, the DRC reviewed the final design proposal for the redevelopment of the property and approved the project as presented, with one Condition of Approval. This condition has since been met.

5. ***Complies with all relevant standards of these LDRs and other Town Ordinances;***

Complies. The proposed development aligns with the requirements of the existing Public/Semi-Public (P/SP) zoning designation and with the conditions required by ZMA P22-053. In addition, the project meets all other relevant municipal codes and ordinances referenced throughout this application.

6. ***Is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.***
   Complies**.** This application complies with the conditions required by ZMA P22-053.

Fiscal Impact.
Staff does not anticipate any fiscal impact from the project at this time, as it involves the redevelopment of an existing site already owned and operated by St. John's Health. The proposed use remains consistent with the property's current role in supporting hospital operations and employee housing and no new public infrastructure or services are currently expected.

Staff Impact.
The amount of staff time to review, meet with the Applicant, research, and write this report including future work to send final letters was roughly 70 hours.

Attachments.
- Applicant Submittal
- Department Reviews

Suggested Motion.
I move to ***approve*** Development Plan P25-041 for a 72-unit residential development located at 460 East Broadway Avenue, based upon the findings presented in this staff report, the departmental reviews attached, and the conditions of approval in this staff report dated June 2, 2025.

PLANNING PERMIT APPLICATION
Planning & Building Department

150 E Pearl Ave.
P.O. Box 1687
Jackson, WY 83001

ph: (307) 733-0440
www.townofjackson.com

For Office Use Only

Fees Paid_____ Date & Time Received _____

Application #s _____ _____ _____

Please note: *Applications received after 3 PM will be processed the next business day.*

PROJECT.

Name/Description: St Johns Health, Hitching Post Housing Development Project

Physical Address: 460 E Broadway Avenue

Lot, Subdivision: Parcel B, Map T-74A PIDN: 22-41-16-34-2-00-001

PROPERTY OWNER.

Name: Teton County Hospital District Phone:

Mailing Address: 460 E Broadway Avenue, Jackson, WY ZIP: 83001

E-mail:

APPLICANT/AGENT.

Name: HH Land Strategies, LLC, Hal Hutchinson Phone: 307-699-0265

Mailing Address: PO Box 1902, Wilson, WY ZIP: 83014

E-mail: hal@hhlandstrategies.com

DESIGNATED PRIMARY CONTACT.

_____Property Owner X Applicant/Agent

TYPE OF APPLICATION. *Please check all that apply; review the type of application at www.townofjackson/200/Planning*

Use Permit

_____Basic Use

_____Conditional Use

_____Special Use

Relief from the LDRs

_____Administrative Adjustment

_____Variance

_____Beneficial Use Determination

_____Appeal of an Admin. Decision

Physical Development

_____Sketch Plan

X Development Plan

_____Design Review

Subdivision/Development Option

_____ Subdivision Plat

_____Boundary Adjustment (replat)

_____Boundary Adjustment (no plat)

_____Development Option Plan

Interpretations

_____Formal Interpretation

_____Zoning Compliance Verification

Amendments to the LDRs

_____LDR Text Amendment

_____Map Amendment

Miscellaneous

_____**Other:** _____

_____ Environmental Analysis

PRE-SUBMITTAL STEPS. *To see if pre-submittal steps apply to you, go to www.townofjackson.com/200/Planning and select the relevant application type for requirements. Please submit all required pre-submittal steps with application.*

Pre-application Conference #: P24-188 Environmental Analysis #: n/a

Original Permit #: _____ Date of Neighborhood Meeting: _____

SUBMITTAL REQUIREMENTS. *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant. Go to www.townofjackson.com/200/Planning and select the relevant application type for submittal requirements.*

Have you attached the following?

n/a **Application Fee.** Fees are cumulative. Go to www.townofjackson.com/200/Planning and select the relevant application type for the fees.

x **Notarized Letter of Authorization.** A notarized letter of consent from the landowner is required if the applicant is not the owner, or if an agent is applying on behalf of the landowner. Please see the Letter of Authorization template at http://www.townofjackson.com/DocumentCenter/View/845/LetterOfAuthorization-PDF.

x **Response to Submittal Requirements**. The submittal requirements can be found on the TOJ website for the specific application. If a pre-application conference is required, the submittal requirements will be provided to applicant at the conference. The submittal requirements are at www.townofjackson.com/200/Planning under the relevant application type.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Hal Hutchinson — 02/25/2025

Signature of Property Owner or Authorized Applicant/Agent — Date

Hal Hutchinson — Agent

Name Printed — Title

Hitching Post Apartments

Application for

Development Plan and Basic Use Permit

Submitted on _ Feb 25, 2025_____

Owner:	**Applicant/ Land Planning:**	**Architecture:**
Teton County Hospital District PO Box 428 Jackson, WY 83001 Attn: Sean Ryan, Director of Facilities 307-739-7410	HH Land Strategies, LLC Hal Hutchinson PO Box 1902 Wilson, WY 83014 307-699-0265	Shopworks Architecture Kyle Mead 301- W 45th Avenue Denver, CO 80216 303-433-4094 x105 520-780-8747 (mobile)
Civil Engineering:	**Landscape Architecture:**	**Development Consultant:**
Jorgensen Associates Brian Barney PO Box 9550 Jackson, WY 83002 (307) 733-5150	Flow Design Collaborative Christopher Hoy 303 W 45th Avenue Denver, CO 80216	Blueline Development, Inc. Jake Leininger 1004 South Ave W Missoula MT 59801 406-926-1401
	General Contractor: Shaw Construction Dale Staten 460 S Cache Jackson, WY 83001 307-342-4276	

Table of Contents

1. Background, Property Description, Project Goals and Applications

2. Development Plan – Response to Submittal Checklist

3. Findings for Approval

Exhibit A: Hitching Post Apartments Plan Set

Exhibit B: Design Review Committee Conceptual Review Follow Up Letter.

Exhibit C: Shared Parking and Access Agreement

Exhibit D: Hospital Campus Parking Plan

Exhibit E: Construction Management Plan

1. Background, Property Description, Project Goals and Applications:

1.1 Introduction:

The Teton County Hospital District, referred to throughout this application as "St. John's Health", is the owner of the property located at 460 E Broadway, also known as Parcel B, Map T74A (the "Subject Property"). The Subject Property is commonly known at the "Hitching Post Lodge".

St. John's Health seeks approval from the Town of Jackson of a Development Plan application and a Basic Use Permit application to develop the Subject Property for employee housing that serves St. John's Health employee recruitment and retention needs so St. John's Health can continue to provide high quality health care to the Town of Jackson and Teton County community residents and visitors.

1.2. Background:

St John's Health purchased the Hitching Post Lodge property in 2001 and since that time has continued the pre-existing use of the property for short-term lodging use, providing patient and patient families with lodging opportunities near the hospital. The property has also been used to house St. John's Health employees.

In March 2022, St. John's Health submitted at the Town of Jackson an application for a Zoning Map Amendment (ZMA P22-053) to change the zoning of the Subject Property from Neighborhood Medium Density 2 (NM-2) to Public/ Semi Public (P/SP). The purpose of seeking P/SP zoning for the property was to provide St. John's Health with the flexibility to develop employee housing on the in an effective and efficient manner. The most restrictive component of NM-2 zoning, in relation to the goal of economically developing quality housing for St. John's Health employees, is that NM-2 zoning limits the maximum number of units within an individual building to eight, which, based on St. John's project goals discussed below, would necessitate construction of numerous individual buildings, adding significant cost and reducing project efficiency and density .

P/SP zoning has no such limitation in the number of units that can be located in an individual building, thereby allowing greater flexibility in designing and providing high quality housing for St. John's Health employees.

The Zoning Map Amendment P22-053 was approved by Town Council on June 20, 2022. This ZMA approval included a number of conditions, subjecting any subsequent Development Plan application to specific dimensional limitations requirements based on the previous NM-2 zoning. The "conditional P/SP zoning" approval of ZMA P22-053 are as follows:

1. *The 1.65-acre subject property located at 460 East Broadway shall be subject to the following dimensional standard requirements of the NM-2 District, as modified in this recommendation, and as the NM-2 Zone may be amended from time to time:*
    a. *Structure setbacks;*
    b. *Building height of up to 39' but with consideration for the dimensional standards of neighboring zones;*

c. *3 story limit;*
d. *Site development setbacks;*
e. *Parking setbacks;*
f. *LSR of 21% but not 70% in first 1/3 of property;*
g. *Parking; and*
h. *Design review.*

2. *The future redevelopment of the site shall be subject to a Development Plan process as provided in the LDRs*

In addition to the conditions of approval of the ZMA application that seek to carry over limited dimensional limitations associated with NM-2 zoning, it is important to note that, while the proposed development on the Subject Property meets the threshold for a Sketch Plan application requirement, the ZMA approval limits the application requirement to a Development Plan only.

Since approval of the Zoning Map Amendment, St. John's Health has considered their housing needs, and how the Subject Property can accommodate their needs under the limitations of the conditional P/SP zoning while ensuring the provision of high-quality housing. This Development Plan application is a result of careful consideration and extensive planning and design efforts.

St. John's Health, and their representatives held a Pre-application Conference with the Town of Jackson Planning Department staff on January 14, 2025 (P24-188). This Development Plan and Basic Use Permit application addresses all items requested by the Pre-application Conference summary and Land Development Regulations submittal requirements for Development Plan and Basic Use Permit applications.

1.3. Property Description:

The Hitching Post Lodge property is generally flat and rectangular in shape, with approximately 196 feet of street frontage on East Broadway. It extends approximately 365 feet south from this Broadway Avenue frontage. The property is approximately 1.65 acres.

The Subject Property is bordered on the east by five individual lots. The northernmost lot bordering the property to the east is zoned Office Residential (OR). The four lots to the south of the OR Zoned lot are zoned Neighborhood Low Density 5 (NL-5). Land south of the property is zoned NM-2 and contains residential uses. A lot owned by Teton County that contains Teton County Health borders the property for approximately 30 feet along the western portion of the property's southern boundary. The property bordering the Subject Property to the west is zoned NM-2, is owned by the Church of Jesus Christ of Latter Day Saints, and is used as a parking lot for the Church. Please see **Exhibit A**: Hitching Post Apartments Plan Set, Sheet DEV-03 Vicinity Map.

The Hitching Post Lodge is currently developed and contains seventeen (17) buildings. The uses on the subject property include residential uses and short-term rental uses that support St. John's Health operations. The seventeen (17) individual buildings contain a total of thirty-four (34) individual units.

The uses within the existing buildings on the Hitching Post Lodge property includes fifteen (15) Employee Housing Units (residential use) that include thirty (30) individual bedrooms. There are nineteen (19) Patient/Patient Family Lodging Rooms and On Call rooms (short term use) that include a total of 22 bedrooms. Limited office space is also located on the Subject Property.

1.3. Project Goals:

The lack of workforce housing in Teton County is possibly the single biggest challenge facing our community. It is well documented that the cost of homeownership and residential rental rates in Teton County is well above what typical employees in Teton County can afford. While this is an issue for all types of employers and employees in Teton County, it is a particularly acute issue for St. John's Health. St. John's Health provides high quality and critical health care services to the entire community. The single biggest challenge of continuing to provide these critical health care services that St. John's Health faces is the recruitment and retention of health care professionals due to the high housing costs in the community. While it is not the primary mission of St. John's Health to provide housing for their employees, the local housing crisis necessitates that St. John's Health seek housing solutions for their employees in order to achieve their purpose *"To provide our unique community and visitors with exceptional and ever-advancing individualized care."*

Recognizing the housing challenge facing the community generally, and St. John's Health specifically, St. John's acquired the Hitching Post Property in 2001. Since acquisition, the property has provided both employee housing and short-term rentals that help them serve the community's health care needs. However, as housing costs have risen, employee recruitment and retention challenges have become more acute. As such, the existing thirty-four units on the Hitching Post have become inadequate to serve the growing employee housing and patient care needs of St. John's Health.

The Hitching Post Lodge is uniquely located in immediate proximity of the hospital. It is also a relatively large (1.65 acres) property. These property characteristics make the Subject Property ideal for redevelopment for employee housing. The property is large enough to provide a meaningful amount of housing units efficiently and effectively. The Hitching Post Lodge's proximity to the hospital allows for quick staff response at all times. This proximity also reduces St. John's Health employee transportation needs.

St. John's recognizes its vital role in the community, and that the Hitching Post property is in an existing neighborhood. Based on St. John's stated vision to *"…be a trusted partner with the community, enabling people to live their best possible lives"* it is important to St. John's Health

leadership that redevelopment of the Hitching Post property for employee housing acknowledges and is compatible with community and neighborhood goals.

Based on the need to recruit and retain employees, the costs of providing housing, the unique characteristics of the Hitching Post property, and the vision of being a trusted community partner, it is necessary to optimize the effectiveness and efficiency for redeveloping the property that the existing conditional Public/Semi Public zoning provides.

Considering these factors, St. Johns goals for the Hitching Post Lodge property are:

- Provide housing in close proximity to the hospital to ensure quick medical response on a 24/7/365 basis;
- Optimize the use of limited resources to address critical needs;
- Reduce St. John's Health's employee transportation and parking needs;
- Promote connection to the community by housing staff in Teton County and;
- Design a project that is friendly to the neighborhood and community interests by respecting, to the greatest extent practical, the existing dimensional limitations of NM-2 zoning as required by the conditional P/SP zoning designation of the property while benefiting from the flexibility that P/SP zoning provides.

1.4 Applications:

Based on Town of Jackson Land Development Regulations and the requirements of the conditional P/SP zoning, the Hitching Post employee housing project is subject to a number of application requirements. These include, but are not limited to the review and approval of the following applications:

1. Final Design Review approval by the Town Design Review Committee
2. Development Plan approval
3. Basic Use Permit approval.
4. Shared Parking Agreement approval

Prior to submittal of these Development Plan and Basic Use Permit applications, St. John's Health submitted architectural plans to the Town Design Review Committee for Conceptual review of the project (P24-180). The Design Review Committee undertook conceptual review of the project plans on December 11, 2024. During this public design review hearing, the applicant and their agents understood that the Design Review Committee had a generally favorable response to the conceptual plans for the project. While the review was generally positive, the Design Review Committee did have some recommendations during their conceptual review, which were documented by the Town Planning Staff are discussed in the "P24-180 Follow Up Letter" included in this application as **Exhibit B**: Design Review Committee Conceptual Review Follow Up Letter.

As a result of this conceptual design review feedback, the architectural plans were revised to respond to these recommendations. Prior to submittal of this Development Plan and Basic Use Permit application, St. Johns agents submitted an application for Final Design Review that includes the architectural revisions made in response to the Design Review Committee's recommendations. We anticipate that Final Design Review of these revised plans will be held on March 12, 2025. The architectural plans within this Development Plan application are the same plans submitted for Final Design Review but this Development Plan application includes significant additional information, including detailed engineering plans.

As part of the plans for the Hitching Post project, St. John's Health intends to provide a portion of the required parking off-site on land owned by St. John's Health. Providing of a portion of the required parking off-site necessitates the review and approval of a "Shared Parking Agreement" that will be reviewed and approved concurrently with the Development Plan application. The location and amount of proposed off-site parking and details of the parking plan are more specifically discussed under **Section 2.2**. Narrative Description of Proposed Development, **Section 2.3.** Proposed Development Program, **Section 2.15.** Parking of this report, and in attached **Exhibit C** - Shared Parking and Access Agreement and site plans within **Exhibit A:** Hitching Post Apartments Plan Set

In addition to the above reference applications, St John's Health has submitted a Demolition Permit application to the Town. St. Johns recognizes that some of the existing buildings on the property may be considered historic and the Demolition Permit application identifies the buildings that are considered eligible for historic designation. In addition, St. John's Health has had discussions with interested individuals with the hope that some or all of the buildings considered eligible for historic designation can be moved/relocated. A general depiction of the demolition plan is included in **Exhibit A:** Hitching Post Apartments Plan Set, Sheet 2.10 – Demolition Plan and discussed in **Exhibit E:** Construction Management Plan

2. Development Plan – Response to Submittal Checklist

2.1. General Information:

The general information required by the submittal checklist includes administrative requirements such as providing a planning permit application and providing a letter of authorization. These administrative requirements have been provided within the application.

2.2. Narrative Description of Proposed Development:

Property Description: Located at 460 East Broadway, the Subject Property is subject to conditional P/SP zoning based on a zoning map amendment approved on June 20, 2022 (ZMA P22-053). The approved zoning map amendment provided St. John's Health with some level of flexibility to plan and design an employee housing project that contributes to the housing needs of St. John's Health in an efficient and effective manner.

The proposed development includes 72 residential units within a single building. Of these 72 units, 22 are one-bedroom units, 48 are two-bedroom units and 2 are three-bedroom units, for a total of 124 bedrooms within the overall development. Amenities for the residential units include gathering spaces on the first floor of the building, extensive and well-designed outdoor gathering and relaxation spaces, and basement storage spaces to accommodate the needs of each residential unit's occupants.

Located across E Broadway from the main St. John's hospital campus, the Subject Property is ideally located to accommodate St. John's Health employees within easy walking distance (mere feet) to their primary place of employment and near the services and amenities at the center of the Town of Jackson. Not only is this location convenient to St. John's Health employee's workplace and Town of Jackson amenities, but it provides for convenient walking and/or biking to their workplace, and amenities, effectively limiting the daily need to drive. Of particular importance to St. John's Health operations, their employees housed at the Hitching Post Apartments are also next door to the hospital, making employee access to hospital operations convenient and timely as hospital operations frequently require.

At approximately 1.65 acres, the Subject Property is large enough to accommodate a relatively dense residential development. Parking is primarily provided on site, with a portion of the required parking provided near the Subject property, less than 700' from the residential project.

The proposed development is sited primarily along the western portion of the project, adjacent to property dedicated for parking by the neighboring Jesus Christ of Latter-Day Saints church. Surface parking and a landscape buffer runs along the eastern property boundary, providing relief from the neighboring residential and office uses to the east. The development is also setback from the south property line, which is boarded partially by residential uses and primarily by Teton County Health.

2.3. Proposed Development Program

The project's compliance with conditional P/SP zoning for the Subject Property is summarized below. Also included is a comparison of the project's consistency with certain NM-2 Zoning dimensional standards that were not included in the conditional P/SP zoning.

Development Standard	Permitted Under Conditional P/SP	Proposed	Permitted Under Prior NM-2 √=Compliance
Primary Building Setbacks			
Primary street setback (min)	20'	20'	20' √
Secondary street setback (min)	10'	10'	10'
Side interior (min)	10'	10'	10' √
Rear (min)	10'	20'	20' √
Site Development Setbacks			
Primary/Secondary Street (min)	20'	>20'	20' √
Side/Interior (min)	5'	10'	5' √
Landscape Surface Ratio			
Apartments	.21 excl. 70% in first 1/3 of lot	.28.8%	.21 & 70% in first 1/3 of lot
Vehicular Access Standards			
Curb Cut Width (max)	None	24'	20'
Driveway Width	None	24'	20'
Parking Setbacks			
Primary Street (min)	0'	>20'	>20' √
Secondary Street (min)	0'	n/a	0'
Side interior (min)	1'	10'	1' √
Rear (min)	5'	20'	5' √
Height			
Height @ > 6/12 (max)	39' but with consideration to neighbors to east.	39'	39' √
Stories	3	3	3 √
FAR			
	none	1.0 (approx.)	.40 with exemption per 7.8.3.

2.4 Architectural plans including site plans, floor plans, elevations and renderings

The existing conditions of the Subject Property are shown in attached **Exhibit A:** Hitching Post Apartments Plan Set, Sheet C3.00 – Site Plan and architectural plans Sheet DEV-04 – Site Plans.

Architectural site plans, floor plans, area plans, unit plans, elevations and renderings are included in the attached **Exhibit A:** Hitching Post Apartments Plan Set Sheets DEV-04 through DEV16 dated 2.18.2025.

2.5. Structure Location and Mass

The proposed structure location and mass, including setbacks, height, floor area and other dimensional limitations are summarized in the above **Section 2.3.** Proposed Development Plan of this report. The project's proposed structure location and mass meets all dimensional limitations required by the conditional P/SP zoning. The proposed structure location and mass is shown throughout the attached **Exhibit A:** Hitching Post Apartments Plan Set

2.6. Pedestrian Frontage:

Neither the conditional P/SP zoning, nor the previous NM-2 zoning have pedestrian frontage standards, and while not specifically included in the Pre-application Conference checklist, pedestrian frontage was a discussion point during the pre-application conference. Therefore, "pedestrian frontage is included here for the purpose of showing compliance with the intent of the Community Streets Plan.

In the vicinity of the Subject Property the Community Streets Plan envisions a 5' detached sidewalk and a 6' landscape buffer. The Subject property line is approximately 8' from the existing south curb of the fronting E Broadway travel way. The Hitching Post project proposes a 7.5' landscape strip on the Subject Property, combined with the 8' distance between property line and curb for a total 15.5' landscape buffer. The plans then call for a 6' sidewalk south of the landscape buffer. The sidewalk terminates at the main entrance to the Hitching Post Apartments.

The project also proposes a crosswalk across E Broadway from the project entrance directly north, and includes a new curb cut and ADA ramp at both the north and south terminations of the crosswalk.

2.7. Maximum Scale of Development

The conditional P/SP zoning has no limitation on maximum scale of development. A breakdown of the overall floor area in the project, including habitable, versus nonhabitable, a breakdown

of floor area by building floor, and overall floor area by dwelling versus circulation is included in the attached **Exhibit A:** Hitching Post Apartments Plan Set on Sheet DEV-02 Program Matrix/Index. Plan Set Sheet DEV-06 Area Plans includes a color-coded break down of habitable and nonhabitable floor area as well.

2.8. Design Review

The Design Review Committee undertook a "conceptual review" of the project on December 11, 2024. A summary of the Design Review Committee comments on the conceptual plans in included as **Exhibit B:** Design Review Committee Conceptual Review Follow Up Letter of this application.

Architectural plans were revised in response to Design Review Committee comments and were submitted for final review by the Design Review Committee on February 17, 2025, and final review is expected to occur during the March 12, 2025 Design Review Committee meeting.

2.9. Site Development

The conditional P/SP zoning for the Subject Property includes a requirement that the Landscape Surface Ratio meet the minimum LSR requirement for Apartment use in NM-2 zoning of .21 with the exception that the Subject Property is not subject to the additional standard of a minimum 70% LSR in the front 1/3 of the lot.

As presented, the project proposes an LSR of 20,681 s.f. of landscape area or approximately 28.8 % of the lot area. This information is included on the **Exhibit A:** Hitching Post Apartments Plan Set, sheet titled Landscape Plan.

The conditional P/SP zoning on the property does not include any limitations on driveway and access limits. Previous NM-2 zoning includes a curb cut width maximum of 20' per 100' of lot frontage. The Subject Property has 196.5 feet of lot frontage. While this limitation is not applicable under the conditional P/SP zoning, the project as proposed has a curb cut width of 24', which is consistent with the purpose of curb cut with limitations in the NM-2 zone district.

2.10. Fencing

The conditional P/SP zoning does not prescribe fencing standards. The proposed development will include fencing along the east, south and west property lines. The fencing is proposed to be cedar fencing, 6 feet in height along these property lines. Regardless of the fact that no fencing standards are prescribed by the conditional P/SP zoning, the fencing proposed meets the standards of the NM-2 zoning, which limits fencing to 6' in height along the side or rear lot lines. Please refer to **Exhibit A:** Hitching Post Apartments Plan Set Sheet DEV-04 Site Plans

2.11. Scenic Standards

Exterior lighting standards apply. Please refer to architectural plans, specifically Sheet DEV – 16 Exterior Light Fixture Cutsheets of the attached **Exhibit A:** Hitching Post Apartments Plan Set.

2.12. Natural Hazards to Avoid

No steep slopes are present on site. The property is not within the Flat Creek floodplain. Soil and groundwater studies have been completed revealing no hazards. Please refer to the attached engineering plan for any additional information on soil stability and excavation, erosion control and shoring.

The project is subject to Town of Jackson Wildland Urban Interface standards. The applicant will consult the Town Fire Department to ensure compliance with the WUI Standards during the course of Development Plan review.

2.13. Grading and Erosion Control, Stormwater, etc.

Preliminary grading, erosion control, shoring approach, and stormwater management plans has been provided within the engineering plans included in the attached plan set. These plans provide information on compliance with relevant LDR standards and proposed utility locations.

2.14. Allowed Uses/ Affordable Workforce Housing

The Hitching Post Apartment project proposes a total of 72 apartment uses, including 22 one-bedroom units, 48 two-bedroom units and 2 three-bedroom units. The project also includes amenity space on the first floor and basement, and 75 storage units in the project's basement for the benefit of residents.

The conditional P/SP zoning allows for Accessory Residential Units as a Basic Use. During the Zoning Map Amendment application (ZMA P22-053) it was determined that the Subject Property and any proposed ARU use on the Subject Property is considered accessory to St. John's Health's overall hospital use on adjacent property owned by the Teton County Hospital District.

The ARU use is subject to ARU occupancy requirement as described in LDR Section 6.1.11.B, which limits occupancy of ARUs, in part, requiring that "*The occupants shall be employed within Teton County, in accordance with the Jackson/Teton County Housing Rules and Regulations".*

The Jackson/Teton County Housing Rules are Regulations generally state that ARUs:

"...will be part of the "Workforce Rental" program and are required to have a Special Restriction for Workforce Rental Housing recorded on them. To qualify to rent these units, the Household

must meet the Employment Requirement. A minimum of 75% of the Household's income must be earned from a Local Business(es). The tenants must physically occupy the unit a minimum of 80% of their lease term. Tenants will be required to requalify annually or upon lease renewal. The units are not allowed to remain vacant in excess of 60 days. Rents are set by the owner."

It is the overarching purpose of the Hitching Post Apartment project to provide housing to their employees. The project will not only significantly benefit St. John's Health, to achieve their purpose *"To provide our unique community and visitors with exceptional and ever-advancing individualized care"*, by helping them retain employees who may not otherwise be able to afford housing in the community but also will serve as an attractive inducement to recruit needed health care professionals.

As an entity that provides immeasurable benefits to the community, and one that is undertaking a significant development project as a way to continue its commitment to providing high quality health care to the Town of Jackson and Teton County community residents and visitors, St. John's Health is committed to meeting the general purpose of ensuring that the ARU units on the Hitching Post Lodge property provide workforce housing, as intended.

However, due to the unique circumstances specific to the St. John's Health organization, the challenges associated with recruiting and retaining health care employees, and the significant cost and burden of developing the Hitching Post Lodge property, St. John's Health will require some limited modifications to the detailed Jackson/Teton County Housing Rules/Regulations specific to ARUs. These include the following:

1. Limit the requirement that a minimum of 75% of the *household's* income must be earned from a local business to apply the 75% minimum to only the St. John's Health employee, rather than the overall household.
2. Allow units to remain vacant for a period of time greater than the 60 days as dictated by the Jackson/Teton County Rules and Regulations.

The purpose of needing these modifications to the Rules and Regulations are due to the unique employee retention and recruiting circumstances of St. John's Health.

Regarding item #1 above, in experience and practice, St. John's Health employs health care professionals that have specific skills, but who may have a household partner that may earn their living outside of Teton County. If not for housing, that employee would not continue employment or move to Jackson Hole for employment at St. John's and will not subject their partner to a requirement that they are necessarily employed by a Teton County business. As such, the retention and/or recruitment of such an employee will not be successful. While a St. John's employee's partner may earn income from outside the community, it is necessarily the case that any St. John's employee in the Hitching Post Apartments will earn a minimum of 75% of their income from St. John's Health, and therefore within Teton County.

Relating to item #2 above, while it is not in the interest of St. John's Health to allow units to remain vacant for any period of time, much less 60 days, it is the experience and practice of St. John's Health that, in order to recruit skilled and trained employees there is often a lag time between securing employment of an individual from outside the community and the time it takes for the individual to be released from their current employment, and move to the Jackson Hole community. This lag time is commonly greater than 60 days for those individuals with specific skills and experience that are rare or difficult to recruit. Most importantly, these difficult to fill positions are typically an acute need to continuing the ongoing operations of St. John's Health.

For these reasons, St. John's Health seeks the modifications to the ARU occupancy Rules and Regulations and we look forward to discussing how to best make these modifications to any deed restriction that may be required for the ARUs proposed in the Hitching Post Apartment project.

2.15. Parking

While P/SP zoning has a parking requirement of 1.25 spaces/Accessory Residential Unit, it has been the interpretation of the Town of Jackson planning staff that the use of the Subject Property is less consistent with ARU use and that, for the purpose of parking requirements, "Apartment" use is more appropriate. Apartment use requires 1.5 spaces per unit. Accepting this interpretation by the planning staff, the Hitching Post Apartment project is providing a total of 108 parking spaces for the project. (72 units x 1.5 = 108).

Of the 108 required parking spaces, 76 spaces are being provided on site. Of the parking spaces provided on site, 38 are standards parking spaces, 5 are handicap spaces (2 handicap spaces are van accessible and 3 are standard handicap spaces) and 33 spaces are EVSE capable (with 6 of these being EVSE installed).

The remaining parking space requirement of 32 spaces (108-76=32) are proposed to be provided off-site on land currently owned by St. John's Health. The location of these parking spaces is near the southeast corner of E Broadway and Redmond Street and is shown on the attached plan **Exhibit A**: Hitching Post Apartments Plan Set on Sheet DEV-03 and labeled as #8 Shared Parking Location. The location of the shared parking is approximately 665 feet from the Subject Property.

Off-site parking requires a shared parking agreement between the Subject Property and the property where the off-site parking is being provided. A draft shared parking agreement, including the number of spaces being shared at the off-site location is provided in **Exhibit C:** Shared Parking and Access Easement Agreement to this report.
By providing off-site parking on lands currently owned/used by the hospital, St. John's Health will displace some of the parking currently provided for hospital campus use. However, St. John's Health has completed a parking study for the overall campus, including the Hitching Post

Lodge property/project and the off-site parking proposed as part of the Hitching Post project. This parking study takes into consideration the parking provided on-site and off-site for the Hitching Post Apartment and establishes that there is a surplus of parking for the overall campus when accounting for the parking proposed by the Hitching Post Apartment project. This parking Study is included with this report as **Exhibit D:** Hospital Campus Parking Plan

The amount, type and location of the vehicle parking spaces proposed for the Hitching Post project, including the % of handicap spaces, the % of EVSE capable and installed spaces, and the proximity of off-site spaces to the Subject Property are all consistent with the parking standards of Section 6.2 of the Town LDRs.

Newly adopted standards for bike parking also apply to this Development Plan application. The standard of providing 93 bike parking spaces (.75 bike parking spaces per bedroom (124 bedrooms x .75 = 93) is being met by providing long term bile parking within each of the basement storage units for each of the apartment units and providing short term bike parking on site for 24 bikes. This is indicated in **Exhibit A** - Hitching Post Apartments Plan Set on Sheet DEV-04 and on the sheet titled Landscape Plan.

2.16. Operational Standards

Refuse and recycling enclosure are provided and located along the East boundary of the property as shown on all site plan sheets within the attached **Exhibit A** - Hitching Post Apartments Plan Set.

2.17. Transportation Facility Standards

Access to roads and streets standards are discussed elsewhere in this report, including in Section 2.9 - Site Development and illustrated within various site plans included in **Exhibit A** - Hitching Post Apartments Plan Set

2.18. Required Utilities:

Utility plans, including water supply and sanitary sewer plans and engineering details are included in **Exhibit A:** Hitching Post Apartments Plan Set, Sheets C3.10 Utility Plan, C4.10 Water Details, and C4.20 Sewer Details. Also included in the engineering plans are storm sewer details on Sheet C4.30 and C4.31.

2.19. Construction Management Plan:

While not specifically required by the Pre-application Conference checklist, the applicant has provided a construction management plan for the project for consideration by the Town of Jackson. This is included with this report as **Exhibit E:** Construction Management Plan

3.0. Finding for Approval

3.1. Findings for Approval – Development Plan

A development plan shall be approved upon finding the application:

1. **Is consistent with the desired future character described for the site in the Jackson/Teton County Comprehensive Plan;**

   Complies: The purpose of the LDRs is to implement the Jackson/Teton County Comprehensive Plan and promote the health, safety and general welfare of the present and future inhabitants of the community. The Subject Property is located partially in Comprehensive Plan Subarea 2.6 – Mixed Use Office and Residential and partially in Subarea 3.2 – Residential Core. Subarea 2.6 recognizes St. John's Hospital as an existing institutional use and envisions that the "Bulk, scale and intensity of St' John's campus has always been and will continue to be of higher intensity than the surrounding mixed use and residential neighborhoods." Subarea 3.2 envisions that "multifamily residential uses will be encouraged in order to replace existing commercial uses…" and that "Multifamily structures will be predominately found on larger residential lots and along mixed-use corridors. The size and scale of multi family structures will be predominately two stories with three stories considered in specific cases with proper design."

   The proposed Hitching Post Apartments project meets the desired future character of Subarea 2.6 and 3.2 by integrating into the greater St. John's Hospital campus, replacing the existing commercial use on the Subject Property with residential use, and a multifamily structure on a larger lot, located along E Broadway, a mixed use corridor, and properly designing the project to minimize impacts to neighboring residential areas.

2. **Achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable;**

   Not applicable.

3. **Does not have significant impact on public facilities and services, including transportation, potable water and wastewater facilities, parks, schools, police, fire, and EMS facilities;**

   Complies: The proposed Hitching Post Apartments project will serve to provide residential opportunities for St. John's Health employees in close proximity to their place of employment, effectively reducing traffic and will allow the continued support for fire, EMS and police services that that St' John's Health provides. The project also replaces an existing development that is served by water and wastewater facilities.

4. **Complies with the Town of Jackson Design Guidelines, if applicable;**

   Complies: The applicant has made every effort to comply with the Town of Jackson Design Guidelines and has presented plans for conceptual review by the Design Review Committee, which was favorably reviewed. Application for final design review has been submitted to the Town prior to the submittal of this Development Plan application.

5. **Complies with all relevant standards of these LDRs and other Town Ordinances;**

   Complies: The proposed project meets the requirements of the existing conditional P/SP zoning, all relevant standards of the LDRs, and meets all other applicable town ordinances as discussed throughout this application.

6. **Is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.**

   Not Applicable.

3.2. Findings for Approval – Basic Use Permit

A basic use permit shall be approved upon finding the application:

1. Complies with the use specific standards of Division 6.1. Allowed Uses and the zone;

Complies: The proposed use of the property as a multifamily Accessory Residential use is a Basic Use in the P/SP zone District.

2. Complies with all other relevant standards of these LDRs and all other Town Ordinances; and

Complies: The proposed project meets the requirements of the existing conditional P/SP zoning, all relevant standards of the LDRs, and meets all other applicable town ordinances as discussed throughout this application.

3. Is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.

Not applicable

Exhibit A:

Hitching Post Apartments Plan Set

Exhibit B:

Design Review Committee Conceptual Review Follow Up Letter.

PLANNING & BUILDING DEPARTMENT

December 12, 2024

HH Land Strategies
Hal Hutchinson
PO Box 1902
Wilson, WY 83014

RE: P24-180 Conceptual Design Review
460 E Broadway Ave. (Hitching Post)

SENT VIA EMAIL

Dear applicant,
This letter is to confirm that on December 11, 2024, the Design Review Committee (DRC) reviewed the proposed conceptual design for the Hitching Post ARU structure at 460 E Broadway Ave and gave the following feedback for design team consideration prior to final DRC review:

- Consider design alternatives to create better cohesion between gabled and flat roof elements. The asymmetry of roof angles may require additional study.
- The committee felt the eastern façade versus remaining facades read as different projects.
- Consider design alternatives at northwest corner of the structure, such as incorporating a third story stepback, to help reduce real or perceived massing from the pedestrian level and street façade.
- Continue study of the northeast "porch" feature, particularly the interaction between gabled roof of porch and flat element of upper story.

In general, DRC was supportive of the existing design in terms of overall site design, landscaping, courtyards, engaging entrances, and general livability of floor plans. The committee specifically appreciated the overall choice and quality of materials and expressed hope that material quality does not diminish as the project progresses.

Should you have any questions or need additional information, please contact me at 307-734-3493 or by email at kpage@jacksonwy.gov.

Sincerely,

Katelyn S. Page, AICP
Associate Planner

Exhibit C:

Shared Parking and Access Agreement

SHARED PARKING AND ACCESS EASEMENT AGREEMENT

THIS SHARED PARKING AND ACCESS EASEMENT AGREEMENT (this "Agreement") is made as of this _____ day of January, 2025 ("Effective Date"), by and between **Teton County Hospital District d/b/a St. John's Health,** acting in its capacity as owner of Burdened Parcel (defined below) ("Grantor"), and **Teton County Hospital District d/b/a St. John's Health,** acting in its capacity as owner of Benefitted Parcel (defined below) ("Grantee"). Grantor and Grantee, each as and when acting in such capacity, are herein individually referred to as a "Party" and are collectively referred to as the "Parties."

R E C I T A L S

WHEREAS, Grantor owns the parcel of land and parking improvements commonly identified as 30 Redmond Street in the Town of Jackson, Teton County, Wyoming, as legally described on Exhibit A attached hereto (the "Burdened Parcel");

WHEREAS, Grantee owns the parcel of land and employee housing improvements commonly identified as the Hitching Post, located at 460 East Broadway Avenue in the Town of Jackson, Teton County, Wyoming, as legally described on Exhibit B attached hereto (the "Benefitted Parcel");

WHEREAS, Grantor wishes to grant, and Grantee wishes to receive and accept, easements for shared parking and vehicular and pedestrian ingress and egress over, upon and across certain portions of the Burdened Parcel for the benefit of the Benefitted Parcel, all as more fully set forth below; and

WHEREAS, the Parties wish to enter into certain agreements regarding such easements.

NOW, THEREFORE, for and in consideration of the covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. **Access and Parking Easements over Burdened Parcel**.

(a) Grantor hereby grants unto Grantee, as easements appurtenant to the Benefitted Parcel, non-exclusive, irrevocable and perpetual easements for (i) vehicular and pedestrian access by the Grantee Related Parties (as defined below) upon, over and across the surface of that portion of the Burdened Parcel that is designated from time to time by Grantor for use as driveways, walkways and similar accessways (such areas, the "Access Easement Area"); and (ii) the parking of motor vehicles by Grantee, Grantee's tenants and their respective agents, employees, contractors, invitees and guests (collectively, the "Grantee Related Parties") upon, over and across the surface of that portion of the Burdened Parcel that is designated by Grantor for parking purposes and identified by shading on Exhibit C attached hereto (such area, the "Parking Easement Area;" the Access Easement Area and the Parking Easement Area are herein collectively referred to as the "Easement Areas"). Grantee specifically acknowledges and agrees with respect to the Easement Areas as follows: (W) its rights with respect to the Parking

Easement Area are limited to the nonexclusive use of the thirty-one (31) parking spaces within the Parking Easement Area depicted by shading on Exhibit C; (X) Grantor reserves the right to continue to utilize all easements of record encumbering the Easement Areas, Grantee hereby acknowledging that Grantor has not elected to cause such easement rights of record enjoyed by Grantor to merge into Grantor's title to the Burdened Parcel; (Y) Grantee shall not obstruct Grantor's access to or interfere with Grantor's use of the Easement Areas; and (Z) at no time shall Grantee or Grantor place any signs on any part of the Easement Areas indicating that any specific parking spaces are for the exclusive use and benefit of Grantee or the Grantee Related Parties or Grantor, its tenants, agents, employees, invitees and guests (any such signage shall provide that the Easement Areas are for the use of Grantor and Grantee, jointly). [*In addition to the foregoing, Grantee covenants and agrees that, without the prior written consent of Grantor, which consent shall not be unreasonably withheld, conditioned or delayed, Grantee shall not change the use of the Benefitted Parcel to any use that is not permitted under the Land Development Regulations (the "LDRs") of the Town of Jackson (the "Town"), in effect from time to time, or increase or change the nature or the intensity of the use of the Benefitted Parcel in any manner that increases the number of off-street parking spaces that are required to be provided under the LDRs to serve the Benefitted Parcel beyond the sum of the parking spaces located on the Benefitted Parcel and the thirty-one (31) parking spaces provided for in the Parking Easement Area.*]

(b) Grantor shall repair, maintain and replace the surface of the Easement Areas as and when Grantor deems necessary, the reasonable costs of which shall be referred to herein as the "Maintenance Costs." The Easement Areas shall in all events be operated and maintained by Grantor in compliance with all applicable governmental laws, rules, regulations, orders and ordinances. The aforesaid maintenance and repair obligation shall include, but not be limited to, the following: (i) maintaining all paved surfaces and curbs in a smooth and evenly covered condition, (ii) periodically removing all papers, debris, refuse, ice and snow, to the extent necessary to keep the Easement Areas in a clean, safe and orderly condition, (iii) restriping the parking lot and drive areas of the Easement Areas as necessary, and (iv) maintaining, cleaning and replacing Easement Areas lighting facilities. Grantee shall be responsible for sixty-nine percent (69%) of the Maintenance Costs (based upon the proportion of Grantee's 31 parking spaces and a total of forty-five parking spaces), and Grantor shall be responsible thirty-one percent (31%) of the Maintenance Costs. After incurring Maintenance Costs, Grantor shall provide Grantee with a detailed statement that sets forth: (Y) the amount due and owing from Grantee; and (Z) reasonable evidence substantiating the amount of Maintenance Costs incurred. Grantee, within 30 days of receiving such statement, shall reimburse Grantor for the amount set forth therein. If Grantee fails to make such reimbursement within the 30-day period, the amount due and owing from Grantee shall bear interest until paid at a per annum rate of interest equal to the "prime rate" of interest announced from time to time by the Bank of Jackson Hole at its principal place of business in the Town of Jackson, Wyoming (or its successors or assigns), plus two percent (2%) per annum (not to exceed the maximum rate of interest allowed by law) (such interest rate, the "Default Rate").

(c) Grantor agrees that thirty-one (31) of the parking spaces located on and within the Parking Easement Area may be used to satisfy the requirements of all applicable zoning laws, codes and ordinances for the Benefitted Parcel, and Grantor agrees to execute and deliver such

further documents and instruments confirming and implementing the foregoing agreement as Grantee may from time to time reasonably request as long as such further document or instrument is consistent with provisions of this Agreement. The easements granted by this Agreement are meant to help satisfy Town parking requirements for Benefitted Parcel and are granted for that purpose despite the unity of ownership that currently exists between Grantor and the Benefitted Parcel.

2. **Remedies and Enforcement**.

(a) **Self-Help**. In addition to all other remedies available at law or in equity, upon the failure of a Party (such Party, a "Defaulting Party") to cure a breach of this Agreement within 30 days following written notice thereof by the other Party (such Party, the "Non-Defaulting Party"), the Non-Defaulting Party shall have the right to perform such obligation contained in this Agreement on behalf of such Defaulting Party and to be reimbursed by such Defaulting Party upon demand for the reasonable costs thereof together, or the appropriate portion thereof, with interest until paid calculated at a per annum rate equal to the Default Rate, *provided, however*, that with respect to any breach the nature of which cannot reasonably be cured within such 30-day period, the Non-Defaulting Party shall not be entitled to the foregoing remedy if the Defaulting Party commences cure within such 30-day period and thereafter diligently prosecutes such cure to completion. Without limitation of the foregoing, in the case of any breach of this Agreement or threat thereof involving an emergency situation that, if not corrected, would or might reasonably be likely to result in damage to property or would or might reasonably be likely to materially impair the conduct of business in a reasonable manner on the Non-Defaulting Party's property, any Non-Defaulting Party shall not be obligated to wait for the expiration of the above-referenced cure period before acting under this subsection (a) and may, but shall not be obligated to, act immediately under this subsection (a).

(b) **Remedies Cumulative**. The remedies specified herein shall be cumulative and in addition to all other remedies permitted at law or in equity.

(c) **Prevailing Party**. In the event of any litigation between the Parties hereto on account of any default under, or dispute relating to, this Agreement, the prevailing Party in any such litigation shall be entitled to recover from the non-prevailing Party the reasonable amount of all attorneys' fees and expenses incurred by the prevailing Party in connection with such litigation or dispute.

3. **Prohibition on Encumbrances/Further Grants**. Grantee shall not create, effect, contract for, commit or consent to, suffer or permit any lien, mortgage, security interest or other encumbrance of the Easement Areas or any part thereof, *provided however*, that in connection with the granting of a mortgage of Grantee's fee interest in the Benefitted Parcel, Grantee may grant a mortgage on its limited easement rights granted herein (but in no event upon fee title to the Burdened Parcel). Grantee shall not grant or extend to any third party, or contract or commit to grant or extend to any third party, the right to use the Easement Areas or any part thereof except for the Grantee Related Parties.

4. ***[Town's Rights of Enforcement.***

(a) ***Enforcement***. *Grantor and Grantee recognize and agree that the Town has a valid interest in ensuring that the restrictions, covenants, easements, and agreements set forth in this Agreement are properly performed and, therefore, the Parties grant the Town the right to enforce such restrictions, covenants, easements and agreements by a proceeding at law or in equity against any person or persons violating or attempting to violate any restriction, covenant, or agreement contained in this Agreement, either to restrain a violation, to compel affirmative action, to recover damages, and as to the land described in this Agreement, to enforce any lien created by the provisions of this Agreement.*

(b) ***Exercise of Town Rights; Waiver***. *The Town is not required to exercise the rights granted in this Agreement, except as it shall determine to be in its best interest. Failure by the Town to exercise any right herein granted shall not be construed as a waiver of that right or any other right. Nothing in this Agreement shall be deemed or construed to constitute a dedication of any property to the Town.]*

5. **Covenants Running with the Land**. All provisions of this Agreement, including the benefits and burdens set forth herein, shall run with title to the Benefitted Parcel and the Burdened Parcel, respectively, and are binding upon and shall inure to the benefit of the Parties and their respective successors and assigns, as owners of the Benefitted Parcel and the Burdened Parcel.

6. **Interpretation**. The rule of strict construction does not apply to the grants herein. The grants herein shall be given a reasonable construction to carry out the intention of the Parties to confer a commercially usable right of enjoyment in favor of Grantee and the Grantee Related Parties.

7. **Notices**. All notices and other communications given pursuant to this Agreement shall be in writing and shall be deemed properly served if delivered in person to the Party to whom it is addressed or two days after deposit in the U.S. mail if sent postage prepaid by U.S. registered or certified mail, return receipt requested, addressed as follows:

(a) If to Grantor:
Teton County Hospital District
P.O. Box 428
Jackson, WY 83001
Attention: Sean Ryan
Telephone: 307-739-7410
Fax: 307-739-7238

(b) If to Grantee:
Teton County Hospital District
P.O. Box 428
Jackson, WY 83001
Attention: Sean Ryan
Telephone: 307-739-7410
Fax: 307-739-7238

Either Party may change the name of the person or address to which notices and other communications are to be given by so notifying the other Party. Notices or demands from either Party may be given by that Party or any of their agents.

8. **Exhibits**. All exhibits are incorporated herein by reference as if the same were fully set forth herein.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first above written.

GRANTOR:

Teton County Hospital District d/b/a St. John's Health,
acting in its capacity as owner of Burdened Parcel

By:_____
Its:_____
Date:_____

GRANTEE:

Teton County Hospital District d/b/a St. John's Health,
acting in its capacity as owner of Benefitted Parcel

By:_____
Its:_____
Date:_____

STATE OF WYOMING)
) SS.
COUNTY OF TETON)

I, _____, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that _____, _____, _____ of _____, personally known to me to be the same person whose name is subscribed to the foregoing instrument as such _____, appeared before me this day in person and acknowledged that he/she signed and delivered said instrument as his/her own free and voluntary act, and as the free and voluntary act of said Hospital District for the uses and purposes therein set forth.

GIVEN under my hand and notarial seal this _____ day of _____, 2025.

_____
Notary Public

My Commission expires:____

STATE OF WYOMING)
) SS.
COUNTY OF TETON)

I, _____, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that _____, _____, _____ of _____, personally known to me to be the same person whose name is subscribed to the foregoing instrument as such _____, appeared before me this day in person and acknowledged that he/she signed and delivered said instrument as his/her own free and voluntary act, and as the free and voluntary act of said Hospital District for the uses and purposes therein set forth.

GIVEN under my hand and notarial seal this _____ day of _____, 2025.

_____
Notary Public

My Commission expires:_____

EXHIBIT A

Legal Description of Burdened Parcel

Lots 6 and 7 of the 2nd Redmond Plat, Teton County, Wyoming, according to that plat recorded in the Office of Teton County Clerk on July 15, 1937 as Plat No. 122.

EXHIBIT B

Legal Description of Benefitted Parcel

A parcel of land in the Northeast Quarter of the Northwest Quarter (NE 1/4 NW 1/4) of Section 34, Township 41 North, Range 116 West, 6th Principal Meridian, Teton County, Wyoming, being a portion of that parcel of record in the Office of the Teton County Clerk in Book 6 of Deeds, Page 404, and being more particularly described as follows:

> Beginning at a point on the southerly right-of-way of Broadway in the Town of Jackson which point lies S0º21'26"E, 30.02 feet from the 1/4 corner common to Sections 27 and 34 of said Township and Range and is the northeast corner of said parcel in Book 6 of Deeds; thence along the easterly boundary of said record parcel in Book 6 of Deeds, S0º14'17", 369.61 feet to a point; thence S89º51'28"W, 199.22 feet to a point on the easterly boundary of that record parcel in Book 3 of Deeds, Page 450; thence along said easterly boundary N0º8'20"E, 364.73 feet to a point on the southerly right-of-way of Broadway; thence along said right-of-way N88º26'6"E, 196.87 feet to the point of beginning.

PIN Number: 22-41-16-34-2-00-001

EXHIBIT C

Depiction of Easement Areas



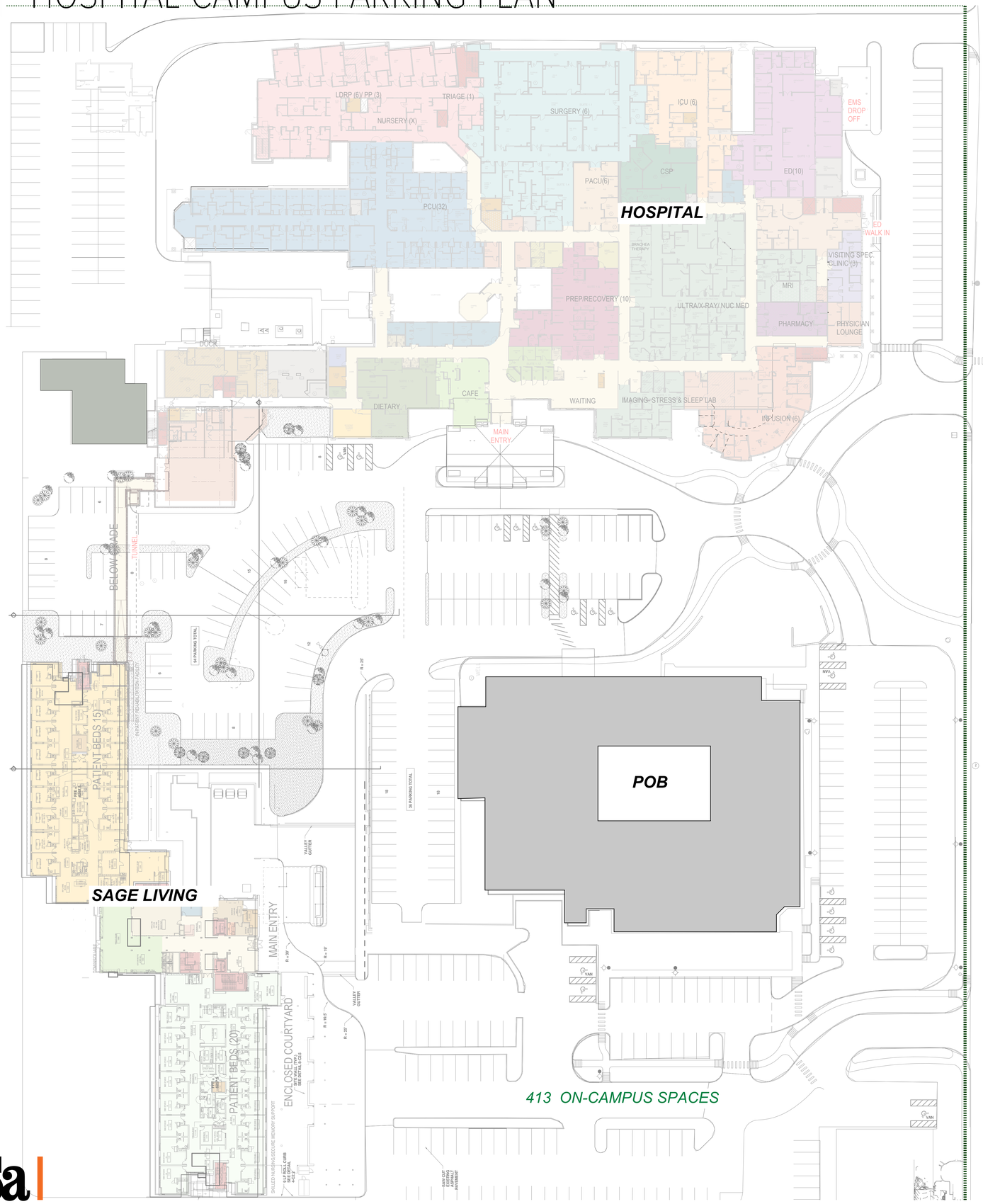
33932105_v2

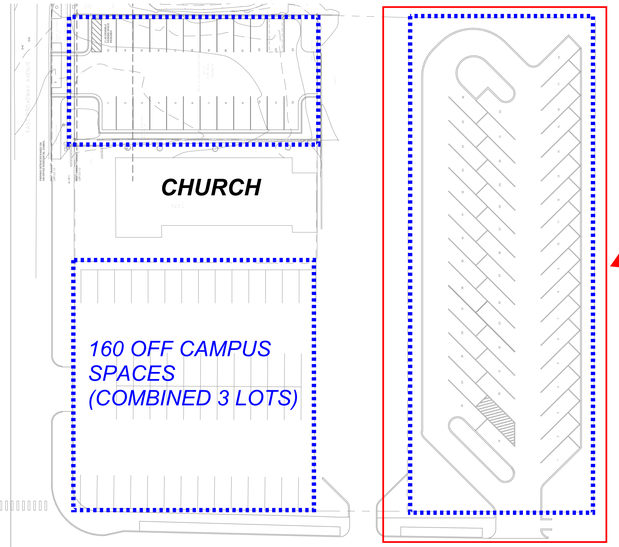
Exhibit D:

Hospital Campus Parking Plan

C

HOSPITAL CAMPUS PARKING PLAN





32 SPACES ALLOCATED TO THE HITCHING POST TO BE LOCATED HERE

CAMPUS PARKING SUMMARY (EXISTING & PROPOSED PROJECTS)

PHASE	MASTERPLAN- PROPOSED PROJECTS (EACH PROJECT IS CUMILATIVE)	Existing Parking Count (Hospital)	Existing Parking Count (Sage)	Displaced Parking	Added Parking	Actual Parking Count	Change in Code Required Spaces	Code Required Parking (3.3/1000 gsf POB, 4 per bed)+ 60 for Sage	Code Required Surplus (Deficit)
EXIST.	Existing Condition	477	96	0	0	573	0	463	110
PRE 1A	Hitching Post (70 units)- Off Campus	477	96	0	0	573	32	495	78
1A	Oncology Expansion, Cardiopulmonary relocation, Med-Staff lounge relocation, Chapel relocation, GI/Endo Expansion (7,500 new sf)	477	96	0	0	573	25	520	53

48 PRIMARY CARE/ ACUTE
16 INPAT REHAB
16 MEMORY CARE
40 SKILLED NURSING
54,000 DGSF POB

413 PARKING SPACES ON CAMPUS + 160 OFF CAMPUS (CHURCH LOTS)= 573 SPACES

ESa

Exhibit E:

Construction Management Plan

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

SHAW CONSTRUCTION
www.shawwyoming.com

February 14, 2025

Construction Management Plan: The Hitching Post

Project Scope:

The Hitching Post will be a type 5 structure multi-family project consisting of 72 units. The total gross square footage for this project will be 96,089 sf. The building will include common areas for circulation, a shared amenity area, management lobby/office and storage at subterranean basement. The design includes repeating unit floor plans with three levels of living area(s) and common stairs and elevators. The structure will include tuck-under parking and snowmelt for the entirety of the paved parking lot. 72 parking spaces will be provided with 4 of those accommodating ADA access. Public utilities will include domestic water tie in, sanitary sewer tie in, and storm sewer tie-in. Electricity will be brought to the site and coordinated with Lower Valley Energy and the Town of Jackson as necessary. The estimated start of construction activities is July 1st, 2025, upon approved building permit. The total approximate project duration is 24 months, finishing up in approximately June 2027.

Phase 1- Demolition:

The existing site has a total of 17 cabins of varying sizes and dates of installation at the site that are slated for demolition and removal. We will be following best practices for material sorting and recycling. We propose chipping of organics and approximate 165,000 lbs of local offsite composting. We also propose grinding other materials to reduce truck trips and accommodate higher waste to recycling diversion, approximating 95,000 lbs of metals recovery that would otherwise go directly to landfill. The site will have two entrances that will allow a uni-directional flow of traffic and keep all trucks and equipment working together efficiently.

Phase 2- Construction:

Public Impact:

Shaw will coordinate with the Town of Jackson (TOJ) to identify the properties and businesses most impacted by the construction to create an email contact list, to provide information as the project schedule and work. This list is attached at the end of this submission and includes the TOJ Engineering Division. Shaw will work to minimize any effect on adjacent properties by maintaining proactive communication including giving a minimum 48-hour notice of any closures and after-hours work. The owner and Shaw acknowledge that the right-of-way (R.O.W.) is a shared public use area and will coordinate with TOJ and neighbors for special event planning and construction activities that will encroach on the R.O.W. of the surrounding streets. Activities that affect the Town of Jackson include domestic water tie in and the storm system connection, but impact on the neighbors should be minimal if any. During said activities, the best practice traffic control practices will be implanted including a well-defined drive aisle, signage, clearly fenced/screened property boundaries, well-marked and gated

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

entrance, and personnel for the direction and control of traffic flow. No sidewalk exists on the property front. Pedestrian traffic will be re-routed to the opposite side of the street until a new sidewalk is installed as part of the completed project.

All necessary permits will be obtained prior to any closures including a traffic control plan.

If any intermittent adjacent sidewalk closures are required, they will be coordinated with neighboring property owners. Please note that public safety will be best served by temporarily rerouting all pedestrians to the sidewalk on the North side of E. Broadway Ave. The reasons for this are as follows:

1) There is no pedestrian sidewalk existing or available along the site currently

2) The North sidewalk of E. Broadway Av. is not impacted by construction.

3) Public Safety is paramount therefore not allowing any pedestrian crossing in front of construction entrance/exit would be the safer choice. The Town has the authority to require modifications to the Construction Management Plan.

Construction Parking:

The contractor shall implement a clear and self-enforcing construction parking plan that does not use or encumber downtown on street and/or public parking lot parking spaces. This plan specifies that employee or contractor parking within time restricted parking zones, the Home Ranch, East Delony, Miller Park and/or the Parking Garage lots are not allowed. The Contractor will encourage carpooling and bus riding, and when possible, provide shuttles to/from the project. The site plan as designed will allow for all construction parking, deliveries and staging to the site alone. The size of the site gives ample room for any parking required for all onsite construction personnel.

Site Logistics, General Staging Plan:

A site logistics and general staging plan are attached to this document. Throughout the entirety of the project staging and parking will be strictly maintained within the project boundary, no offsite yard needs are foreseen for this project, with the site providing ample space for parking along with construction staging. The construction lot will contain the job office trailer, dumpsters, concrete washout, recycling, temporary toilets, and an area designated for snow storage / haul off based on the master site plan.

The project site will have a perimeter site construction fence with a silt fence along the inner downhill margin as part of the erosion control BMP's. Worker and vehicle access is minimized to one access point along E Broadway Ave to minimize disturbance for the businesses and residences. The vehicle entrance gates will include vehicle tracking control pads as needed and a skid steer will remain on site to maintain clean roads utilizing bucket and sweeper attachments. Throughout all stages, trucks arriving or leaving the site will have access to utilize the town truck route. A map to the site, delivery and parking

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

instructions will be provided to subcontractors and vendors at the beginning of the project and additionally as needed.

Construction work hours, unless by special exception, will be Monday-Friday 7AM-7PM and 8AM-5PM during weekends and holidays.

During construction, up to two small mobile cranes will be utilized so that both sections of the building can be built concurrently. The cranes will not encroach on any PROW and will be installed interior to the site itself. Cranes will include hardwired electric lighting at their highest point.

Parking, Street, and Alley Encroachments:

It is not anticipated that site logistics will require long term portions of the adjacent street travel lanes to be occupied by construction equipment or staging at different times during the project. The attached Staging Plan shows no areas to be occupied on a continuous basis. Areas to access in street utilities are anticipated on an intermittent basis. Those areas shall incorporate trench boxes where possible and appropriate barriers and directional devices to maintain two directional flows of traffic. The closure of parking to the north side of Broadway may be necessary to achieve two directional traffic through these utility tie ins. Public data shows much of the private gas, power, and communication utilities on the projects side of the ROW.

Shaw will coordinate with Town officials and adjacent property owners to minimize the impact of these encroachment activities and to assure all Town rules and permitting procedures are properly followed. The intermittent encroachments for Utility improvements along the surrounding streets will be necessary during construction activities. All necessary permits will be obtained prior to any closures, including a traffic control plan. Site barriers shall not interfere with Town snow removal. Contractor shall be responsible for all snow removal from along the barrier after each time the town plows. Fence shall be held at back of curb to allow and segregate material and man lifts from public. Public safety will be held paramount during overhead crane and concrete pumping activities.

Performance Bonds and Guarantees:

All required bonds, guarantees, and warranty to be provided by Owner at prior to permit release. Town to notify Owner of required amounts.

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

SHAW CONSTRUCTION
www.shawwyoming.com

Stormwater Management:

All erosion control measures and BMPs will be implemented per plan as developed by the civil engineer, including inlet protection and perimeter controls. All stormwaters of the site will be managed in accordance with TOJ standards & will not affect TOJ stormwater systems. During any rain event, storm water monitoring and reporting will be recorded. A stabilized entrance with tracking control mats will be installed and maintained at the vehicle access point. Concrete washout location clearly defined and accessible. Temporary toilets will be properly bedded and staked. Gas, diesel, and oils will be stored in proper containment vessels. Spoils piles will be covered and staked. Final measures will be reviewed with the building or grading permit.

Snow Removal:

Snow removal within the property will be collected and relocated to appropriate offsite locations. Any snow that accumulates along property margins will be removed after city plows have been through and the snow has accumulated enough to restrict access. Shaw will have the snow removed each time the Town plows. Site barriers shall not interfere with Town snow removal.

Cranes:

Crane location(s) are included with the attached site plans documents. Cranes will not be permitted to perform any picks adjacent to areas open to the public, unless they are within a fenced construction zone. Cranes will be operated by a certified operator and will follow all industry and OSHA standards.

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

SHAW CONSTRUCTION
www.shawwyoming.com

Neighborhood Contact List

Business / Owner Name	Address	Phone	Email
Town of Jackson			townengineering@jacksonwy.gov
CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS	420 East Broadway Ave		
Jackson House LLC	520 E Broadway Ave		
Full Send Properties LLC	523 No Name Alley St		
Viking LLC	524 No Name Alley St		
STOLTZFUS, CLARENCE & RODICA	525 No Name Alley St		
FURMAN, L. ANNETTE IRREVOCABLE TRUST	526 No Name Alley St		
TOLLISON, SARAH	527 No Name Alley St		
BARRY, MICHAEL G. & MAUREEN C	518 E PEARL AVENUE		
LIVEZEY, REBECCA N	516 E PEARL AVENUE		
BIGHORN RIVER CO., LLC	514 E PEARL AVENUE		
KIM-MILLER, MATTHEW W. & MINDY J.	512 E PEARL AVENUE,		
MARLOW, BRUCE	510 E PEARL AVENUE		

Town of Jackson
150 E Pearl Avenue
PO Box 1687, Jackson, WY 83001
P: (307)733-3932 F: (307)739-0919
www.jacksonwy.gov

Date: September 20, 2024

LETTER OF AUTHORIZATION

NAMING APPLICANT AS OWNER'S AGENT

PRINT full name of property owner as listed on the deed when it is an individual OR print full name and title of President or Principal Officer when the owner listed on the deed is a corporation or an entity other than an individual

Jeff Sollis, CEO, St Johns Health

Being duly sworn, deposes and says that Teton Cty. Hospital Dist. is the owner in fee of the premises located at:

Name of property owner as listed on deed

Address of Premises: 460 E Broadway Ave, Town of Jackson, WY 83001

Legal Description: Parcel B, Map T-74A

Please attach additional sheet for additional addresses and legal descriptions

And, that the person named as follows: Name of Applicant/agent: Hal Hutchinson, HH Land Strategies, LLC

Mailing address of Applicant/agent: PO Box 1902, Wilson, WY 83014

Email address of Applicant/agent: hal@hhlandstrategies.com

Phone Number of Applicant/agent: 307-699-0265

Is authorized to act as property owner's agent and be the applicant for the application(s) checked below for a permit to perform the work specified is this(these) application(s) at the premises listed above:

☑ Development/Subdivision Plat Permit Application ☐ Building Permit Application

☐ Public Right of Way Permit ☐ Grading and Erosion Control Permit ☐ Business License Application

☐ Demolition Permit ☐ Other (describe)_____

Under penalty of perjury, the undersigned swears that the foregoing is true and, if signing on behalf of a corporation, partnership, limited liability company or other entity, the undersigned swears that this authorization is given with the appropriate approval of such entity, if required.

Property Owner Signature

Chief Executive Officer

Title if signed by officer, partner or member of corporation, LLC (secretary of corporate owner) partnership or other non-individual Owner

STATE OF Wyoming)
) SS.
COUNTY OF Teton)

R AUDRA NIELSEN
NOTARY PUBLIC
STATE OF WYOMING
COMMISSION ID: 165818
MY COMMISSION EXPIRES: 07-06-2027

The foregoing instrument was acknowledged before me by Jeff Sollis this 20th day of September. WITNESS my hand and official seal.

Notary Public

My commission expires:



HITCHING POST APARTMENTS

460 EAST BROADWAY
JACKSON, WY 83001
DEVELOPMENT PLAN REV 1
05.06.2025

shop works architecture
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 05.06.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
COVER SHEET

SCALE:

NO. DEV-01

PROGRAM MATRIX

HITCHING POST APARTMENTS

Unit type	Description	Unit Count	Kitchen Type	Bath Type	Av. Unit NRA	Av. Unit NLA	Av. Balcony	# of Balc.	Total Balc.	Unit GLA w/balc.	NLA	GLA	First Floor Unit Count	First Floor NLA/ Floor	First Floor GLA/Floor	Second Floor Unit Count	Second Floor NLA/ Floor	Second Floor GLA/Floor	Third Floor Unit Count	Third Floor NLA/ Floor	Third Floor GLA/Floor	
				One Bedroom Units																		
1.1	1 Bedroom, 1 Bath	15	TBD	TBD		622	0	0	0	622	9,330	9,330	3	1,866	1,866	6	3,732	3,732	6	3,732	3,732	15
1.2	1 Bedroom, 1 Bath (Bridge)	2	TBD	TBD		654	0	0	0	654	1,308	1,308	0	0	0	1	654	654	1	654	654	2
1.3	1 Bedroom, 1 Bath (End)	2	TBD	TBD		664	0	0	0	664	1,328	1,328	0	0	0	1	664	664	1	664	664	2
1.4A	1 Bedroom, 1 Bath (Type A)	3	TBD	TBD		628	0	0	0	628	1,884	1,884	1	628	628	1	628	628	1	628	628	3
2.1	2 Bedroom, 1.5 Bath	38	TBD	TBD		835	0	0	0	835	31,730	31,730	8	6,680	6,680	15	12,525	12,525	15	12,525	12,525	38
2.2	2 Bedroom, 1.5 Bath (Corner)	3	TBD	TBD		899	0	0	0	899	2,697	2,697	1	899	899	1	899	899	1	899	899	3
2.3	2 Bedroom, 1.5 Bath (Corner)	3	TBD	TBD		853	0	0	0	853	2,559	2,559	1	853	853	1	853	853	1	853	853	3
2.4A	2 Bedroom, 1 Bath (Type A)	2	TBD	TBD		846	0	0	0	846	1,692	1,692	0	0	0	1	846	846	1	846	846	2
2.5	2 Bedroom, 1 Bath	2	TBD	TBD		846	0	0	0	846	1,692	1,692	0	0	0	1	846	846	1	846	846	2
3.1	3 Bedroom, 2 Bath	2	TBD	TBD		1,493	0	0	214	1,707	2,986	3,414	0	0	0	1	1,493	1,707	1	1,493	1,707	2
Sub-total One Bedroom units		**22**	31%					0	214		**57,206**	57,634	14	10,926	10,926	29	23,140	23,354	29	23,140	23,354	72
Sub-total Two Bedroom units		**48**	67%	Type A Units	5	7%																
Sub-total Three Bedroom units		**2**	3%	Type B Units	67	93%																
Total Units		**72**	100%																			

RESIDENTIAL SUMMARY	First Floor	Second Floor	Third Floor	0	TOTAL
TOTAL UNITS	**14**	**29**	**29**	**23,354**	**23,426**
TOTAL BEDROOMS					

SQUARE FOOTAGE SUMMARY		First Floor	Second Floor	Third Floor	0
Average Unit GLA					
Average Unit NLA					
NLA	57,206	10,926	23,140	23,140	
GLA	57,634	10,926	23,354	23,354	
Amenity Area	**1,701**	1,701			
Office Area	**1,643**	1,643			
Circulation and Support	**12,879**	2,851	5,014	5,014	
SUBTOTAL GLA + ACCESORY	**73,857**	**17,121**	**28,368**	**28,368**	
BUILDING EFFICIENCY		**64%**	**82%**	**82%**	
BASEMENT STORAGE AREA	11,523				
COVERED PARKING / BRIDGE	11,906				
GBA	**97,286**				

PARKING SUMMARY	
TOTAL PARKING PROVIDED	76

DEFINITIONS

NET RENTABLE- The area of a living unit is measured from the inside faces of the corridor and exterior walls and from the inside faces of the partitions separating

NET LEASABLE= Outside face of exterior/ Centerline of Units/ Corridor side of Units.

Blue = Formula - Do not Edit

shopworks

DRC SHEET INDEX

Sheet Number	Sheet Name	DEVELOPMENT PLAN 02.18.2025		
ARCHITECTURE				
DEV-01	COVER SHEET	X		
DEV-02	PROGRAM MATRIX / INDEX	X		
DEV-03	VICINITY MAP	X		
DEV-04	SITE PLANS	X		
DEV-05	FLOOR PLANS	X		
DEV-06	AREA PLANS	X		
DEV-08	UNIT PLANS	X		
DEV-09	ELEVATIONS	X		
DEV-10	ELEVATIONS	X		
DEV-11	RENDERED ELEVATIONS	X		
DEV-12	RENDERING NORTHEAST	X		
DEV-13	RENDERING NORTHWEST	X		
DEV-14	RENDERING ENTRY	X		
DEV-15	MATERIAL BOARD	X		
DEV-16	EXTERIOR LIGHT FIXTURE CUTSHEETS	X		
CIVIL				
C1.00	CIVIL COVER SHEET	X		
C2.00	EXISTING CONDITIONS	X		
C2.10	DEMOLITION PLAN	X		
C3.00	SITE PLAN	X		
C3.10	UTILITY PLAN	X		
C3.20	GRADING PLAN	X		
C4.00	EROSION AND UTILITY DETAILS	X		
C4.10	WATER DETAILS	X		
C4.20	SEWER DETAILS	X		
C4.30	STORM SEWER DETAILS	X		
C4.31	STORM SEWER DETAILS	X		
C4.40	STREET DETAILS	X		
C4.41	STREET DETAILS	X		
LANDSCAPE				
LS-001	LANDSCAPE EXHIBIT	X		
LS-101	LANDSCAPE PLAN	X		

shopworks architecture 301 N. Alton Ave • Aurora, CO 80012 • 303.443.8866

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

stJohn's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 02.18.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:

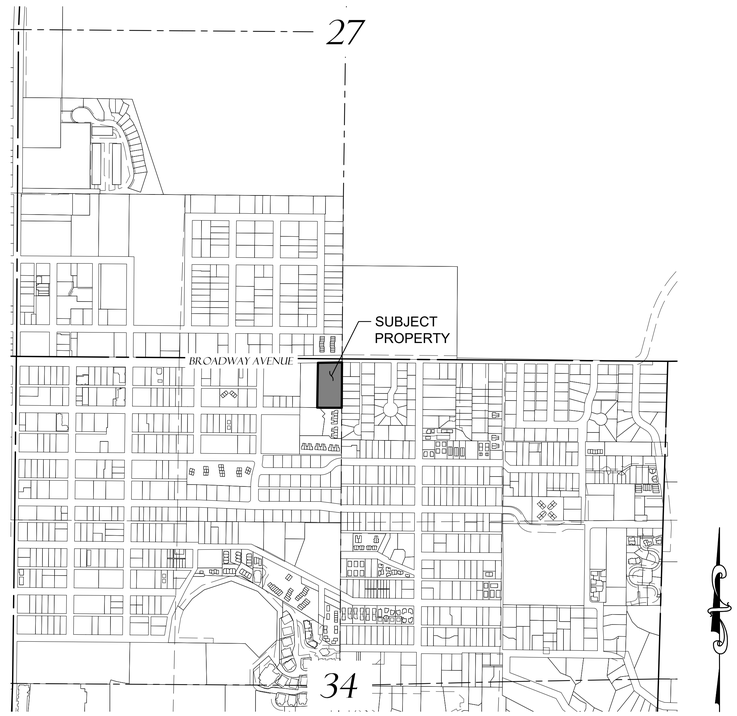
PROGRAM MATRIX / INDEX

SCALE:

NO. DEV-02

HITCHING POST
WORKFORCE HOUSING
DEVELOPMENT PLAN

LOCATED WITHIN
NE1/4NW1/4 SECTION 34, T41N, R116W, 6TH P.M.
JACKSON, WYOMING



VICINITY MAP
1" = 500'

FOR 24x36 PRINTS



SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
C1.00	CIVIL COVER SHEET
C1.10	PROJECT NOTES AND LEGEND
C2.00	EXISTING CONDITIONS
C2.10	DEMOLITION PLAN
C3.00	SITE PLAN
C3.10	UTILITY PLAN
C3.20	GRADING PLAN
C4.00	EROSION AND UTILITY DETAILS
C4.10	WATER DETAILS
C4.20	SEWER DETAILS
C4.30	STORM SEWER DETAILS
C4.31	STORM SEWER DETAILS
C4.40	STREET DETAILS
C4.41	STREET DETAILS

OWNER:

Teton County Hospital District
P.O. Box 428
Jackson, Wyoming 83001
307.733.3636

CIVIL ENGINEER:

Jorgensen Associates, Inc.
P.O. Box 9550 / 1315 HWY 89 S., Suite 201
Jackson, Wyoming 83002
307.733.5150

ARCHITECT:

Shopworks Architecture
301 W. 45th Avenue
Denver, Colorado 80216
303.433.4094x105

HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
CIVIL COVER SHEET

SCALE: 1" = 20'-0"

NO. C1.00

GENERAL PROJECT NOTES:

1. PROJECT SCOPE: CONSTRUCTION WILL INCLUDE A 72 UNIT APARTMENT COMPLEX AND ITS ASSOCIATED UTILITIES.

2. PROJECT LOCATION: 460 E. BROADWAY AVENUE, JACKSON, WYOMING, PID: 22-41-16-34-2--00-001

3. PROPERTY ZONING, OVERLAYS, AND FLOODWAYS:

ZONE:	P/SP
SCENIC OVERLAY:	NOT WITHIN
NATURAL RESOURCES OVERLAY:	NOT WITHIN
WILDLAND-URBAN INTERFACE:	NOT WITHIN
FLOOD ZONE:	ZONE X

5. PROJECT SCHEDULE: CONSTRUCTION TO BEGIN SUMMER/FALL 2025 AND TO BE COMPLETED FALL 2027.

6. PROPERTY AREA = ±1.67 ACRES (±72,573 SF)

   TOTAL AREA OF DISTURBANCE = 1.76 ACRES (±76,677 SF)

   IMPERVIOUS SURFACE: (~73% OF LOT)

7. BASE MAPPING PREPARED FROM GROUND SURVEY PERFORMED BY JORGENSEN ASSOCIATES, INC IN JULY 2021 USING GPS RTK METHODS AND REFERENCE NGVD29. THE BASIS OF BEARINGS FOR THIS SURVEY IS REFERENCED TO THE EAST PROPERTY BOUNDARY WITH A BEARING OF S 00°09'43" E.

8. ALL PROPOSED FENCING SHALL MEET THE WILDLIFE FRIENDLY FENCING STANDARDS AS DEFINED IN SECTION 5.1.2 OF THE TETON COUNTY LAND DEVELOPMENT REGULATIONS, NO PERMANENT FENCING IS CURRENTLY PROPOSED FOR THIS PROJECT.

9. ALL PROPOSED REFUSE/RECYCLING CONTAINERS SHALL BE BEAR-RESISTANT ACCORDING TO SECTION 5.2.2 OF THE TETON COUNTY LAND DEVELOPMENT REGULATIONS.

GENERAL CONSTRUCTION NOTES & SPECIFICATIONS:

1. ALL SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS, ARTICLE 5 OF TETON COUNTY LAND DEVELOPMENT REGULATIONS, AND THE REQUIREMENTS OF THE ASPEN WATER AND SEWER DISTRICT.

2. CONTRACTOR SHALL CONSTRUCT EROSION CONTROL STRUCTURES PRIOR TO ANY EARTHWORK OR CONSTRUCTION. EROSION CONTROL STRUCTURES SHALL BE CONSTRUCTED AND MAINTAINED BY CONTRACTOR UNTIL VEGETATION IS RE-ESTABLISHED IN DISTURBED AREAS. REFER TO TYPICAL DETAILS FOR APPROVED EROSION CONTROL STRUCTURES.

3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL PROMPTLY NOTIFY THE ENGINEER OF ANY VARIATIONS OR DISCREPANCIES.

4. ALL EXCAVATION ACTIVITIES SHALL COMPLY WITH PERMIT REQUIREMENTS ISSUED FOR THE PROJECT. CONTRACTOR SHALL REVIEW AND BE RESPONSIBLE FOR PERMIT COMPLIANCE.

5. CONTRACTOR TO LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

6. FILL MATERIAL SHALL BE SUITABLE ON-SITE OR IMPORTED MATERIAL WITH ROCK NO LARGER THAN 6 INCHES IN DIAMETER. LARGER MATERIAL MAY BE PLACED ONLY WHEN AUTHORIZED BY THE ENGINEER.

7. SUBGRADE, PIT RUN SUBBASE, AND SITE FILL MATERIALS SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (AASHTO T-99 - STANDARD PROCTOR DENSITY) IN LIFTS NOT TO EXCEED 12 INCHES IN LOOSE THICKNESS.

8. CRUSHED GRAVEL BASE MATERIAL SHALL BE GRADING W. CRUSHED GRAVEL BASE COURSES SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (AASHTO T-180 - MODIFIED PROCTOR DENSITY). IN LIFTS NOT TO EXCEED 8 INCHES IN LOOSE THICKNESS.

9. WEEDS SHALL BE CONTROLLED BY SPRAYING, LIMITING DISTURBANCE AREA, OR OTHER MEANS PRIOR TO REVEGETATION AND AFTER REVEGETATION IS COMPLETE.

10. FUGITIVE DUST WILL BE CONTROLLED BY WATERING DURING DRY PERIODS OR AS REQUIRED BY ENGINEER.

11. ALL EXCAVATED MATERIALS INCLUDING STRIPPED AND SALVAGED TOPSOIL SHALL BE STOCKPILED AND PROCESSED ON-SITE. CONFIRM STOCKPILE AND STAGING LOCATIONS WITH THE OWNER.

12. TOPS OF CUT AND FILL SLOPES SHALL BE ROUNDED TO AVOID RAVELING AND EROSION.

13. TOPSOIL SHALL BE PLACED ON ALL SLOPES AND AREAS STRIPPED FOR GRADING, PRIOR TO REVEGETATION.

REVEGETATION SPECIFICATIONS:

1. SEED MIXTURE (OR APPROVED EQUAL). USE THIS REVEGETATION SPECIFICATION IN THE ABSENCE OF OTHER REVEGETATION SPECIFICATIONS OR DIRECTION FROM LANDSCAPE ARCHITECT.

COMMON NAME	LBS./ACRE
MOUNTAIN BROME	10 LBS./ACRE
THICKSPIKE WHEATGRASS	12 LBS./ACRE
IDAHO FESCUE	6 LBS./ACRE
WESTERN WHEATGRASS	12 LBS./ACRE
ALPINE TIMOTHY	12 LBS./ACRE
TOTAL PURE LIVE SEED APPLICATION RATE	52 LBS./ACRE

2. SEED MIXES CONTAINING NATIVE FLOWERING PLANTS SUCH AS LUPINE, YARROW AND PAINTBRUSH ARE ACCEPTABLE.

3. ALL SEED SHALL COMPLY WITH WYOMING SEED LAW. SEED SHALL BE PURCHASED FROM A DEALER LICENSED WITH THE WYOMING DEPARTMENT OF AGRICULTURE. CERTIFICATIONS FOR THE SEED MIX SHALL BE PROVIDED TO THE ENGINEER PRIOR TO SEEDING.

4. TOPSOIL SHALL BE UNIFORMLY SPREAD ON PREPARED SURFACES PRIOR TO SEEDING. REMOVE FOREIGN MATERIALS, WEEDS AND UNDESIRABLE PLANTS FROM THE PREPARED SOIL PRIOR TO SEEDING.

5. HARD PACKED OR CAKED TOPSOIL SURFACES SHALL BE SCARIFIED OR DISKED PRIOR TO SEEDING.

6. SEED SHALL BE UNIFORMLY DISTRIBUTED OVER THE SURFACE BY APPROVED MECHANICAL BROADCASTING DEVICES AND THE GROUND SHALL BE IMMEDIATELY RAKED OR DRAGGED TO COVER THE SEED.

7. SEEDING SHALL BE PERFORMED BETWEEN THE TIME THE FROST LEAVES THE GROUND IN THE SPRING AND BEFORE THE FROST ENTERS THE GROUND IN THE FALL.

CONSTRUCTION NOTES & SPECIFICATIONS:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE PERMITS AND AGREEMENTS INCLUDING: WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY, AND WYOMING STATE ENGINEERS OFFICE PERMIT. CONTACT ENGINEER FOR COPIES OF PERMITS AND PERMIT REQUIREMENTS. CONTRACTOR SHALL REVIEW AND BE RESPONSIBLE FOR PERMIT COMPLIANCE.

2. IF NECESSARY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY NPDES STORMWATER PERMIT PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES.

3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL PROMPTLY NOTIFY THE ENGINEER OF ANY VARIATIONS OR DISCREPANCIES.

4. CONTRACTOR SHALL VERIFY LOCATION OF ALL BURIED AND OVERHEAD UTILITIES PRIOR TO ANY EXCAVATION IN THE VICINITY. UTILITY LOCATIONS SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. ENGINEER DOES NOT WARRANT THE ACCURACY NOR COMPLETENESS OF THE INFORMATION SHOWN FOR EXISTING UTILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES PRIOR TO INSTALLING IMPROVEMENTS. PRIVATE UNDERGROUND UTILITIES EXIST IN THE PROJECT AREA.

5. CONTRACTOR TO CONFIRM STOCKPILE AND STAGING LOCATIONS WITH THE OWNER.

6. FILL MATERIAL SHALL BE SUITABLE ON-SITE OR IMPORTED MATERIAL WITH ROCK NO LARGER THAN 6 INCHES IN DIAMETER. LARGER MATERIAL MAY BE PLACED ONLY WHEN AUTHORIZED BY THE ENGINEER.

7. SUBGRADE, PIT RUN SUBBASE, AND SITE FILL MATERIALS SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (AASHTO T-99 - STANDARD PROCTOR DENSITY) IN LIFTS NOT TO EXCEED 12 INCHES IN LOOSE THICKNESS.

8. CRUSHED GRAVEL BASE MATERIAL SHALL BE GRADING W. CRUSHED GRAVEL BASE COURSES SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (AASHTO T-180 - MODIFIED PROCTOR DENSITY).

9. DESTRUCTION AND DAMAGE TO TREES AND OTHER NATURAL VEGETATION SHALL BE MINIMIZED AND ALL DISTURBED SURFACES SHALL BE RESEEDED AS SOON AS PRACTICABLE IN ACCORDANCE TO THE REVEGETATION SPECIFICATIONS.

10. WEEDS SHALL BE CONTROLLED BY SPRAYING, LIMITING DISTURBANCE AREA, OR OTHER MEANS PRIOR TO REVEGETATION AND AFTER REVEGETATION IS COMPLETE.

11. REVEGETATION SHALL OCCUR AFTER CONSTRUCTION IS COMPLETE AND WILL BE COMPLETED IN THE FALL OF 2025 OR SPRING OF 2026.

12. FUGITIVE DUST WILL BE CONTROLLED BY WATERING OR OTHER METHODS DURING DRY PERIODS OR AS REQUIRED BY OWNER.

13. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED AND PROCESSED ON-SITE ONLY AT LOCATIONS AS DESIGNATED ON THE PLANS.

14. TOPS OF CUT AND FILL SLOPES SHALL BE ROUNDED TO AVOID RAVELING AND EROSION. CUT AND FILL SLOPES SHALL NOT EXCEED 2:1 WITHOUT SPECIAL STABILIZATION AND APPROVAL FROM ENGINEER.

15. A LAYER OF TOPSOIL SHALL BE PLACED ON ALL SLOPES AND AREAS STRIPPED FOR GRADING.

16. NO WETLANDS SHALL BE DISTURBED WITHOUT FIRST OBTAINING NECESSARY PERMITS FROM THE U. S. ARMY CORPS OF ENGINEERS.

17. AREAS WITH UNSUITABLE SUBGRADE UNDER ROADWAYS OR BUILDING SHALL BE SUB-EXCAVATED AND REPLACED WITH APPROVED STRUCTURAL FILL. COORDINATE WITH ENGINEER FOR REMOVAL DEPTHS AND STRUCTURAL FILL SELECTION.

18. ENGINEER SHALL BE CONTACTED PRIOR TO CONSTRUCTION TO PROVIDE CONSTRUCTION OBSERVATION.

19. ALL FENCING MUST COMPLY WITH SECTION 49220, WILDLIFE FRIENDLY FENCING, OF THE TETON COUNTY LAND DEVELOPMENT REGULATIONS. THIS SECTION INCLUDES A PROVISION FOR SPECIAL PURPOSE FENCING. ALL SPECIAL PURPOSE FENCING MUST BE APPROVED BY THE WYOMING GAME AND FISH DEPARTMENT.

20. BEFORE START OF CONSTRUCTION INSTALL CONSTRUCTION FENCE/SILT FENCE TO DEFINE LIMITS OF LAND DISTURBING ACTIVITIES. FENCE FILTER FABRIC SHALL BE SPUN BOND GEOTEXTILE FABRIC.

21. CONTRACTOR IS RESPONSIBLE FOR PERIODIC INSPECTIONS, MAINTENANCE AND REPAIR OF EROSION CONTROL STRUCTURES TO INSURE PROPER SEDIMENT CONTAINMENT AND EROSION CONTROL.

22. STORMWATER RUNOFF SHALL BE MANAGED IN ACCORDANCE WITH TETON COUNTY LAND DEVELOPMENT REGULATIONS. RUNOFF FROM THE SITE SHALL NOT EXCEED THE PRE-CONSTRUCTION VALUES, AND VOLUME OF STORAGE SHALL NOT BE REDUCED.

23. DURING CONSTRUCTION CONTRACTOR SHALL MONITOR THE PROJECT SITE FOR THE GROWTH OF NOXIOUS WEEDS. THE GROWN OF NOXIOUS WEED SHALL BE REPORTED TO THE TETON COUNTY WEED AND PEST DISTRICT OFFICE. CONTRACTOR AND OWNER SHALL IMPLEMENT A WEED CONTROL PROGRAM TO CONTROL NOXIOUS WEEDS.

24. GRADES SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET OF THE BUILDING FOUNDATION.

25. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL SLOPE MIN. 2% AWAY FROM THE BUILDING.

26. ALL SITE AND UTILITY WORK TO BE PERFORMED IN ACCORDANCE TO THE GEOTECHNICAL RECOMMENDATIONS PREPARED FOR THIS PROJECT, WHICH ARE INCLUDED IN THE PROJECT SPECIFICATIONS.

WATER AND SEWER UTILITY NOTES

1. WATER AND SEWER INSTALLATIONS SHALL BE IN ACCORDANCE WITH CURRENT WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER QUALITY DIVISION RULES AND REGULATIONS. AND CONFORM TO TETON COUNTY WATER AND SEWER REGULATIONS

2. TYPE A TRENCH BACKFILL SHALL APPLY TO ALL PAVED SURFACES AND AROUND ALL APPURTENANCES INCLUDING VALVES, FIRE HYDRANTS AND MANHOLES. TYPE B TRENCH BACKFILL SHALL APPLY ONLY TO NON-TRAVELED AREAS. SEE WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS. IF BACKFILL TYPE IS NOT SHOWN TYPE A SHALL BE USED.

3. CONTINUOUS RIGID TYPE A PIPELINE INSULATION SHALL BE PROVIDED AS SHOWN ON THE TYPICAL TRENCH DETAIL, AT ALL LOCATIONS WHERE DEPTH OF COVER IS LESS THAN 6 FEET FOR SEWER MAINS AND SERVICES; LESS THAN 7 FEET FOR WATER MAINS, SEWER FORCE MAINS, AND WATER SERVICES OR AS SHOWN ON THE PLANS. ALL SERVICES UNDER ROADWAYS, DRIVEWAYS, AND SIDEWALKS SHALL BE INSTALLED WITH 2" TYPE A INSULATION.

4. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL SEPARATION BETWEEN WATER PIPES AND SEWER PIPES/MANHOLES, MEASURED EDGE TO EDGE. MAINTAIN A MINIMUM OF 18 INCHES VERTICAL SEPARATION AT WATER-SEWER PIPE CROSSINGS. WHERE SEWER PIPE CROSSES ABOVE WATER PIPE, SPECIAL CONSTRUCTION IS REQUIRED. SEE TYPICAL DETAILS.

5. WATER SERVICE LINES 3" OR LESS IN DIAMETER SHALL BE POLYETHYLENE (PE) CONFORMING TO THE REQUIREMENTS OF AWWA C 901. PE PIPE SHALL BE PRESSURE TUBING CONFORMING TO TABLE 7 OF SAID SPECIFICATION. TUBING SHALL BE CLASS 200.

6. SANITARY SEWER GRAVITY LINES AND FITTINGS SHALL BE SDR 35 PVC AND CONFORM TO ASTM D-3034. PRESSURE SEWER SERVICE LINES SHALL BE POLYETHYLENE, SDR11 IPS PE.

7. SEWER TESTING: MAXIMUM ALLOWABLE INFILTRATION OR EXFILTRATION, INCLUDING MANHOLES, SHALL NOT EXCEED 50 GALLONS PER DAY PER MILE OF SEWER PER INCH OF PIPE DIAMETER.

8. AIR TEST ALTERNATE FOR SEWER PIPELINES: MAINTAIN 4.0 PSI FOR 4 MINUTES WITH NO APPRECIABLE LOSS. GAGE SHALL HAVE MAXIMUM 1 PSI GRADATIONS.

9. LOCATIONS OF EXISTING FACILITIES ARE FROM DRAWINGS PROVIDED TO JORGENSEN ASSOCIATES. CONTRACTOR SHALL POT HOLE IN THE PRESENCE OF THE ENGINEER TO DETERMINE CONNECTION LOCATIONS, DEPTH, SIZE AND TYPE OF PIPE, AND OTHER PERTINENT INFORMATION REQUIRED FOR THE PROJECT. ANY ADJUSTMENTS NEEDED SHALL BE REFLECTED ON AS-CONSTRUCTED DRAWINGS.

10. GROUNDWATER IS PRESENT AT THE SITE AND CONSTRUCTION DEWATERING WILL MOST LIKELY BE REQUIRED TO INSTALL THE WATER AND SEWER MAINS. CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING THE CONSTRUCTION DEWATERING PLAN AND SYSTEM AND OBTAINING ANY NECESSARY PERMITS FOR THE DEWATERING ACTIVITIES.

LEGEND

EXISTING		PROPOSED
	BOUNDARY, SUBJECT PROPERTY	
	BOUNDARY, ADJOINING PROPERTY	
	EDGE OF PAVEMENT	
6210	INDEX CONTOUR, 10' INTERVAL	6210
6208	INTERMEDIATE CONTOUR, 2' INTERVAL	6208
	FENCE, WOODEN, POST AND RAIL	
X X	FENCE, CHAINLINK	
	FENCE, SILT	
	LIMITS OF DISTURBANCE	
com	UNDERGROUND COMMUNICATIONS LINE	
fo	UNDERGROUND FIBER OPTIC LINE	
bt	UNDERGROUND CABLIE LINE	
gas	UNDERGROUND GAS LINE	
OH	OVERHEAD POWER LINE	
ugp	UNDERGROUND POWER LINE	
s	SEWER LINE	S
w	WATER LINE	W
	SIGN	
C	COMMUNICATIONS PEDESTAL	
FO	FIBER OPTIC PEDESTAL	
U	UTILITY VAULT	
G	GAS METER	
	ELECTRIC JUNCTION BOX	
	ELECTRIC TRANSFORMER	
	UTILITY POLE	
	GUY ANCHOR	
	CLEANOUT	
S	SEWER MANHOLE	
	CURBSTOP	
	SPIGOT	
	ASPEN TREE	
	COTTONWOOD TREE	
	CANIFER TREE	
	SHRUB	

shop works architecture
301 w. 8th ave • ketchum, co 83340 • 303.443.0994

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

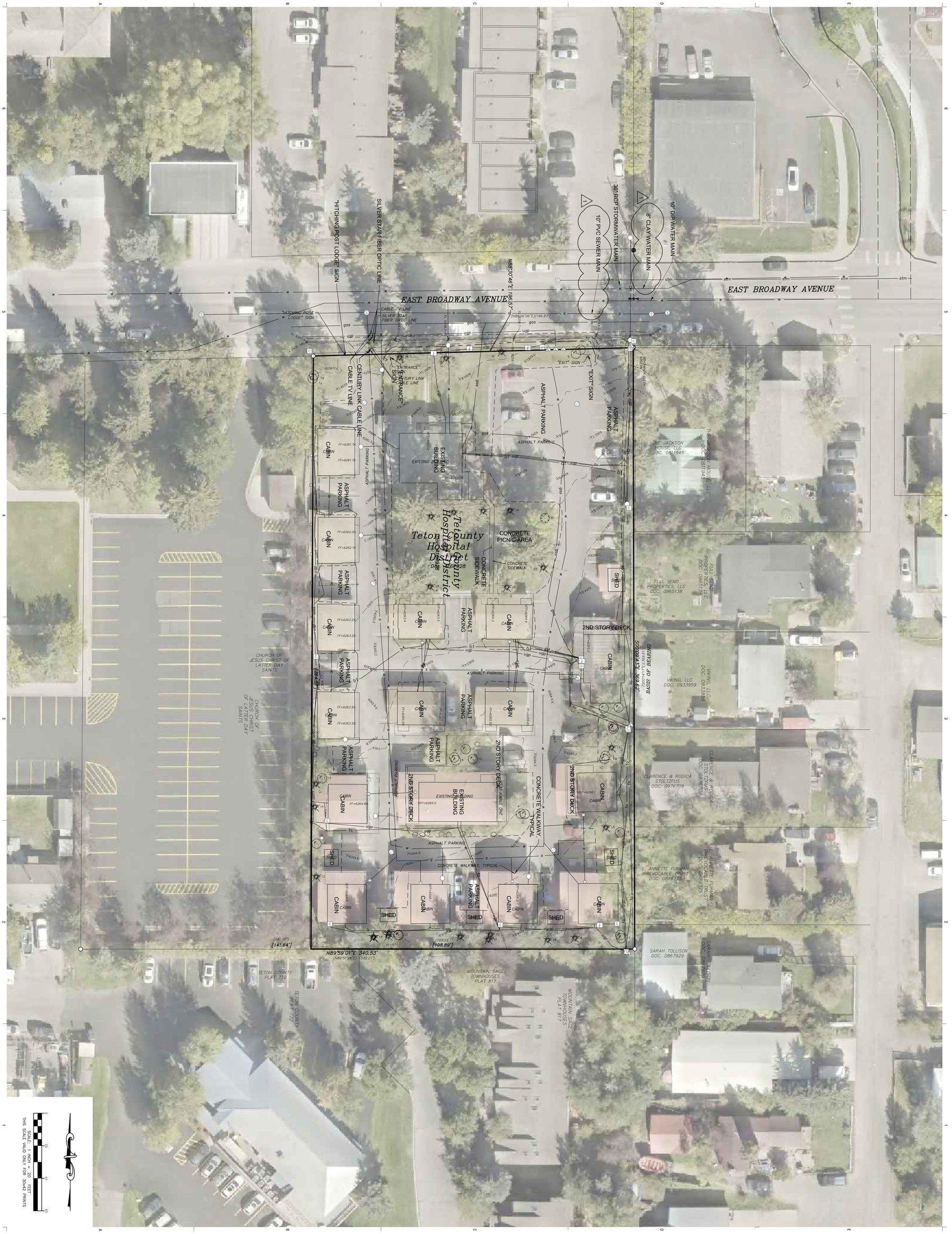
DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:

PROJECT NOTES AND LEGEND

SCALE: 1" = 20'-0"

NO. C1.10



SCALE: 1 INCH = 20 FEET
THIS SCALE VALID ONLY FOR 30x42 PRINTS

0 20 40 60

DRAWN: UC
REVIEWED: BB
DATE: 05.06.2025
DEV PLAN REV 1
PROJECT # 2412.7
SHEET TITLE:
EXISTING CONDITIONS
SCALE: 1" = 20-0"
NO.
C2.00

HITCHING POST APARTMENTS

St John's HEALTH
BLUELINE PROPERTY MANAGEMENT
SHAW CONSTRUCTION
JORGENSEN
shopworks architecture
901 W. 45TH AVE • DENVER, CO 80216 • 303.433.4094
flow design collaborative



GENERAL DEMOLITION NOTES:

1. ALL WALKWAYS, SLABS, FENCES, FLATWORK, AND ASPHALT WITHIN THE SUBJECT PROPERTY ARE TO BE REMOVED FROM SITE UNLESS OTHERWISE SHOWN.
2. BURIED CABLE UTILITIES, AND GAS LINES ARE TO BE REMOVED FROM SITE AS NEEDED TO ACCOMMODATE NEW BUILDING AND INFRASTRUCTURE.
3. STRUCTURES ARE TO BE REMOVED FROM SITE OR RELOCATED. DESIGNATION OF HISTORIC STRUCTURES TO BE RELOCATED IS CONTINGENT ON A PENDING REVIEW FROM TETON COUNTY HISTORIC PRESERVATION BOARD.
4. ALL UTILITIES, SEWER, WATER, GAS, TELEPHONE AND ELECTRICAL SERVICES TO BE DISCONNECTED AND CAPPED ACCORDING TO CITY, COUNTY, AND UTILITY COMPANY REQUIREMENTS, UNLESS OTHERWISE SHOWN.
5. EXCAVATED AREAS SHOULD BE BACKFILLED PER THE GEOTECHNICAL REPORT TO PREPARE FOR THE DEVELOPMENT.
6. CLEAR AND GRUB TREES, SHRUBS, AND VEGETATION WITHIN THE SUBJECT PROPERTY AND ALONG PROPERTY FRONTAGE ADJACENT TO BROADWAY AVENUE UNLESS OTHERWISE NOTED. DISPOSAL TO BE OFF-SITE.
7. REMOVE DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM THE DEMOLITION AND SITE CLEARING OPERATIONS . DISPOSE OF MATERIALS IN A LEGAL MANNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIAL. DISPOSAL SHALL BE AT AN APPROVED SITE FOR SUCH MATERIAL. BURNING ONSITE IS NOT PERMITTED.
9. THE LOCATION OF EXISTING UTILITIES SHOWN ARE BASED ON VARIOUS RECORDS, FIELD OBSERVATIONS, AND SURVEY INFORMATION. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. CONTRACTOR SHALL CONTACT AUTHORITIES HAVING JURISDICTION FOR FIELD LOCATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF IN-PLACE AND RELOCATED UTILITIES DURING CONSTRUCTION.
10. CONTRACTOR SHALL COORDINATE WORK WITHIN THE RIGHT-OF-WAY WITH TOWN OF JACKSON PUBLIC WORKS. ALL WORK WITHIN THE RIGHT-OF-WAY TO CONFORM TO THE TOWN OF JACKSON ENCROACHMENT PERMIT.
11. INSTALL TRAFFIC WARNING DEVICES AS NEEDED IN ACCORDANCE WITH TOWN OF JACKSON STANDARDS.
12. ALL DEMOLITION WORK SHALL BE DONE IN COMPLIANCE WITH TOWN OF JACKSON DEMOLITION PERMIT.
13. DEMOLISH EXISTING BUILDINGS AND CLEAR FROM SITE, UNLESS OTHERWISE SHOWN. DEMOLITION SHALL INCLUDE FOOTINGS AND FOUNDATIONS.
14. IF CONTRACTOR OBSERVES EVIDENCE OF HAZARDOUS MATERIALS OR CONTAMINATED SOILS, THEY SHALL IMMEDIATELY CONTRACT THE PROJECT ENGINEER TO PROVIDE NOTIFICATION AND OBTAIN DIRECTION BEFORE PROCEEDING WITH DISTURBANCE OF SAID MATERIALS OR CONTAMINATED SOILS.
15. LIMITS OF DEMOLITION/DISTURBED AREAS SHOWN ON THE PLANS MAY NOT BE AN EXACT DEPICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MEANS AND METHODS OF HOW THE WORK WILL BE COMPLETED. THE CONTRACTOR SHALL DETERMINE THE AREA OF CONSTRUCTION IMPACT. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ALL IMPACTED AREAS AND ALL RESTORATION SHALL BE PART OF THE CONTRACT BID.
16. CONTRACTOR SHALL SHORE AND PROTECT NEIGHBORING PROPERTIES PER OSHA STANDARDS DURING EXCAVATION ACTIVITIES AS NECESSARY. ALL EXCAVATION SHALL REMAIN ON AND WITHIN THE BOUNDS OF THE SUBJECT PROPERTY. UNLESS SPECIFICALLY NOTED ON THE PLANS AND APPROVED FROM THE ADJOINING NEIGHBOR OR TOWN OF JACKSON HAS BEEN OBTAINED PRIOR TO ANY EXCAVATION BEYOND THE SUBJECT PROPERTY LIMITS.

SCALE: 1 INCH = 20 FEET
THIS SCALE VALID ONLY FOR 30x42 PRINTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
DEMOLITION PLAN

SCALE: 1" = 20'-0"

NO. C2.10

HITCHING POST APARTMENTS

NO NAME STREET

EAST BROADWAY AVENUE

THE JACKSON HOUSE, LLC
DOC. 0811945

FULL SEND PROPERTIES, LLC
DOC. 0965138

VIKING, LLC
DOC. 0933959

CLARENCE & RODICA STOLTZFUS
DOC. 0976709

L. ANNETTE FURMAN IRREVOCABLE TRUST
DOC. 0889375

SARAH TOLLISON
DOC. 0867929

MOUNTAIN SAGE TOWNHOUSES PLAT 817

TETON COUNTY PLAT 772

CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

NEW CURB AND GUTTER TO REPLACE EXISTING CURB CUT

PROPOSED ACCESS

NEW CURB AND GUTTER TO REPLACE EXISTING CURB CUT

PROPOSED 13.5' WIDTH EASEMENT WITH TOWN OF JACKSON TO BE RECORDED AT A LATER TIME

CONNECT TO EXISTING SIDEWALK

RETAINING CURB

PROPOSED PRIVACY FENCE

RETAINING WALL

TRASH ENCLOSURE

20' (TYPICAL)

9' (TYPICAL)

5' (TYPICAL)

24'

120'

FIRE APPARATUS TURNAROUND

BUILDING OUTLINE FOR LEVELS ABOVE PARKING

24" VALLEY GUTTER

BUILDING OUTLINE FOR LEVELS ABOVE PARKING

R26'

R26'

60'

STAND UP CURB

5' PATHWAY

STAIRWELL

20'

BUILDING FOOTPRINT WITH TWO LEVELS ABOVE

6' SIDEWALK

BUILDING FOOTPRINT WITH TWO LEVELS ABOVE

24'

PROPOSED DEVELOPMENT LEVEL 1 FFE 6260' / 6261.5'

PROPOSED DEVELOPMENT LEVEL 1 FFE 6261.5'

BUILDING OUTLINE FOR LEVELS ABOVE

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1

PROJECT #: 24127
FILE:
SHEET TITLE:

SITE PLAN

SCALE: 1" = 20'-0"

SCALE: 1 INCH = 20 FEET
THIS SCALE VALID ONLY FOR 30x42 PRINTS

NO. C3.00

NO NAME STREET

EAST BROADWAY AVENUE

THE JACKSON HOUSE, LLC
DOC. 0811945

FULL SEND PROPERTIES, LLC
DOC. 0965138

VIKING, LLC
DOC. 0933959

CLARENCE & RODICA STOLTZFUS
DOC. 0976709

L. ANNETTE FURMAN IRREVOCABLE TRUST
DOC. 0889375

SARAH TOLLISON
DOC. 0867929

MOUNTAIN SAGE TOWNHOUSES PLAT 817

TETON COUNTY PLAT 772

CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

10" DIP WATER MAIN

8" CLAY WATER MAIN

36" RCP STORMWATER MAIN

10" PVC SEWER MAIN

NEW 8" WATER TAP

125 LF SAW CUT ASPHALT
913 SF ASPHALT PATCH

NEW 48" SANITARY SEWER MANHOLES

77 LF SAW CUT ASPHALT
456 SF ASPHALT PATCH

CAP EXISTING WATER SERVICES AT THE MAIN

92 LF SAW CUT ASPHALT
755 SF ASPHALT PATCH

CAP EXISTING SANITARY SEWER SERVICE OUTSIDE OF THE EXISTING MANHOLE

59 LF 8-INCH SANITARY SEWER

52 LF 6-INCH WATER SERVICE

STORMWATER INFILTRATION SYSTEM

STORM INLET WITH FRAME AND GRATE

69 LF 8" STORM SEWER PIPE

40 LF 8" STORM SEWER PIPE

292 LF 8-INCH WATER MAIN

TRASH ENCLOSURE

FIRE HYDRANT ASSEMBLY

FIRE HYDRANT ASSEMBLY

STORMWATER INFILTRATION SYSTEM

35 LF 6" STORM SEWER PIPE

STORM INLET WITH FRAME AND GRATE

59 LF 6" STORM SEWER PIPE

14 LF 2-INCH WATER SERVICE

STAIRWELL

73 LF 6" STORM SEWER PIPE

TRENCH DRAIN

41 LF 8-INCH SANITARY SEWER

36 LF 6" STORM SEWER PIPE

10 LF 4" STORM SEWER PIPE

66 LF 6" STORM SEWER PIPE

STORMWATER INFILTRATION SYSTEM

80 LF 8" STORM SEWER PIPE

STORMWATER INFILTRATION SYSTEM FOR FOUNDATION DRAINS

PROPOSED ADA PEDESTRIAN LANDING AND RAMP

STORMWATER INFILTRATION SYSTEM FOR FOUNDATION DRAINS

10 LF 4" STORM SEWER PIPE

PROPOSED DEVELOPMENT
LEVEL 1 FFE 6260' / 6261.5'

PROPOSED DEVELOPMENT
LEVEL 1 FFE 6261.5'

30 LF NEW CURB AND GUTTER

76,677 SF LIMITS OF DISTURBANCE COINCIDENTAL WITH PROPERTY LINE

CONNECT TO EXISTING SIDEWALK ON ADJACENT LOT

CREATE SWALE BETWEEN PORPERTY LINE AND BUILDING

950 LF SILT FENCE AROUND PERIMETER OF SITE. COORDINATE ALIGNMENT WITH CONTRACTOR'S FENCING.

914 LF PRIVACY FENCE

SCALE: 1 INCH = 20 FEET
THIS SCALE VALID ONLY FOR 30x42 PRINTS

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1

PROJECT #: 24127
FILE:
SHEET TITLE:
UTILITY PLAN

SCALE: 1" = 20'-0"

NO. C3.10

NO NAME STREET

EAST BROADWAY AVENUE

THE JACKSON HOUSE, LLC
DOC. 0811945

FULL SEND PROPERTIES, LLC
DOC. 0965138

VIKING, LLC
DOC. 0933959

CLARENCE & RODICA STOLTZFUS
DOC. 0976709

L. ANNETTE FURMAN IRREVOCABLE TRUST
DOC. 0889375

SARAH TOLLISON
DOC. 0867929

MOUNTAIN SAGE TOWNHOUSES PLAT 817

TETON COUNTY PLAT 772

CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

10" DIP WATER MAIN

8" CLAY WATER MAIN

36" RCP STORMWATER MAIN

10" PVC SEWER MAIN

125 LF SAW CUT ASPHALT
913 SF ASPHALT PATCH

77 LF SAW CUT ASPHALT
456 SF ASPHALT PATCH

92 LF SAW CUT ASPHALT
755 SF ASPHALT PATCH

115 LF RETAINING CURB

210 LF RETAINING WALL

254 LF 2' WIDE VALLEY GUTTER

132 LF RETAINING WALL

19 LF RETAINING WALL

58 LF RETAINING WALL

300 LF RETAINING WALL

914 LF PRIVACY FENCE

950 LF SILT FENCE AROUND PERIMETER OF SITE. COORDINATE ALIGNMENT WITH CONTRACTOR'S FENCING.

CREATE SWALE BETWEEN PORPERTY LINE AND BUILDING

76,677 SF LIMITS OF DISTURBANCE COINCIDENTAL WITH PROPERTY LINE

CONNECT TO EXISTING SIDEWALK ON ADJACENT LOT

30 LF NEW CURB AND GUTTER

PROPOSED ADA PEDESTRIAN LANDING AND RAMP

PROPOSED DEVELOPMENT
LEVEL 1 FFE 6260' / 6261.5'

PROPOSED DEVELOPMENT
LEVEL 1 FFE 6261.5'

TRASH ENCLOSURE

STAIRWELL

BTM 6260.75
TOP 6261.77
TOW 6263.00
TOP 6262.52
TOP 6261.28
TOW 6261.00
BTM 6266.28
BTM 6261.51
TOP 6267.14
TOW 6267.00
BTM 6262.14
TOW 6260.50
TOW 6262.25
TOW 6265.00
TOW 6264.50

scale: 1 inch = 20 feet
this scale valid only for 30x42 prints

shop works architecture
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
St John's HEALTH

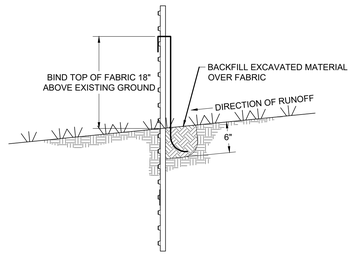
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
GRADING PLAN

SCALE: 1" = 20'-0"

NO. C3.20

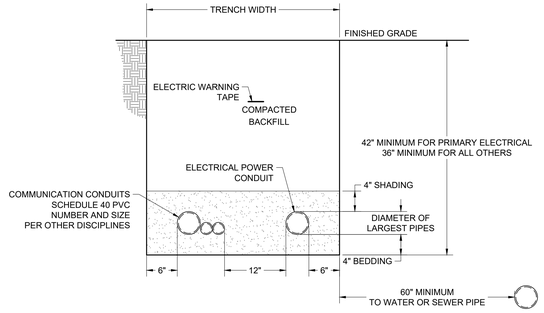


NOTE

1. USE MIRAFI 100X FILTER FABRIC WITH STEEL FENCE POSTS AT 10' ON CENTER OR APPROVED EQUAL.
2. PLACE SILT FENCE DOWN GRADIENT OF CONSTRUCTION OPERATIONS AS SHOWN ON THE PLANS TO CONTROL SILF FROM LEAVING SITE.

SILT FENCE DETAIL

NOT TO SCALE



NOTE

1. WHEN ELECTRICAL CONDUCTORS CROSS OVER OR UNDER WATER AND/OR SEWER PIPES THERE SHALL BE A MINIMUM OF 12" VERTICAL SEPARATION. IN ADDITION, THE ELECTRICAL CONDUCTORS SHALL BE PROTECTED WITH NOT LESS THAN 48" OF SUITABLE PVC OR RIGID STEEL CONDUIT WITH NO LESS THAN 24" ON EITHER SIDE OF THE CROSSING.
2. CUSTOMER INSTALLED CONDUIT MUST BE INSPECTED PRIOR TO BACKFILLING. IF NOT INSPECTED, TRENCH MAY BE REJECTED.
3. ALL TRENCHES ARE TO BE INSPECTED PRIOR TO BACKFILLING.
4. 18" SEPARATION MUST BE OBTAINED BETWEEN HDPE GAS PIPE AND POWER CABLE OR TRENCH WILL BE REJECTED.
5. BEDDING AS SHADING MATERIAL MUST BE SMOOTH, FREE OF ROCKS, AND MUST BE ABLE TO SIFT THROUGH A $\frac{1}{4}$" SCREEN (SAND RECOMMENDED).

CABLE UTILITY TRENCH DETAIL

NOT TO SCALE

shop works architecture
301 w. 6th ave • ste#103, CO 80611 • 303.410.0894
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
StJohn's HEALTH

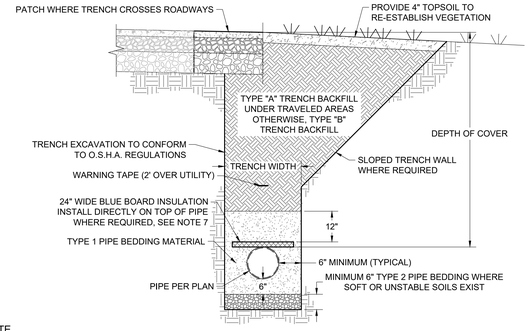
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
EROSION AND
UTILITY DETAILS

SCALE: 1" = 20'-0"

NO. C4.00

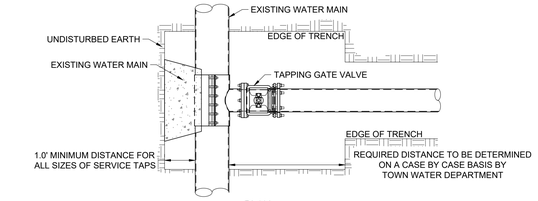


NOTE

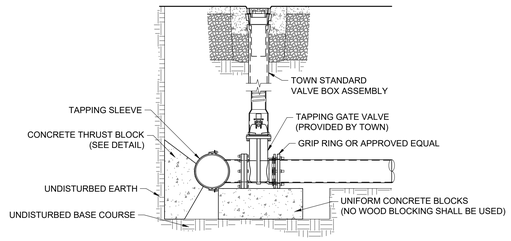
1. TRENCH BACKFILL BELOW THE SURFACE SHALL MEET THE FOLLOWING CRITERIA:
   - TYPE A: 95% MODIFIED PROCTOR DENSITY.
   - TYPE B: DENSITY APPROXIMATELY EQUAL TO SURROUNDING SOILS.
2. COMPACTION OF NATIVE TRENCH BACKFILL, WITH ALL ROCK LARGER THAN 6" REMOVED, SHALL BE CARRIED OUT IN 2' LIFTS.
3. PIPE BEDDING SHALL BE PLACED IN 6" LIFTS AND THOROUGHLY COMPACTED WITH A JUMPING JACK TO PROVIDE UNIFORM PIPE SUPPORT.
4. UNLESS OTHERWISE DIRECTED, ALL BASE COURSE AND GRAVEL SURFACE REPLACEMENT SHALL BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
5. ALL TRENCH EXCAVATION SHALL CONFORM TO WYOMING OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (WYOSHA) REGULATIONS.
6. PIPE ELEVATION SHALL BE PER PLANS. IF THE DEPTH SPECIFIED ON THE PLAN CANNOT BE ACHIEVED, NOTIFY THE ENGINEER.
7. PROVIDE INSULATION ACCORDING TO THE FOLLOWING CRITERIA:
   - 7.1. WHERE COVER OVER WATER OR PRESSURE SEWERS IS LESS THAN 7 FEET, PROVIDE 1 LAYER OF 2" THICK INSULATION.
   - 7.2. WHERE COVER OVER WATER OR PRESSURE SEWERS IS LESS THAN 6 FEET, PROVIDE 2 LAYERS OF 2" THICK INSULATION.
   - 7.3. WHERE SANITARY SEWER OR STORM LINES ARE LESS THAN 5 FEET, PROVIDE 1 LAYER OF 2" THICK INSULATION.
   - 7.4. WHERE SANITARY SEWER OR STORM LINES ARE LESS THAN 4 FEET, PROVIDE 2 LAYERS OF 2" THICK INSULATION.
   - 7.5. DEPTH OF COVER SHALL NOT BE LESS THAN 5 FEET FOR WATER OR PRESSURE SEWER LINES, OR LESS THAN 3 FEET FOR SANITARY SEWER OR STORM LINES WITHOUT APPROVAL FROM THE ENGINEER.

TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



PLAN



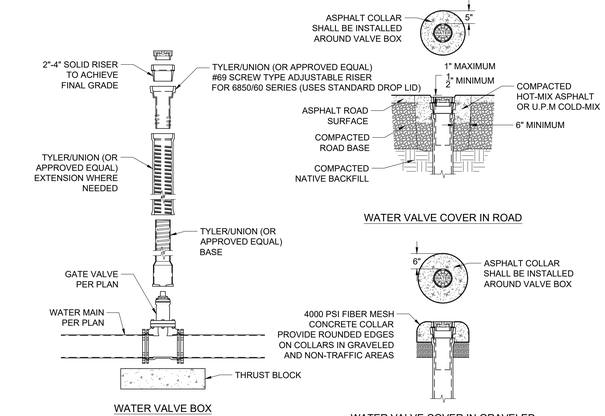
ELEVATION

NOTE

1. THE TOWN SHALL COMPLETE THE TAPPING OF THE MAIN. NO OTHER PERSONS SHALL COMPLETE TAP WITHOUT CONSENT OF TOWN. ALL OTHER WATER MAIN WORK SHALL BE THE RESPONSIBILITY OF THE OWNER.
2. TRENCH WILL BE EXCAVATED TO MEET ALL WYOSHA STANDARDS PRIOR TO TAPPING.
3. EXCAVATION OF TAPPING LOCATION SHALL BE APPROVED BY TOJ WATER DEPARTMENT PRIOR TO TAPPING.

WATER MAIN TAPPING DETAIL

NOT TO SCALE TOJ W-118



WATER VALVE BOX

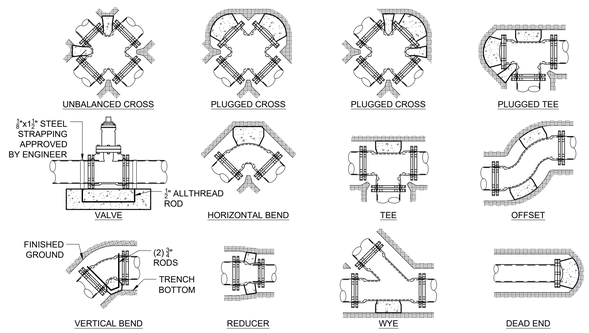
WATER VALVE COVER IN GRAVELED AND NON-TRAFFICED AREAS

NOTE

1. ADJUST WATER VALVE BOX UPWARD OR DOWNWARD AS REQUIRED. FINAL ADJUSTMENT SHALL BE MADE AFTER PAVING AND BEFORE SEAL COATING
2. THE TOWN SHALL INSPECT THE VERTICAL ALIGNMENT BEFORE AND AFTER BACKFILLING.
3. MUD PLUGS ARE REQUIRED TO BE PLACED IN ALL VALVE BOXES

WATER GATE VALVE DETAIL

NOT TO SCALE TOJ W-106

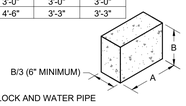


MINIMUM DIMENSIONS FOR THRUST BLOCKING NOTES

FITTING SIZE	TEES AND PLUGS A	TEES AND PLUGS B	90° BENDS A	90° BENDS B	45° BENDS AND WYES A	45° BENDS AND WYES B	REDUCERS AND 22 1/2° BENDS A	REDUCERS AND 22 1/2° BENDS B	11 1/2° BENDS A	11 1/2° BENDS B
4"	1'-7"	1'-2"	1'-9"	1'-6"	1'-8"	0'-10"	1'-7"	0'-6"	0'-6"	0'-6"
6"	2'-0"	1'-11"	2'-5"	2'-2"	1'-10"	1'-7"	1'-9"	0'-10"	1'-0"	0'-6"
8"	2'-8"	2'-6"	3'-2"	3'-0"	2'-5"	2'-1"	1'-9"	1'-6"	1'-0"	1'-0"
10"	3'-4"	3'-3"	4'-0"	3'-10"	3'-0"	2'-9"	2'-2"	1'-11"	1'-6"	1'-0"
12"	4'-0"	3'-10"	4'-8"	4'-8"	3'-8"	3'-3"	2'-7"	2'-3"	2'-0"	1'-0"
14"	5'-5"	3'-10"	6'-6"	4'-11"	4'-9"	3'-5"	3'-5"	2'-5"	2'-0"	1'-6"
20"	5'-0"	5'-0"	6'-0"	6'-0"	5'-0"	4'-0"	3'-6"	3'-0"	3'-0"	2'-0"
24"	6'-0"	6'-0"	7'-0"	7'-0"	5'-0"	5'-0"	4'-6"	3'-0"	3'-0"	3'-0"
30"	7'-6"	7'-6"	8'-0"	8'-0"	6'-3"	6'-3"	4'-9"	4'-6"	3'-3"	3'-3"

NOTE

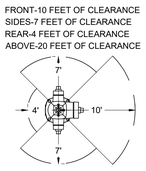
1. SIZE BLOCKS SHALL BE A MINIMUM OF 6" THICK
2. ALL BLOCKING SHALL BEAR AGAINST UNDISTRIBUTED MATERIAL
3. DESIGN IS BASED ON 150 PSI MAIN PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
4. 4 MIL POLYETHELENE PLASTIC BOND BREAKER SHALL BE PROVIDED BETWEEN THRUST BLOCK AND WATER PIPE



THRUST BLOCK DETAIL

NOT TO SCALE TOJ W-111

HYDRANT SECTION



HYDRANT CLEARANCE DIAGRAM

NOTE

1. HYDRANT DRAIN HOLE NOT PERMITTED IF BELOW WATER TABLE
2. HYDRANT LOCATION TO BE APPROVED BY THE TOWN PRIOR TO INSTALLATION
3. THERE ARE NO ABOVE GROUND OBSTRUCTIONS ALLOWED IN THE AREAS SHOWN IN THE HYDRANT CLEARANCE DIAGRAM UNLESS APPROVED BY THE TOWN.
4. FIRE HYDRANTS SHALL BE WATEROUS PACER OR CLOW MOUNTAIN MEDALLION.

FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE TOJ W-101

shop works architecture
301 W. 18th AVE • LARAMIE, CO 80070 • 303.433.2994
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
St John's HEALTH

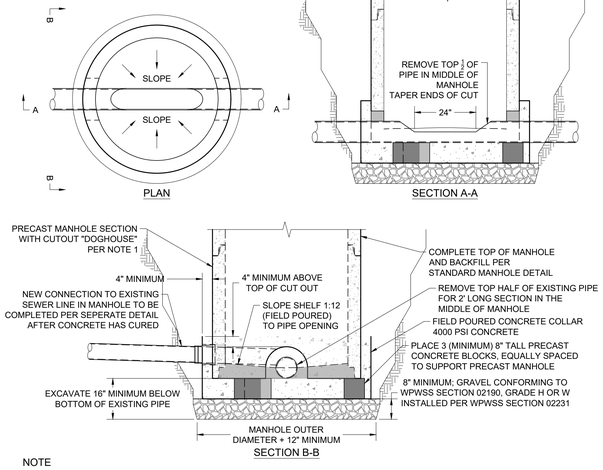
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
WATER DETAILS

SCALE: 1" = 20'-0"

NO.
C4.10

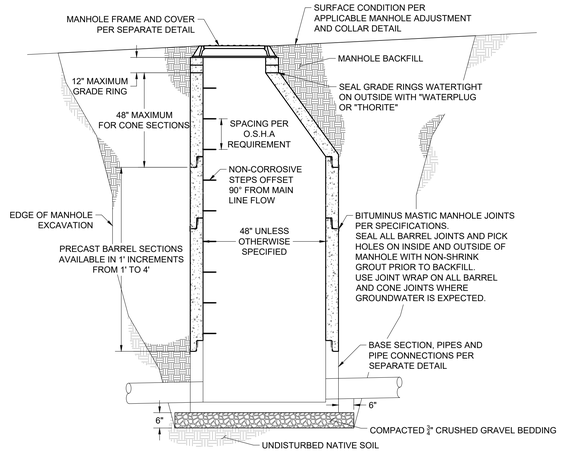


NOTE

1. INSTALLATION SHOULD BE INSPECTED AND APPROVED BY THE UTILITY OWNER AT THE TIME OF INSTALLATION AND PRIOR TO BACKFILLING

NEW MANHOLE ON EXISTING LINE DETAIL

NOT TO SCALE "DOGHOUSE" MANHOLE

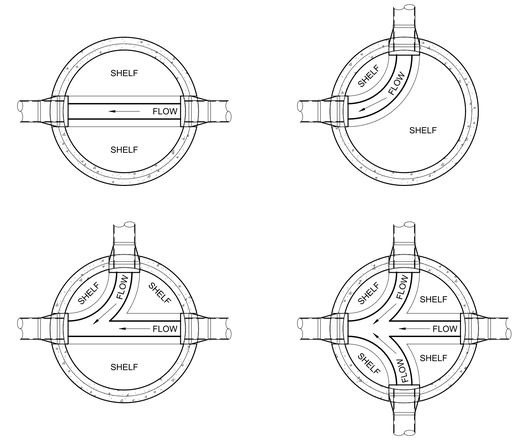


NOTE

1. REINFORCEMENT FOR PRECAST SECTIONS SHALL BE AS PER ASTM C-478.
2. C.I. RING AND COVER HS-20-44 ONE VENT HOLE OR AS SHOWN ON PLAN SHEET.
3. MOUND CRUSHED GRAVEL BASE AROUND TOP OF MANHOLE AT ROAD SURFACING LOCATIONS.
4. ALL SEWER MANHOLE BASES, BARRELS, AND CONES SHALL BE VACUUM TESTED.

STANDARD MANHOLE CONSTRUCTION DETAIL

NOT TO SCALE

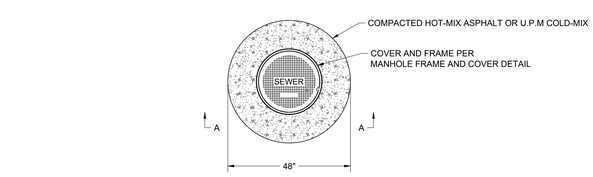


NOTE

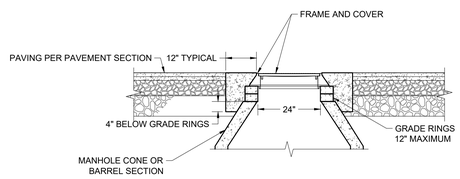
1. SLOPE ALL SHELVES TO CHANNEL AT 1" PER FOOT.
2. SLOPE OF CHANNEL SHALL BE 0.1' ACROSS MANHOLE FOR ALL MAIN RUNS. SEE PROFILE SHEETS.
3. MANHOLE INVERTS SHALL MATCH INFLOW AND OUTFLOW PIPE INVERTS
4. 4" SERVICE PIPES ENTERING MANHOLES SHALL HAVE CROWN OF 4" PIPE MATCH CROWN OF MAIN WHERE INVERTS INDICATE.

TYPICAL MANHOLE CHANNEL DETAILS

NOT TO SCALE



COVER AND COLLAR PLAN



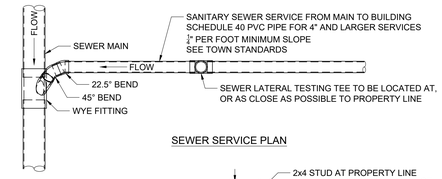
ADJUSTMENT DETAIL SECTION A-A

NOTE

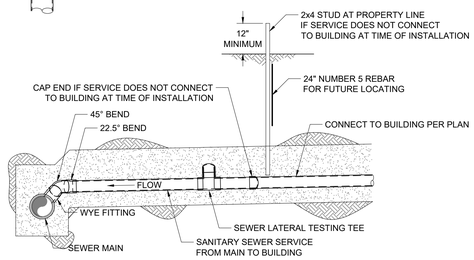
1. ADJUST MANHOLE UPWARD WITH ADJUSTING RINGS UNDER FRAME. ADJUST MANHOLE DOWNWARD BY REMOVING A PORTION OF THE MANHOLE RISER AND REBUILDING TO PROPER HEIGHT. SLOPE MANHOLE RING AS REQUIRED TO MATCH STREET GRADE AND CROSS SLOPE. MAKE FINAL MANHOLE ADJUSTMENT AFTER PAVING AND BEFORE SEAL COATING. IF REQUIRED ADJUSTMENT EXCEEDS GRADE RINGS, REMOVE MANHOLE CONE AND ADD OR SUBTRACT BARREL SECTIONS.

MANHOLE ADJUSTMENT & COLLAR IN ASPHALT

NOT TO SCALE



SEWER SERVICE PLAN



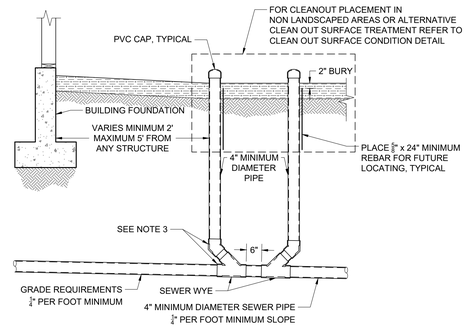
SEWER SERVICE ELEVATION

NOTE

1. NEW SERVICE CONNECTIONS TO EXISTING SANITARY SEWER MAINS SHALL BE COORDINATED WITH TOWN OF JACKSON PUBLIC WORKS.
2. BACKFILL OPERATIONS AT NEW SERVICES CONNECTED TO EXISTING SANITARY SEWER MAINS SHALL BE COMPACTED PER TOWN STANDARDS
3. CLEANOUTS TO BE PROVIDED ADJACENT TO BUILDING, EVERY 100' ALONG THE SERVICE LINE AND AT ALL BENDS.
4. PRIVATE PARTY BEING SERVED BY CONNECTION RESPONSIBLE FOR FEE TAP AND APPROVAL BY UTILITY OWNER.

SANITARY SEWER SERVICE DETAIL

NOT TO SCALE TOJ SS-111



NOTE

1. PRIOR TO BACKFILLING THE TOWN PUBLIC WORKS DEPARTMENT MUST INSPECT ALL PIPE, FITTINGS, COUPLINGS, GRADE AND COMPLETE LEAK TESTING.
2. INSTALL AND COMPACT ALL BACKFILL MATERIAL PER TOWN PUBLIC WORKS DEPARTMENT STANDARD SPECIFICATIONS AND AS SHOWN WITHIN THE TRENCH DETAIL.
3. ALL PVC FITTINGS SHALL MEET ASTM D3034 SPECIFICATIONS, AND SHALL ALSO MEET ASTM D312 SPECIFICATIONS FOR RUBBER GASKETED BELL AND SPIGOT TYPE WITH INTEGRAL BELL.

BUILDING CLEANOUT DETAIL

NOT TO SCALE REV TOJ SS-114

shop works architecture
301 w. 67th ave • denver, co 80221 • 303.433.0044
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
St John's HEALTH

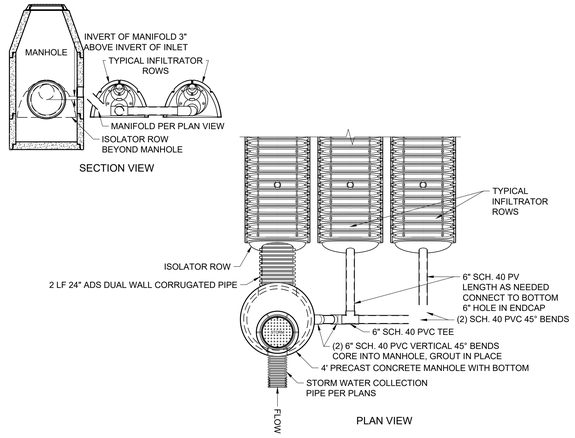
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
SEWER DETAILS

SCALE: 1" = 20'-0"

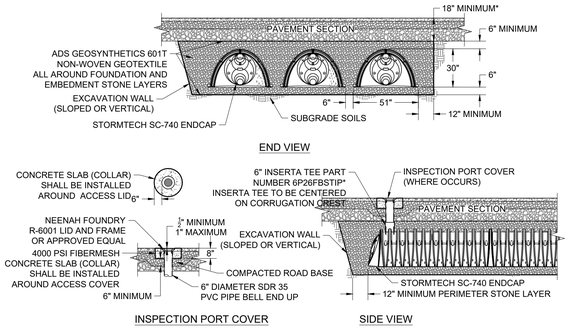
NO. C4.20



NOTE

1. ISOLATOR ROW SHALL HAVE TWO LAYERS OF 5' MINIMUM WIDTH CONTINUOUS STRIPS OF ADS GEOSYNTHETIC 315WTK, MIRAFI 600X OR APPROVED EQUAL WOVEN GEOTEXTILE BETWEEN FOUNDATION STONE AND CHAMBERS.
2. COVER ENTIRE ISOLATOR ROW WITH 8' WIDE STRIP OF ADS GEOSYNTHETIC 601T OR MIRAFI 160N OR APPROVED EQUAL NON-WOVEN GEOTEXTILE.

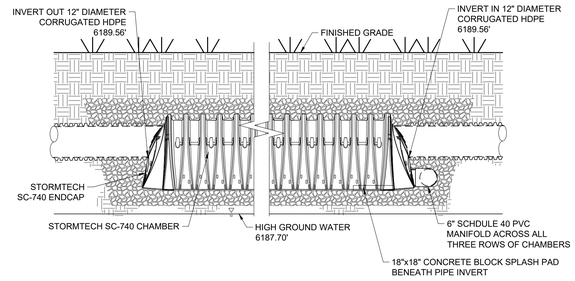
INFILTRATION SYSTEM DETAIL
NOT TO SCALE



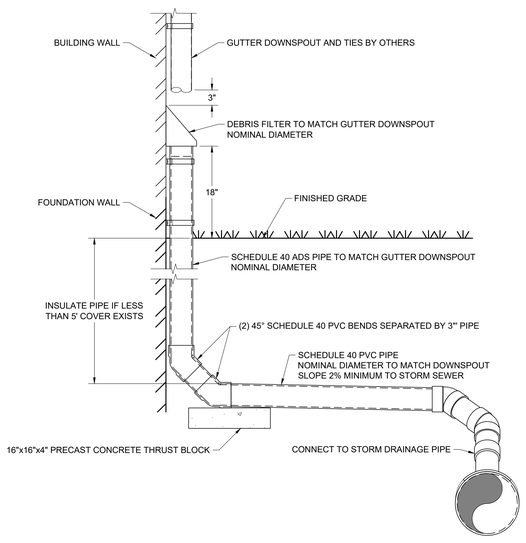
NOTE

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. FOUNDATION, EMBEDMENT AND PERIMETER STONE TO BE ¾"-1½" CLEAN, ANGULAR GRAVEL.
7. FOUNDATION STONE TO BE RAKED OR DRAGGED TO ACHIEVE A FLAT SURFACE.

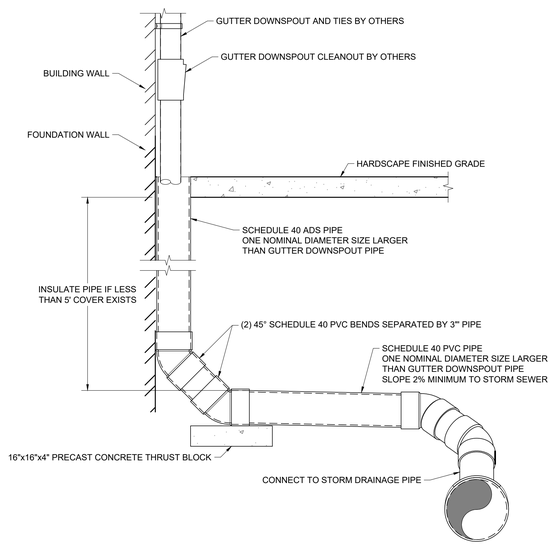
STORMTECH SC-740 CHAMBER SYSTEM DETAIL
NOT TO SCALE — PAVED SURFACE



INFILTRATION SYSTEM DETAIL
NOT TO SCALE



DOWNSPOUT TO STORM WATER DETAIL
NOT TO SCALE — LANDSCAPED AREA



STORM WATER LATERAL CONNECTION DETAIL
NOT TO SCALE — HARDSCAPE AREA

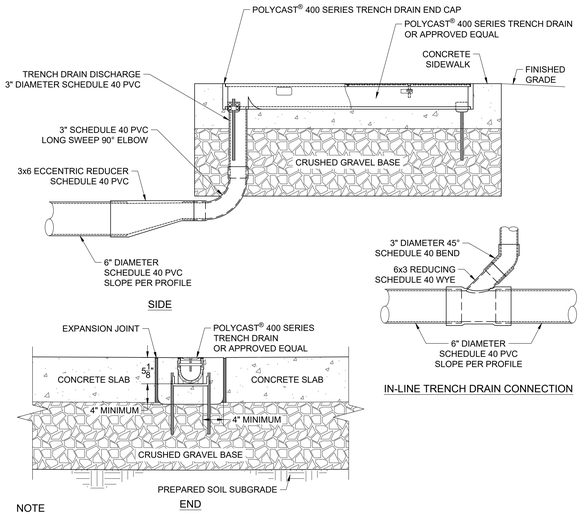
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
STORM SEWER DETAILS

SCALE: 1" = 20'-0"

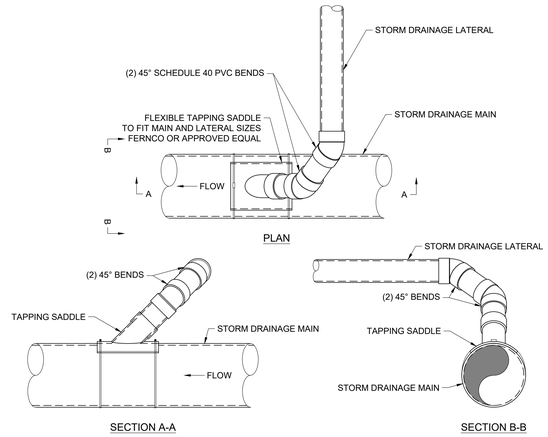
NO. C4.30



NOTE

1. ADJACENT CONCRETE AND EXPANSION JOINTS ACCORDING TO TYPICAL CONCRETE SIDEWALK DETAIL.
2. REFER TO POLYCAST® INSTALLATION GUIDE FOR COMPLETE DETAILS.
3. EXPANSION JOINT SHOULD BE USED TO PROTECT THE CHANNEL AND CONCRETE ENCASEMENT

TRENCH DRAIN DETAIL
NOT TO SCALE



STORM WATER LATERAL CONNECTION DETAIL
NOT TO SCALE

shop works architecture
301 w. 6th ave • ste#101a, CO 80121 • 303.433.0044

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

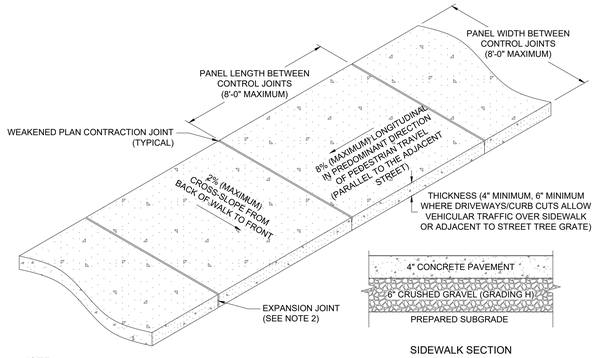
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
STORM SEWER DETAILS

SCALE: 1" = 20'-0"

NO. C4.31



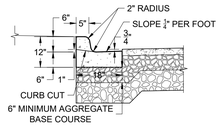
SIDEWALK SECTION

NOTE

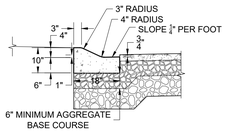
1. SIDEWALK SHALL CONFORM TO ALL APPLICABLE ADA STANDARD REQUIREMENTS SIDEWALKS SHALL CONFORM TO WPWSS SECTION 02776, EXCEPT THAT PORTLAND CEMENT CONCRETE SHALL BE FIBERMESH-REINFORCED CLASS 4000 CONCRETE CONFORMING WITH WPWSS SECTION 03304, PART 2.07.
2. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT THE SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS ADJACENT TO CURB. (PER WPWSS SECTION 03251, PART 3.04 SPACING SHALL NOT EXCEED 32'-0" ON CENTER.)
3. FOR SIDEWALKS GREATER THAN EIGHT FEET IN WIDTH, A LONGITUDINAL CONTROL JOINT SHALL BE INSTALLED AT THE CENTER OF THE WALK.
4. REMOVAL AND REPLACEMENT OF SIDEWALK SHALL TAKE PLACE IN FULL PANELS.
5. AGGREGATE BASE COURSE SHALL BE FOUR INCH MINIMUM THICKNESS, CONFORM TO WPWSS SECTION 02190, PART 2.03 GRADING H, AND BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
6. CLEAR VEGETATION AND STRIP TOPSOIL TO SUBGRADE. SCARIFY, CONDITION, AND COMPACT. PROOF ROLL IN THE PRESENCE OF THE ENGINEER
7. MATERIAL STRIPPED TO DEPTH LOWER THAN SUBGRADE SHALL BE REPLACED WITH STRUCTURAL MATERIAL TO SUBGRADE ELEVATION.
8. WHERE UNSUITABLE SUBGRADE SOIL EXISTS, OVER EXCAVATION AND REPLACEMENT WILL BE REQUIRES. GEOGRID MAY BE SUBSTITUTED FOR OVER EXCAVATION UPON APPROVAL FROM GEOTECHNICAL ENGINEER.

TYPICAL CONCRETE SIDEWALK DETAIL

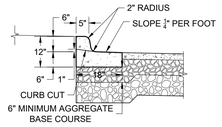
NOT TO SCALE TOJ ST-127



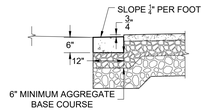
VERTICAL CURB



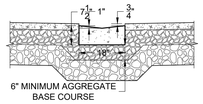
ROLL CURB



DROP LIP VERTICAL CURB



RIBBON CURB



18" WIDE VALLEY GUTTER

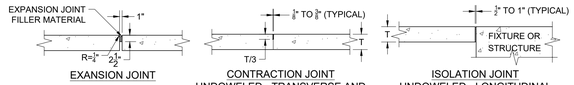
NOTE

1. CURBS SHALL CONFORM TO SPECIFICATION 32 16 13, EXCEPT THAT PORTLAND CEMENT CONCRETE SHALL BE FIBERMESH-REINFORCED CLASS 4000 CONCRETE CONFORMING WITH SPECIFICATION 32 13 13.
2. AGGREGATE BASE COURSE SHALL BE SIX INCH MINIMUM THICKNESS, CONFORM TO SPECIFICATION 31 05 16, PART 2.03, GRADING H, AND BE INSTALLED PER SPECIFICATION 32 11 23, PART 3.03.
3. REMOVAL AND REPLACEMENT OF CURB SHALL TAKE PLACE IN FULL PANELS.
4. VERTICAL CURB SHALL BE USED IN PREFERENCE TO ROLL CURB.

CURB SECTION DETAIL

NOT TO SCALE

1 NOTE: PREVIOUS SIDEWALK RAMP AND CONCRETE WHEEL STOP DETAILS ARE NO LONGER NECESSARY.



EXANSION JOINT

CONTRACTION JOINT UNDOWELED - TRANSVERSE AND UNITED - LONGITUDINAL

ISOLATION JOINT UNDOWELED - LONGITUDINAL

NOTE

1. INSTALL ISOLATION JOINTS WHEN ABUTTING A FIXED STRUCTURE. USE EXPANSION JOINT MATERIAL EXTENDING THE FULL DEPTH AND LENGTH OF THE CONCRETE SURFACE.
2. TRANSVERSE AND LONGITUDINAL CONSTRUCTION JOINTS ARE NOT INCLUDED IN THE JOINT LAYOUT PLAN. USE TRANSVERSE AND LONGITUDINAL CONSTRUCTION JOINTS SPARINGLY. SUBMIT PLANNED CONSTRUCTION JOINT LOCATIONS TO THE CO FOR APPROVAL.
3. MAINTAIN JOINT SEALANT SHAPE FACTOR 1:1 EXCEPT WHEN SILICONE SEALANT IS USED, THE WIDTH TO DEPTH SHAPE FACTOR IS 2:1 OR AS RECOMMENDED BY SEALANT MANUFACTURER.

CONCRETE SIDEWALK JOINT DETAIL

NOT TO SCALE

shop works architecture
301 W. 11TH AVE • ESTES, CO 80517 • 303.443.0894
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
StJohn's HEALTH

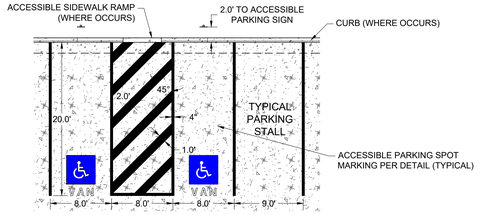
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

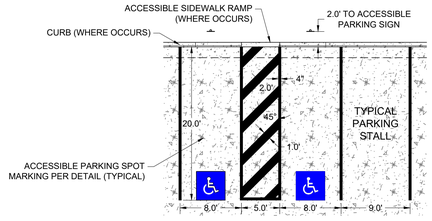
DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
STREET DETAILS

SCALE: 1" = 20'-0"

NO. C4.40



ACCESSIBLE VAN PARKING



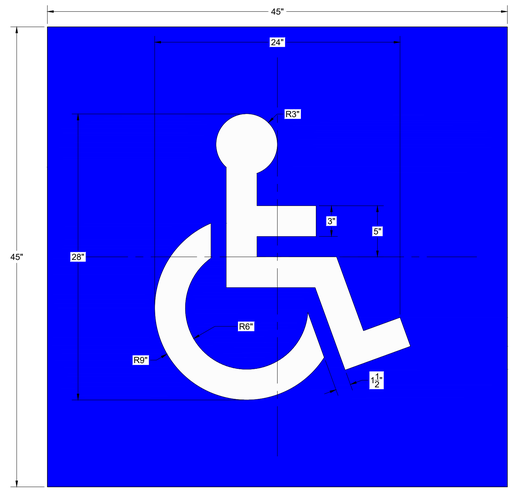
TYPICAL ACCESSIBLE PARKING

NOTE

1. PAVEMENT MARKINGS TO BE TYPE B, SOLID WHITE UNLESS OTHERWISE SPECIFIED

ACCESSIBLE PARKING STALL DETAIL

NOT TO SCALE



ACCESSIBLE PARKING SPACE MARKING DETAIL

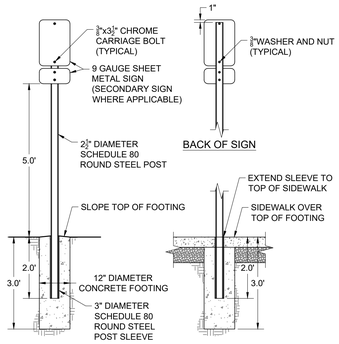
NOT TO SCALE



ACCESSIBLE PARKING SPOT

VAN ACCESSIBLE PARKING SPOT (WHERE APPLICABLE)

SIGN GRAPHICS



SIGN BASE

SIGN BASE IN SIDEWALK

ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

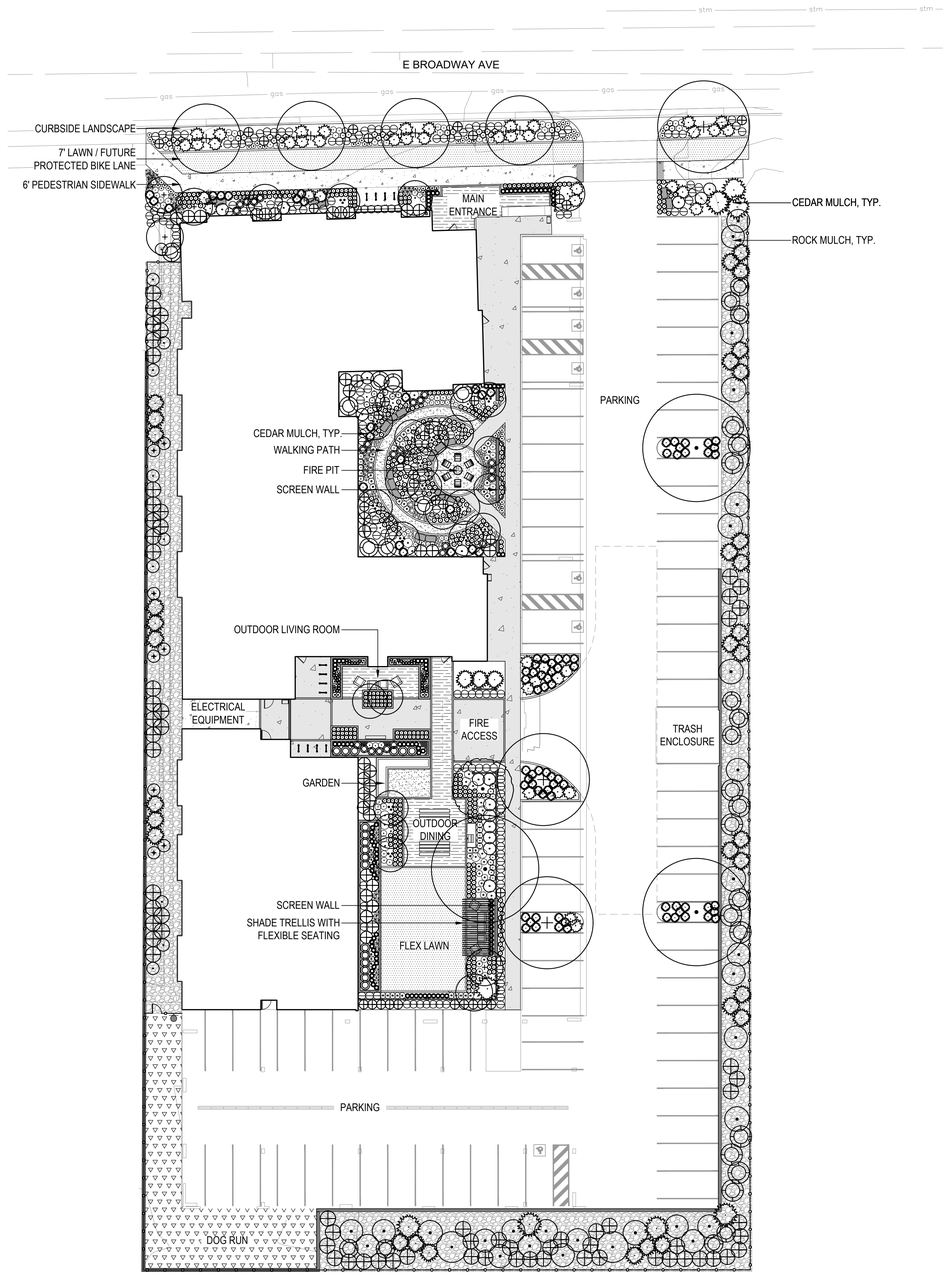
HITCHING POST APARTMENTS

DRAWN: UC
REVIEWED: BB

DATE: 05.06.2025
DEV PLAN REV 1
PROJECT #: 24127
FILE:
SHEET TITLE:
STREET DETAILS

SCALE: 1" = 20'-0"

NO. C4.41



A LANDSCAPE PLAN

SCALE: 1"=20'-0"

0' 10' 20' 40' NORTH

PLANTING NOTES

1. PLANT MATERIAL WILL CONSIST PRIMARILY OF NATIVE AND REGIONALLY ADAPTED SPECIES TO ENHANCE SITE RESILIENCE, REDUCE WATER DEMAND, AND SUPPORT LOCAL WILDLIFE.
2. ALL PLANTS WILL BE SELECTED FOR THEIR ABILITY TO THRIVE IN JACKSON, WY'S HIGH-ALTITUDE CLIMATE, SEASONAL TEMPERATURE EXTREMES, AND WELL-DRAINED SOILS, MINIMIZING THE NEED FOR EXCESSIVE MAINTENANCE AND IRRIGATION.
3. TREES, SHRUBS, AND PERENNIALS WILL BE PLACED IN GROUPINGS THAT MIMIC NATIVE PLANT COMMUNITIES, PROMOTING ECOLOGICAL FUNCTION AND VISUAL COHESION WITH THE SURROUNDING LANDSCAPE.
4. PLANT MATERIAL SHALL BE LOCALLY SOURCED WHEN POSSIBLE TO ENSURE REGIONAL ADAPTABILITY AND SUPPORT LOCAL NURSERY STOCK.
5. LANDSCAPE DESIGN WILL INCORPORATE WILDLAND-URBAN INTERFACE (WUI) BEST PRACTICES, INCLUDING FUEL REDUCTION ZONES, FIRE-RESISTANT PLANT SELECTION, AND ADEQUATE DEFENSIBLE SPACE AROUND STRUCTURES TO MINIMIZE FIRE RISK.

LEGEND:

ENHANCED PAVING 1		LANDSCAPE BOULDER	
ENHANCED PAVING 2		GARDEN BOXES	
ENHANCED PAVING 3		PLANTER WALL	
CRUSHER FINES		CONCRETE SCREEN WALL	
ROCK MULCH		ORNAMENTAL FENCING	
IRRIGATED TURF		PRIVACY FENCING	
PROPERTY LINE		BIKE RACKS	
EDGER		SITE FURNISHINGS	

PLANT SCHEDULE

DECIDUOUS TREES

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
	GLA	5	Acer glabrum	Rocky Mountain Maple	3" Cal.
	MSS	4	Acer miyabei 'Morton'	State Street™ Miyabe Maple	3" Cal.
	ABM	3	Acer x freemanii 'Jeffersred'	Autumn Blaze® Freeman Maple	3" Cal.
	WCB	1	Betula pendula `Laciniata`	Weeping Cutleaf Birch	3" Cal.
	CEL	3	Celtis occidentalis 'Prairie Pride'	Prairie Pride Hackberry	3" Cal.
	ANG	14	Populus tremuloides	Quaking Aspen	3" Cal.
	ANC	13	Populus tremuloides 'Clump Form'	Clump Form Quaking Aspen	3" Cal.

DECIDUOUS SHRUBS

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
	SSK	8	Amelanchier alnifolia	Saskatoon Serviceberry	5 gal.
	SER	4	Amelanchier canadensis	Shadblow Serviceberry Multi-trunk	5 gal.
	ABS	20	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	5 gal.
	MMC	18	Cercocarpus ledifolius	Curl-leaf Mountain Mahogany	5 gal.
	RAB	26	Chrysothamnus nauseosus	Rubber Rabbitbrush	5 gal.
	RDW	37	Chrysothamnus nauseosus nauseosus	Dwarf Blue Rabbitbrush	5 gal.
	AFD	34	Cornus sericea 'Farrow'	Arctic Fire® Red Twig Dogwood	5 gal.
	COR	71	Cornus sericea sericea	Red Twig Dogwood	5 gal.
	SHC	18	Dasiphora fruticosa floribunda	Shrubby Cinquefoil	5 gal.
	NMO	8	Physocarpus monogynus	Mountain Ninebark	5 gal.
	CEN	13	Physocarpus opulifolius 'Center Glow'	Center Glow Ninebark	5 gal.
	MSR	25	Spiraea splendens	Meadowsweet Rose	5 gal.

EVERGREEN SHRUBS

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
	ARC	45	Arctostaphylos uva-ursi	Kinnikinnick	5 gal.
	TWS	8	Artemisia tridentata	Big Sagebrush	5 gal.
	CSN	36	Ceanothus velutinus var. velutinus	Ceanothus Snowbrush	5 gal.
	PAX	75	Paxistima myrsinites	Mountain Lover	5 gal.
	PHJ	14	Picea engelmannii 'Hexenbesen Jasper'	Jasper Engelmann Spruce	5 gal.

GRASSES

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
	BGS	54	Bouteloua curtipendula	Side Oats Grama	1 gal.
	BGG	485	Bouteloua gracilis	Blue Grama Grass	1 gal.
	THG	51	Deschampsia cespitosa	Tufted Hair Grass	1 gal.
	SLG	53	Eragrostis trichodes	Sand Lovegrass	1 gal.
	FES	29	Festuca idahoensis	Idaho Fescue	1 gal.
	NTG	8	Hesperostipa comata	Needle and Thread Bunchgrass	1 gal.
	PDG	162	Sporobolus heterolepis	Prairie Dropseed	1 gal.

PERENNIALS

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
	YCO	37	Achillea millefolium	Western Yarrow (Native)	1 gal.
	ANT	46	Antennaria parvifolia	Small-leaf Pussytoes	1 gal.
	COR	15	Aquilegia caerulea	Rocky Mountain Blue Columbine	1 gal.
	AQY	3	Aquilegia flavescens	Yellow Columbine	1 gal.
	ARF	59	Artemisia frigida	Fringed Sagebrush	1 gal.
	ARL	35	Artemisia ludoviciana	White Sagebrush	1 gal.
	ASC	11	Asclepias speciosa	Showy Milkweed	1 gal.
	NWP	26	Castilleja angustifolia	Northwestern Paintbrush	1 gal.
	CHA	14	Chamerion angustifolium	Fireweed	1 gal.
	HUM	28	Epilobium canum	Hummingbird Trumpet	1 gal.
	SFB	12	Eriogonum umbellatum	Sulfurflower Buckwheat	1 gal.
	ENG	5	Eucephalus engelmannii	Engelmann's Aster	1 gal.
	GER	24	Geranium richardsonii	Richardson's Geranium	1 gal.
	PSM	12	Geum triflorum	Prairie Smoke	1 gal.
	PWA	22	Penstemon cyananthus	Wasatch Penstemon	1 gal.
	SPH	16	Phacelia sericea	Silky Phacelia	1 gal.
	PRI	65	Primula parryi	Rocky Mountain Primrose	1 gal.
	TNG	6	Solidago velutina	Threenerve Goldenrod	1 gal.

PLANT UNITS

LANDSCAPE AREA SITE REQUIREMENT	20,681 SF / 1,000	21 UNITS
PARKING LOT REQUIREMENT	74 PARKING SPACES / 8	10 UNITS
	TOTAL REQUIRED UNITS	31 UNITS

PLANT QUANTITY (ALTERNATE 'A')

	PLANT UNIT	REQUIRED	PROPOSED
3" CAL TREES	31 UNIT x 1 =	31	43
6'-8' LARGE SHRUBS / MULTI-STEM TREES	31 UNIT x 6 =	186	186
#5 CONTAINER SHRUBS	31 UNIT x 4 =	124	274

BIKE PARKING

	PLANT UNIT	REQUIRED	TOTAL
ON-SITE BIKE PARKING	0.75 x 124 UNITS	93 BIKES	
SHORT TERM BIKE PARKING	0.25 x 93	24 BIKES	24 BIKES
SHORT TERM BIKE RACKS (2 BIKES/RACK) =			12 BIKE RACKS

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

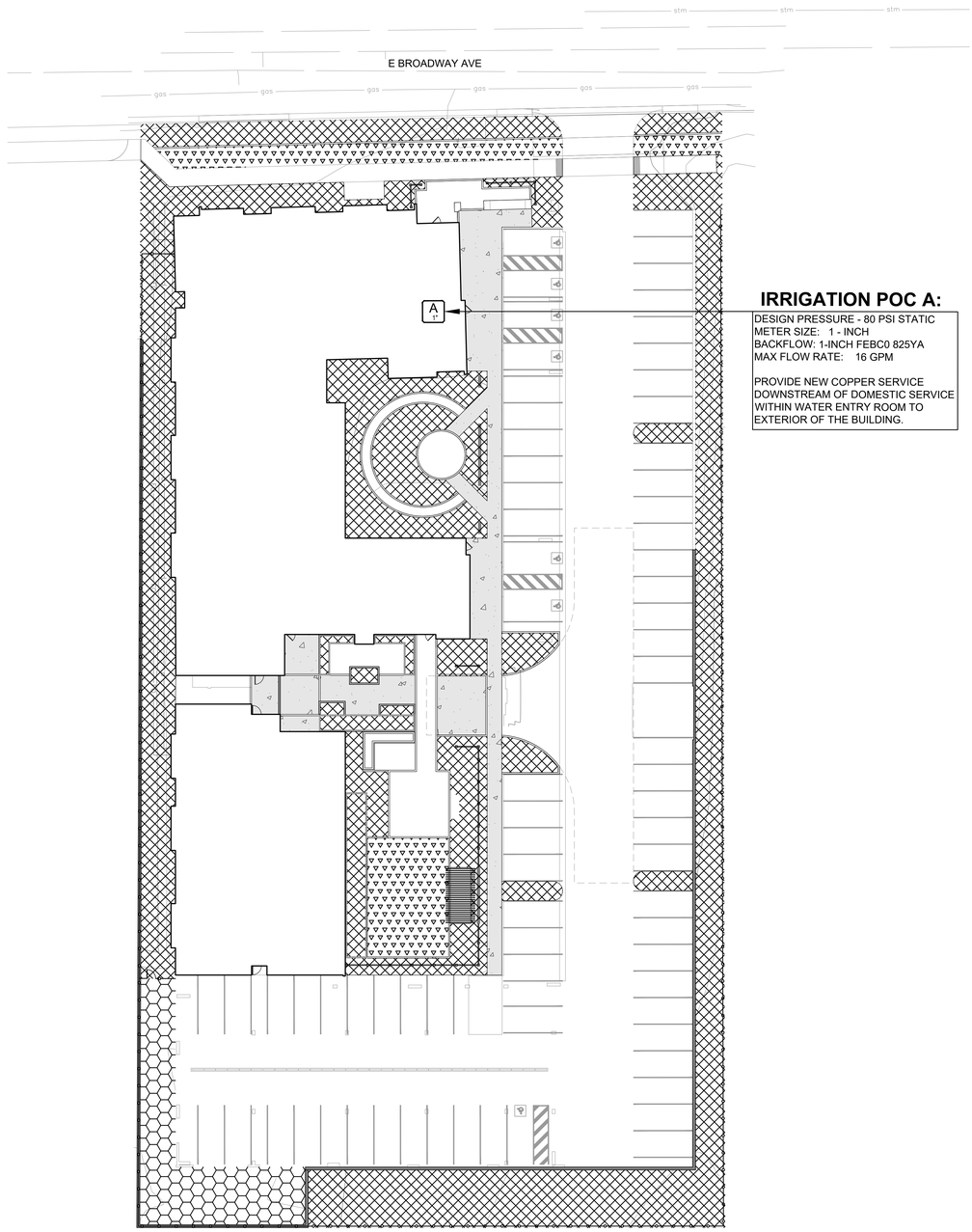
DRAWN: AE
REVIEWED: CH

DATE: 05.06.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:
LANDSCAPE PLAN

SCALE: As Indicated

NO.



IRRIGATION POC A:

DESIGN PRESSURE - 80 PSI STATIC
METER SIZE: 1 - INCH
BACKFLOW: 1-INCH FEBC0 825YA
MAX FLOW RATE: 16 GPM

PROVIDE NEW COPPER SERVICE DOWNSTREAM OF DOMESTIC SERVICE WITHIN WATER ENTRY ROOM TO EXTERIOR OF THE BUILDING.

HYDROZONE LEGEND

- IRRIGATED SOD (6" POP-UP MP ROTATORS)
- IRRIGATED PET RELIEF AREA (6" POP-UP MP ROTATORS)
- DRIP IRRIGATION (POINT SOURCE EMITTERS)

IRRIGATION NARRATIVE

1. ALL LANDSCAPE PLANT MATERIAL WILL BE ESTABLISHED WITH AN AUTOMATIC IRRIGATION SYSTEM. THE LANDSCAPE IRRIGATION FOR ENTIRE SITE WILL BE FED FROM A DOMESTIC WATER TAP AND LOCATED WITHIN THE WATER ENTRY ROOM. A REDUCED PRESSURE BACKFLOW ASSEMBLY, MASTER VALVE AND FLOW METER WILL BE INSTALLED DOWNSTREAM OF THE BACKFLOW DEVICE.
2. PLANT MATERIAL WILL BE GROUPED INTO LATERAL ZONES BASED ON SIMILAR WATER REQUIREMENTS TOREDUCE OVERALL WATER CONSUMPTION WHILE ALLOWING PLANTS TO SUSTAIN HEALTHY, VIGOROUS GROWTH.
3. TURF AREAS WILL BE TURF WILL BE IRRIGATED USING 6" POP-UP ROTATOR TYPE SPRINKLER HEADS.
4. PLANTING BEDS WITH TREES, SHRUBS, GROUNDCOVERS AND ORNAMENTAL GRASSES WILL BE IRRIGATED USING POINT SOURCE DRIP AND DRIPPERLINE IRRIGATION METHODS.
5. ALL AREAS LOCATED OFF-SITE DISTURBED THROUGH PROJECT INFRASTRUCTURE CONSTRUCTION ARE TO BE RE-SEEDED. ALL RE-SEEDED AREAS TO BE IRRIGATED BY WATER TRUCK OR OTHER MEANS OF SUPPLEMENTAL WATERING UNTIL FINAL ESTABLISHMENT.

HYDROZONE CALCULATIONS

HYDROZONE CATEGORY	IRRIGATED AREA (SF)	WATER USE (GAL/SF)	WATER BUDGET (GAL)	IRRIGATED AREA (AC)	ACRE FEET REQUIRED
HIGH: TURF	2,254 SF	20.0 GAL/SF	45,080	0.05	0.18
MODERATE: TREES/SHRUBS/GROUNDCOVERS	16,476 SF	12.0 GAL/SF	197,712	0.38	.63
VERY LOW: NATIVE SEED	1,843 SF	0.0 GAL/SF	0	0	0
TOTAL	45,524 SF		235,200	0.43	0.81

A IRRIGATION HYDROZONE PLAN
SCALE: 1"=20'-0"

0' 10' 20' 40' NORTH

HITCHING POST APARTMENTS

DRAWN: AE
REVIEWED: CH

DATE: 05.06.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
IRRIGATION HYDROZONE PLAN

SCALE: As Indicated

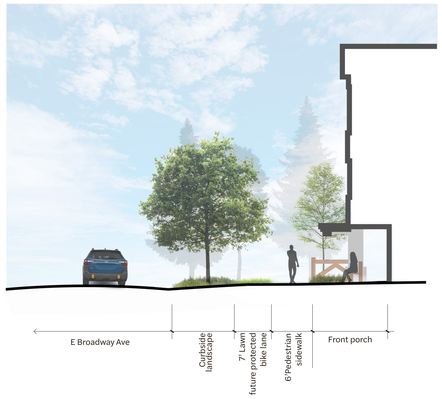
NO.



A LANDSCAPE PLAN

SCALE: 1" = 20'-0"

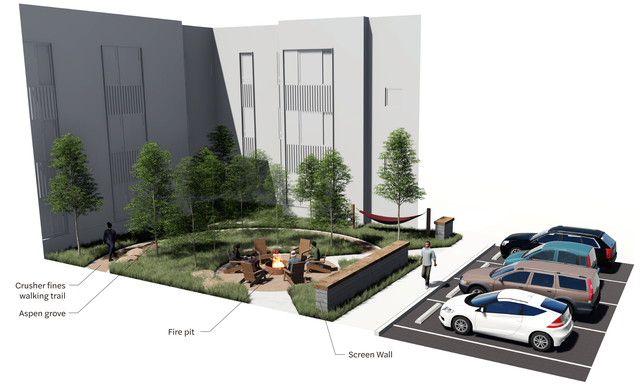
0' 10' 20' 40' NORTH



1 MAIN ENTRANCE

SCALE: 1" = 10'-0"

0' 5' 10' 20' NORTH



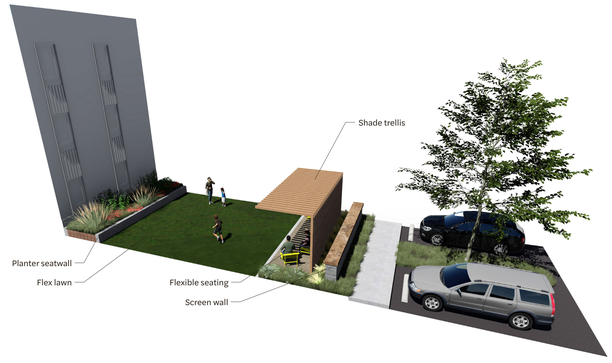
2 ASPEN GROVE TRAIL + FIREPIT

SCALE: N.T.S.



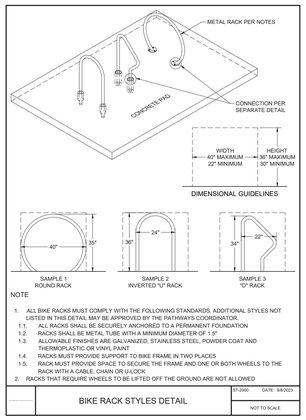
3 OUTDOOR LIVING ROOM

SCALE: N.T.S.



4 FLEX LAWN + SHADE TRELLIS

SCALE: N.T.S.



5 BIKE RACK DETAIL

SCALE: N.T.S

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

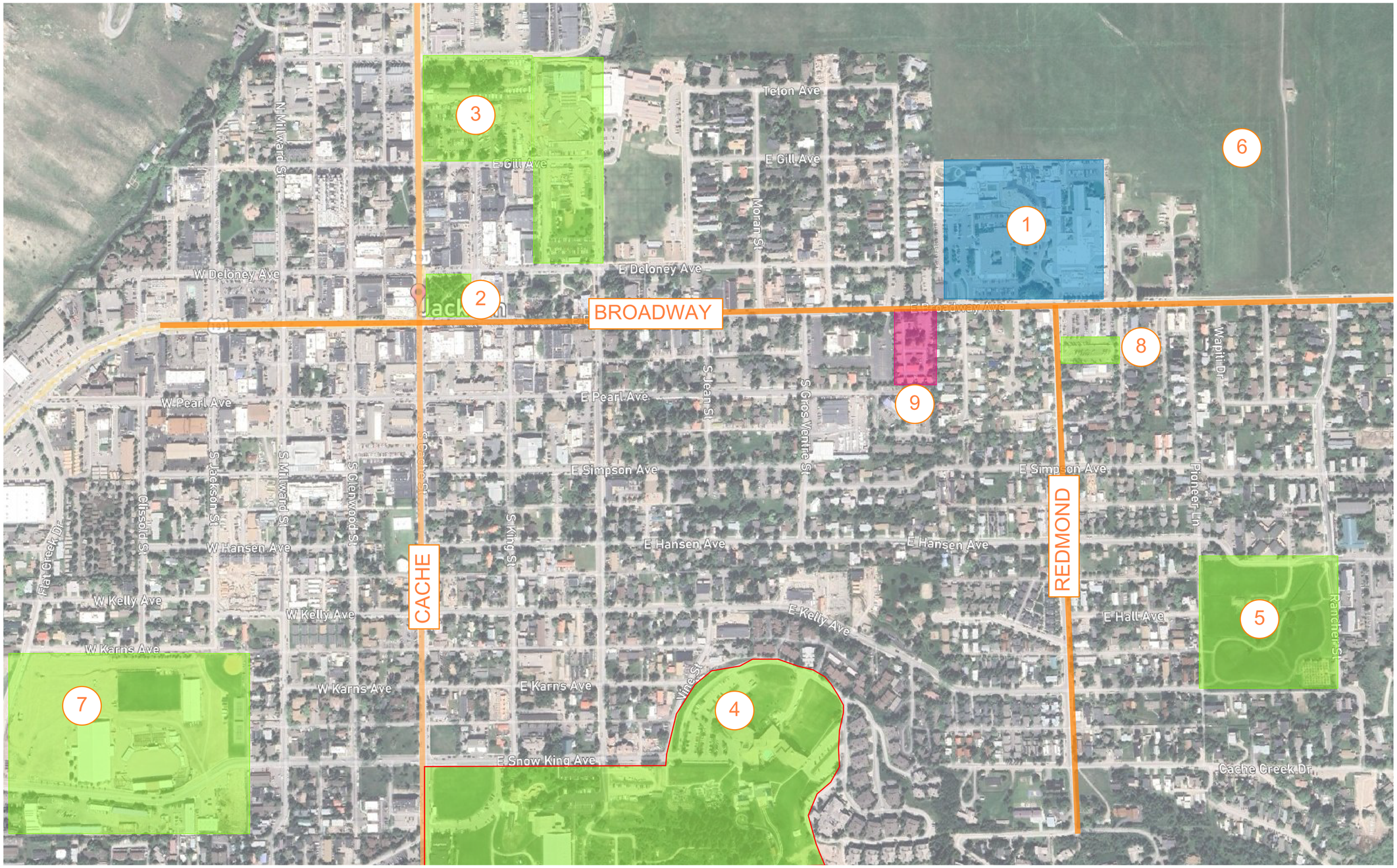
HITCHING POST APARTMENTS

DRAWN: AE
REVIEWED: CH

DATE: 05.06.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
LANDSCAPE EXHIBIT

SCALE: As Indicated

NO.



INDEX

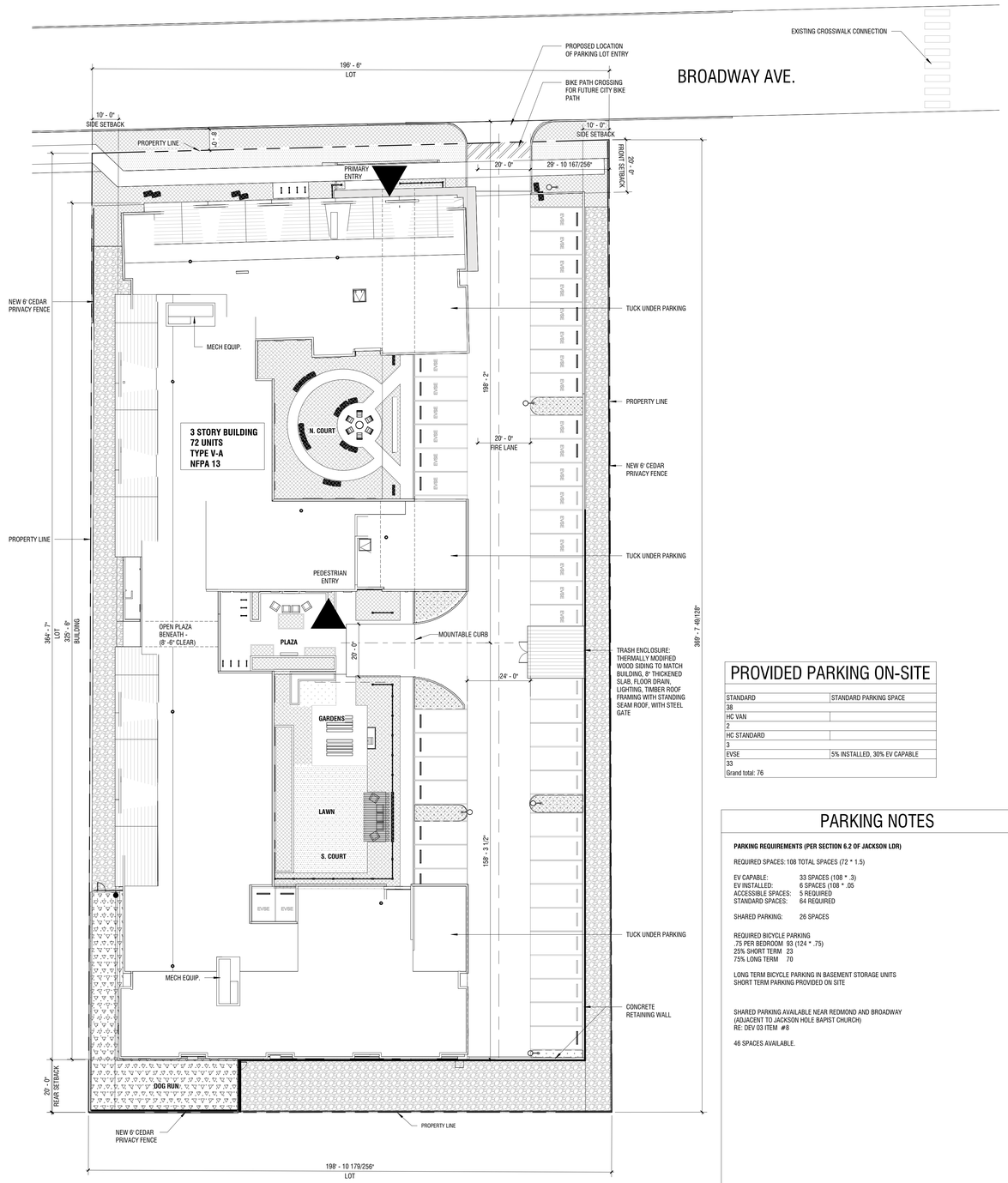
1 ST. JOHN'S HEALTH
2 JACKSON TOWN SQUARE
3 TETON COUNTY PARKS AND RECREAETION
4 SNOW KING MOUNTAIN
5 MAY PARK
6 NATIONAL ELK REFUGE
7 JACKSON HOLE RODEO
8 SHARED PARKING LOCATION
9 HITCHING POST APARTMENTS

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM
DATE: 02.18.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
VICINITY MAP

SCALE:

NO. DEV-03



N

2 .ARCHITECTURAL SITE PLAN

1" = 20'-0"

PROVIDED PARKING ON-SITE

STANDARD	STANDARD PARKING SPACE
38	
HC VAN	
2	
HC STANDARD	
3	
EVSE	5% INSTALLED, 30% EV CAPABLE
33	
Grand total: 76	

PARKING NOTES

PARKING REQUIREMENTS (PER SECTION 6.2 OF JACKSON LDR)

REQUIRED SPACES: 108 TOTAL SPACES (72 * 1.5)

EV CAPABLE: 33 SPACES (108 * .3)
EV INSTALLED: 6 SPACES (108 * .05
ACCESSIBLE SPACES: 5 REQUIRED
STANDARD SPACES: 64 REQUIRED

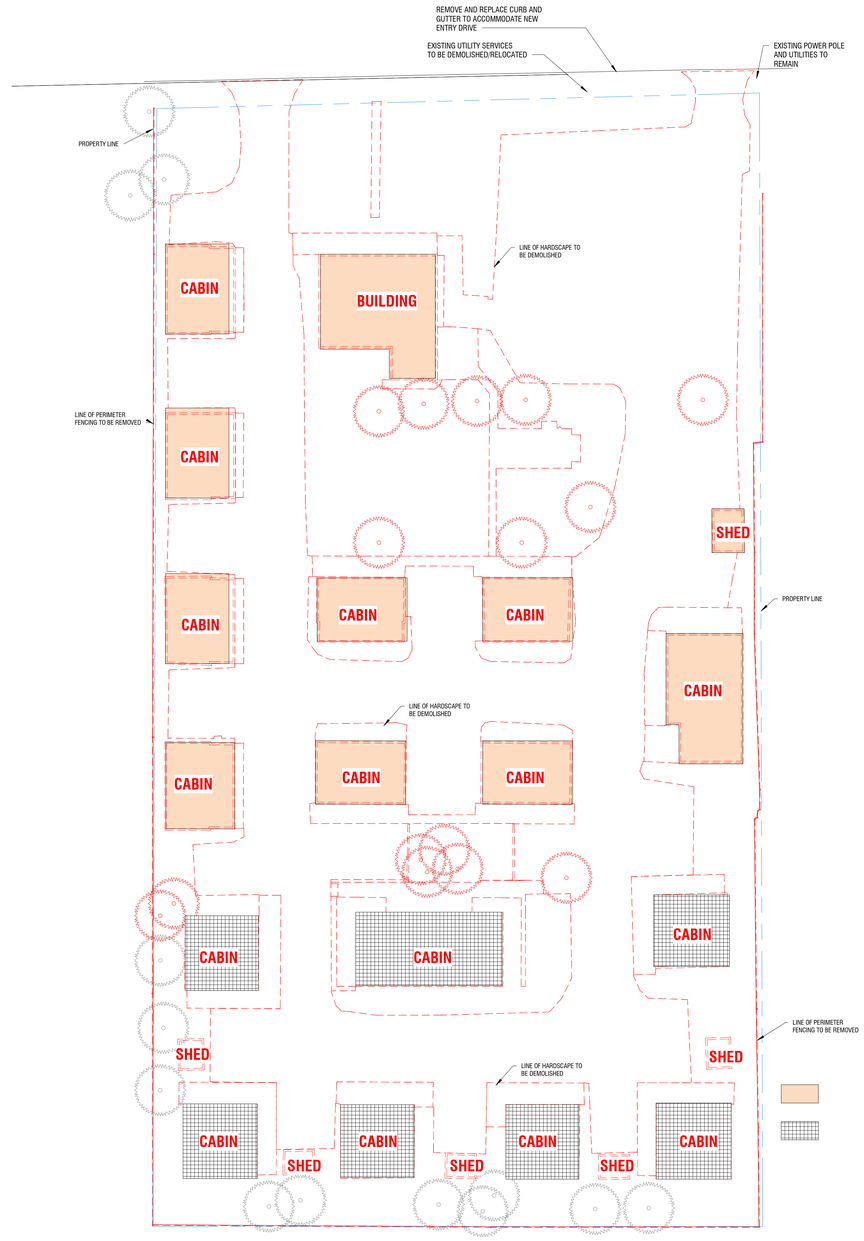
SHARED PARKING: 26 SPACES

REQUIRED BICYCLE PARKING
.75 PER BEDROOM 93 (124 * .75)
25% SHORT TERM 23
75% LONG TERM 70

LONG TERM BICYCLE PARKING IN BASEMENT STORAGE UNITS
SHORT TERM PARKING PROVIDED ON SITE

SHARED PARKING AVAILABLE NEAR REDMOND AND BROADWAY
(ADJACENT TO JACKSON HOLE BAPIST CHURCH)
RE: DEV 03 ITEM #8

46 SPACES AVAILABLE.



N

1 ARCHITECTURAL DEMOLITION SITE PLAN

1" = 20'-0"

SITE DEMOLITION NOTES

1. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS PROPOSAL TO BECOME FAMILIAR WITH ALL EXISTING FIELD CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
2. DEMOLITION CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION MEASURES TO SAFEGUARD THE PUBLIC DURING CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES TO SAFEGUARD AGAINST THE INTERRUPTION OF SERVICES TO THE PUBLIC.
4. REMOVE EXISTING ON-SITE TREES THAT ARE IN CONFLICT WITH NEW CONSTRUCTION.
5. REMOVE ALL EXISTING UNDERGROUND UTILITIES IN CONFLICT WITH NEW CONSTRUCTION OR ABANDONED.

SITE LEGEND

CABINS TO BE DEMOLISHED IN PHASE 1

CABINS TO BE DEMOLISHED IN PHASE 2

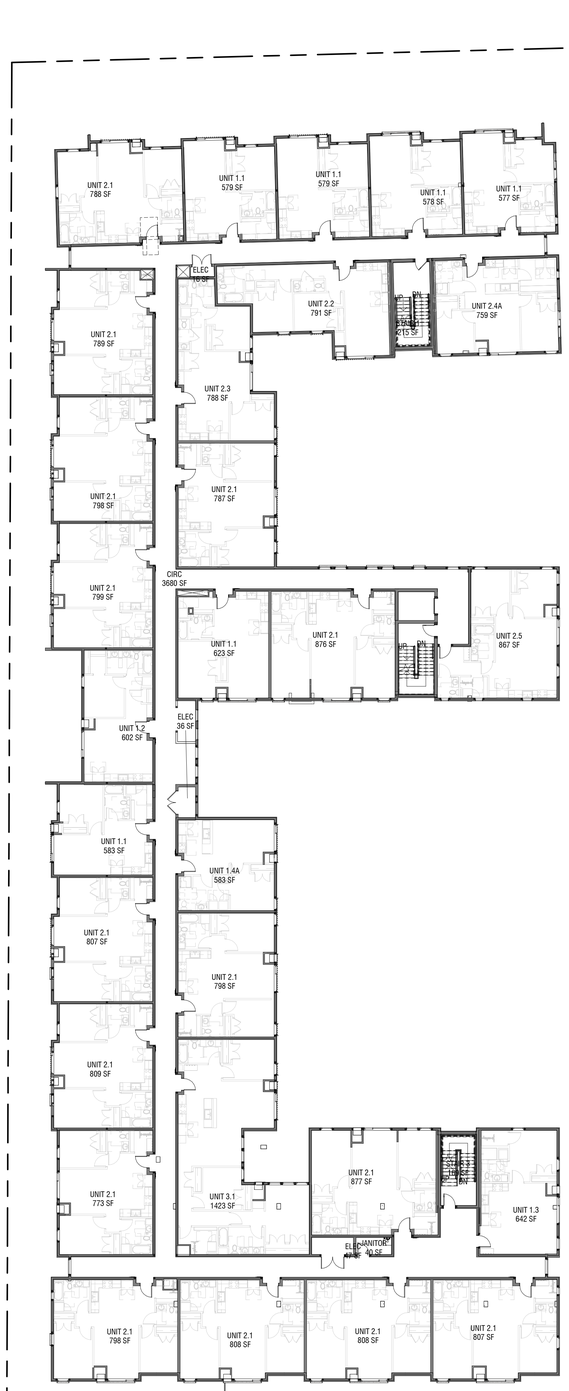
shop works architecture
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
St John's HEALTH
HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 05.06.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
SITE PLANS

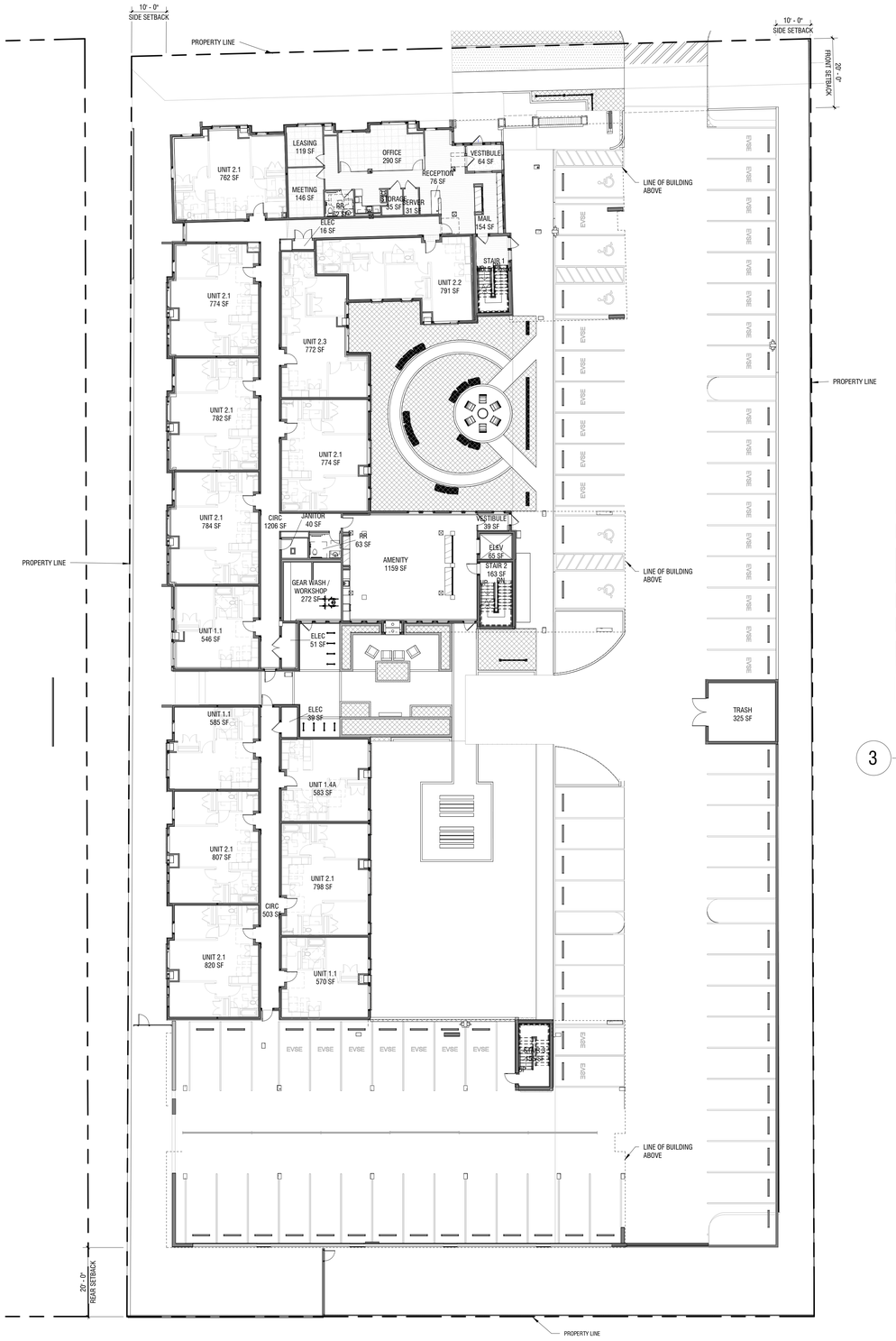
SCALE: As indicated

NO. DEV-04



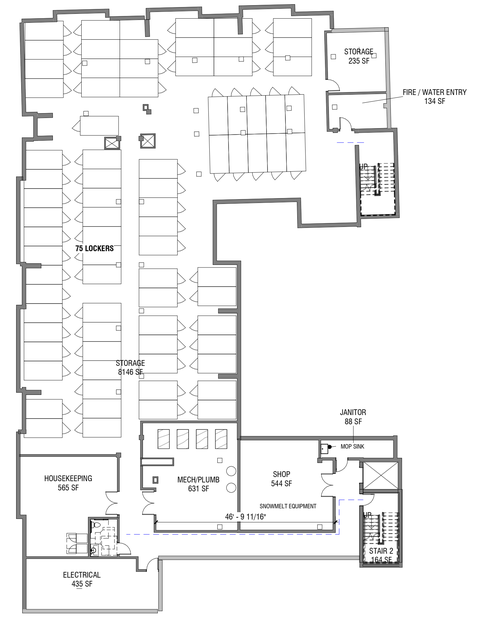
1 LEVEL 2 -3 TYPICAL PLAN

1/16" = 1'-0"



2 LEVEL 1 FLOOR PLAN

1/16" = 1'-0"



3 BASEMENT PLAN

1/16" = 1'-0"

shop works architecture
301 N. Alton #401 • Victoria, CO 80521 • 303.443.0004

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

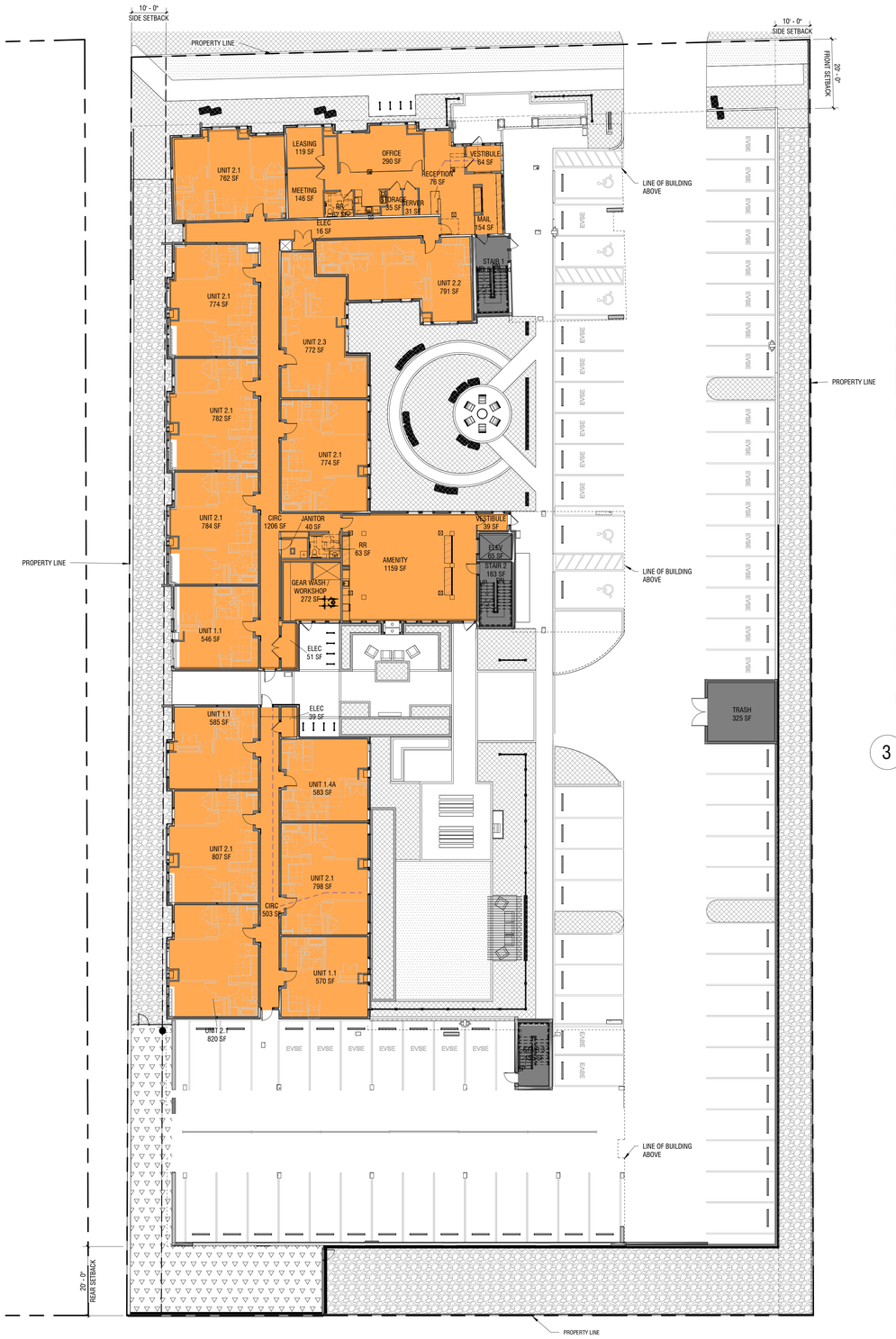
DATE: 05.06.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
FLOOR PLANS

SCALE: 1/16" = 1'-0"

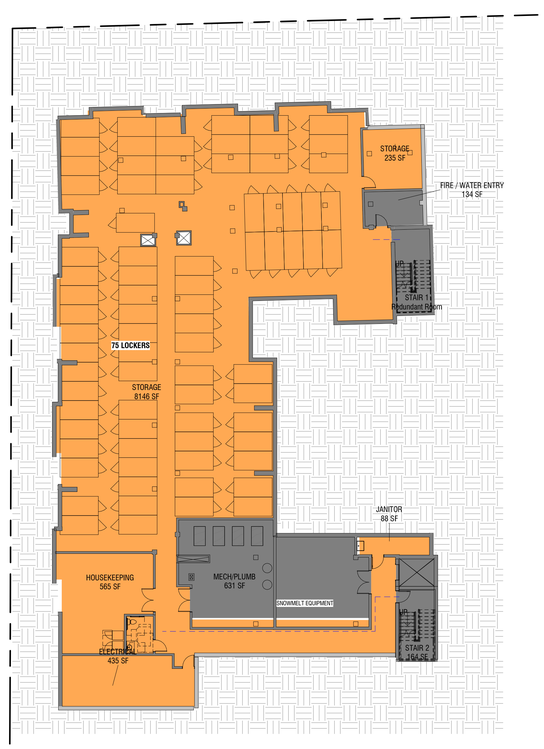
NO. DEV-05



1 LEVEL 2 -3 TYPICAL PLAN
1/16" = 1'-0"



2 LEVEL 1 FLOOR PLAN
1/16" = 1'-0"



3 BASEMENT PLAN
1/16" = 1'-0"

HABITABLE AREAS

BASEMENT	HABITABLE NON-HABITABLE	9,682 SF 1,561 SF
LEVEL 1	HABITABLE NON-HABITABLE	16,066 SF 620 SF
LEVEL 2	HABITABLE NON-HABITABLE	27,796 SF 620 SF
LEVEL 3	HABITABLE NON-HABITABLE	27,796 SF 620 SF

HABITABLE

NON-HABITABLE

shop works architecture
301 W. Elm Ave • Fowler, CO 81039 • 303.443.0894

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 05.06.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
AREA PLANS

SCALE: As indicated

NO. DEV-06



UNIT 3.1 PLAN
(2 UNITS)



UNIT 2.3 PLAN
(3 UNITS)



UNIT 2.2 PLAN
(3 UNITS)



UNIT 2.1 (2.4A & 2.5 SIM)
(42 UNITS)



UNIT 1.3 PLAN
(2 UNITS)



UNIT 1.2 PLAN
(2 UNITS)



UNIT 1.1 (1.4A SIM)
(18 UNITS)

UNIT SCHEDULE	
UNIT 1.1	15
UNIT 1.2	2
UNIT 1.3	2
UNIT 1.4A	3
UNIT 2.1	38
UNIT 2.2	3
UNIT 2.3	3
UNIT 2.4A	2
UNIT 2.5	2
UNIT 3.1	2
Grand total: 72	

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 02.18.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:
UNIT PLANS

SCALE:

NO. DEV-08



1 EAST ELEVATION

3/32" = 1'-0"





2 NORTH ELEVATION

3/32" = 1'-0"



3 SOUTH ELEVATION

3/32" = 1'-0"

4 WEST ELEVATION

3/32" = 1'-0"



THERMALLY MODIFIED WOOD SIDING - LIGHT FINISH



CORTEN STEEL ACCENT PANELS AND FRAMES



THERMALLY MODIFIED WOOD SIDING - BLACK FINISH



ACCENT WOOD TEXTURE

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 02.18.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:
ELEVATIONS

SCALE: 3/32" = 1'-0"

NO. DEV-09



1 ELEVATION AT COURTYARD NORTH

1/8" = 1'-0"



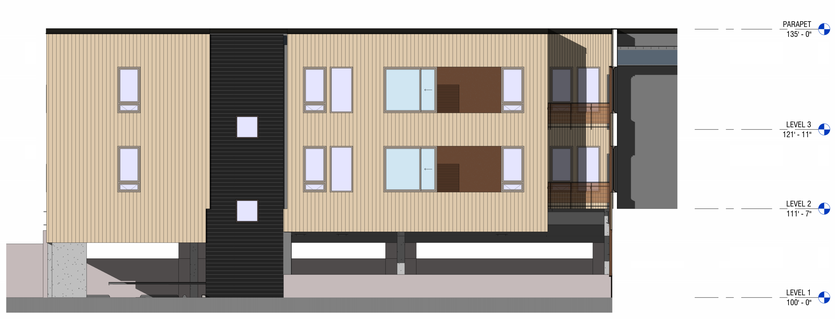
2 ELEVATION AT COURTYARD SOUTH

1/8" = 1'-0"



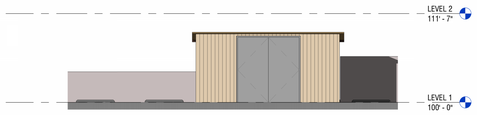
3 ELEVATION AT PLAZA NORTH

1/8" = 1'-0"



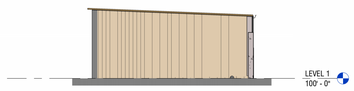
4 ELEVATION AT PLAZA SOUTH

1/8" = 1'-0"



5 EAST ELEVATION AT ENCLOSURE

1/8" = 1'-0"



6 SOUTH ELEVATION AT ENCLOSURE

1/8" = 1'-0"



THERMALLY MODIFIED WOOD SIDING - LIGHT FINISH



CORTEN STEEL ACCENT PANELS AND FRAMES



THERMALLY MODIFIED WOOD SIDING - BLACK FINISH



ACCENT WOOD TEXTURE

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 02.18.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:
ELEVATIONS

SCALE: 1/8" = 1'-0"

NO. DEV-10



RENDERED NORTH ELEVATION



RENDERED SOUTH ELEVATION



RENDERED WEST ELEVATION



RENDERED EAST ELEVATION

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM
DATE: 02.18.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
RENDERED ELEVATIONS

SCALE:

NO. DEV-11



RENDERED NORTHEAST VIEW

shop works architecture

flow design collaborative

SHAW CONSTRUCTION

JORGENSEN

BLUELINE PROPERTY MANAGEMENT

St John's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 02.18.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:
RENDERING
NORTHEAST

SCALE:

NO. DEV-12

shop works
architecture
301 W. 80TH AVE • DENVER, CO 80216 • 303.434.4004
flow
design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
stjohns HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: AM
DATE: 05.15.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
RENDERING
NORTHWEST

SCALE:

NO. DEV-13



RENDERED NORTHWEST VIEW



RENDERED ENTRY VIEW

HITCHING POST APARTMENTS

DRAWN: SW
RENDERED: AM
DATE: 08.19.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
RENDERING ENTRY

SCALE:

NO. DEV-14

SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
StJohns HEALTH
flow design collaborative
shop works
architecture
301 W. 80TH AVE • DENVER, CO 80216 • 303.434.4004





ACCENT WOOD TEXTURE



CORTEN STEEL ACCENT PANELS AND FRAMES



THERMALLY MODIFIED WOOD SIDING - BLACK FINISH



THERMALLY MODIFIED WOOD SIDING - LIGHT FINISH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: AM
DATE: 08.15.2025
DEVELOPMENT PLAN

PROJECT #: 24008
FILE:
SHEET TITLE:
MATERIAL BOARD

SCALE:

NO. DEV-15

SHAW CONSTRUCTION

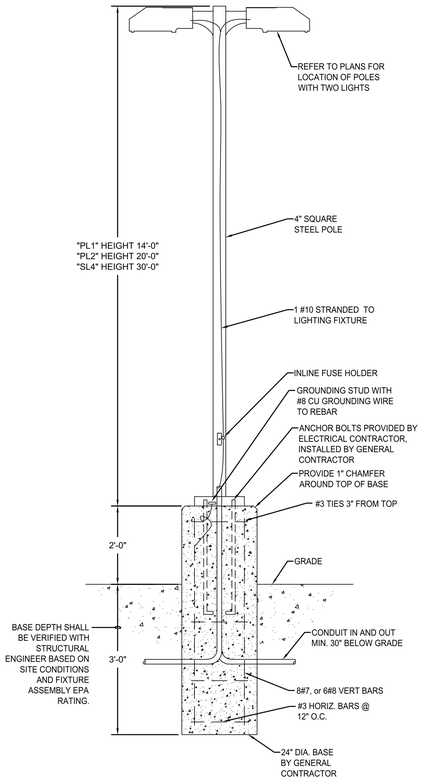
JORGENSEN PROPERTY MANAGEMENT

BLUELINE

strohns HEALTH

flow design collaborative

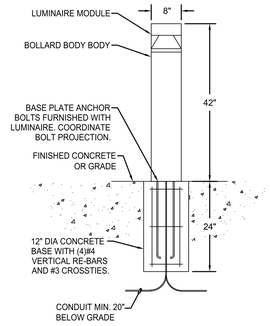
shop works
architecture
301 W. 80TH AVE • DENVER, CO 80216 • 303.434.4004



2 FIXTURE TYPE "PL1" DETAIL

NO SCALE

NOTE:
1. FIXTURE BASE DETAIL PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ELECTRICAL CONTRACTOR TO COORDINATE REQUIREMENTS OF POLE BASE WITH STRUCTURAL ENGINEER AND/OR POLE MANUFACTURER PRIOR TO ROUGH-IN.



1 TYPE "B1" BOLLARD DETAIL

NO SCALE

NOTE:
1. FIXTURE BASE DETAIL PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ELECTRICAL CONTRACTOR TO COORDINATE REQUIREMENTS OF BOLLARD BASE WITH STRUCTURAL ENGINEER AND/OR POLE MANUFACTURER PRIOR TO ROUGH-IN.

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
□	B1	27	LITHONIA	KBC8-LED-16C-350-40K-SYM-MVOLT-DBLXD	8" DIAMETER X 42" HIGH BOLLARD, BLACK FINISH	LED 4000K	1	1116	1	20
	PL1	43	LITHONIA	DSX0-LED-40K-TFTM-MVOLT-SPA	13" WIDE X 26" LENGTH POLE LIGHT, BLACK FINISH	LED 4000K	1	6926	1	70
	PL2	1	LITHONIA	DSX0-LED-40K-TFTM-MVOLT-SPA	13" WIDE X 26" LENGTH POLE LIGHT, BLACK FINISH	LED 4000K	1	6926	1	70
	SL4	4	SIGNIFY/ LUMEC/ ROADFOCUS	RFL-85W120LED-3K-G2-R3M	13" WIDE X 37.6" LENGTH POLE LIGHT, GREY FINISH	LED 3000K	1	12,800	1	85
	PL4	8	LUMINIS BELLEVUE	BVA21	6" WIDE X 20" LENGTH POLE LIGHT WITH 168" TALL 6" X 6" SQUARE POLE, BLACK FINISH	LED 3000K	1	TBD	1	64
	PL1 POLE	43	LITHONIA	SSSDB-14-4C	4" SQUARE, 14' HIGH POLE FOR "PL1" LIGHT, BLACK FINISH	-	-	-	-	-
	PL2 POLE	1	LITHONIA	SSSDB-20-4C	4" SQUARE, 20' HIGH POLE FOR "PL2" LIGHT, BLACK FINISH	-	-	-	-	-
	PL3 POLE	4	VALMONT	DS32-750A286-8S-GV-HH-NC	4" SQUARE, 30' HIGH POLE FOR "SL4" LIGHT, GREY FINISH	-	-	-	-	-
⊢○⊣	SL	5	LITHONIA	FEM-L48-3000LM-LPPFL-MD-MVOLT-GZ10-40K-80CRI	48" LONG LINEAR LIGHT WET LOCATION, WHITE FINISH	LED 4000K	1	3000	1	18
——	SP	33	BEGA	B33018-K24-BLK	10" LONG RECESSED LED STEP LIGHT, BLACK FINISH	LED 4000K	1	44	1	5
——	TL	180'	WAC LIGHTING	T24-OD1-40	OUTDOOR LED TAPE LIGHT	LED 4000K	1	100/LF	1	1.2/LF
○	UP	21	HYDREL	ALDER-A-P1-40K-120V-30DEG-FLC-350R	2.5" SQUARE LED UPLIGHT, 30 DEGREE BEAM, FLAT CLEAR LENS, BLACK FINISH	LED 4000K	1	10558	1	92
	W1	17	GOTHAM	EVO2WC-40-02-AR-LD-MWD-MVOLT-UGZ-WL-DBL	2" DIAMETER WALL MOUNTED DOWN LIGHT, BLACK FINISH	LED 4000K	1	10558	1	92
	W2	3	MODERN FORMS	WS-W520	20" HIGH WALL MOUNTED EXTERIOR LIGHT, BLACK FINISH	LED 3000K	1	551	1	17



3 FIXTURE TYPE "SL4"

N.T.S.



4 FIXTURE TYPE "ST"

N.T.S.



5 FIXTURE TYPE "PL4"

N.T.S.



6 FIXTURE TYPE "B1"

N.T.S.



7 FIXTURE TYPE "PL1"/"PL2"

N.T.S.



8 FIXTURE TYPE "W1"

N.T.S.



9 FIXTURE TYPE "W2"

N.T.S.



10 FIXTURE TYPE "TL"

N.T.S.



11 FIXTURE TYPE "C1"

N.T.S.



12 FIXTURE TYPE "SL"

N.T.S.



13 FIXTURE TYPE "UP"

N.T.S.

shop works architecture
flow design collaborative
SHAW CONSTRUCTION
JORGENSEN
BLUELINE PROPERTY MANAGEMENT
StJohn's HEALTH

HITCHING POST APARTMENTS

DRAWN: SW
REVIEWED: KM

DATE: 02.18.2025
DEVELOPMENT PLAN
PROJECT #: 24008
FILE:
SHEET TITLE:
EXTERIOR LIGHT FIXTURE CUTSHEETS

SCALE:

NO. DEV-16

JACKSON/TETON COUNTY AFFORDABLE HOUSING

MEMORANDUM

To: Andrew Bowen
Town of Jackson Planning and Building

From: Kristi Malone
Jackson/Teton County Housing Department

Re: Housing Department Review of Development Plan (P25-041) for 72 ARUs at St. John's Health (460 E Broadway)

Date: April 29, 2025

The applicant is proposing redevelopment of the St. John's Health housing and lodging located at 460 E Broadway (Hitching Post) to build 72 dwelling units.

Affordable Workforce Housing Standards:
Development in the Public/Semi-Public zone is exempt from housing mitigation.

Accessory Residential Unit Use Standards:
In the Town's Public/Semi-Public zone, the only principal residential uses allowed are Dormitory and Group Home. Accessory Residential Units are allowed if they are secondary to another use on the property. The Development Plan application asserts that the proposed 72 ARUs are accessory to the St. John's Health hospital campus. LDR Section 6.1.11.B and the Housing Department Rules & Regulations require ARUs accessory to a non-residential use to be deed restricted as Workforce Rental units. Template restrictions representing the terms of the Housing Department Rules & Regulations are approved intermittently by the Town Council for consistency of application to individual properties. Any variation or exception to the template restriction must be approved by the Town Council. While the complete restriction will be prepared, reviewed, and approved prior to certificate of occupancy on the building requested for development, the applicant has requested that two Workforce Rental restriction elements be reviewed now as they are critical to rental operations of the ARUs and staffing process for St John's Health.

- The Housing Department Rules & Regulations require that households qualifying for Workforce Rentals earn a minimum of 75% of their total income from local businesses. The applicant requests that, rather than 75% of the household income, the metric be adjusted to minimum 75% of the St. John's Health employee income be required to be from local businesses.

- The Housing Department Rules & Regulations require Workforce Rentals to be consistently occupied, with any vacancy more than 60 continuous days constituting a violation. The applicant requests that this rule be waived considering that hospital employment offers paired with housing options may necessitate holding housing units open for greater than 60 days.

The Housing Department recommends that:

1. Households with at least one member working full-time for St. John's Health be exempted from the minimum 75% local income rule. The exception should be considered for St. John's Health as housing will be offered as a benefit of relocation to Jackson for employment, leading to higher likelihood of household partners working remotely for non-local businesses. This development is supported by SPET which was approved by the voting public specifically for St John's Health employee housing.
2. No universal exception to the 60-day maximum vacancy rule. Workforce housing is most effective when consistently occupied. Exceptions to this rule may be requested on a case-by-case basis where timing for hiring of a St John's Health position must be accommodated with prescribed timing of housing availability. Decisions on these requests are made by Housing Manager consistent with the proceed and findings outlined in Section 8-3 of the Housing Department Rules & Regulations.

Please also note that Workforce Rental restrictions require a minimum rental period of 6 months. This restriction term prevents use of the ARUs as short-term lodging for families supporting St. John's Health patients. If this existing use on site is desired to be continued post-redevelopment, a use other than ARU should be considered as part of the Development Plan.

Process & Conditions of Approval:

The following conditions of approval are recommended for inclusion upon approval of this Development Plan:

1. **Required components of livability.** Restricted housing units shall include, at a minimum, the components of Livability Standards required by Sec. 3-3 of the Housing Department Rules and Regulations.

   Prior to applicant's submittal of Building Permit,

   - ☐ the Livability Standards Questionnaire (https://www.tetoncountywy.gov/DocumentCenter/View/15860/Livability-Standards-Questionnaire-Interactive) shall be completed for each unit type and submitted to the Housing Department for review along with floor plans that include dimensions and a functional furniture placement diagram.
   - ☐ a letter from the Housing Department will be issued to the applicant stating whether the unit(s) are compliant with Livability Standards or whether there are required changes.
   - ☐ a Livability Standards Letter from the Housing Department that confirms approval is required to be included in any Building Permit application.

Prior to issuance of Certificate of Occupancy,

- ☐ the Housing Department shall inspect the site to ensure restricted units were built to approved Livability Standards.

2. **Deed Restriction.** To ensure continued compliance with the standards of the Town of Jackson Land Development Regulations and the Housing Department Rules & Regulations, dwelling units shall be subject to a deed restriction for Workforce Rental housing, in perpetuity, in a form established and approved by the Housing Department.

   Prior to issuance of Certificate of Occupancy,

   - ☐ a special restriction drafted by the Housing Department using the applicable approved Restriction Template will be recorded on the unit/property. The applicant will be responsible for payment of recording fees**.**
   - ☐ the leasing agent/realtor/property manager or person managing residents shall attend a Compliance Conference with the Housing Department to learn how Workforce and Affordable households are qualified for residency in restricted units.

Thank you for the opportunity to review. Please contact me with any questions.

P25-041 Referral Comments

BUILDING DEPARTMENT COMMENTS
Structures must meet the most current adopted building codes adopted by the Town of Jackson at the time of permitting.

PATHWAYS DEPARTMENT COMMENTS
The pedestrian sidewalk needs to extend across the driveway to the east end of the property. It shall be constructed as a continuous sidewalk with no change in elevation from the legs on either side of the driveway. Any vertical change from the street elevation to the sidewalk elevation should be restricted to the driveway apron in the buffer space between the sidewalk and street. Concrete sidewalk surfaces and texture shall continue uninterrupted across the entire access driveway. Staff can provide additional guidance and design details for this if needed.

Bike parking racks shall comply with Town of Jackson standard details.
The future streetscape along East Broadway is slated to include a protected bike lane between the sidewalk and the street. Any landscaping or other improvements between the proposed sidewalk and the curb may be impacted by future construction of these improvements. There will need to be a sidewalk and bike lane easement granted to the Town for the area from the south edge of the proposed sidewalk to the north property line and continuing straight to the east and west property boundaries to allow for the sidewalk to continue straight in the event of a future realignment.

Wheelstops in the parking spaces adjacent to any pedestrian walkway shall be placed far enough away from the curb (a minimum of 3) so that longer vehicles do not overhang the walkway.

FIRE DEPARTMENT COMMENTS
Comments from P24-188 apply in addition to the following.

1. Fire flow for construction type V-A shall meet the requirements of the IFC, Table B105.1(2) of gallons per minute and flow duration based on square footage.
2. Provide specifications on elevator as it will have an impact on fire protection requirements.
3. A construction permit shall be required from the fire department for the install of stationary electrical energy storage systems (ESS). Construction documents shall be submitted for review and approval prior to permit being issued. Installation of an ESS shall be listed in accordance with UL 9540 and meet the requirements of the IFC, Section 1207 as applicable.
4. Confirm angle of approach for fire apparatus/emergency vehicles is adequate where tuck under parking is adjacent to fire apparatus turnaround. Length of turnaround states 60'0" - confirm the width of turnaround.

ENGINEERING DEPARTMENT COMMENTS
Development Plan APPROVED with Conditions

P25-041
ADDRESS: 460 E Broadway
OWNER: Teton County Hospital District
APPLICANT: HH Land Strategies, LLC Hal Hutchinson

Jeff Silliman, 733-3079

The engineering division has reviewed your application for a Development Plan submitted on and with application materials as dated above.

*The following comments are being provided for use in preparation of future applications.
CONDITIONS OF APPROVAL

1. The proposed plan is in substantial conformance with the LDRs and Town Standards. For future approvals, the plan must be revised to complete conformance with the LDRs and Town Standards. The following comments are being provided to note specific areas of the plan that need to be addressed but do not relieve the applicant from compliance with regulations and standards not noted.

2. PROJECT SPECIFIC COMMENTS
    1) Based on the information provided, this is not the appropriate place for a mid-block pedestrian crossing. The Town would consider carrying an attached-style sidewalk further east to No-Name St. to place the projects crosswalk at the west side of Broadway/No Name intersection. If the sidewalk is located on private property, grant an easement to the Town.
    2) Provide the hydraulic analysis to demonstrate adequate supply to two hydrants off of the one service.
    3) Include ADA tiles at both sides of the driveway entrance on the sidewalk if including a stop sign.
    4) Coordinate with Town staff on the appropriate frontage.
        a. Clarify whether existing conifers are to remain. Note they may conflict with current WUI regulations.
        b. Show sidewalk crossing driveway entrance as elevated to prioritize pedestrians.
        c. Sidewalk is currently shown terminating at a wooden deck mid-block. Remove deck and continue sidewalk east.
    5) Show sizes of proposed sewer, water and storm utilities on plans.
    6) Plans call out existing 8 Clay Water Main and point to stm. Review and revise accordingly.
    7) Landscaping in the right of way should be grass or a standard street frontage.
    8) Provide drawings to scale, C3.20 did not scale correctly in PDF.

LAND DEVELOPMENT REGULATIONS

5.7.4 - Stormwater Management Standards Provide treatment prior to discharge from private property.
5.7.4.B -Include stormwater calcs for sizing of stormwater infiltration units. Stormwater calcs required for commercial post-development control using Rational Method for peak flow rates, Modified Rational Method for volumetric requirements for drainage areas less than 10 acres.

7.2.2.A.1 Provide a striping and signage plan, including the public way.

7.6.3 - Streets Alleys and Easements: Provide a plan showing all proposed easements. Show compliance with the standards for sight obstructions and general standards .
7.6.4.2 - For all pedestrian areas provide a plan that includes: dimensions, radii, elevations, slopes (running and cross slopes, not oblique slopes), ramp slopes, grade breaks, stair dimensions, handrails, guards, etc. showing compliance with ADA, IBC, and Town standards.
7.6.4.3 - Design street frontages using existing road grades for control of sidewalk and buffer grades. Treat any buffer and sidewalk all as one plane, without grade breaks. Accommodate accessibility within the private property and not in the right-of-way.

7.7 REQUIRED UTILITIES
7.7.2 Potable Water Supply:
1. Provide a water supply plan and estimated average day, maximum day, and maximum hour, required fire flows, and per capita maximum daily demands. Demands shall be determined by one of the following: Wyoming DEQ Chapter 12 Section 8 (equivalent per capita water use shall be at least 125 gpd and 340 gpd for average and maximum day respectively); Wyoming DEQ Chapter 25 Tables 1 and 2 with consumption and irrigation factored in, metered water supply data from another development where similar water demands have been demonstrated, AWWA M22 method, or other Town Engineer approved source.
2. Provide a water system analysis indicating the required domestic and fire flow demands. Identify impacts to or upgrade requirements for the existing distribution, supply, or treatment system.
3. Show compliance with state regulations, construction standards, connections for lots of record, provisions for system expansion, and fire protection. Provide information on planned metering and backflow prevention locations.
4. State whether the water system will be privately or publicly owned. Water services over 2-inch in diameter require engineering design. Water mains larger than 8-inch and or longer than 250 feet require a Wyoming DEQ permit.

7.7.3 Sanitary Sewer System:
1. Provide a sanitary sewer wastewater plan and estimated average day, maximum day, and peak hour for the design of the project, per capita design flows, extraneous flows, and industrial and/or commercial waste volumes. Volumes shall be determined by one of the following: Wyoming DEQ Chapter 25 Tables 1 and 2; metered water supply data from another development where similar water demands have been demonstrated; or other Town Engineer approved source.
2. Provide a sanitary sewer analysis. Identify downstream impacts on existing sewers, lift stations, and treatment facilities.
3. Show compliance with state regulations, construction standards, maximum allowable infiltration, connections for lots of record, provisions for system expansion.
4. State whether the sewer system will be privately or publicly owned.

7.7.4 Irrigation System:

1. Provide an irrigation plan when the system is for the entire development or the system will be owned by the Town. For all systems provide the irrigation water demand, type of backflow preventer, location, and whether irrigation will be metered separately from domestic.

8.3.2 Impact on Public Facilities: Provide a plan for mail delivery that does not have a significant impact on public facilities and services, e.g. mail and parcel room, USPS Caller service, private mail delivery, etc.

IBC CHAPTER 11 / ADA ACCESSIBILITY

Show compliance with accessibility regulations including but not limited to:

1104.1: At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served.

1104.2: At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site.

1104.5: Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall be interior. Where only one accessible route is provided, the accessible route shall not pass through kitchens, storage rooms, restrooms, closets or similar spaces.

shopworks architecture

May 6, 2025

Andrew Bowen
Senior Planner
Town of Jackson
abowen@jacksonwy.gov

P-25-041
Hitching Post Apartments
St. John's Health

Dear Andrew,

Thank you for your review and comments provided on our Development Plan submittal for the project titled Hitching Post Apartments. This letter is in response to the comments received April 23rd, 2025. Each comment has been responded to below.

Please do not hesitate to contact me with any questions regarding this submittal.

Thank you,



Kyle Mead
Project Manager
Shopworks Architecture
kyle@shopworksarc.com
520-780-8747

BUILDING DEPARTMENT COMMENTS

Structures must meet the most current adopted building codes adopted by the Town of Jackson at the time of permitting.

Response: Acknowledged.

PATHWAYS DEPARTMENT COMMENTS

The pedestrian sidewalk needs to extend across the driveway to the east end of the property. It shall be constructed as a continuous sidewalk with no change in elevation from the legs on either side of the driveway. Any vertical change from the street elevation to the sidewalk elevation should be restricted to the driveway apron in the buffer space between the sidewalk and street. Concrete sidewalk surfaces and texture shall continue uninterrupted across the entire access driveway. Staff can provide additional guidance and design details for this if needed.

Response: *Acknowledged, the sidewalk design has been revised per this comment's recommendations [Jorgensen Engineering].*

Bike parking racks shall comply with Town of Jackson standard details.

Response: *Bike parking racks consistent with current Town of Jackson standard details will be used.*

The future streetscape along East Broadway is slated to include a protected bike lane between the sidewalk and the street. Any landscaping or other improvements between the proposed sidewalk and the curb may be impacted by future construction of these improvements.

Response: *Acknowledged. Landscaping and improvements along the East Broadway street frontage have been revised to allow for a future cycle track. The parking lot access as been regraded to meet the anticipated location and of the future cycle track. Allowing for future designs to connect on either side of the access.*

There will need to be a sidewalk and bike lane easement granted to the Town for the area from the south edge of the proposed sidewalk to the north property line and continuing straight to the east and west property boundaries to allow for the sidewalk to continue straight in the event of a future realignment.

Response: Easements will be granted to the Town as requested

Wheelstops in the parking spaces adjacent to any pedestrian walkway shall be placed far enough away from the curb (a minimum of 3) so that longer vehicles do not overhang the walkway.

Response: *Wheelstops have been removed from the parking spaces. All parking spaces are 9.0 ft x 20.0 ft and meet typical Town of Jackson standard dimensions.*

FIRE DEPARTMENT COMMENTS

Comments from P24-188 apply in addition to the following.

1. Fire flow for construction type V-A shall meet the requirements of the IFC, Table B105.1(2) of gallons per minute and flow duration based on square footage.
   Response: Acknowledged. Fire Flow calculations will be provided with building department permit submission.

2. Provide specifications on elevator as it will have an impact on fire protection requirements.
   Response: Elevators are anticipated to be low-rise electric traction elevators. Exact make and model are TBD at this point, however the basis of design is Thyssenkrupp 200 MRL. Fire suppression design will be per NFPA 13.

3. A construction permit shall be required from the fire department for the install of stationary electrical energy storage systems (ESS). Construction documents shall be submitted for review and approval prior to permit being issued. Installation of an ESS shall be listed in accordance with UL 9540 and meet the requirements of the IFC, Section 1207 as applicable.
   Response: An ESS is not anticipated for this project.

4. Confirm angle of approach for fire apparatus/emergency vehicles is adequate where tuck under parking is adjacent to fire apparatus turnaround. Length of turnaround states 60'0" - confirm the width of turnaround.
   Response: Turnaround has been shifted south to clear the building. 20’-0” width dimension has been added.

   Comments received from **P24-188**

   Project shall meet requirements of the current International Fire Code (IFC) and the current International Wildland-Urban Interface Code (IWUIC) at the time of application for building permit including but not limited to the following.

   1.) A Construction Management Plan establishing a fire prevention program at the project site for all phases of construction submitted for review and approval before a building permit is issued.
   Response: Acknowledged, a CMP will be provided at the building permit submittal.

   2.) A fire permit is required for an automatic sprinkler system. A stamped set of plans shall be provided for review and approval prior to a permit being issued.

Response: Acknowledged, a CMP will be provided at the building permit submittal.

3.) A fire permit is required for a fire alarm system. A stamped set of plans shall be provided for review and approval prior to a permit being issued.
Response: Acknowledged, fire alarm design will be provided as a deferred submittal through the contractor.

4.) Means of egress shall meet the requirements of the IFC, Chapter 10 as it applies to the multi-use proposal including number of exits, exit access, discharge, maximum exit access travel distance, signage, illumination and emergency electrical system in the event of a power supply failure.
Response: Acknowledged, egress design will be demonstrated on code plans at building permit submittal.

5.) Portable fire extinguishers installed for the occupancy.
Response: Acknowledged.

6.) Fire department access as required in the IFC, Chapter 5.
Response: Acknowledged, fire department access has been illustrated in the development plans and will be further developed with the building permit plans. Please advise if there are particular areas requiring attention such as location of knox box, FDC, etc.

7.) Occupant load shall be posted in all areas designated as assembly.
Response: Acknowledged.

8.) The provisions of the IWUIC shall apply to the construction, alteration, moving, repair, maintenance and use of any building, structure or premises within the wildland-urban interface areas in this jurisdiction. The Wildland Urban Interface (WUI) boundary has expanded to include all private property in the town and county. The new boundaries are expected to take effect on January 1, 2025.
Response: Acknowledged.

ENGINEERING DEPARTMENT COMMENTS
Development Plan APPROVED with Conditions

P25-041
ADDRESS: 460 E Broadway
OWNER: Teton County Hospital District
APPLICANT: HH Land Strategies, LLC Hal Hutchinson

Jeff Silliman, 733-3079

The engineering division has reviewed your application for a Development Plan submitted on and with application materials as dated above.

*The following comments are being provided for use in preparation of future applications.
CONDITIONS OF APPROVAL
A. The proposed plan is in substantial conformance with the LDRs and Town Standards. For future approvals, the plan must be revised to complete conformance with the LDRs and Town Standards. The following comments are being provided to note specific areas of the plan that need to be addressed but do not relieve the applicant from compliance with regulations and standards not noted.

PROJECT SPECIFIC COMMENTS

1) Based on the information provided, this is not the appropriate place for a mid-block pedestrian crossing. The Town would consider carrying an attached-style sidewalk further east to No-Name St. to place the projects crosswalk at the west side of Broadway/No Name intersection. If the sidewalk is located on private property, grant an easement to the Town.
Response: *The proposed mid-block pedestrian crossing has been removed.*

2) Provide the hydraulic analysis to demonstrate adequate supply to two hydrants off of the one service.
Response: *A hydraulic analysis will be provided with the building permit.*

3) Include ADA tiles at both sides of the driveway entrance on the sidewalk if including a stop sign.
Response: *ADA tiles have been added to both sides of the driveway entrance.*

4) Coordinate with Town staff on the appropriate frontage.
    a. Clarify whether existing conifers are to remain. Note they may conflict with current WUI regulations.

Response: *Existing conifers are to be removed. Note has been added to sheet C2.10-Demolition Plan.*

b. Show sidewalk crossing driveway entrance as elevated to prioritize pedestrians.
Response: *Sidewalk crossing has been updated to match coordination efforts with the Town of Jackson.*

c. Sidewalk is currently shown terminating at a wooden deck mid-block. Remove deck and continue sidewalk east.
Response: *Drawings have been updated to show continuous concrete and the pavers at entrance of building has been pulled back.*

5) Show sizes of proposed sewer, water and storm utilities on plans.
Response: *Preliminary sizes to proposed sewer, water and storm utilities have been added to plans. Final sizing to be determined during water and sewer analysis for building permit.*

6) Plans call out existing 8 Clay Water Main and point to stm. Review and revise accordingly.
Response: *Callout has been updated.*

7) Landscaping in the right of way should be grass or a standard street frontage.
Response: *In response to the future protected bike lane, right of way landscaping has been adjusted to 7' wide irrigated grass section adjacent to the pedestrian walkway. In the future, the irrigated lawn can be removed and replaced with the protected bike lane. The remaining right of way landscape is proposed to be native grasses and low shrubs to provide separation between the protected bike lane and E Broadway Ave.*

8) Provide drawings to scale, C3.20 did not scale correctly in PDF.
Response: *Drawing scale has been corrected.*

LAND DEVELOPMENT REGULATIONS

5.7.4 - Stormwater Management Standards Provide treatment prior to discharge from private property.
Response: *Stormwater will be directed to infiltrators within the subject property.*

5.7.4.B - Include stormwater calcs for sizing of stormwater infiltration units. Stormwater calcs required for commercial post-development control using Rational Method for peak flow rates, Modified Rational Method for volumetric requirements for drainage areas less than 10 acres.

Response: *Preliminary stormwater calculations were performed to establish an approximate size for the infiltration units shown. Complete stormwater analysis will be performed for final design and detailing for building permit.*

7.2.2.A.1 - Provide a striping and signage plan, including the public way.
Response: *No striping or signage is proposed within the public right-of-way. Striping within the parking lot is shown.*

7.6.3 - Streets Alleys and Easements: Provide a plan showing all proposed easements. Show compliance with the standards for sight obstructions and general standards.
Response: *The future easement for the sidewalk and bike lane has been shown on the plan. There are no other easements on the property.*

7.6.4.2 - For all pedestrian areas provide a plan that includes: dimensions, radii, elevations, slopes (running and cross slopes, not oblique slopes), ramp slopes, grade breaks, stair dimensions, handrails, guards, etc. showing compliance with ADA, IBC, and Town standards.
Response: *Acknowledged. Complete analysis and design details will be included with permit drawings.*

7.6.4.3 - Design street frontages using existing road grades for control of sidewalk and buffer grades. Treat any buffer and sidewalk all as one plane, without grade breaks. Accommodate accessibility within the private property and not in the right-of-way.
Response: *Street frontage has been updated to match coordination efforts with the Town of Jackson.*

7.7 REQUIRED UTILITIES
7.7.2 Potable Water Supply:
1. Provide a water supply plan and estimated average day, maximum day, and maximum hour, required fire flows, and per capita maximum daily demands. Demands shall be determined by one of the following: Wyoming DEQ Chapter 12 Section 8 (equivalent per capita water use shall be at least 125 gpd and 340 gpd for average and maximum day respectively); Wyoming DEQ Chapter 25 Tables 1 and 2 with consumption and irrigation factored in, metered water supply data from another development where similar water demands have been demonstrated, AWWA M22 method, or other Town Engineer approved source.
Response: *Water demand calculations will be provided with the building permit.*

2. Provide a water system analysis indicating the required domestic and fire flow demands. Identify impacts to or upgrade requirements for the existing distribution, supply, or treatment system.
Response: *Water system analysis will be provided with the building permit.*

3. Show compliance with state regulations, construction standards, connections for lots of record, provisions for system expansion, and fire protection. Provide information on planned metering and backflow prevention locations.
Response: *The water system will be designed to comply with state regulations and construction standards. The water metering and backflow prevention will take place at the water entrance to the building.*

4. State whether the water system will be privately or publicly owned. Water services over 2-inch in diameter require engineering design. Water mains larger than 8-inch and or longer than 250 feet require a Wyoming DEQ permit.
Response: *The system will be privately owned. Acknowledged, Engineering design of the water service with the building permit. If required, a DEQ permit will be obtained.*

7.7.3 Sanitary Sewer System:
1. Provide a sanitary sewer wastewater plan and estimated average day, maximum day, and peak hour for the design of the project, per capita design flows, extraneous flows, and industrial and/or commercial waste volumes. Volumes shall be determined by one of the following: Wyoming DEQ Chapter 25 Tables 1 and 2; metered water supply data from another development where similar water demands have been demonstrated; or other Town Engineer approved source.
Response: *Sewer demand calculations will be provided with the building permit.*

2. Provide a sanitary sewer analysis. Identify downstream impacts on existing sewers, lift stations, and treatment facilities.
Response: *Sanitary sewer analysis will be provided with the building permit.*

3. Show compliance with state regulations, construction standards, maximum allowable infiltration, connections for lots of record, provisions for system expansion.
Response: *The sanitary sewer system will be designed to comply with state regulations and construction standards.*

4. State whether the sewer system will be privately or publicly owned.
Response: *The system will be privately owned.*

7.7.4 Irrigation System:
1. Provide an irrigation plan when the system is for the entire development or the system will be owned by the Town. For all systems provide the irrigation water demand, type of backflow preventer, location, and whether irrigation will be metered separately from domestic.
Response: See attached landscape irrigation hydrozone plan for detailed information related to irrigation approach

8.3.2 Impact on Public Facilities: Provide a plan for mail delivery that does not have a significant impact on public facilities and services, e.g. mail and parcel room, USPS Caller service, private mail delivery, etc.
Response: The building will have a mail and parcel room inside.

IBC CHAPTER 11 / ADA ACCESSIBILITY
Show compliance with accessibility regulations including but not limited to:

1104.1: At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served.
Response: Accessible routes will be provided within the site from all amenities noted to entrances.

1104.2: At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site.
Response: Accessible routes will be provided within the site from all amenities noted to entrances.

1104.5: Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall be interior. Where only one accessible route is provided, the accessible route shall not pass through kitchens, storage rooms, restrooms, closets or similar spaces.
Response: Acknowledged

HH LAND STRATEGIES, LLC

PO Box 1902, Wilson, WY 83014

307-699-0265 – hal@hhlandstrategies.com

May 21, 2025

To: Sean Ryan & Sandra Murphy, St. John's Health
April Norton, Jackson/Teton County Housing Department

From: Hal Hutchinson

Re: Hitching Post Deed Restriction Meeting Summary and Deed Restriction Revision Summary

Sean Ryan and Sandra Murphy from St. John's Health and I met with April Norton with the Jackson/Teton County Housing Department met on May 15, 2025 to discuss details relating to Workforce Deed Restrictions that are intended to be placed on the planned 72 apartment units at the Hitching Post property at 460 E Broadway, Town of Jackson.

Five main topics were discussed at the meeting.

1) How will the 75% minimum local income rule be applied to Hitching Post deed restrictions
2) How will the 60-day minimum vacancy rule be applied to the Hitching Post deed restrictions
3) How will the 6-month minimum lease requirement be handled in the Hitching Post Deed restrictions
4) How will the sale of property, or individual units be handled under the Hitching Post deed restriction?
5) In the event St. John's leases any Hitching Post units to non-St John's employees, what Workforce deed restriction requirements apply?

Based on discussions during the meeting, I understand St John's Health and the staff of the Jackson/Teton County Housing department agree in principle on the following details for each of the above listed main topics.

Regarding #1: The Housing Department agrees, and St. John's Health accepts that the Hitching Post deed restrictions will be modified to exempt Hitching Post units rented to a full-time employee at St. John's Health from the 75% local income rule. If a unit is rented to a household without a full-time St. John's Health employee, the tenant household will be required to meet all the requirements of the Workforce Program as outlined in the deed restriction and the Housing Department Rules and Regulations. For the purpose of the deed restriction, St. John's Health's Full Time Employee will meet the requirement that they work, at a minimum, 1,560 hours per year.

Furthermore, because St. John's Health's organizational structure includes contracting with separate but linked entities to provide service in furtherance of St. John's Health mission (such as pharmacy services) the deed restriction will clearly indicate that employees of these separate but linked entities qualify as employees of St. John's Health for the purpose of qualifying for occupancy of Hitching Post deed restricted units. To achieve this purpose, the deed restriction will indicate that qualified employees include "Employees of St. John's Health or employees of entities that provide full time services to St. John's Health" or similar agreed upon language achieving this purpose.

Regarding #2: The Hitching Post deed restrictions will include a maximum 60-day vacancy requirement. However, because of the unique circumstances facing St. John's Health employee recruitment and retention,

should St. John's Health anticipate that a deed restricted unit will be vacant for more than 60 days they will report this along with a brief description of the reasons for greater than a 60 -day vacancy. Such reports are deemed to be requests for an exemption to the 60-days vacancy rule and the deed restriction will include a statement that "Housing Department's acceptance of the extension of the 60-day vacancy rule will not unreasonably be withheld" or similar agreed upon language.

Regarding #3: Due to the unique circumstances associated with St. John's Health and entities providing full time services filling essential positions there may arise some need for St. John's Health to provide housing to employees serving in these positions on a short-term basis. In these situations, St. John's Health will seek from the Housing Department an exemption to the 6-month minimum lease of deed restricted units and the deed restriction will include language that "such exemption will not be unreasonably withheld" to similar agreed upon language achieving this purpose.

Regarding #4: In no anticipated scenario will St. John's Health sell either the Hitching Post property or the planned Hitching Post Apartments project. However, the deed restrictions will be placed on the units in perpetuity and should reflect and/or anticipate any eventuality, however unlikely. Therefore, the deed restriction should anticipate sale of the property. In this eventuality, the deed restriction will indicate that, in the event of sale of the property, the exceptions listed above in items #1, #2 and #3 will be eliminated from the deed restriction.

Regarding #5: In the unlikely event that St John's Health leases any units within the Hitching Post Apartments project to a non-St. John's Health or employees of entities that provide full time services to St. John's Health the exemptions identified in items #1, #2, and #3 shall not apply and the rules within the Workforce Housing Deed Restriction shall apply.

Hitching Post

AN April Norton <ahnorton@tetoncountywy.gov>
To Andrew Bowen
Cc Kristi Malone

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Hitching Post_Deed Restriction_Mtg_Summary_.docx
26 KB

Hi Andrew,
I met with Hal, Sean, and Sandra a couple of weeks ago to discuss the deed restrictions. Please see the attached memo from Hal, which I've reviewed and am fine with.
Thanks,
April

April Norton (she/her/hers)
Director | Jackson/Teton County Affordable Housing Department
(o) 307-732-0867 (m) 307-690-7442
www.jhaffordablehousing.org
Follow us on Facebook & Instagram

Correspondence, including e-mail, to and from employees of Teton County, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Town Council
Submitting Department:	Planning Department	**Presenter:**	Tyler Valentine
Agenda Item:	Three Development Plans for Lots 53, 57, & 58 within the Snow King Master Plan (P24-168, P24-174 & P24-175)	**Public Comment:**	Yes

NOTE: No final decision will be made on this item at the June 2, 2025, Council meeting, thus this item will be continued to the next Council regular meeting on June 16, 2025. Progress on this item will be dependent on the time available on the June 2 agenda, however, staff hope to complete the staff presentation, applicant presentation, and possibly public comment, before conclusion of the June 2 meeting.

Purpose & Policy Considerations.
A Development Plan is required in the Snow King Planned Resort District by the Snow King Master Plan for all new development, thus a separate Development Plan is required to develop Lots 53, 57, & 58 for a total of three individual Development Plans. Although Development Plans are typically reviewed separately with individual staff reports and findings, staff consolidated these three Development Plans into a single report. This approach minimizes redundancy in analyzing common elements of the Master Plan—such as Design Guidelines, Capital Improvements, Phasing, and Land Use—and allows for a more streamlined and cohesive analysis. This is especially true because the three lots share common ownership, road/pedestrian access, housing mitigation requirements, and master site grading.

Requested Action.
The applicant, Northworks Architects, is requesting approval for three Development Plans for the Snow King Condos on Lots 53, 57, & 58 that cumulatively total 240 average peak occupants (APOs or guests), 110,370 sf of above-ground habitable, 175,348 sf total gross square footage (includes basements and non-habitable areas), 60 market short-term rental condominiums, and 12 affordable deed-restricted condominiums within four buildings that each have underground parking. Below is a summary of each lot:

- **ITEM A (P24-168):** The applicant proposes a new three-story, 42,314 sf (habitable) condominium building that consists of 26 market condominium units, 7 affordable deed-restricted condominium units, and 57 parking spaces with a basement parking garage on Lot 53 (553 Upper Snow King Loop).

- **ITEM B (P24-174):** The applicant proposes two new three-story condominium buildings – one 18,552 sf (habitable) and another 24,599 sf (habitable) - that consist of 22 market condominium units, 5 affordable deed-restricted condominium units, and 41 parking spaces within basement parking garages on Lot 57 (510 Upper Snow King Loop).

- **ITEM C (P24-175):** The applicant proposes a new three-story, 24,905 sf (habitable) condominium building that consists of 12 market condominium units and 19 parking spaces with a basement parking garage on Lot 58 (725 Upper Snow King Loop).

Key Policy Questions.
1. Does Council agree with staff's position that the missing section of sidewalk west of the existing Grand View Lodge should be required to be installed according to the Master Plan before completion (i.e.,

Certificate of Occupancy) of the first building? (Please refer to the analysis on pages 8-9 of the staff report.)
2. Does the Town Council find that all proposed buildings are generally consistent with the Design Guidelines? (Please refer to the analysis on pages 10-11 of the staff report.)
3. Does the Town Council find that the buildings on Lot 57 are generally consistent with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge as intended by the Master Plan? (Please refer to the analysis on pages 14-15 of the staff report.)

Recommendations.

ITEM A (Lot 53) (P24-168): The Planning Director and Planning Commission recommend **approval** of a Development Plan for a new three-story, 42,314 sf condominium building with a basement located on Lot 53 (553 Upper Snow King Loop), subject to the departmental reviews attached hereto and this staff report dated June 2, 2025, and the following conditions:

1. At the time of building permit submittal, Lot 53 shall comply with the long-term bike parking requirements to be consistent with the analysis in this staff report.
2. Prior to issuance of the Certificate of Occupancy, the applicant shall work with Snow King Resort Master Association (SKRMA) to ensure the missing section of sidewalk located to the west of the Grand View Lodge identified in this staff report is constructed as required by the Snow King Master Plan.
3. As part of the building permit submittal, the landscape plan shall ensure that all new Quaking Aspen trees planted north of the building are at least 18' tall and planted at a one-to-one ratio to those trees removed from this same area.

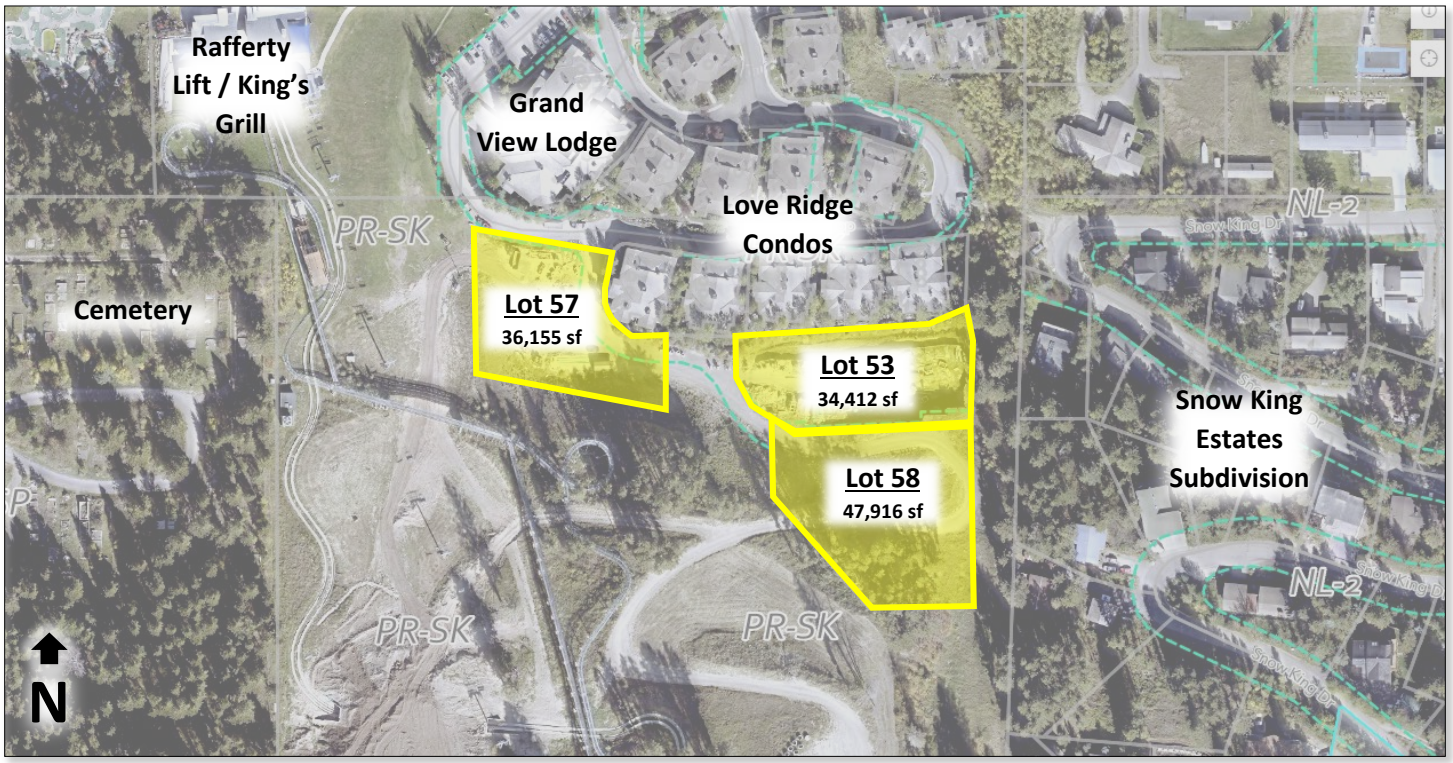
ITEM B (Lot 57) (P24-174): The Planning Director and Planning Commission recommend **approval** of a Development Plan for two new three-story, condominium buildings with a basement, one 18,552 sf and another 24,599 sf, located on Lot 57 (510 Upper Snow King Loop), subject to the departmental reviews attached hereto and this staff report dated June 2, 2025, and the following conditions:

1. At the time of building permit submittal, Lot 57 shall comply with the long-term bike parking requirements to be consistent with the analysis in this staff report.
2. Prior to issuance of the Certificate of Occupancy, the applicant shall work with SKRMA to ensure the missing section of sidewalk located to the west of the Grand View Lodge identified in this staff report is constructed as required by the Snow King Master Plan.

ITEM C (Lot 58) (P24-175): The Planning Director and Planning Commission recommend **approval** of a Development Plan for a new three-story, 24,905 sf condominium building with a basement located on Lot 58 (725 Upper Snow King Loop), subject to the departmental reviews attached hereto and this staff report dated June 2, 2025, and the following conditions:

1. At the time of building permit submittal, Lot 58 shall comply with the long-term bike parking requirements to be consistent with the analysis in this staff report.
2. Prior to issuance of the Certificate of Occupancy, the applicant shall work with SKRMA to ensure the missing section of sidewalk located to the west of the Grand View Lodge identified in this staff report is constructed as required by the Snow King Master Plan.
3. Because the required affordable housing generated from Lot 58 will all be located on Lot 53, a Certificate of Occupancy for Lot 58 shall not be issued until Lot 53 receives its Certificate of Occupancy.

Project Location.
The properties are located at 553 Upper Snow King Loop (LOT 53, GRAND VIEW LODGES 2ND ADDITION), 510 Upper Snow King Loop (LOT 57, GRAND VIEW LODGES 2ND ADDITION), and 725 Upper Snow King Loop (LOT 58, GRAND VIEW LODGES, THIRD ADDITION). An aerial photo is shown below on the following page:



Background/Project Description.
Background
On December 18, 2000, the Jackson Town Council adopted the Snow King Planned Resort District Master Plan (Master Plan). This Master Plan encompasses an area of 62 acres. Pursuant to the Master Plan, there can be 915,000 square feet for above-ground uses and up to 2,460 lodging APOs. An APO, or average peak occupancy, is how the number of nightly guests is calculated within the resort for both hotel/motel and short-term rentals. For example, a hotel unit is assigned an APO of two and a short-term rental unit is assigned an APO of four.

On April 6, 2020, the Town Council amended the Master Plan (P19-201), but there were no changes to the total allowed square footage, APOs, or the allowed uses. One change that did occur was reconfiguring the Master Site Plan from multiple smaller buildings scattered further up the hillside to what is shown today which is one building per lot located farther downhill and closer to Love Ridge and Grand View Lodge. In addition, Lots 53, 57 & 58 used to be located in Sub-Area 4 but were shifted to be part of Sub-Area 3. These site planning efforts were made to locate buildings in more practical locations with generally flatter slopes even though these lots do have some of the steepest slopes within the Master Plan.

The Master Plan is separated into six sub-areas. The proposed project is part of Sub-Area 3, which includes the Grand View Lodge and Conference Center, Grand View & Love Ridge Condos, Simpson Patent Condos, and Lots 53, 57, & 58. All building floor area and APOs developed in Sub-Area 3 shall be deducted from the total building floor area and APO units allowed within the Master Plan. The Master Plan serves as the Sketch Plan for all development projects within the Resort Boundary, and thus the application for a Development Plan for each lot

is appropriate at this time. All developments within the Master Plan are reviewed for compliance with the Master Plan and not the Land Development Regulations (LDRs). However, any standards that are not in the Master Plan automatically revert back to the LDRs. All projects within the Resort are first reviewed by the Snow King Resort Master Association (SKRMA) for compliance with the Master Plan. This project received approval from SKRMA on August 19, 2024 (approval letter attached).

Lots 53, 57, and 58 are vacant lots situated adjacent to each other and located due south (uphill) of Grand View Lodge and Love Ridge Condos. Although the majority of Lots 53 and 57 are relatively flat due to previous man-made grading activities, portions of Lot 57 have man-made slopes above 50%. Lot 58 has the least amount of man-made disturbance, aside from the access/utility road that bisects through the middle and has slopes well above 50%. All three lots are accessible by vehicle only from Upper Snow King Drive, which is a private road owned and maintained by SKRMA. After Lots 53, 57, and 58 are developed, the remaining development to occur within the Master Plan is the development of the KM6 parcel at 330 E. Snow King Avenue and the expansion of the Snow King Hotel and employee housing at 400 E. Snow King Avenue. Below is a sub-area map of the Master Plan depicting Sub-Areas 1-6:



Project Description

The applicant is requesting approval of three Development Plans for the Snow King Condos on Lots 53, 57, & 58 that cumulatively total 240 APOs, 110,370 sf of above-ground habitable, 175,348 sf total gross square footage (includes basements, underground parking, and other non-habitable areas), 60 market short-term rental condominium units, and 12 affordable deed-restricted condominium units. All buildings have daylight basement parking garages that provide a total of 117 parking spaces for the development. Lot 53 is the only building to include units within the daylight basement level. Access to all three lots will be taken from Upper Snow King Loop, which is a private road maintained by SKRMA that dead-ends between Lots 53 and 58. The attached submission packet provides detailed information on the proposed project - site plan, architectural and building elevations, floor plans, landscaping, etc. Below is a breakdown of development on each lot:

Lot 53

- One 53'-10¼" tall, three-story building totaling 104 APOs, 42,314 sf above ground habitable & 71,705 sf gross square footage (includes basement parking garage and basement habitable)
- Basement (57 parking spaces + 7 affordable units)
- 26 short-term rental condominium units – 42,314 sf
- 7 affordable deed-restricted employee housing units – 4,906 sf

Lot 57

- Two, three-story buildings totaling 88 APOs, 43,678 sf above ground habitable & 69,322 sf gross square footage (includes basement parking garage and basement habitable)
- North building (57'-8¼" tall):
    - Total of 18,552 sf above ground habitable & 32,005 sf gross square footage
    - Basement (19 parking spaces)
    - 10 short-term rental condominium units – 18,552 sf
    - 4 affordable deed-restricted employee housing units – 3,719 sf
- South building (55'-½" tall):
    - Total of 24,599 sf above ground habitable & 37,317 sf gross square footage
    - Basement (22 parking spaces)
    - 12 short-term rental condominium units – 24,599 sf
    - 1 affordable deed-restricted employee housing unit – 726 sf

Lot 58

- One 54'-8½" tall, three-story building totaling 48 APOs, 24,905 sf above ground habitable & 34,849 sf gross square footage (includes basement parking garage and basement habitable)
- Basement (19 parking spaces)
- 12 short-term rental condominium units – 24,905 sf

Staff Analysis.

As stated above, the proposed project shall be reviewed for compliance with the Master Plan. However, any standards not addressed in the Master Plan revert to the LDRs (i.e., bike parking, EVSE parking, snow storage, etc.). Below staff has provided a review for each project as it relates to each applicable chapter in the Master Plan. In addition, a link to the complete Master Plan under the Attachments section of this report has been

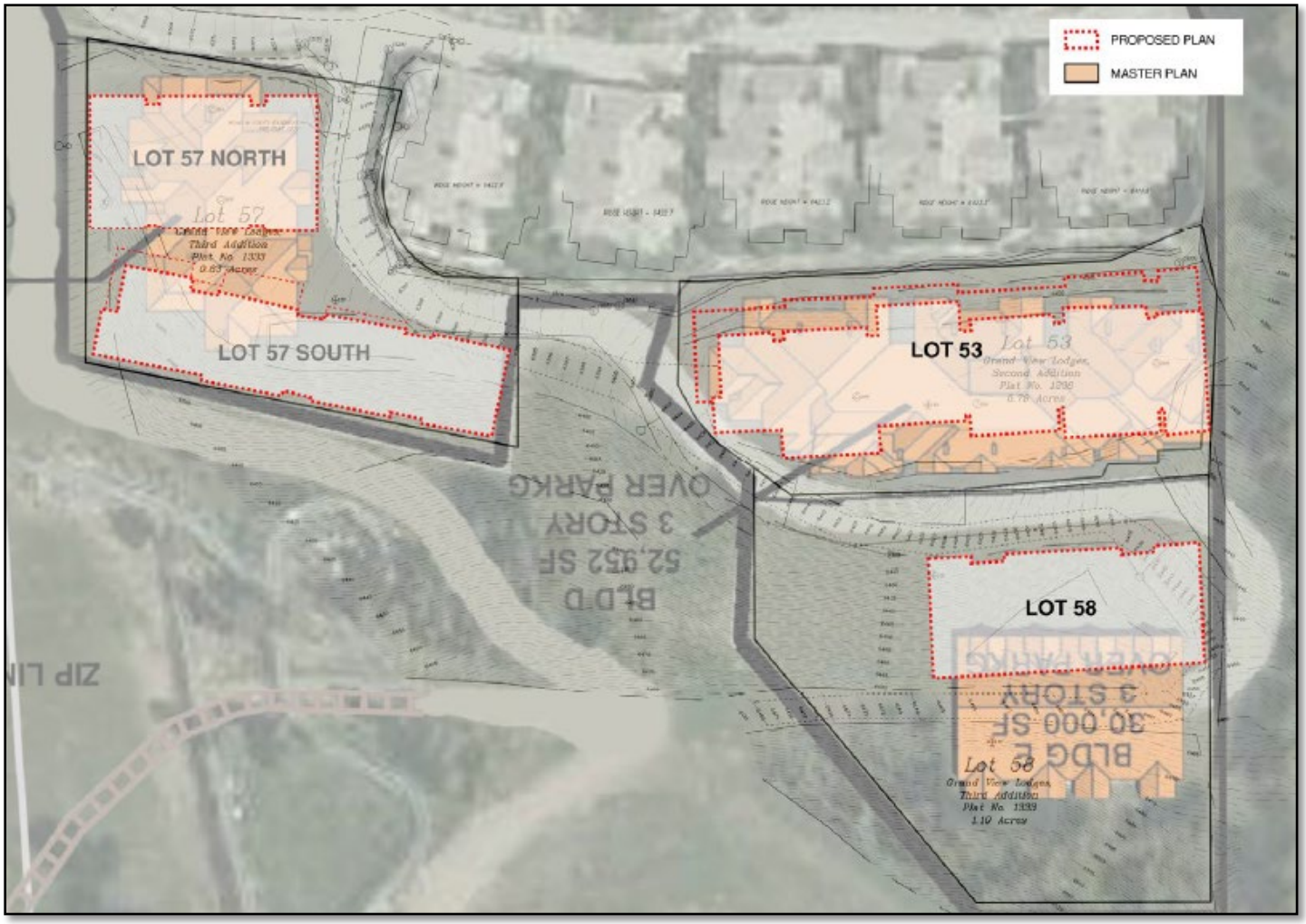
provided. Although these developments are being reviewed under one staff report, the applicant is proposing three separate Development Plans, each of which has their own Master Plan review and findings.

In general, the Master Plan provides a great deal of flexibility and includes far less prescriptive standards compared to the LDRs. This means that interpreting the Master Plan is more subjective in nature, allowing increased architectural freedom to design new buildings, while still emphasizing the need for new development that relates to the existing buildings and overall character. A main theme in the Master Plan – at least as it relates to reviewing for compliance – is focused on compatibility with the existing surrounding development, both in design, open space/landscaping, and pedestrian experience, along with compatibility with the hillside. An important consideration is that from a visual impact standpoint, the proposed developments are within a privately owned Master Plan district, and these buildings will not be visible from Town streets, except partially visible from a few properties along Snow King Drive. Nearly all direct visual impacts would be toward the Love Ridge Condos and Grand View Lodge developments directly to the north. As it relates to the Master Plan's vision for development on Lots 53, 57, & 58, buildings are intended to be larger in bulk and scale than the existing Love Ridge Condos and Grand View Lodge. With that acknowledgement, a main focus for Lots 53, 57, & 58 is how they interface with these existing surrounding developments, specifically the pedestrian experience and landscaping, the spaces and distances between buildings, and how the design, architecture, and materials relate to one another.

Master Site Plan (pages 39-43 of the Master Plan)

The conceptual Master Site Plan chapter provides an overview of how the overall Resort circulation (both pedestrian and vehicular) will function. The conceptual Master Site Plan(s) is broken into two portions, one for the summer season and one for the winter season, showing overall circulation and the relationship of the building envelopes to the outdoor recreation areas described in the plan. More specifically, the chapter then divides the Resort into individual sub-areas and describes the proposed building envelope locations, outdoor recreation areas, and how these allowed uses relate to each other within the sub-area and within the Master Site Plan as a whole. The building envelope locations depicted in the conceptual Master Plan are not intended to be exact but rather serve as a guideline for where future development could generally occur.

The idea is that the conceptual building envelopes would work in conjunction with other Master Plan standards to ensure that new developments interface properly and consistently with surrounding buildings. Specifically for Sub-Area 3, Lots 53, 57, & 58 have no setback requirements, and although the conceptual Master Site Plan shows one building per lot (shown below), the Master Plan allows the development of multiple buildings per lot. Below on the following page is a visual of the conceptual Master Site Plan with conceptual buildings (in orange) and the proposed building locations (dotted red line) from the Master Plan:



Lot 53

Of the three lots, staff finds that Lot 53 is most consistent with the conceptual Master Site Plan. The proposed basement footprint and upper levels include variations of push and pull along the north side of the building that are generally consistent with the building shown on the conceptual Master Site Plan. The push and pull help provide architectural breaks and relief, which are generally consistent with the architectural push and pull on the Love Ridge Condos to the north. Additionally, to address the transition between the existing Love Ridge Condos to the north, the proposed building provides space for adequate landscaping that will help minimize visual impacts to the extent possible. Overall, staff finds that Lot 53 is generally consistent with the conceptual Master Site Plan and finds that the proposed building location is appropriate for this lot.

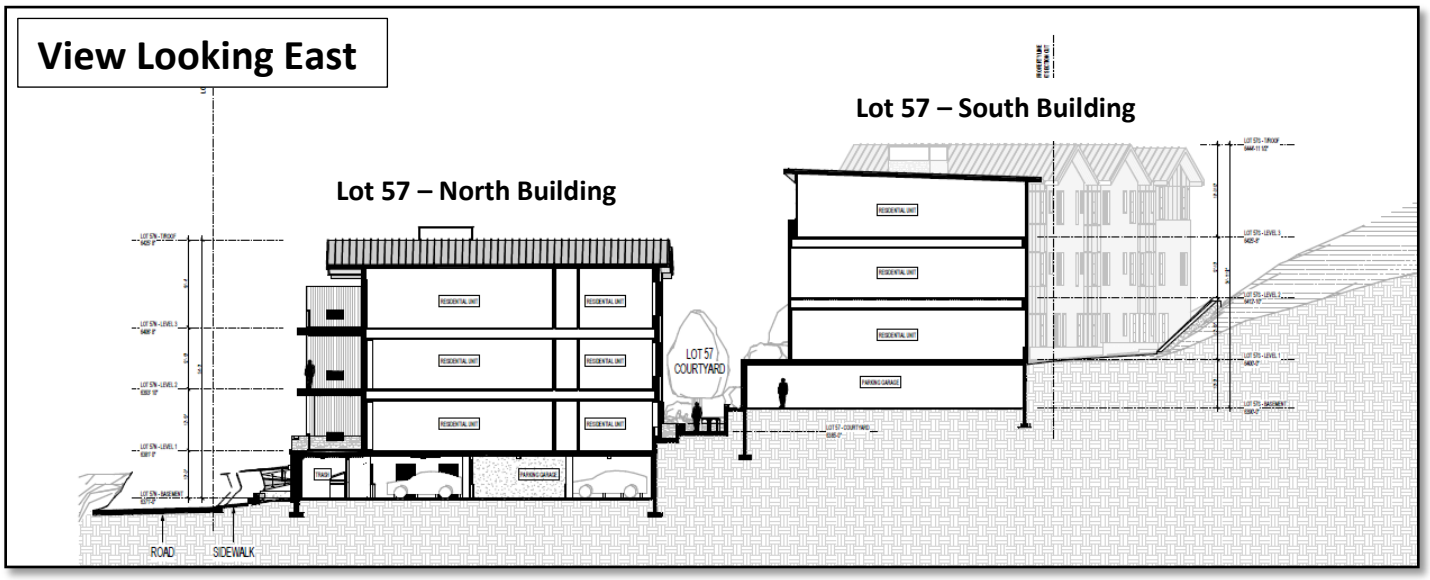
Lot 58

Staff finds that the proposed building on Lot 58, which is located farther downhill (north) than the building shown on the conceptual Master Site Plan, is appropriate because Lot 58 is the steepest of the three lots and shifting the building farther downhill reduces hillside disturbance by decreasing the length of road needed to access it. The building shape is also more of a rectangle and better aligns with the contours of the hillside compared to the building shown in the conceptual Master Site Plan which is more of a square. Staff questions why the original building was shown so high up the hillside where the slopes are steepest, but as previously stated, the conceptual Master Site Plan was not intended to determine the exact location of future development. Additionally, shifting the building further downhill reduces visual impacts from adjacent neighborhoods, namely Snow King Estates to the east. Overall, staff finds that Lot 58 is generally consistent with the conceptual Master Site Plan and finds that the proposed building location is appropriate for this lot.

Lot 57

Amongst the three lots, Lot 57 deviates the most from the conceptual Master Site Plan, specifically because two buildings are proposed instead of one, and because the south building is pushed up against the southern property line and extends nearly to the eastern boundary, which is not explicitly prohibited but was not anticipated by the Master Plan. Although different from the conceptual Master Site Plan, this lot has no setbacks or limits on the number of buildings. The building shown for Lot 57 in the conceptual Master Site Plan illustrated one example of how a building could be situated, knowing it would need to step up the hillside and fit into the surrounding character. While stepping up the hillside can be accomplished in a single building design, multiple buildings can also accomplish the goal of stepping up the hillside, which is what the applicant has proposed. Page 86 of the applicant's submittal shows an east-looking section that demonstrates the stepping up the hillside with two buildings (visual provided below for reference). The proposed two-building plan also provides a visual break between the north and south buildings, allowing views and light to pass through the development from east to west.

Regarding the location of the south building on Lot 57, staff acknowledges that the Master Plan designated development rights on this lot with the understanding that future development would involve significant hillside disturbance due to the existing man-made steep slopes. And given that there were no assigned setbacks or limits on the number of buildings, buildings on Lot 57 can be located as proposed provided the design complies with all other applicable standards in the Master Plan (e.g., Design Guidelines, FAR, LSR, etc.) and is in character with the existing surrounding development. Overall, staff finds that as conditioned, Lot 57 is generally consistent with the proposed building envelope location described in this chapter of the Master Plan for Sub-Area 3.

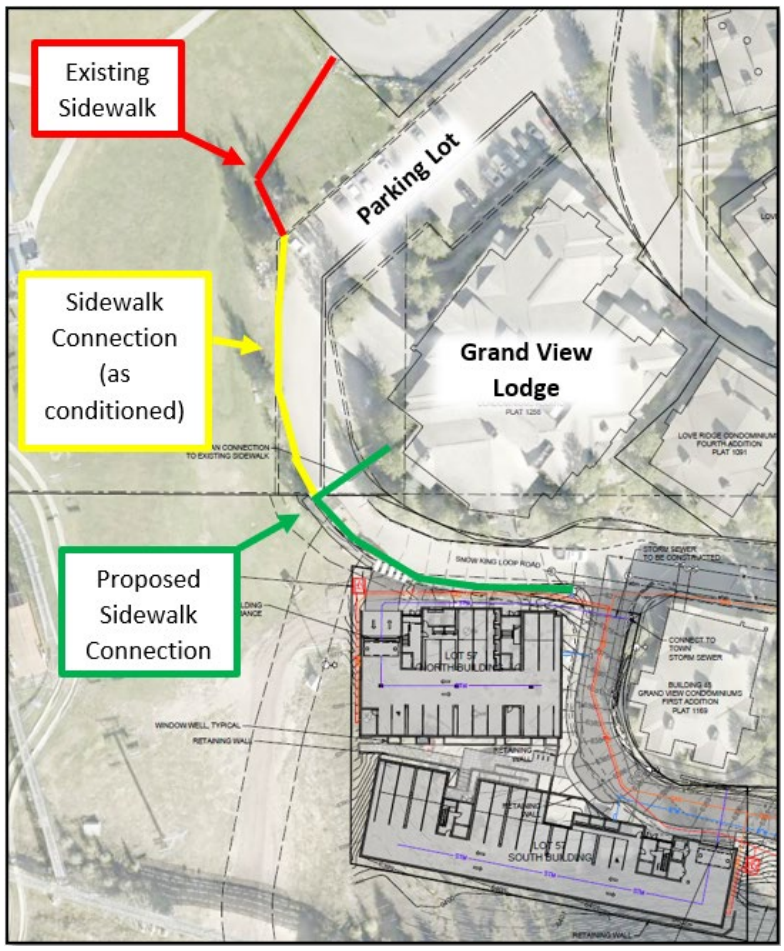


KEY POLICY QUESTION #1:

Does Council agree with staff's position that the missing section of sidewalk west of the existing Grand View Lodge should be required to be installed according to the Master Plan before completion (i.e., Certificate of Occupancy) of the first building?

In addition to building locations, page 42 of the Master Site Plan outlines both existing and proposed pedestrian circulation routes. The Plan identifies a sidewalk along the west side of Upper Snow King Loop that is intended to connect the subject properties to the parking lot adjacent to the Grand View Lodge and Snow King Hotel. The applicant currently proposes new sidewalks that join along Upper Snow King Loop but fall short of completing this connection—redirecting pedestrians into the vehicular courtyard of Grand View Lodge instead. While the

Master Plan does not specify the timing or exact design of pedestrian improvements for each development phase, staff finds that the applicant needs to coordinate with adjacent property owners and SKRMA to extend the sidewalk downhill along the west side of Upper Snow King Loop, completing the link to the existing sidewalk at the Grand View Lodge parking lot. The graphic to the right illustrates the existing sidewalk (red), proposed sidewalk (green), and the intended Master Plan connection (yellow). Because this connection is a required component of the Master Plan and provides the primary downhill pedestrian route, staff believes it must be constructed as part of these developments because these are the last major developments in Subarea 3 of the Resort. Accordingly, staff have added a condition of approval to each Development Plan requiring the applicant to work with SKRMA to complete the missing segment prior to issuance of the first Certificate of Occupancy.



<u>Land Use Plan (pages 44-53 of the Master Plan)</u>
The Land Use Plan and its associated land uses are divided into two broad categories: 1) uses allowed within building envelopes and 2) uses allowed outside the building envelopes. Staff finds that the proposed short-term rental condominiums and affordable workforce condominiums are allowed uses within the Sub-area 3 building envelopes.

The Land Use Plan also includes an example development table to describe the anticipated allocation of square footage and uses by sub-areas in order to calculate impacts such as traffic, parking, employee housing, and utilities at the master plan level. The Master Plan states that the example development table represented only a sample illustration of a possible Master Plan buildout and that precise areas dedicated to each use would be defined at the time of individual Development Plan review. With that said, staff finds that the proposed applications for Lots 53, 57, and 58 are consistent with what was illustrated in the example development plan based on the following analysis of square footage and APOs:

- The Master Plan approved a total of 915,000 sf for above-ground uses in the Resort area. Thus far 334,675 sf have been used, leaving 580,325 sf remaining to be used. The example development table contemplates 252,000 sf for Sub-Area 3, and since Love Ridge Condos and Grand View Lodge have used 143,655 sf, 108,345 sf remains for Lots 53, 57, & 58. The applicant is proposing 110,370 sf, which is 2,025 sf more than the example development table, but is allowed because the Master Plan did not allocate exact floor areas and APOs per sub-area but rather provided examples. Development rights have been privately sold and transferred throughout the Master Plan's history and determining what can be built in each sub-area is determined at the time of Development Plan review. Staff has no concerns over the proposed square footage and finds that the remaining square footage of 469,937 sf would allow for the remaining sub-areas (Sub-Area 1 and Sub-Area 2) that still have development rights to develop consistent with what was contemplated in the Master Plan.

- Regarding APOs, the Master Plan approved a total of 2,460 APOs in the Resort area. Thus far 824 have been used, leaving 1,384 APOs remaining to be used. The example development table contemplates 700 APOs for Sub-Area 3, and since Love Ridge Condos has used 280, 420 APOs are remaining for Lots 53, 57, & 58, and the applicant is proposing 240 APOs. Thus, staff finds that the applicant's proposed APOs comply with the Master Plan. Staff also notes that the remaining APOs after Lots 53, 57, & 58 are developed (i.e., 1,144 APOs remaining) would allow for the remaining sub-areas (Sub-Area 1 and Sub-Area 2) that still have development rights to develop APOs consistent with what was contemplated in the Master Plan.

Design Guidelines (pages 54-65 of the Master Plan)

KEY POLICY DECISION #2

Does the Town Council find that all proposed buildings are generally consistent with the Design Guidelines?

The Master Plan provides a completely separate set of conceptual Design Guidelines from the Town Design Guidelines that apply throughout Town outside of the Resort area. The Master Plan requires that SKRMA review and approve all new developments for consistency with the Master Plan-specific design guidelines prior to Development Plan submittal. The applicant has provided a letter (attached in submittal) confirming that the proposed development on Lots 53, 57, & 58 was reviewed and approved by the SKRMA Board of Directors. In addition, since the 2019 Master Plan Amendment, the Master Plan now also requires that the Town Design Review Committee (DRC) review all new developments for consistency with the Master Plan-specific design guidelines. The DRC reviewed the proposed development of each lot on June 12, 2024, and recommended approval to the Town Council. Below is a 3D contextual rendering of the proposed developments that also show the existing Love Ridge Condos:



After reviewing the proposed development of Lots 53, 57 & 58, staff finds that all proposed buildings comply with the general purposes and conceptual architectural Design Guidelines that govern the Master Plan. In general, the main theme of the conceptual Design Guidelines is striking a balance between control and creativity, to encourage flexibility and creative design on newer buildings while maintaining a sense of cohesiveness and character with existing development. In considering the cohesiveness and character with

existing development, the Love Ridge condos and Grand View Lodge developments play a large role due to their proximity to the subject properties. These existing buildings also served as general guidance for the applicant's use of exterior materials (i.e., stone base, wood siding, etc.), generous deck and balcony spaces, gable roof forms, and large roof overhangs. However, some of the proposed roof forms include reverse shed roofs at the bookends of each building that extend upward, which is not consistent with roof forms at Love Ridge Condos or Grand View Lodge that have hip and gable-style roofs that "waterfall" downward. However, such shed roof forms are not explicitly prohibited, and the applicant's inspiration for them came from the "butterfly" shed roofs on the Raftery Lift / King's Grill building located just northwest of these subject properties. Although the proposed buildings are larger in bulk and scale compared to the adjacent Love Ridge Condo buildings, the Master Plan permits Lots 53, 57 & 58 allow to have three stories over basement, includes no height limit, and contemplates larger buildings based on the example development table in the Master Plan. Overall, staff finds that the proposed development of Lots 53, 57 & 58 complies with the conceptual Design Guidelines.

Dimensional Limitations Plan (pages 66-100 of the Master Plan)

The Dimensional Limitation Plan specifies the dimensional limitations necessary to achieve the overall design theme in the Master Plan and includes floor areas and floor area ratios, densities, landscape ratios, height, setbacks, building envelopes, etc. Below are the specific standards that apply to Lots 53, 57, & 58, which the applicant is complying with, as conditioned:

Standard	Requirement	Lot 53	Lot 57	Lot 58	Complies?
Setbacks	N/A	N/A	N/A	N/A	Yes
LSR (min)	10%	20% LSR 7,245 sf	18% LSR 6,750 sf	57% LSR 27,401 sf	Yes
FAR (max)	Blended FAR Sub-Areas 1-5 = 0.40 x +/-2,700,000 sf (site area) = 1,080,000 sf Sub-Areas 1-4 = 0.60 x +/-2,400,000 sf (site area) = 1,440,000 sf	Complies - total allowed FAR in the Master Plan is 915,000 sf	Complies - total allowed FAR in the Master Plan is 915,000 sf	Complies - total allowed FAR in the Master Plan is 915,000 sf	Yes*
Lodging Capacity (max)	240 APOs for Lots 53, 57, & 58	104 APOs	88 APOs	48 APOs	Yes
Allowed Bulk	One or multiple buildings	1 building	2 buildings	1 building	Yes
Height (max)	N/A	N/A	N/A	N/A	Yes*
Stories (max)	3 stories over basement	3 stories over basement	3 stories over basement	3 stories over basement	Yes

***Floor area in the Master Plan can be shifted from site to site provided that any additional floor added to a site beyond what was contemplated in the Master Plan still results in a project that complies with the intent of the Master Plan and any other applicable standards.**

In addition to the prescriptive standards above, page 70 of the Master Plan provides "Specific Considerations Related to Sub-Area 3" which addresses the bulk, scale, and character of future development of lots 53, 57, & 58 related to existing surrounding development. This specific language (shown below) parallels language in the Master Plan Design Guidelines that new development needs to consider the character of existing surrounding developments, namely Love Ridge Condos and Grand View Lodge.

"The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge. These buildings can be up to three stories in height with a basement and with massing, articulation, openings, and step backs used to reduce bulk and mass. Buildings on these lots may consist of one single building complex or multiple buildings in order to best create a design that fits well with the topography and neighboring condominiums. Parking is to be primarily provided on-site and generally consistent with neighboring development. Active uses, such as retail and services, are permitted on the lower two levels, with lodging, residential or office on upper floors. The minimum landscape surface ratio for these lots is 10%. Sketch plans for buildings on lots 53 and 57 are included with this Master Plan. Both of these buildings were previously approved for construction by the Jackson Town Council. Additional landscape screening around these buildings will be included at the time of development plan submittal for these buildings. At the time of development on any additional lots within this sub-area the developer will be required to provide alternative transportation mode improvements to connect the Master Plan to Cache Creek Drive including paving, bollards, signage and other best practices associated with this connection. Plans for lot 58 must ensure compatibility with the neighborhood to the east at the time of development plan including but not limited to additional landscape screening and architectural design that best incorporates the building into the hillside."

When considering whether the proposed buildings fit with the bulk, scale, and character of the existing Love Ridge Condos and Grand View Lodge, there must be an understanding that Lots 53, 57, & 58 generally allow for larger buildings than the Love Ridge fourplexes based on the floor areas and APOs that were contemplated in the Master Plan. In addition, a theme among all four proposed buildings is the daylight basements, which are allowed, but give the appearance of four stories on certain elevations, and the applicant purposely stepped back the upper levels to help provide visual relief. Staff mentions this theme throughout the proposed development because it is similar to the theme of the 15 Love Ridge Condo buildings, which all have the same design style and were built at the same time. Below staff have provided a review of each lot for consistency with the Specific Considerations Related to Sub-Area 3:

- Lot 53:
  Staff finds that the proposed building is generally consistent with the bulk, scale, and character considerations related to Sub-Area 3. The proposed above-grade habitable square footage of 42,314 sf is over 10,000 sf smaller than what is shown on the conceptual Master Site Plan, which shows a building with 52,952 sf of above-ground habitable. Although the proposed building is much larger than the 15 Love Ridge Condo buildings, each around 8,000 sf (above-grade habitable), the proposed vertical and horizontal push and pull and step backs help reduce the bulk and mass. This is done by stepping the upper three levels back from the daylight basement and stepping the building walls of the upper three levels back from the exterior balconies, giving a three-tier terraced appearance. The use of a stone base, wood siding, and ample outdoor balconies is also a design trait shared by Love Ridge Condos and Grand View Lodge. Although a single building, the circulation towers on the north elevation are recessed back from the wall plane of the units, which further helps break up the building, helping it appear as six attached buildings from certain angles.

Since this lot is already graded and relatively flat, staff finds that the building fits into the existing topography well. Although the daylight basement level does give the appearance of four stories from the north and west elevations, three stories over a daylight basement is permitted, and stepping all three levels back from the basement helps provide visual relief. Staff have also confirmed that the basement complies with the basement definition. The design also leaves ample room between the Love Ridge Condos for landscaping to help screen and soften the new building, and the applicant states that the existing boulder retaining wall along the north will remain and new landscaping will be replanted to maintain the same level of screening. Staff have added a condition of approval requiring the applicant to install new Quaking Aspen trees along the north at a one-to-one ratio to those removed and that are at least 18' tall.

Finally, the Master Plan includes sketch plan-level renderings for Lot 53 (pages 95-96 of the Master Plan). These conceptual renderings were intended to exemplify what a building could look like while acknowledging that the Master Plan provides flexibility to designers to meet the intent and standards of the Master Plan through a more modern approach to design that reflects the time period in which the building was constructed. The sketches were also produced with the original Master Plan back in 2000 and are arguably outdated. The conceptual Design Guidelines even include a statement that *"The world's great cities were not designed by one architect at one time, but rather grew and developed over time with the creative input of many."* Overall, staff find the Lot 53 building is generally consistent with the Specific Considerations Related to Sub-Area 3.

- <u>Lot 57:</u>

  KEY POLICY DECISION #3

  Does the Town Council find that the buildings on Lot 57 are generally consistent with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge as intended by the Master Plan?

  Staff finds that the proposed buildings on Lot 57 are generally consistent with the bulk, scale, and character considerations related to Sub-Area 3. Staff are supportive of the two-building approach because it breaks up the proposed total square footage of 68,823 sf (includes basement) into two buildings. Similar to the buildings on Lots 53 & 58, the Lot 57 buildings include vertical and horizontal push and pull and step backs to help reduce the bulk and mass. The buildings also include a stone base, wood siding, and ample outdoor balconies, which are design traits shared by Love Ridge Condos and Grand View Lodge. Similar to the other buildings on Lots 53 & 57, the daylight basement level does give the appearance of four stories from the north and west elevations, however, three stories over a basement is permitted, and stepping all three levels back from the basement helps provide visual relief. Staff have also confirmed that the basement complies with the basement definition.

  In advance of the first Planning Commission (PC) meeting on April 16, 2025, staff raised character-related concerns regarding the northeast portion of the south building. Specifically, its proximity to the road created a "canyon effect" that appeared more urban in character and inconsistent with surrounding developments, which typically provide greater setbacks and landscaping between buildings and the street. This effect was driven by two primary factors: (1) the south building is proposed in a location not anticipated by the Master Plan, though still permitted, and (2) the applicant is proposing more overall habitable floor area and basement square footage on Lot 57 than envisioned in the conceptual site plan.

While the applicant's proposal complies with all applicable standards— including square footage limits, allowable project overlays (APOs), parking requirements, floor area ratios (FARs), and landscape surface ratios (LSR)—the proposed 43,678 square feet of habitable space exceeds the Master Plan's Example Development Table projection of 25,393 square feet by 18,285 square feet. This increase results from transferring over 10,000 square feet from Lot 53 and over 5,000 square feet from Lot 58, thereby reducing building sizes on those lots. Additionally, approximately 2,500 square feet of new floor area is proposed on Lot 57, which complies with the Master Plan's FAR allowances for this sub-area. Although the Master Plan permits such floor area transfers within the sub-area and does not mandate adherence to the Example Development Table or conceptual Master Site Plan, these adjustments have inadvertently concentrated development on Lot 57. This concentration was a key factor in staff's concerns regarding the south building's need to better align with the bulk, scale, and character of the surrounding neighborhood.

To address the concerns noted above, staff initially recommended a condition of approval requiring the applicant to revise the design and site plan before Town Council review, aiming to reduce the building's bulk and scale and improve its character. However, the PC requested to review these changes themselves before the Council. As a result, the applicant resubmitted updated plans for Lot 57, which the PC reviewed on May 21, 2025 (see PC section below for full discussion). In response to feedback from staff and the PC, the applicant implemented several design revisions, including additional landscaping with taller street trees, a shortened roof overhang above the easternmost third-floor unit and its neighbor to the west, slight reductions in square footage and bedroom counts, revised floor plans to allow for deeper step-backs on the north and side elevations of the easternmost unit, and removal of the third-floor balcony on that unit. These adjustments, along with enhanced landscaping, helped mitigate the canyon-like effect of the earlier design. The updated renderings now show significantly reduced massing at the northeast corner, creating a more traditional building form that steps up and back from the street. Overall, staff finds the revisions generally consistent with the bulk, scale, and character of the surrounding neighborhood.

Similar to Lot 53, the Master Plan includes sketch plan-level renderings for Lot 57 (pages 97-100 of the Master Plan). But again, these conceptual renderings were intended to exemplify what a building could look like while acknowledging that the Master Plan provides flexibility to designers to meet the intent and standards of the Master Plan through a more modern style of design that is current and keeping up with the times. These sketches were also produced with the original Master Plan back in 2000 and are arguably outdated. Staff finds that the proposed materials, outdoor spaces, two-building approach to stepping up the hill, and upper-level step backs from the basement meet the standards and intention of the Master Plan.

- <u>Lot 58:</u>

  Staff finds that the proposed building is generally consistent with the bulk, scale, and character considerations related to Sub-Area 3. The proposed above-grade habitable square footage of 24,905 sf is over 5,000 sf smaller than what is shown on the conceptual Master Site Plan, which shows a building with 30,000 sf of above-ground habitable. The proposed building is similar to the other buildings on Lots 53 & 57 in that the upper three levels are stepped back from the basement level, which gives a slight appearance of stepping up the hillside. The vertical circulation towers along the north elevation are recessed further forward and have flat roofs, which further break up the building wall and help it appear

as four attached building forms from certain angles. The use of a stone base, wood siding, and ample outdoor balconies is also a design trait shared by Love Ridge Condos and Grand View Lodge.

Lot 58 is the steepest of the three lots. To deal with the challenges of developing on steep slopes, the applicant is proposing to lower the grade of the existing road and sink the building into the hillside, which will reduce visual impacts in general, especially from the neighborhood to the east. Sinking the building into the hillside also fits into the topography of the hillside because it involves more cut and reduces the amount of fill that would otherwise be needed if the building pad was propped up from the hillside.

Similar to the other buildings on Lots 53 & 57, the daylight basement level does give the appearance of four stories from the north and west elevations, however, three stories over a basement is permitted, and stepping levels one through three back from the basement helps provide visual relief. Staff have confirmed that the basement complies with the basement definition. Due to this lot's hillside challenges, large retaining walls are needed to support the design, and the applicant is proposing a series of terraced retaining walls to the west of the building which is the most visible (but not to the public) elevation. Although areas for landscaping are limited due to the steep hillside, landscaping and trees will mostly be located within the terraced retaining wall sections. Finally, there are no Sketch Plans for building on Lot 58 in the Master Plan. Development on Lot 58 is envisioned to match the architectural style and design of Lots 53 & 58, which the applicant has accomplished.

Housing Element (pages 101-103 of the Master Plan)

Since the original adoption of the Master Plan in 2000, up until the 2019 Master Plan amendment, affordable workforce housing requirements lived in the Master Plan separate from the LDRs. However, after the 2019 amendment, affordable workforce housing requirements were removed from the Master Plan and required that all affordable workforce housing be provided in accordance with the Jackson LDRs, similar to any other development in town. Based on the proposed 60 short-term rental condominiums, the LDRs require the applicant to provide a total of 12 affordable workforce units in addition to three separate fees-in-lieu for the remaining fractional requirement of each lot that cumulatively totals $856,400.98. Below on the following page is a breakdown of the affordable workforce housing requirement, type, and method for each lot:

	Lot 53	**Lot 57**	**Lot 58**
Required Housing	5.925 units	5.516 units	2.962 units
Units Provided	5 units provided + fee of $381,793.49	5 units provided + fee of $212,978.85	2 units provided + fee of $261,628.64
Type & Method **Area Median Income (AMI)**			
Unit 1	2-bed, <50% AMI	2-bed, <50% AMI	2-bed, <50% AMI
Unit 2	1-bed, 50-80% AMI	1-bed, 50-80% AMI	1-bed, 80-120% AMI
Unit 3	1-bed, 80-120% AMI	1-bed, 80-120% AMI	
Unit 4	2-bed, 80-120% AMI	2-bed, 80-120% AMI	
Unit 5	3-bed, 80-120% AMI	3-bed, 80-120% AMI	

As proposed, the applicant plans to meet their affordable housing requirement by providing 12 affordable deed-restricted ownership condominium units on-site in addition to paying three fees-in-lieu. Lots 53 and 57 have provided 100% of their required affordable housing on-site. The required affordable housing for Lot 58 is being provided on Lot 53, which is allowed according to the Master Plan. Staff has added a condition of approval that

ensures completion (i.e., Certificate of Occupancy) of Lot 53 before completion of Lot 58 because the LDRs do not allow employee-generating development to be completed before its required units are completed.

Regarding the three fractional housing requirements generated by each lot, which cumulatively add up to 2.403 units, the LDRs do not require the applicant to provide the sum total of fractional housing of each lot because each lot is a separate project with its own Development Plan. Each Development Plan has a housing mitigation plan and findings, and from a housing standpoint, they are viewed separately. Although the applicant can willfully choose to provide more units instead of a fee, the applicant is choosing to pay three separate fees, which is allowed per the LDRs.

Transportation Element (pages 105-148 of the Master Plan)

The Master Plan assumed a total of 1,710 trips per day for residential uses in Sub-Area 3. Based on a Traffic Impact Study of the existing and proposed uses, a total of 1,216 trips per day would occur, which is less than was assumed.

According to the Master Plan (pg. 131), the parking requirements for the proposed uses are as follows:

- 72 condominium units total @ 1 space per unit = 72 spaces required
- Total Parking Proposed: 117 spaces

The applicant has proposed 117 covered parking spaces, some of which are tandem, spread out amongst the four proposed buildings to meet the 72-space requirement. Lot 53 provides 57 spaces, Lot 57 (north building) provides 19 spaces, Lot 57 (south building) provides 22 spaces, and Lot 58 provides 19 spaces. Each building has sufficient parking to meet parking demand per the Master Plan and does not rely on other buildings or lots to satisfy its parking demand. Each building has its own vehicular access directly from Upper Snow King Drive that leads directly into daylight basement parking garages. The only lot with surface parking is Lot 53, which has a small surface parking area (three parking spaces) on the first level that also serves as a required Fire Department turnaround. Based upon the requirements of the Master Plan for parking and access, staff finds that each lot complies and, in some cases, exceeds the applicable standards.

Regarding Electric Vehicle Supply Equipment (EVSE) parking, lodging/residential requires 30% of parking provided to be EVSE capable and 5% of parking provided to be EVSE installed. The applicant is providing compliant EVSE-capable and installed spaces within all four buildings. Below is the required number of EVSE stalls that the applicant is providing:

- Lot 53 (57 spaces provided) = 17 capable + 3 installed.
- Lot 57 - South (22 spaces provided) = 7 capable + 1 installed.
- Lot 57 - North (19 spaces provided) = 6 capable + 1 installed.
- Lot 58 (19 spaces required) = 6 capable + 1 installed.

Regarding bike parking, residential uses of five or more units per lot require 0.75 bike parking spaces per bedroom and 25% must be short-term bike parking and 75% must be long-term bike parking. The applicant has shown compliant short-term bike parking counts for each lot, however, the amount of long-term bike parking storage shown is slightly less than what is required. Staff has added a condition of approval requiring this to be addressed at the time of building permit submittal. Below are the bike parking requirements for each lot, which the applicant will be required to adhere to:

- Lot 53 (70 beds) = 14 short-term and 39 long-term bike parking spaces.
- Lot 57 - South (35 beds) = 7 short-term and 20 long-term bike parking spaces.
- Lot 57 - North (27 beds) = 6 short-term and 21 long-term bike parking spaces.
- Lot 58 (29 beds) = 6 short-term and 16 long-term bike parking spaces.

Capital Improvement Plan (pages 149-171 of the Master Plan)
The Capital Improvement Plan focuses on how the Resort private water, sewer, and stormwater systems will interface and connect to the larger Town of Jackson systems. The applicant has provided an initial Engineering Report that demonstrates the anticipated demand and discharge of the proposed development to be consistent with the assumptions made in the Master Plan. The Town Engineering Department has reviewed the application against the Master Plan and Town Utility requirements and has recommended approval subject to their departmental review. At this time no public capital improvements have been identified.

Phasing and the Snow King Resort Master Association (pages 172-174 of the Master Plan)
The Master Plan in Chapter XI Phasing and the Snow King Resort Master Association states as follows:

> *Snow King will develop the property in phases and in a well-balanced manner. While there is no specific timeline and individual phases will be constructed according to market demand, Snow King will ensure that all facilities required for the convenience of guests, public safety and mitigation of any negative impacts are constructed in a timely and concurrent fashion and follow a logical sequence. As additions are completed, the entire infrastructure and other required performance components for each phase will be in place and performance standards will be adhered to. These components include utilities, parking, housing and transportation elements that will be developed in increments in tune with commercial, lodging and other development. When any of these components are built in excess of the required needs of a particular phase, and in excess of the cumulative needs to date, this excess will be credited towards the requirements of future phases. Final Development Plans for each building or phase will address the specific impacts and required mitigation associated with it.*

Upon review of this specific section with this application and in a 2010 letter to Snow King related to this issue (see attached), staff finds there is no specific timeline that the Master Plan is subject to and thus may proceed as stated "according to market demand". As a result, staff find that the proposed development is compliant with this chapter. In addition, staff finds that the proposed application has mitigated all requirements of the Master Plan on site as part of this application and is not reliant on any future phase of development to gain compliance.

The Land Development Regulations set forth requirements for vesting of the entitlements under the Master Plan. Staff have attached an August 20, 2010, letter stating that the required entitlement requirements have been satisfied (see attached). In addition, in a July 6, 2015, letter the Town stated that:

> *SKRMA is operating in compliance with the Snow King Resort Master Plan. Upon review of the Snow King Resort Master Plan and your March 27, 2015 letter and supporting documentation the Town finds that SKRMA is operating in compliance with the Master Plan as required. Based upon this finding property owners within the Master Plan may apply to the Town for Development Plan approval.*

Regarding the specific phasing plan for Lots 53, 57, & 58, the applicant states that a building permit will be submitted within 18 months of Development Plan approval, likely starting with Lot 57, and each subsequent building permit will be submitted within 18 months of completion of the prior building permit. Staff is supportive of this phasing plan because it allows for a reasonable process to develop each lot.

Planning Commission (PC)
On April 16, 2025, the PC recommended approval of Item A (Lot 53) and Item C (Lot 58), finding that both developments comply with the Master Plan. However, the PC continued Item B (Lot 57) to the May 21, 2025, PC meeting and required the applicant to address Condition #5 before Town Council review. Below was Condition #5:

Condition #5 - Prior to Town Council review, the applicant shall revise the site plan and landscape plan for Lot 57 to include additional landscaping and trees (at least 18' tall) in front of the northeast section of the south building and remove the vehicular turn-out and replace it with additional landscaping and trees (at least 18' tall). In addition, the applicant shall make design changes that further reduce the bulk and scale of the northeast corner of the south building. Suggested changes could include, but are not limited to, removing a section of building on the east side, shifting the building farther south, removing a partial story, shortening the roof overhang above the easternmost third-floor unit, reducing square footage, modifying the floor plans to create larger step-backs on upper units, and/or reducing unit counts.

In response to Condition #5, the applicant made the following changes, which are reflected in the applicant's current submittal:

Change #1 – Bulk and Scale

- The third-floor easternmost unit of the south building was changed from a three-bed unit to a two-bed unit and reduced in size from 1,798 sf to 1,440 sf. The walls of this unit were also pushed south and westward to create larger step backs. These changes also resulted in recessed roof eaves and the removal of the unit's balcony, which reduced massing in front of the second-floor unit below. In addition, the third-floor unit directly west of the unit described above was reduced in size from 1,656 sf to 1,506 sf. The roof eaves were also recessed further back to reduce the bulk and scale.

Change #2 – Landscaping

- The site plan was revised to enhance visual screening between the 57 South building and the northern neighbors by adding more plantings. The vehicular drop-off area was removed and replaced with a landscaped planter featuring trees along the roadway. Additional shrub planting areas were introduced on both sides of the parking garage entrance for the south building. (Civil engineering advised against dense tree plantings in this location to maintain clear visibility for vehicles exiting the driveway.) Tall trees were also added to the east of the electrical transformer to screen it from neighboring properties.

As previously noted above in the Dimensional Limitations Plan section of the Master Plan (pages 66–100) section on pages 17–18, staff determined that the proposed modifications to Lot 57 met Condition #5 and that the buildings were generally consistent with the Master Plan. This analysis was presented to the PC. Following an in-depth discussion, the PC ultimately concluded that the applicant's proposed changes satisfied Condition #5 and voted to recommend approval to the Town Council (5–1). During their discussion, the PC acknowledged that the buildings on Lot 57 are significantly larger than the surrounding development and struggled with interpreting the Master Plan, which calls for general consistency with existing development but also provides a high level of flexibility. While there were concerns regarding the bulk, scale, and character—particularly of the south building—the Commission recognized that the Master Plan allows for considerable flexibility and larger-scale development on this lot. Although the PC found the neighbors' concerns to be understandable, they concluded that the proposed design is permissible under the Master Plan's allowances, despite its greater scale relative to adjacent properties. In their review of all three Development Plans, the PC discussed several key topics:

- **Guest Parking**: The PC suggested the applicant consider adding more guest parking spaces beyond the three proposed south of Lot 53.
- **Affordable Unit Parking**: The applicant clarified that one parking space would be allocated to each one-bedroom affordable unit, and two spaces for each two- and three-bedroom unit.

- **Livability of Affordable Units**: The PC noted that the applicant should explore opportunities to try to enhance the livability of certain affordable units, such as improving access to light and open space, but no conditions were recommended. They also acknowledged that the LDRs permit restricted units to be located anywhere within a building, provided livability standards are met.
- **Pedestrian Connectivity**: The PC recommended improving the pedestrian passage between the north and south buildings on Lot 57 to create a more welcoming connection.
- **Bicycle Parking**: Some PC members encouraged the applicant to incorporate short-term bicycle parking, including charging stations for e-bikes.

Public Comment
Public comment has been received and is attached. In general, the majority of public comments were received by owners in the Grand View & Love Ridge Condos, who in general oppose the overall development. With that said, the majority of the concerns are related to the development of Lot 57 not fitting in with the bulk, scale, and character of the existing surrounding development.

Findings for Development Plan.
ITEM A (Lot 53): All Development Plan proposals may be approved only if all of the following findings are made:

1. *The proposed project is consistent with the desired future character described for the site in the Jackson/Teton County Comprehensive Plan.*

   Not applicable. This finding is not applicable according to the Wyoming Supreme Court.

2. *The proposed project achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable.*

   Not applicable. The property is not located within the Natural Resource Overlay (NRO) or Scenic Resources Overlay (SRO).

3. *The proposed project does not have a have a significant impact on public facilities and services, including transportation, portable water and wastewater facilities, parks, schools, police, fire, and EMS facilities.*

   Complies. As conditioned, staff finds that the project will not have a significant impact on public facilities and services. The new project will offer upgraded on-site infrastructure to meet current development standards. In addition, the proposed traffic impacts are within what was contemplated for the Master Plan build-out.

4. *The proposed project complies with the Town of Jackson Design Guidelines, if applicable.*

   Complies. Although the project is not subject to the Town of Jackson Design Guidelines, the Master Plan Design Guidelines do apply and serve a similar purpose to the Town Design Guidelines. As noted in the staff analysis, SKRMA, the Town DRC, and staff find the project to comply with the Master Plan Design Guidelines. Staff also notes that the 2019 Master Plan Amendment started requiring all new projects to be reviewed by the Town DRC, and thus this is the first project in the Master Plan to receive an additional architecture review.

5. *The proposed project complies with all relevant standards of these LDRs and other Town Ordinances.*

Complies. As conditioned, staff finds that the application meets all standards of the LDRs and other Town Ordinances.

6. *The proposed project is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.*

   Complies. As conditioned, staff finds that the project complies with all applicable standards found in the Master Plan, which is the governing pre-approval document for Lot 53.

ITEM B (Lot 57): All Development Plan proposals may be approved only if all of the following findings are made:

1. *The proposed project is consistent with the desired future character described for the site in the Jackson/Teton County Comprehensive Plan.*

   Not applicable. This finding is not applicable according to the Wyoming Supreme Court.

2. *The proposed project achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable.*

   Not applicable. The property is not located within the Natural Resource Overlay (NRO) or Scenic Resources Overlay (SRO).

3. *The proposed project does not have a have a significant impact on public facilities and services, including transportation, portable water and wastewater facilities, parks, schools, police, fire, and EMS facilities.*

   Complies. As conditioned, staff finds that the project will not have a significant impact on public facilities and services. The new project will offer upgraded on-site infrastructure to meet current development standards. In addition, the proposed traffic impacts are within what was contemplated for the Master Plan build-out.

4. *The proposed project complies with the Town of Jackson Design Guidelines, if applicable.*

   Complies. Although the project is not subject to the Town of Jackson Design Guidelines, the Master Plan Design Guidelines do apply and serve a similar purpose to the Town Design Guidelines. As noted in the staff analysis, SKRMA, the Town DRC, and staff find the project to comply with the Master Plan Design Guidelines. Staff also notes that the 2019 Master Plan Amendment started requiring all new projects to be reviewed by the Town DRC, and thus this is the first project in the Master Plan to receive an additional architecture review.

5. *The proposed project complies with all relevant standards of these LDRs and other Town Ordinances.*

   Complies. As conditioned, staff finds that the application meets all standards of the LDRs and other Town Ordinances.

6. *The proposed project is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.*

   Complies. As conditioned, staff finds that the project complies with all applicable standards found in the Master Plan, which is the governing pre-approval document for Lot 57.

ITEM C (Lot 58): All Development Plan proposals may be approved only if all of the following findings are made:

1. *The proposed project is consistent with the desired future character described for the site in the Jackson/Teton County Comprehensive Plan.*

   Not applicable. This finding is not applicable according to the Wyoming Supreme Court.

2. *The proposed project achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable.*

   Not applicable. The property is not located within the Natural Resource Overlay (NRO) or Scenic Resources Overlay (SRO).

3. *The proposed project does not have a have a significant impact on public facilities and services, including transportation, portable water and wastewater facilities, parks, schools, police, fire, and EMS facilities.*

   Complies. As conditioned, staff finds that the project will not have a significant impact on public facilities and services. The new project will offer upgraded on-site infrastructure to meet current development standards. In addition, the proposed traffic impacts are within what was contemplated for the Master Plan build-out.

4. *The proposed project complies with the Town of Jackson Design Guidelines, if applicable.*

   Complies. Although the project is not subject to the Town of Jackson Design Guidelines, the Master Plan Design Guidelines do apply and serve a similar purpose to the Town Design Guidelines. As noted in the staff analysis, SKRMA, the Town DRC, and staff find the project to comply with the Master Plan Design Guidelines. Staff also notes that the 2019 Master Plan Amendment started requiring all new projects to be reviewed by the Town DRC, and thus this is the first project in the Master Plan to receive an additional architecture review.

5. *The proposed project complies with all relevant standards of these LDRs and other Town Ordinances.*

   Complies. As conditioned, staff finds that the application meets all standards of the LDRs and other Town Ordinances.

6. *The proposed project is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.*

   Complies. As conditioned, staff finds that the proposed application is in conformance with the Master Plan, which is the equivalent to a Sketch Plan in this instance.

Staff Impact.
The amount of staff time to review these Development Plans and staff report drafting is approximately 100-120 hours.

Attachments or Links.
Applicant's Submittal
Department Reviews

Public Comment
Snow King Master Plan link

Suggested Motion.
ITEM A (Lot 53): I move to **approve** Development Plan P24-168 for a new three-story, 43,209 sf condominium building with a basement located on Lot 53 (553 Upper Snow King Loop) based upon the findings and conditions presented in the staff report, the departmental reviews, and subject to this staff report dated June 2, 2025.

ITEM B (Lot 57): I move to **approve** Development Plan P24-174 for two new three-story, condominium buildings with a basement, one 18,552 sf and another 24,599 sf, located on Lot 57 (510 Upper Snow King Loop) based upon the findings and conditions presented in the staff report, the departmental reviews, and subject to this staff report dated June 2, 2025.

ITEM C (Lot 58): I move to **approve** Development Plan P24-175 for a new three-story, 24,905 sf condominium building with a basement located on Lot 58 (725 Upper Snow King Loop), based upon the findings and conditions presented in the staff report, the departmental reviews, and subject to this staff report dated June 2, 2025.

Snow King Condominiums



DEVELOPMENT PLAN REVISED SUBMISSION FOR TOWN COUNCIL MEETING

MAY 16, 2025

NORTHWORKS | BEAR DEVELOPMENT

NORTHWORKS

May 16, 2025

Tyler Valentine, Senior Planner
Town of Jackson

RE: Development Plan for Snow King Resort Lots 53, 57, and 58

Tyler,

We are pleased to submit these three development plan applications for Lots 53, 57, and 58 of the Snow King Resort. In total we propose 110,370 square feet and 240 APOs of development along with 12 affordable housing units spread through 4 buildings. Each building is 3-stories over a basement, with on-site parking. We intend to phase the construction, building Lot 57 first.

Our proposal was approved as consistent with the Snow King Resort Master Plan Design Guidelines by both SKRMA (May 23, 2024) and the Town Design Review Committee (June 12, 2024). SKRMA's approval letter is attached and also attests to the allocation of floor area and APOs from the Master Plan pool to this project. Since our original submission SKRMA has revised its accounting of floor area and APOs and the new accounting is reattached for reference; none of the changes impact Lots 53, 57 & 58.

Because this project is governed by the Snow King Resort Master Plan, the high-level character, location, bulk, and infrastructure have already been approved. Our application demonstrates compliance with the approved Master Plan. A summary of the proposed development relative to the Master Plan requirements is in the table below, with more details on the following pages.

Topic	Master Plan Standard	Lot 53	Lot 57	Lot 58
Location	Build within lot lines	Within Lot 53	Within Lot 57	Within Lot 58
Landscaping	10% LSR (min)	20% LSR 7,245 sf	18% LSR 6,750 sf	57% LSR 27,401 sf
Floor Area	915,000 sf across Resort 334,675 sf exist; 580,325 sf allowed	112,952 sf purchased by owner 110,329 sf proposed		
		42,314 sf	43,110 sf	24,905 sf
Height	3 stories over basement	3 stories over basement	3 stories over basement	3 stories over basement
Bulk	1 building or many	1 building	2 buildings	1 building
Design	SKRMA approval, DRC review	SKRMA and DRC approval	SKRMA and DRC approval	SKRMA and DRC approval
APOs	2,208 across Resort 832 exist; 1,376 allowed	240 APOs purchased by owner 240 APOs proposed		
		104 APOs	88 APOs	48 APOs
Parking	1 space per unit, on-site	1.3/unit, on-site	1.1/unit, on-site	1.6/unit, on-site
Housing	Meet LDR standard	5.925 units req. 5 units on Lot 53 + fee-in-lieu	5.414 units req. 5 units on Lot 57 + fee-in-lieu	2.962 units req. 2 units on Lot 53 + fee-in-lieu

Please let us know if any questions arise during your review.

Sincerely,

Nick Orthmann, Bear Development

NORTHWORKS

Table of Contents

01 Project Narratives 4
- Site Overview 5
- Summary of Design Changes 6
- Master Plan Compliance Narrative 15
- Additional LDR Compliance Narrative 29
- Proposed Findings for Approval 30
- Engineering Narrative 31
- Engineering Responses to Conditions 38
- SKRMA Accounting of Development Potential 43
- Housing Calculators 45

02 Architectural, Civil & Landscape Plans 54
- Existing Site 55
- Proposed Design Overview 62
- Overall Renderings 69
- Lot 57 Drawings 84
- Lot 53 Drawings 106
- Lot 58 Drawings 120
- Master Plan Analysis 134
- Civil & Landscape Details 142

03 Construction Management Plan 161

04 Engineering Report Attachments 167

05 Application Documents 178
- Application Forms 179
- Letter of Authorization 185
- Title Reports 186

06 Geotechnical Report ..... Refer to Addendum

NORTHWORKS

Project Narratives

SITE OVERVIEW

The proposed project is comprised of four condominium buildings across 3 lots, located at Snow King Resort Lots 53, 57 & 58 (Sub-Area #3). These parcels are bounded by Snow King Loop Road and the Grand View Condos to the north and the Cowboy Coaster to the south. For purposes of this application, we are referring to each building as “Lot 53”, “Lot 58”, “Lot 57 North” and “Lot 57 South”.

Each building includes 3 stories of residential condo units above basement parking. The market units will be sold to individual owners, and those individuals can rent the units out short-term at their discretion. Affordable housing units are also included in the project. The goal of this development is to create a strong sense of place between the three lots while also relating to the overall design elements of the Snow King Resort and surrounding context.

	Lot 53	**Lot 57**	**Lot 58**
PIDN	22-41-16-34-3-04-001	22-41-16-34-3-07-001	22-41-16-34-3-07-002
Address	553, Upper Snow King Loop	510, Upper Snow King Loop	725, Upper Snow King Loop
Legal	Lot 53, Grand View Lodges 2nd Addition	Lot 57, Grand View Lodges 3rd Addition	Lot 58, Grand View Lodges 3rd Addition
Zone	PR-SK	PR-SK	PR-SK
Subarea	Master Plan Subarea 3	Master Plan Subarea 3	Master Plan Subarea 3
GSA	34,412 sf	36,155 sf	47,916 sf

The three lots sit on relatively steep terrain with ski-in, ski-out access to the Snow King Ski Resort. The plazas, roads, and interstitial spaces between these four buildings shall be enlivened with plantings and materials that connect to the style of the Snow King Resort and create a safe and welcoming environment. Parking garages will be enclosed with solid garage doors, and pedestrian walking will be encouraged. The buildings will be connected to the surrounding landscape for easy access to the ski slopes and the town center.

In addition to the development proposed on the above sites, access and utilities will be constructed in easements that access the site across SKRMA land. Discussions with SKRMA are ongoing, and agreements will be worked out prior to construction.

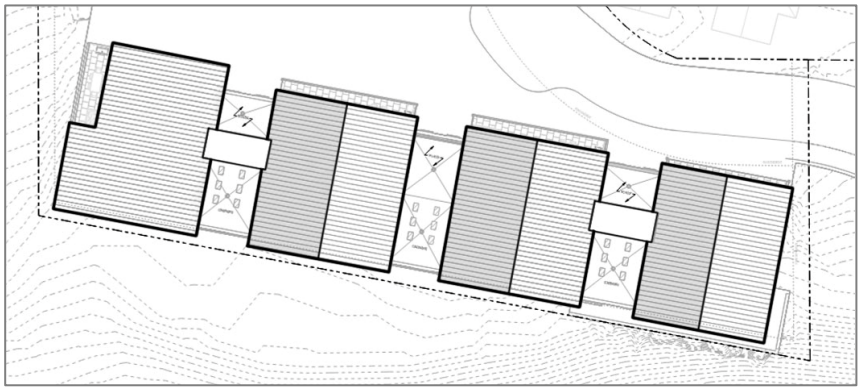
SUMMARY OF DESIGN CHANGES SINCE APRIL 15, 2025, PLANNING COMMISSION

Lot 57 – Summary of New Design Changes Since First Planning Commission Meeting

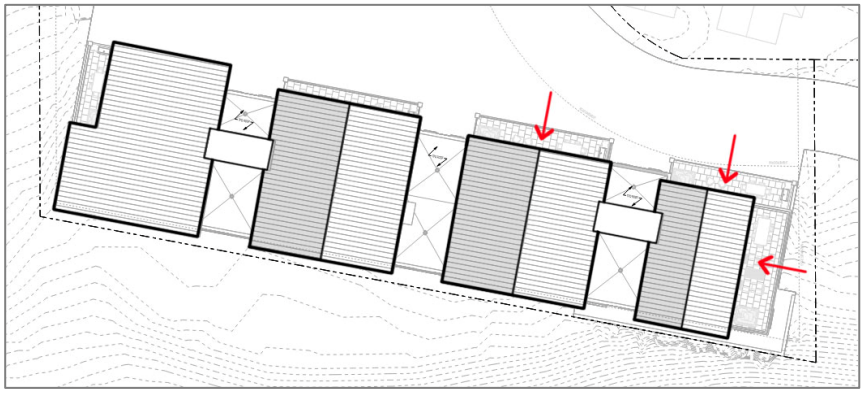
Change 1: Reduced the mass of the Lot 57 South building at the east end. The third floor eastern unit was changed from a 3-bedroom to a 2-bedroom and reduced in square footage. The eastern wall of this unit was pushed westward to create a larger stepback on the eastern façade. This also allowed us to entirely remove the north-facing balcony at that unit, which creates a large stepback at the north façade as well.



Revised Lot 57 South elevation



Previous roof plan



Revised roof plan

Change 2: Increased landscaped planting areas. The site plan was adjusted to add more planting for visual screening between the 57 South building and the neighbors to the north. The vehicular drop-off area was removed and replaced with a green planter with trees along the road. Additional planting areas for shrubs were added on either side of the south building parking garage entry. (Civil engineering advised that dense trees are not safe here because they would reduce visibility for cars turning out of the driveway.) Tall trees were also added east of the electrical transformer to screen it from neighbors.



Lot 57 – Previous Site Plan, revised for Planning Commission



*Lot 57 – **New** Revised Site Plan with added greenery*



View of added landscaping and reduced massing at east end of Lot 57 South Building

SUMMARY OF PREVIOUS DESIGN CHANGES AFTER OCT. 2024 DEVELOPMENT PLAN SUBMISSION, FOR APRIL PLANNING COMMISSION

In response to feedback received on the initial design, the design team has reduced the mass of each building to better align building with neighboring structures, moved the Lot 53 building further south and provided increased landscaping throughout the project site. The changes outlined below show updates to the site and building designs relative to our initial October 2024 Development Plan submission. All the design updates fit within the design guidelines and dimensional limitations of the Snow King Planned Resort District Master Plan.



Revised Aerial Rendering of Lots 57, 53, & 58

Lot 57 – Summary of Design Changes

Change 1: Increased landscaped areas. The sidewalk leading downhill from the 57 South building to the 57 North building was removed, allowing for additional planting to buffer between the North building and the street. The sidewalk to the east of the 57 South building was also removed to introduce more planting, including a planter along the north façade. This will further screen the South building's east entry and driveway. Crosswalks will be used to delineate the pedestrian walking paths from Lot 57 up to Lot 53 and 58.



Lot 57 – Previous Site Plan



Lot 57 – New Site Plan

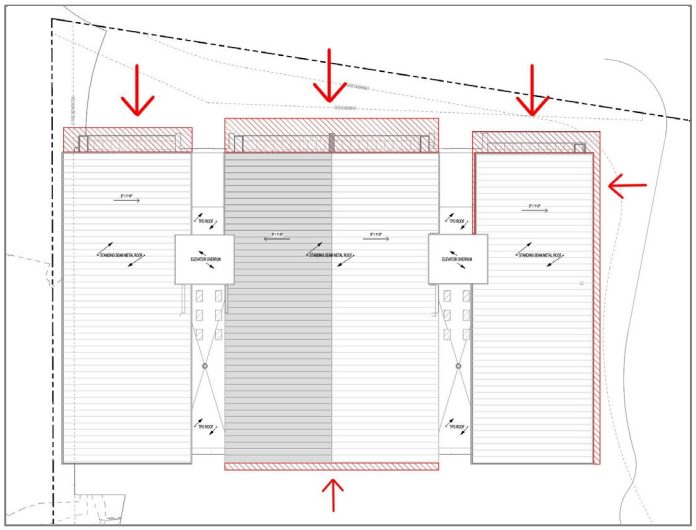
Change 2: North Building roof adjustments. The eastern shed roof was mirrored to slope in the opposite direction, resulting in a lower building height along the facade closest to Grand View. Additionally, all roofs were lowered by 1'-0" in height, and roof overhangs were pulled back to only extend 3'-0" from the exterior wall.



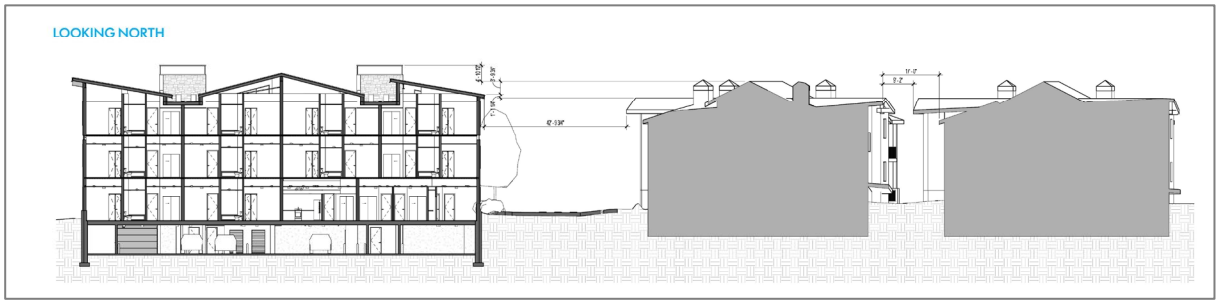
Lot 57 North – Previous Elevation



Lot 57 North – New Elevation

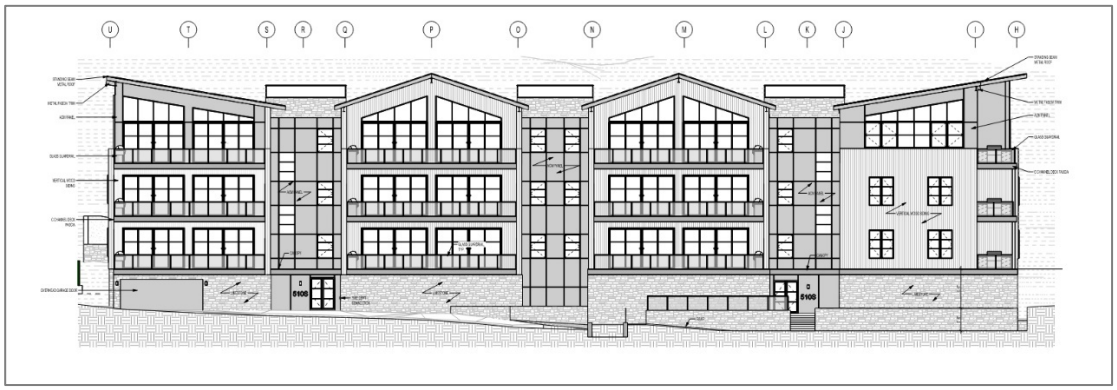


Lot 57 North – Reductions in Roof Footprint Noted in Red

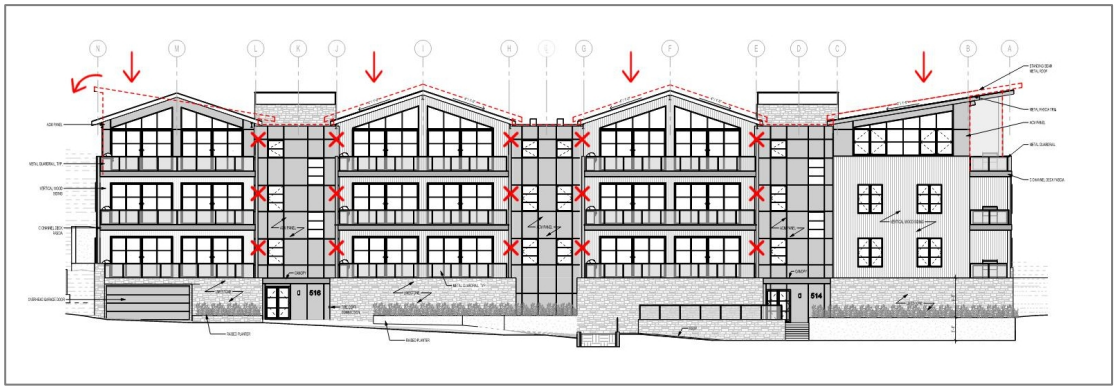


Site Section showing the relationship in heights between Lot 57 North and the adjacent Grand View buildings

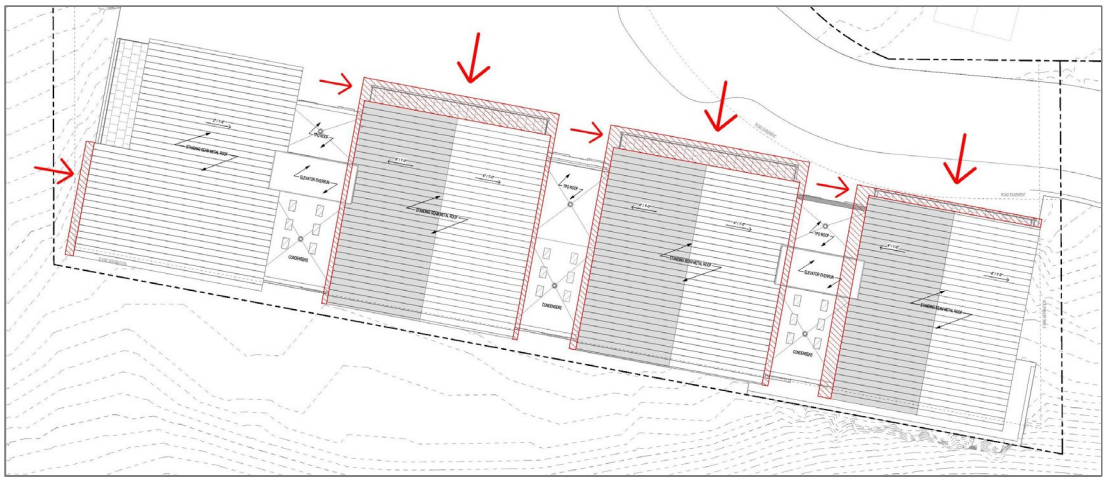
Change 3: South Building roof adjustments. The easternmost roof was changed to a gable roof, which greatly reduces the height of the building at the east façade. Additionally, all roofs were lowered by 1’-0” in height, and roof overhangs were pulled back to only extend 3’-0” from the exterior wall.



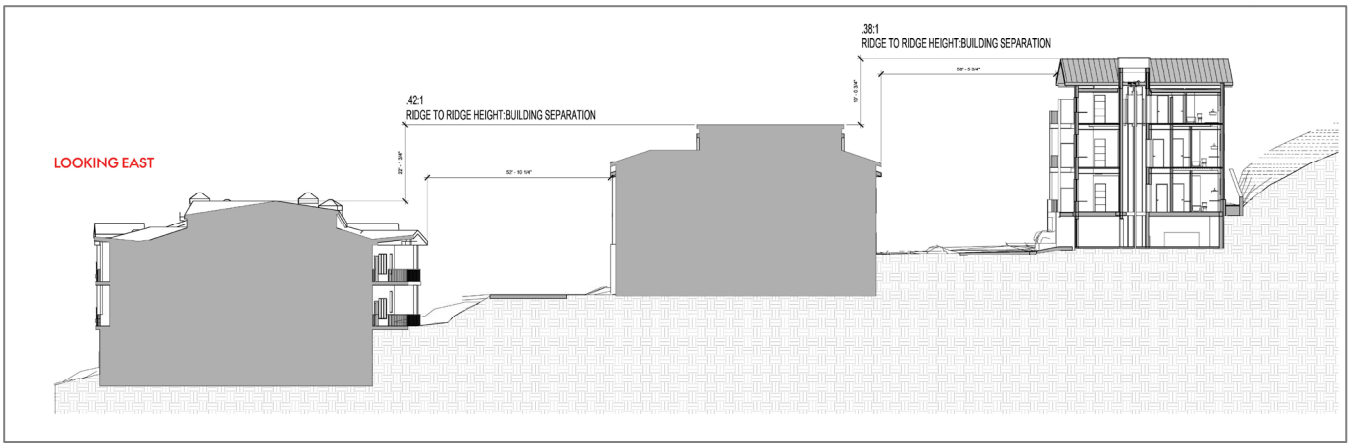
Lot 57 South – Previous Elevation



Lot 57 South – New Elevation



Lot 57 South – Reductions in Roof Footprint Noted in Red



Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings

Change 4: Reduction of solid walls at balconies. As shown in red 'X' labels on the preceding elevation diagrams, both the North and South buildings' balconies were redesigned to be more open-air and less enclosed by solid walls flanking each end.



Lot 57 North – Previous Solid Balcony Walls



Lot 57 North – New Open Balcony Guardrails

Lot 53 – Summary of Design Changes

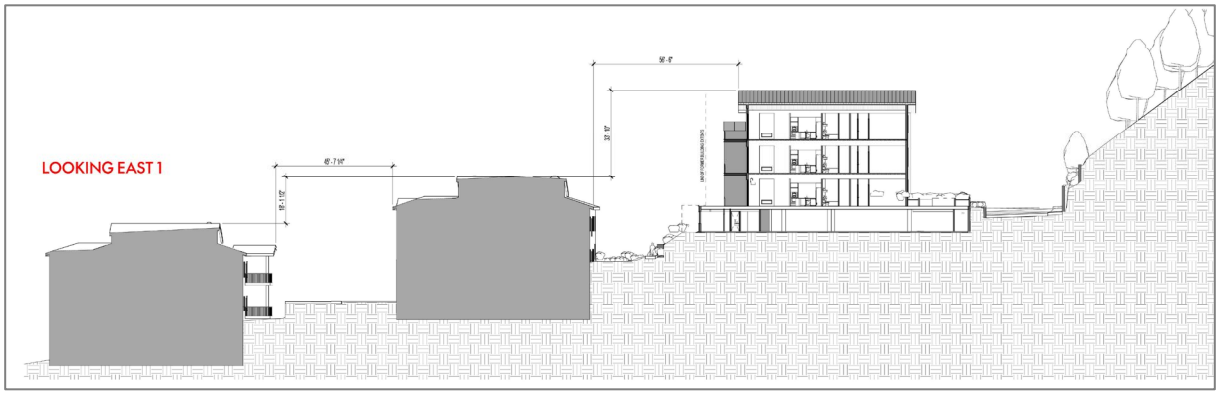
Change 5: Pushed back the entire Lot 53 building away from Grand View. The first, second, and third floor units were pulled south 15'-0" on average and 5'-0" at the central fire truck turnaround. The north basement floor plan was also pulled south an average of 5'-0" to create more space between this building and the neighbors to the north. A secondary retaining wall was removed at the north setback, allowing for additional planting and boulders to mediate the space between the two lots. Linear planter boxes were also added along the north edge of the basement roof to help create a screen between Grand View and the Lot 53 first floor terraces.



Lot 53 – Previous Site Plan



Lot 53 – New Site Plan



Site Section showing the relationship in heights between Lot 53 and the downhill Grand View buildings



Lot 53 – Setbacks and Landscape Buffers Between Lot 53 & Grand View

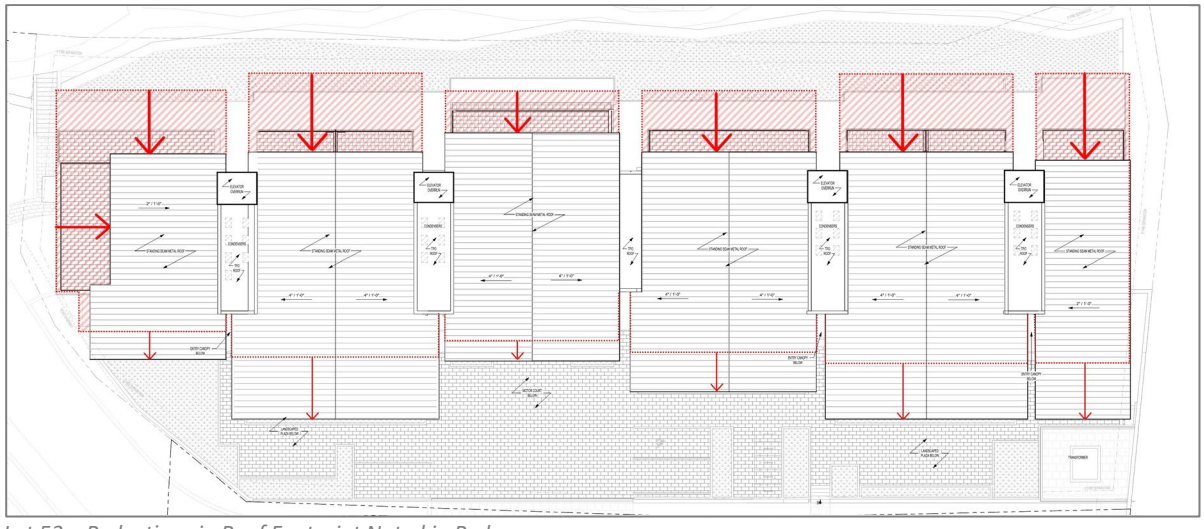
Change 6: Roof adjustments. In additional to pulling the building south, the third floor roofs were also reduced in size and in height. All the gable roofs were lowered by 1’-0” in height, and the shed roofs on the east and west end were lowered by 2’-0”. Additionally, roof overhangs were pulled back to only extend 3’-0” from the exterior walls.



Lot 53 – Previous Elevation



Lot 53 – New Elevation



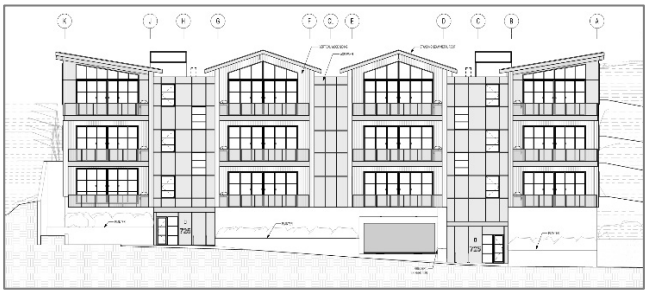
Lot 53 – Reductions in Roof Footprint Noted in Red

Change 7: Western unit stepback. As shown in the roof plan above, the third-floor western unit footprint was adjusted to greatly reduce the visual massing along the west façade. Its western exterior wall was pushed east another 10’-6”, and its roof footprint was also drastically pulled back to reduce the visual overhang.

Change 8: Reduction of solid walls at balconies. As shown in red ‘X’ labels on the preceding elevation diagrams, both the Lot 53 balconies were redesigned to be surrounded by more open-air guardrails and fewer solid walls at each end.

Lot 58 – Summary of Design Changes

Change 9: Reduction of solid walls at balconies. As shown in red ‘X’ labels below, both the Lot 53 balconies were redesigned to be surrounded by more open-air guardrails and fewer solid walls at each end.



Lot 58 – Previous Elevation



Lot 58 – New Elevation

MASTER PLAN COMPLIANCE NARRATIVE

The Snow King Resort Master Plan (Master Plan) that governs development on the subject property was approved in 2019. It establishes the entitlements and development standards for the site, addresses the major questions of development character, location, bulk, and scale, and addresses infrastructure and other considerations on a Resort-wide basis. It also serves as the Sketch Plan for all development within the Resort. The Master Plan has 12 Chapters. Applicability of each chapter to this application is discussed below.

Introduction

While the introduction does not include any standards for new development, it is instructive on how to read and use the various chapters of the Master Plan. In general, Chapters I-III of the Master Plan memorializes the compliance of the Master Plan with the Land Development Regulations and Comprehensive Plan. Chapters IV-X establish standards for new development and are the primary focus of this application. Finally, Chapters XI-XII establish standards for the continued operation of the ski hill and administration of the Resort.

More specifically, the introduction is clear that the site plans are conceptual (p.3). They establish the general location of development, open space, and pedestrian connectivity through lot lines and subarea boundaries. They illustrate the example development used to plan for the overall impact on public infrastructure. Where specific setbacks and heights, setbacks, and other dimensional limitations are required to achieve the desired character, they are specified in Chapter VII, Dimensional Limitations Plan. Where dimensions are not specified, the Master Plan relies on the Design Guidelines in Chapter VI to ensure consistency with the Master Plan (p.5). SKRMA administers the Snow King Design Guidelines with review by the Town DRC (p.54).

I. Statement of Purpose

This Chapter states the purpose of the Master Plan. Demonstration of our proposal's consistency with that purpose is the product of the totality of this application.

II. Consistent with Comp Plan

This Chapter outlines compliance of the Master Plan with the Jackson/Teton County Comprehensive Plan. By demonstrating compliance with the Master Plan, our application is also consistent with the Comprehensive Plan.

III. Compliance with LDRs

This Chapter outlines compliance of the Master Plan with the Town of Jackson Land Development Regulations. By demonstrating compliance with the Master Plan, our application is also consistent with the Land Development Regulations governing Resorts (Div. 4.3). See below for additional demonstration of compliance with the LDRs not addressed by the Master Plan.

IV. Master Site Plans

The Master Plan divides the Resort into subareas. The proposed development is in Subarea 3, which also includes the Love Ridge and Grand View condominiums and the Grand View Lodge. The Master Site Plans establish the lot lines within which the development must occur. While the Master Site Plans depict buildings to illustrate the overall location and scale of development, the bounds of the development location for Subarea 3 are the lot lines with no additional setbacks. Throughout the Master Plan, the site plans are referred to as conceptual except where setbacks are established for specific subarea – no setbacks are established for Subarea 3. The lots are

already set back from neighboring properties. Our proposed buildings are within each lot and, on Lot 58, pulled down the hill to limit disturbance.

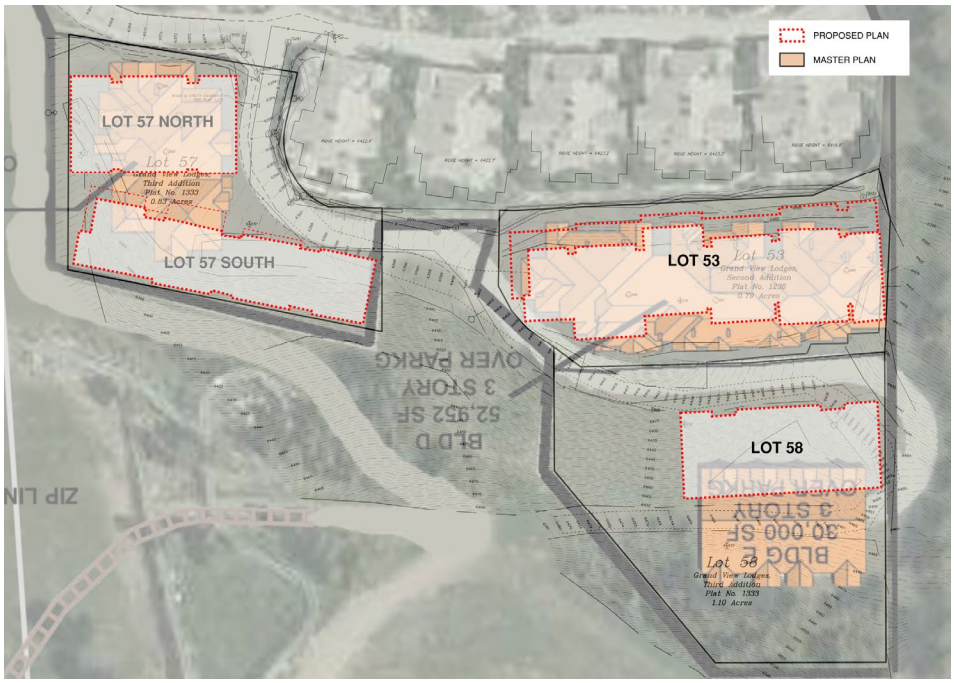


Figure 1 - Proposed site plan overlayed on Master Site Plan

The Master Site Plan also includes a circulation plan that indicates where sidewalks should be provided. Our proposal provides not only the Master Plan sidewalks but additional pedestrian connectivity of the site to the Resort's recreational amenities.

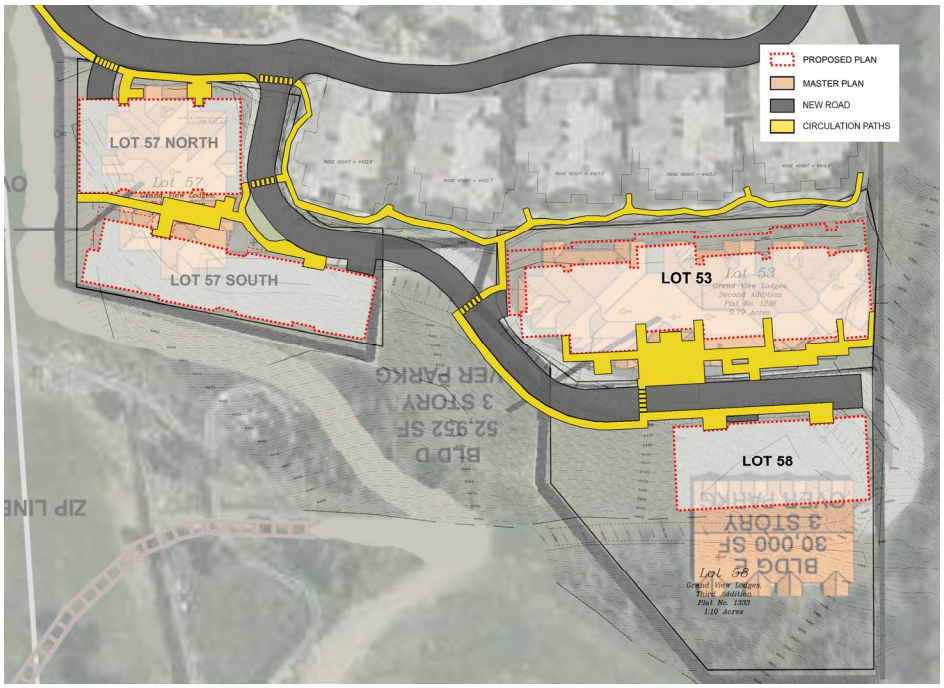


Figure 2 - Proposed pedestrian circulation plan overlayed on Master Sidewalk Plan

V. Land Use Plan

The proposed residential and short-term rental of the market condominiums are each a by-right use in Subarea 3 of the Snow King Master Plan, as is affordable workforce housing (also referred to as "Employee Housing" in the Master Plan). These uses are also the type of development anticipated in the example development table, making the proposal consistent with the resort-wide impact planning done during Master Plan approval. Below is a table showing the mix of market and affordable units by bedroom.

AREA & UNIT MIX OVERVIEW

SITE	FAR SUBTOTAL (SF)	GROSS AREA SUBTOTAL (SF)	# 1 BEDS	# 2 BEDS	# 3 BEDS	# 4 BEDS	MARKET UNIT COUNT	REQ. # OF AFF. UNITS	AFF. 1-BEDS REQ.	AFF. 1-BEDS PROVIDED	AFF. 2-BEDS REQ.	AFF. 2-BEDS PROVIDED	AFF. 3-BEDS REQ.	AFF. 3-BEDS PROVIDED	TOTAL AFF. UNITS REQ.	TOTAL AFF. UNITS PROVIDED	TOTAL REQUIRED PARKING	PARKING PROVIDED	PARKING PROV. INCL. TANDEM
LOT 57 NORTH	18,571	31,957	0	10	0	0	10	5.414	2	2	2	1	1	1	5	4	14	15	19
LOT 57 SOUTH	24,539	36,812	0	5	5	2	12			0		1		0		1	13	14	22
								PHASE 1: LOT 57	2	2	2	2	1	1	5	5			
										AFF. 1-BEDS OK		AFF. 2-BEDS OK		AFF. 3-BEDS OK	TOTAL REQ.	TOTAL AFF. OK			
LOT 53	42,314	71,705	1	18	7	0	26	5.822	2	3	2	3	1	1	5	7	33	42	57
LOT 58	24,905	34,849	0	7	5	0	12	2.962	1	0	1	0	0	0	2	0	12	19	19
								PHASE 2: LOTS 53 & 58	3	3	3	3	1	1	7	7			
										AFF. 1-BEDS OK		AFF. 2-BEDS OK		AFF. 3-BEDS OK	TOTAL REQ.	TOTAL AFF. OK			
									REQ.	PROVIDED	REQ.	PROVIDED	REQ.	PROVIDED	REQ.	PROVIDED			
	110,329	175,323	1	40	17	2	60	ALL LOTS TOTAL	5	5	5	5	2	2	12	12	72	90	117
	TOTAL FAR AREA	TOTAL GROSS AREA	1-BEDS	2-BEDS	3-BEDS	4-BEDS	MARKET UNITS			AFF. 1-BEDS OK		AFF. 2-BEDS OK		AFF. 3-BEDS OK	TOTAL REQ.	TOTAL AFF. OK	REQ.	PROVIDED	PROVIDED INCL. TANDEM
			2%	67%	28%	3%													

MAX. SHORT TERM	112,952
OVER/UNDER	-2,623
	UNDER

VI. Design Guidelines

The Master Plan Design Guidelines (not the Town Design Guidelines) govern development in the Resort. The Master Plan Design Guidelines are administered by SKRMA with review by the Town DRC. As required by the Master Plan, the proposal has been approved as consistent with the Master Plan Design Guidelines by both the Snow King Resort Master Association (SKRMA), on May 23, 2024, and the Town of Jackson Design Review Committee (DRC), on June 12, 2024. SKRMA's approval letter is attached. Since the reviews by SKRMA and the DRC, the configuration of the units and Lot 53 entrance has changed slightly – increasing the pedestrian space and further breaking up the massing Lot 53 so that it reads as multiple buildings similar to the neighboring Grand View development.

Below is a detailed description of the project's compliance with the Design Guidelines, which is unchanged from the SKRMA and DRC submittals. See also the Architectural, Civil & Landscape Plans for plans and renderings of the proposed development.

A. Introduction.

The introduction establishes the Snow King Master Plan Design Guidelines (Design Guidelines) as the method by which a proposal is evaluated for compliance with Section 4.3.1.F.7 of the Town of Jackson Land Development Regulations (LDRs). It establishes SKRMA as the administrator of the Design Guidelines and the DRC as a review entity.

B. Design Guidelines. Character and Design Objectives.

Despite its title, Section B applies specifically to the portion of the resort fronting Snow King Avenue and is not applicable to Lots 53, 57, and 58. The general statements regarding pathways and relationship to the ski hill (B.8 and B.9) are addressed later in the guidelines as they apply to Lots 53, 57, and 58 (C.6).

C. Design Guidelines. General Purposes. The general purpose of the design guidelines is to create visual variety while maintaining a sense of cohesiveness- balancing control and connectivity with enough flexibility in choice of materials and style to give life to the resort. New architecture in the Resort is to have, "clean rooflines, taper-sawn shake roofs, and clearly expressed structure." "While rustic character has been adopted for other resorts, a more direct simple architecture that capitalizes on large areas of glass, simple roof forms and tautly detailed elegant materials, will distinguish Snow King from other Jackson experiences."

The proposed development on Lots 53, 57 & 58 achieves this by integrating the materials and forms from the Grand View development with the more recent development at the Rafferty base area and Snow King summit. The vertical elements, recessed forms, stone base, siding, and roof gables all reference Grand View design and massing, while the single-pitch roofs and larger windows on the building ends reference the on-mountain design and desire for simpler forms and more glass.

The remainder of Section C spells out the LDR requirements for the Design Guidelines, which are specified for Snow King in the Sections that follow.

D. Architectural Design Guidelines.

1. Building Form, Massing and Character:

The design fits in with the ToJ context with its simple but elegant architectural forms and materials. The public spaces between buildings shall be comfortable landscaped plazas that encourage pedestrian activity.

> Buildings must feel as if they fit in the context of the Town of Jackson. They should not seem "imported" from someplace else. They must not overwhelm the pedestrian scale. Building masses will be broken down through the use of covered arcades at pedestrian levels and through the use of building envelopes that require the structures to step back away from the street or plaza.

The design references all of the surrounding development in a way that cohesively completes Subarea 3. The vertical elements of the hotel, siting and materials of Grand View and modern roof lines of the Rafferty base are all incorporated into the proposal.

> Architectural forms will be simple and practical, not elaborate. They must reflect an ability to deal with the severe climate and have honesty and directness similar to the best indigenous structures such as barns and sheds, or some of the structures in Yellowstone and Grand Teton National Parks.

The architecture forms reference the Grand View development while also introducing some of the simplicity and practicality incorporated into the more modern development at the base of Rafferty.

> In general, building forms should be used to create definable public spaces between buildings. Buildings affronting plazas should create an edge that defines the space. Buildings on the south side of a plaza step back above the second story to allow light into the plaza. Where building facades face the mountains or non-pedestrian spaces, buildings will be allowed to rise without necessarily stepping back.

The proposal includes an east-west pedestrian experience that begins with a plaza on Lot 53 and extends to the west via sidewalk to another plaza between the buildings on Lot 57 feeding out onto the ski slopes at the base of Rafferty. The south building on Lot 57 is set back from the plaza by pedestrian scale landscape terraces that

provide form for the plaza while setting back the building to provide light. On Lot 58 especially, the building has to be tall enough as viewed from the downhill side so that the retaining wall holding back the hill is not taller than the building itself. The terraced pedestrian experience is what maintains the human scale given the steep slopes. The largest facade, on Lot 53, faces away from the primary pedestrian axis of the development, but includes stepbacks at the first and third floors to provide light to the pedestrian path behind the adjacent Grand View development.

> Buildings should be sited to help shape the spaces around them and to create a sense of "street space" by lining up with adjacent buildings where possible.

The buildings are sited to continue the east-west pattern of Grand View that follows the contours around the hill and breaks mass into separate buildings that step up the hill so that lower buildings hide the lower floors of the buildings above and behind them instead of singular masses running up the hill. Where this is most evident is Lot 57, where the single building shown on the Master Site Plan is broken into 2 buildings that better align and connect the development to Grand View.

> Buildings should employ various architectural devices to help bring the masses to a more friendly, pedestrian scale. Changing materials, breaking the wall line, using different roof forms and adding balconies or projecting bays are some of these devices.

The proposal breaks the development on the 3 lots into four separate buildings, literally breaking the mass, while also employing balconies, varied roof forms and wall recesses that break up the mass further. The development is also socketed into the hillside so that the mass of each building varies on each side.

> Larger buildings may be broken into smaller elements that appear to be an aggregation of smaller buildings. Overly differentiated facades on a single building are to be avoided however.

The vertical recesses along each building's front façade, which range in width between 10 to 18 feet, help to break down each building into a language of aggregated masses separated by recessed gaps. These mirror the Grand View development, where buildings are separated by gaps of a similar scale and, once landscaped, create the same mass-breaking effect.

2. Roofs:

The project's roofs reflect the neighboring architecture, namely: the majority of the roofs, which are gabled, tie into the Love Ridge condos to the north; and a few shed roofs pay homage to the long, sloped roofs of the Snow King Resort Hotel. The majority of roofs are 4:12 gable roofs, with a few shallower shed roofs.

> In order to be sympathetic to the existing Snow King Resort, new buildings must relate to existing architecture by using similar roof forms, generous roof overhangs, and some similar materials such as heavy timber beams holding up roof overhangs.

The roof forms reference the Grand View and Rafferty base area developments.

Primary roofs must be sloped and in keeping with existing roofs, their slopes should predominantly be in the range of 4:12 to 7:12. Flat roofs and parapet roofs will be allowed where they act as connectors from one gabled roof to another and at larger spaces where necessary and not visible from street or plaza levels or where practical for best incorporating structures into the surrounding built environment. Special consideration is to be given to designing roofs in reference with nearby pedestrian uses. Roof materials should be as consistent as possible throughout the Resort.

Gabled roofs throughout each Lot have a 4:12 slope, except at Lot 57, where the gable roof slopes were reduced to 3½:12 at the South building and 3:12 at the North building in order to reduce the overall height. Across all lots, shed roof lines at the edge of each building are 2:12 while referencing the Rafferty base area development.

Large roof overhangs should be held up by heavy timber beams or knee braces. Eave lines should be kept thin to avoid the heavy look of typical cold roof structures with 20" fascias.

Roof overhangs are held up by vertical wood structures that reference the vertical elements of the nearby hotel. Roof lines are kept thin.

3. Exterior Materials: Buildings shall sit on masonry bases, and feel as if they are firmly rooted in the ground. Stone, cultured stone, stucco, synthetic stucco and concrete will withstand the extreme weather conditions and pilling up of snow along the foundations.

   Appropriate materials above the ground level will predominantly be stone, cultured stone, wood siding, wood shingles, heavy timber, logs and glass. Other materials such as brick, stucco, synthetic stucco, oxidized steel, and board-formed concrete will also be allowed to a lesser extent. Buildings should have texture and visible structural purpose.

The buildings sit on stone bases in order to appear “rooted” in the natural hillside environment. Upper stories use wood, metal, and glass to give a lightweight appearance to the structure, and to create a feeling of connection with the surrounding forest. Like its neighbors, this project incorporates natural wood cladding to blend in with the surrounding environment. The warm hues of the stained wood pay homage to the range of wood tones found throughout the Resort. Each building sits on a stone base whose texture references the natural rock found on the mountain while also serving as a contemporary corollary to the stone bases of neighboring buildings. Metal accents on the facades and roofs connect the project to the other modern buildings at the resort.

4. Windows: Windows at the pedestrian level should be as large as possible given the function behind them. For retail and/or hotel frontage windows should represent approximately 75% of the linear frontage.

Ground level windows are larger at pedestrian entries; they are limited at basement garages in order to hide vehicles from sight. Due to the steep nature of the hillside, portions of the 1st and 2nd floors are visible to pedestrians and also use large glassy window openings at residential balconies.

Above the ground floor, there is no minimum requirement of window to wall. In keeping with the existing Snow King Hotel and its available views in all directions, large windows are encouraged. When in heavy walls of stone or concrete, windows should appear to be "punched", and they should have lintels of timber or stone. Metal clad windows, wood windows, and nonreflective aluminum storefront windows are all permitted. Darker colors of the windows are encouraged.

The proposal incorporates large metal-clad windows in all directions very much in keeping with the hotel. Cladding will be black.

Divided light windows, if used, must have real divisions, either true divided light or simulated divided light with metal spacers between the double panes of glass. Snap-in false mountings will not be permitted. Generally larger expanses of glass are preferred to small divisions.

Proposed windows will have real divisions, and the larger expanses of glass match the scale of the glass on the Rafferty base area and Hotel lobby/restaurant windows.

5. Commercial Frontage, Entryways: The proposal does not include retail or hotel storefronts.

6. Decks and Balconies: Decks and balconies add functional amenity to the resort but also become part of the design palette used to add character and create variety on the building exterior. Where possible balconies and decks should be located to take advantage of solar exposure and/or views. Long, linear balconies are not permitted.

Decks and balconies with strong vertical orientation similar to the hotel are a key aspect of the design. They are oriented toward mountain views due to the south aspect of the development being set into the slope. Each residential unit has a generous balcony with views toward the Resort, the town, and Tetons beyond. Balconies are broken up by vertical walls and stepped back portions of the façade to create variety and depth in the massing.

7. Walkways: To promote the sense of a unified resort with pedestrian accessibility, buildings should have covered walkways on facades along which connections can be made to other buildings in the village. Wherever possible these walkways should have retail stores and restaurants and other visually interesting spaces along them. All buildings must take into account pedestrian access to all adjacent buildings and the rest of the Snow King Resort.

Pedestrian accessibility is promoted through outdoor walkways and planted areas that encourage outdoor activity. The proposal connects to the pedestrian paths and sidewalks of the Grand View Lodge and condominiums and moves visitors through two plazas toward the hotel and Rafferty base area. The proposal does not include any retail frontage.

8. Color: The use of color should support and reinforce the overall design theme for Snow King Resort. As a year-round resort, colors chosen must work well in all seasons and help the resort blend with its town context as well as with the natural landscape. Color schemes should be built around natural materials, such as stone and wood. Earth hues, natural colors of foliage, deadfall timber and dried grasses are all appropriate. Primary or bright colors should be used sparingly, as accents to highlight the more muted color schemes. Use of "day glow" colors is not allowed. On wood, stains are preferred over paint.

The overarching warm brown wood tones, interspersed with some gray metal and light concrete tones, will blend in nicely with the environment in all seasons. The proposal employs warm hues of stained wood above stone bases. No bright colors are employed and recessed areas utilize darker colors that pull them back further.

9. Lighting: The lighting systems will serve functional and aesthetic roles that include:
    - Providing security and visual safety
    - Serving as directional indicators for vehicular and pedestrian traffic
    - Providing extended outdoor use time, particularly in pedestrian areas,
    - Reinforcing the identity and character through form, color, and materials of fixtures, visual light quality and placement

    Lighting must be designed and configured in conformance to Town of Jackson standards. Light sources must be shielded so as not to reflect direct light upon adjacent buildings or properties.

Lighting will be designed to comply with Sec. 5.3.1 of the LDRs.

Pedestrian scale lighting: The use of low level light sources at the pedestrian scale to accent or illuminate the ground plane provides a special opportunity to reinforce Snow King's unique identity and character. This is achieved by the use of proper fixtures at lower mounting heights to produce a more intimate effect. At night, the fixtures provide light necessary for safety and visual effect. By day, the fixtures should lend animation and scale to the pedestrian environment. Fixtures at a maximum height of 16 feet will be used for these pedestrian areas. Painted steel will only be used for accent.

Additional pedestrian scale lights may be used including bollard lights at approximately 42" in height, and canister type lights on overhead structures. Lighting for pedestrian areas should be incorporated into the buildings whenever possible.

The lighting design across the site will provide a sense of comfort, safety, and elegance to the project. A combination of low-level pedestrian light sources along pathways and recessed lighting at entry canopies will create a welcoming environment.

9. Disabled Accessibility: Consideration for the disabled must be a part of the design process for any project. Every structure shall be accessible by the disabled through the use of ramps (not to exceed 8%) and/or elevators. All outdoor pedestrian areas must be accessible.

All buildings and walkways will be accessible.

10. Sub Area 2. Specific Guidelines. The proposal is not in Subarea 2.

E. Site Design Guidelines. Plant Palette.

The landscaping and architectural design of site walkways and walls will integrate the building into the hillside; indigenous plantings will screen the building and enhance the shared plazas.

Site design at the Snow King Resort focuses on plant palette and design, pedestrian circulation, site architectural features and the colors and materials that comprise the build environment. Snow King's setting is both urban and rural. On the one hand the in- town location provides a diverse urban design context. This context generally implies that the site design will be dominated by landscape with formal plantings. Conversely, the resort is built into the base of a forested mountain and is bounded by the Bridger-Teton National Forest. This context usually implies a more random or natural site design. The objective will be to intertwine these two design goals, in a transitional manner, without creating confusion.

The landscape plans manage the tension between the urban and rural, formal and natural, tame and wild that are inherent to the site's relationship to town and the Bridger-Teton National forest through the use of inward facing planting spaces that reference the plantings in relationship to the built and urban nature of the site, and views outward from these "internal" planting areas that form a relationship between the on-site landscape outward to the broader context of the surrounding natural landscape. Planting scale and proximity to the pedestrian experience further enhances this relationship with planters and plantings at the pedestrian scale expanding outward to terraced landscaping areas in keeping with the natural slope and scale of plant material surrounding the site.

Just as the resort straddles a seam between the urban and rural environments it is located at the interface of three different plant communities. The lower portions of the site are dominated by the sage/grassland and the Aspen/Chokecherry communities; remnants of these communities still exist along the eastern boundary of the PRD. The higher, moister portions of the site exhibit a Douglas Fir and Spruce plant community.

The landscape plan is developed with a sensitivity to the varying plant communities on and around the site and responds accordingly to, where appropriate, integrate and complement plant species from each of the surrounding distinct plant communities.

Plantings around the resort should mimic these existing communities. Replication of the endemic plants also provides an excellent opportunity to provide visitors with information about the local flora. These plants will also provide an adaptable palette necessary to flourish in the wide variety of moisture, light and temperature conditions, which large buildings create and will also help to weave the rural with the urban environments.

Endemic plants are most suited for use in the climatic and seasonal conditions in which they naturally thrive and are used as such in the landscape design. Plantings of local flora further consider the unique microclimatic conditions created by buildings on the site and are designed in such a way to provide seasonal planting interest year-round throughout the site.

Other planting materials of sufficient caliper will be used to screen and enhance the buildings. In general, the plant material will be in accordance with the Land Development Regulations, except for areas designated as Ski Trails and Outdoor Recreation.

In accordance with the Land Development Regulations, the plant material, landscape plans, and architecture of the buildings on the site seek a symbiotic relationship where each complement and enhance the others, developing visual interests from within and outside of the site, creating, and where appropriate, screening views.

Detailed Landscape Plans will be part of each Final Development Permit Application.

See the Landscape Details. These landscape plans provide plant material in accordance with the Land Development Regulations that enhance the pedestrian experience of the site and buildings, and weaves together the unique urban and rural nature of surroundings.

F. Pathways and Circulation Elements. The proposal includes concrete sidewalks and stairs that connect the development to the existing and planned trail system and the rest of the Resort. The sidewalks encourage visitors to the development to access Resort amenities by foot and provide direct access to the ski hill. The sidewalks connect outdoor plazas on Lots 53 and 57. The open plazas at Lots 53 & 57 are meant to encourage outdoor activity; the ski-in/ski-out nature of the property also encourages pedestrian activity on all 3 lots.

G. Signage. Signage will be provided in non-reflective matte metals that are earth-toned with lighting incorporated. Lighting will comply with Town standards.

VII. Dimensional Limitations

The Master Plan's dimensional limitations include a pool of floor area and lodging capacity, conceptual three-dimensional building envelopes, and sub-area-specific considerations. Where dimensional limitations are not specified, the Design Guidelines are relied upon to achieve the desired character with the conceptual illustrations as guidance for developers, SKRMA, and the Town DRC. For Subarea 3, the only specified dimensional limitations are:

- Overall Master Plan Floor Area and APOs
- An LSR of 10%
- A limit of 3 stories over a basement.

Each is addressed below. Unlike Subareas 2 and 5, the illustrations for Subarea 3 are not dimensioned, emphasizing their conceptual nature for use in relating the Design Guidelines to the site rather than specifying an exact three-dimensional envelope. As discussed above, both SKRMA and the Town DRC have found the proposal consistent with the Design Guidelines and intent of the subarea.

FAR and APOs

Topic	Master Plan Standard	Lot 53	Lot 57	Lot 58
Floor Area	915,000 sf across Resort 334,675 sf exist; 580,325 sf allowed	112,952 sf purchased by owner 110,329 sf proposed		
		42,314 sf	43,110 sf	24,905 sf
APOs	2,208 across Resort 832 exist; 1,376 allowed	240 APOs purchased by owner 240 APOs proposed		
		104 APOs	88 APOs	48 APOs

The Master Plan has a pool of allowed floor area (915,000 sf) and lodging capacity (2,208 APOs) that can be built throughout the Resort. We have purchased 112,952 sf of floor area and 240 APOs for the development of this site. Beyond this development, about 470,000 sf and 1,140 APOs will be left to be developed in the Resort. A more detailed accounting and verification of development rights is included in the SKRMA approval letter and attachments. Since our original submittal, SKRMA has updated its accounting of APOs on other sites within the resort, an updated table of APOs is attached to the resubmittal.

The Master Plan also establishes cumulative FARs for Subareas 1-5 and Subareas 1-4, but they are irrelevant because the allowed floor area from those FARs is greater than the 915,000 sf limit on overall development.

Building Envelope

For an individual development, the Master Plan relies on the concept of three-dimensional building envelopes to define the appropriate bulk and scale. The site of this proposal is tucked into the hillside behind the interface of the resort with the rest of the Town of Jackson, and as a result, the building envelope for this site has limited definition. The Master Plan emphasizes that the building envelopes are intended to be flexible and should be used in coordination with the Design Guidelines. The Master Plan also includes renderings to illustrate how the building envelopes can be implemented for some sites. For Lots 53 and 57, the Master Plan includes undimensioned sketches of previously approved buildings. Please see the Master Plan Analysis section of the Architectural Plans for comparisons of those sketches to our proposal.

Our proposal meets the design guidelines as approved by SKRMA and the DRC, the dimensional limitations as demonstrated throughout the rest of this section, and is consistent with the three-dimensional building envelope illustrations for Lots 53 and 57 as demonstrated in the Architectural Plans.

Subarea 3 Standards – Bulk, scale, mass, and height

Topic	Master Plan Standard	Lot 53	Lot 57	Lot 58
Bulk	1 building or many	1 building	2 buildings	1 building
Height	3 stories over basement	3 stories over basement	3 stories over basement	3 stories over basement

The master plan allows for development on lots 53, 57 & 58 to be in one or many buildings (p. 70). On Lot 57 there are 2 buildings. On Lots 53 and 58, there is one building per lot. The building and unit mix table above in the Land Use section details how the mass is broken up across the buildings.

The Master Plan also limits development in Subarea 3 to three stories above a basement. Each building has three stories above a basement. The floor area allowances of the Master Plan exempt basement floor area and floor area for required housing. The Proposed Design Overview in the Architectural Plans outlines the floor area that is and is not exempt on each level of each building.

Compliance with the definition of basement is demonstrated for each building in the Architectural Plans specific to each lot. That the isolated area around the garage entrance on Lot 58 is taller than 10’ to meet grade is consistent with how underground parking entrances have been accommodated throughout Town. The retaining walls used for site grading are not relevant to the basement definition because their purpose is not to elevate the buildings. They are necessary to accommodate the slope and build a road that meets fire protection standards. The existing grading and retaining wall on Lot 53 are evidence of the fact that the Master Plan has always contemplated site grading and retaining as being necessary. The Master Plan Analysis section of the Architectural Plans demonstrates the site retention that would have been needed under the previously approved development on Lots 53 and 57 and the anticipated development of Lot 58.

Our proposal lowers the buildings from what is suggested in the Master Plan, with the retaining walls representing the infrastructure that was always anticipated by the Master Site Plan. If the building on Lot 58 were

any lower, the retaining wall behind the building would be taller than the building itself. And, with the building on Lot 58 set as low as possible, the buildings below it cannot be lowered without making the road too steep.
The Master Plan Analysis section of the Architectural Plans of the attached drawings illustrates how our proposed building location on Lot 58 reduces the amount of disturbance anticipated by the Master Plan and significantly lowers the building.

Subarea 3 Standards – Parking (LDR Standards also discussed)

SITE	TOTAL REQUIRED PARKING	PARKING PROVIDED	PARKING PROV. INCL. TANDEM	TOTAL # BEDROOMS	REQ. BIKE PARKING	REQ. BIKES, SHORT-TERM (25% x .75/bed)	REQ. BIKES, LONG-TERM (75% x .75/bed)	NOTES
LOT 57 NORTH	14	**15**	**19**	27	21	6	15	EVSE spaces: 6 capable + 1 installed. Short-term bike parking at outdoor spaces; long-term located in garages.
LOT 57 SOUTH	13	**14**	**22**	35	27	7	20	EVSE spaces: 7 capable + 1 installed.
LOT 53	33	**42**	**57**	70	53	14	39	EVSE spaces: 17 capable + 3 installed.
LOT 58	12	**19**	**19**	29	22	6	16	EVSE spaces: 6 capable + 1 installed.
	72 REQ.	**90** PROVIDED	**117** PROVIDED INCL. TANDEM					

Topic	Master Plan Standard	Lot 53	Lot 57 N	Lot 57 S	Lot 58
Vehicle Parking	1 space per unit, on-site	1.3/unit, on-site (1.7 w/tandem)	1.1/unit, on-site (1.4 w/tandem)	1.1/unit, on-site (1.7 w/tandem)	1.6/unit, on-site
	Market Units	26	10	12	12
	Affordable Units	7	4	1	0
Total Spaces		**42** (57 w/tnd.)	**15** (19 w/tnd.)	**14** (22 w/tnd.)	**19**
	Single Spaces	27	11	6	19
	Tandem Spaces	15 (30 spaces)	4 (8 spaces)	8 (16 spaces)	-
	Assigned (Garage)	39	15	14	19
	Guest (Garage)	-	-	-	-
	Guest (Level 1)	3	-	-	-
Topic	LDR Standards				
ADA Total (1/25)		**3** (3 of 42)	**1** (1 of 15)	**1** (1 of 14)	**1** (1 of 19)
	ADA Van (1/8 ADA)	1 (1 of 3)	1 (1 of 1)	1 (1 of 1)	1 (1 of 1)
	ADA Tandem	1	-	-	-
EVSE Total (30%) *of total incl. tandem*		**20** (35% of 57)	**7** (37% of 19)	**8** (36% of 22)	**7** (37% of 19)
	EVSE Capable	17 (30%)	6 (32%)	7 (31%)	6 (32%)
	EVSE Installed (5%)	3 (5%)	1 (5%)	1 (5%)	1 (5%)
Bike Parking Total (0.75/bedroom)		**53** (.76)	**21** (.78)	**27** (.77)	**22** (.76)
	Bedrooms	70 beds	27 beds	35 beds	29 beds
	Short-Term (25%)	14	6	7	6
	Long-Term (75%)	39	15	20	16

The Parking minimum for the site is 1 space per unit, which our proposal exceeds. The Master Plan's parking discussion is largely focused on ensuring that there is ample public/semi-public shared parking in the other Subareas of the Resort to accommodate recreation uses. The intent for Subarea 3 is that development will be parked on-site and neither impact nor contribute to the shared parking elsewhere in the Resort. By exceeding the parking minimum and managing the parking spaces as part of the property management, we more than meet the Master Plan expectations.

Each parking space is numbered and dimensioned In the Architectural Plans for each lot. ADA compliance is also demonstrated on the parking drawings. Which spaces will be EVSE Installed and Capable will be finalized at building permit with final electrical plans.

The required bike parking meets the 25% short-term bike parking requirement for all units because the market condos can be used residentially or as short-term rentals. Short-term bike parking is provided through public spaces that meet the Town's design requirements and can be found on the Landscape Plan for each lot. Long-term bike parking is accommodated in a combination of storage lockers (assuming a maximum of 2 bikes per locker), with the remaining long-term bike storage provided in wall-mounted bike racks where applicable (refer to notes on garage floor plans).

Subarea 3 Standards- Landscaping

Topic	Master Plan Standard	Lot 53	Lot 57	Lot 58
Landscaping	10% LSR (min)	20% LSR 7,245 sf	18% LSR 6,750 sf	57% LSR 27,401 sf

As discussed on page 72 of the Master Plan, hardscape surfaces composing pedestrian plazas, patios, and outdoor function areas are considered landscape surfaces. See the Landscape Plan for additional detail on the landscaping. Note the landscape screening that works with the topography and setting of the development into the hillside to screen the development from the existing neighborhoods to the east.

Subarea 3 Standards – Alternative Transportation

The alternative transportation connection to Cache Creek Drive that is required in the Master Plan has already been completed.

VIII. Housing Element

Applicability

Div. 6.3 of the LDRs applies to the sites with no credits. Required housing is calculated for each development plan in the attached Housing Calculator pages.

Amount, Type and Method of Housing Provision

The Snow King Master Plan allows for required housing to be built anywhere within or outside of the Resort. We will build 7 of the required units on Lot 53 and the other 5 required units on Lot 57. The project will be phased (see Phasing Plan below) so that the required housing is built before or concurrent to the development generating the requirement. In-lieu fees will be paid prior to certificate of occupancy for the fee-generating lot.

See the Housing Calculator for each lot below. The amount, type, and method of housing required on each lot is summarized below:

	Lot 53	Lot 57	Lot 58
Required Housing	5.925	5.414	2.962
Total Units Provided	5 (Lot 53)	5 (Lot 57)	2 (Lot 53)
Type and Method			
1 bed/studio, <50% FMI	$381,588.71	$170,783.77	
2 bed, <50% FMI	1 unit (Lot 53)	1 unit (Lot 57)	1 unit (Lot 53)
1 bed/studio, <80% FMI	1 unit (Lot 53)	1 unit (Lot 57)	
1 bed/studio, <120% FMI	1 unit (Lot 53)	1 unit (Lot 57)	1 unit (Lot 53)
2 bed, <120% FMI	1 unit (Lot 53)	1 unit (Lot 57)	$261,687.53
3 bed, <120% FMI	1 unit (Lot 53)	1 unit (Lot 57)	

Special Restriction

All units are intended to be condominiumized for sale at the designated level of affordability. We will complete the deed restriction worksheet at building permit and sign the deed restrictions prior to certificate of occupancy for the requirement generating units to ensure requirement provision remains at pace with or ahead of requirement generation.

Livability Standards

We are aware of the livability requirements for kitchens, bathrooms, closets, storage, floor coverings, room size, windows, laundry, heating, and parking. We will demonstrate detailed compliance of each unit at building permit as we finalize the design. See Architectural Plans for draft floor plans.

IX. Transportation Element

The Transportation Element focuses on how traffic, transit, and parking throughout the Resort will interface and connect to the larger Town of Jackson transportation system. Our proposal is consistent with the assumed impacts from Subarea 3 buildout. See the Engineering Report for demonstration of how our proposal is consistent with the assumptions made about Subarea 3 in the Master Plan.

X. Capital Improvements Plan

The Capital Improvement Plan focuses on how the Resort water, sewer, and stormwater systems will interface and connect to the larger Town of Jackson systems. Our proposal is consistent with the assumed impacts from Subarea 3 buildout. See the Engineering Report for demonstration of how our proposal is consistent with the assumptions made about Subarea 3 in the Master Plan.

XI. Phasing and SKRMA

The eleventh chapter is about SKRMA's responsibilities and is not relevant to approval of this application.

XII. Community Services Element

The final chapter is about the community services provided by the Resort and is not relevant to approval of this application.

ADDITIONAL LDR COMPLIANCE NARRATIVE

Phasing Plan

While there are three development plans, a single phasing plan is proposed. The first building permit(s) will be submitted within 18 months of development plan approval, and will likely be for Lot 57. Each subsequent building permit(s) will be submitted within 18 months of completion of the prior building permit. The building permits will be sequenced so that the required affordable workforce housing is produced concurrently or prior to the generating development.

Construction Management Plan

Please refer to the Construction Management Plan chapter

Environmental Standards

Master Plan approval demonstrated compliance; no additional Environmental Analysis is required.

Scenic Standards

Exterior lighting compliance will be demonstrated at building permit.

Natural Hazards

Steep Slopes

See Engineering Narrative and Geotechnical Report.

Wildland Urban Interface

Wildland Urban Interface compliance will be demonstrated at building permit.

Grading, Erosion Control, and Stormwater

See Engineering Narrative

Operational Standards

Storage for each unit is provided. There will be no outside storage. Compliance will be managed through property management.

Refuse and recycling facilities are provided in the parking garage of each unit. See the garage floor plan of each building.

Subdivision

The applicant intends to plat the units as condominiums once they are built.

School Exactions

Page 102-103 of the Master Plan exempt short-term rental development from park and school exactions.

Park Exactions

Page 102-103 of the Master Plan exempt short-term rental development from park and school exactions.

Transportation Facilitates

See Engineering Narrative

Utilities

See Engineering Narrative

PROPOSED FINDINGS FOR APPROVAL

A development plan shall be approved upon finding the application:

1. Is consistent with the purposes and organization of the LDRs;

Complies. The purpose of the LDRs, and by extension the Snow King Resort Master Plan, is to implement the Jackson/Teton County Comprehensive Plan and promote the health, safety, and general welfare of the present and future community. is By being consistent with the Master Plan and LDRs, the proposal is consistent with that purpose.

2. Achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable;

Complies. The Snow King Resort Master Plan demonstrated compliance with the NRO and SRO. The proposed development is consistent with the Snow King Resort Master Plan.

3. Does not have significant impact on public facilities and services, including transportation, potable water and wastewater facilities, parks, schools, police, fire, and EMS facilities;

Complies. The proposed development is consistent with the transportation, water, wastewater, parks, schools, police, fire, and EMS assumptions of the Snow King Resort Master Plan. The cumulative impact of all development entitled under the Master Plan was evaluated and approved with Master Plan approval.

4. Complies with the Town of Jackson Design Guidelines, if applicable;

Complies. While the Town of Jackson Design Guidelines are not applicable, the proposed development was found to comply with the Snow King Resort Master Plan Design Guidelines by SKRMA on May 23, 2024 and the Town Design Review Committee on June 12, 2024.

5. Complies with all relevant standards of these LDRs and other Town Ordinances; and

Complies. The proposed development complies with all LDRs and Town Ordinances not otherwise addressed by the Snow King Resort Master Plan.

6. Is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.

Complies. The proposed development complies with the Snow King Resort Master Plan. It complies with the Site Plan by being located within Lots 53, 57, and 58. It complies with the land use plan by being residential or short-term rental and affordable employee housing. It complies with the design guidelines as approved by SKRMA (May 23, 2024) and the Town DRC (June 12, 2024). It complies with the dimensional limitations by being 3-stories above basement with at least 10% LSR and within the overall Floor Area and Peak Occupancy allowances for the Resort. It complies with the housing element by providing the required housing on-site. Finally, it complies with the transportation and utility elements by being consistent with the Master Plan assumptions for the cumulative impact of the development of the Resort.

ENGINEERING NARRATIVE

JORGENSEN
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Introduction

Snow King Condominiums is a proposed development within the Snow King Planned Resort District Master Plan (Sub-Area 3) located at 510, 553 and 725 Upper Snow King Loop Road. Upper Snow King Loop Road is located at the upper end of Grand View/Love Ridge Condo area and is within the Town of Jackson. The properties border lands owned by the Snow King Mountain Resort, LLC and the Grand View Condos. The land included in this proposal is comprised of property owned by affiliates of Bear Real Estate Group, described as Lot 53 of the Grand View Lodges 2nd Addition (553 Upper Snow King Loop Road) and Lots 57 (510 Upper Snow King Loop Road) and 58 (725 Upper Snow King Loop Road) of the Grand View Lodges Third Addition. The total combined property site is approximately 2.72 acres. Lot 57 is separated from Lots 53 and 58 (which are contiguous) by approximately 100' of land owned by Snow King Mountain Resort, LLC. Currently Lots 53 and 57 are used by Snow King Resort for material and equipment storage, while Lot 58 has a road that has historically been used to access Snow King Mountain but has been abandoned. Development of these Lots is governed by the Town of Jackson Land Development Regulations (LDRs) and the Snow King Planned Resort District Master Plan (Master Plan).



Figure 1: Project Vicinity Map

The building program is for a residential condominium development consisting of four buildings spread over the three lots, which includes both short term rental market units and deed restricted affordable units. Unit bedroom breakdown and building square footage is detailed in the Development Plan's Architectural Narrative.

Vehicular access to the three lots from the Town of Jackson street network is from the intersection of Snow King Avenue and Vine Street via Snow King Loop Road and Upper Snow King Loop Road. Snow King Loop Road is a 2-lane paved road, maintained by Snow King Resort Master Association (SKRMA) accessing the Love Ridge and Grand View Condos as well as the Grand View Lodge. Upper Snow King Loop Road is a steep dirt road that has historically provided access up Snow King Mountain. The three lots can be accessed by cyclists and pedestrians from the northwest (Snow King Avenue) and northeast (Cache Creek Drive) using a combination of existing trails, sidewalks and low volume streets.

This Final Development Plan Engineer's Report is intended to provide the engineering basis for the design and discuss engineering related items for the development of the project. Site infrastructure associated with the project is described including the expected infrastructure connections to existing Town of Jackson (TOJ) and SKRMA owned utilities. Design details will advance as the plan moves into construction permitting and construction phases of the project.

Site and Soils Conditions

The project site is located on the north-facing slope of Snow King Mountain and each lot has significant vertical relief with the hill sloping upward to the south. A geotechnical investigation by Jorgensen Geotechnical, LLC was conducted on each parcel in the fall of 2023 and explored Subsurface Soil Conditions and conducted a Geophysical Exploration. The reports of the investigations include Subsurface Preparation recommendations and Slope Stability Modeling for the current design in Attachment A.

Groundwater

The hillside nature of this site does not lend itself to persistent shallow groundwater but its location on the lower reaches of Snow King Mountain makes groundwater related to precipitation and snowmelt likely. Groundwater was encountered during the drilling of test bores performed as part of the Geotechnical Investigation at depths between 27 and 47 ft below ground surface. The proposed building is unlikely to be impacted by static groundwater at these depths, even during the construction of below grade parking structures. Lateral water flow through the soil can be expected from snow melt and stormwater and structures should provide foundation drains to mitigate this moisture.

Parking and Access

Analysis and calculation of parking required for each lot is provided in the Master Plan Compliance Narrative, Section VII – Dimensional Limitations. The parking stalls discussed in that section will be provided in parking garages beneath each of the buildings. All proposed parking meets the dimensional limitation criteria and design standards. Plan views of each parking garage detailing key dimensions, layouts and drainage patterns are provided in the plan set.

Access to the site will be from Snow King Loop Road and Upper Snow King Loop Road, with all parking located in basement garages except a few surface spaces provided for short-term guest parking.

Upper Snow King Loop Road will be realigned and vertically adjusted to meet the Fire Protection Resolution for New Subdivisions, and a Fire Apparatus Turnaround will be provided at the Lot 53 drop off.

With construction and occupancy of Lot 57 happening first, an interim Fire Apparatus Turnaround can be provided near the western property boundary of Lot 53, which will serve until the completion of the final turnaround discussed above.

Lot 53

Two vehicular access points are provided to the Lot 53 Building; the first is directly into the basement garage via a door on the west end of the building. The second is a vehicular drop off/turnaround/courtyard at the first-floor elevation accessed from the access road to the south of the building.

Multi-modal access will be provided to the Lot 53 building from a sidewalk along the south side of Upper Snow King Loop Road, with safe crossing points provided to both the basement door and first floor courtyard. A door into the parking garage will be located near the garage door and individual units will be accessed from the first floor from the courtyard. A dirt walking path will also be provided from the termination point of Upper Snow King Loop Road, near the southeast corner of the building, up to existing grade to the east of the building and along the east face of the building, to the existing sidewalk at the northeast corner of the building.

Lot 57

The two buildings proposed on Lot 57 will have individual garage vehicular access points. The north building will be accessed from Snow King Loop Road, near the northwest corner of the lot and the south building will be accessed from Upper Snow King Loop Road, near the east boundary of the lot.

Multi-modal access will be provided to the Lot 57 buildings via the courtyard between the buildings from a sidewalk along the west side of Upper Snow King Loop Road. Multi-modal access into each garage will also be provided through a separate garage level access door.

Lot 58

The building on Lot 58 will have a vehicular access point from Upper Snow King Loop Road into the garage located approximately in the middle of the north side of the building.

Multi-modal access will be provided to the Lot 58 building from a sidewalk along the south side of Upper Snow King Loop Road. There will be several access points along the north side of the building providing access to both the garage and to stair/elevator towers into the individual units.

Transportation Element

Existing traffic (vehicular and multi-modal) was evaluated as part of the Traffic Impact Study prepared for the Master Plan. Physical counts of traffic were collected and analyzed as part of the Master Plan Traffic Impact Study.

The proposed uses and scale of development on Lots 53, 57 and 58 are consistent with the Master Plan. Trip generation for the project, using the trip generation rates from the Master Plan, is summarized in Table 1.

Table 1 – Trip Generation

Traffic, Trip Generation			
	Number of Units	Unit Type	Trip Generation
Lot 53	26	Condominium	$26\ units * 8.0\ \frac{trips}{unit} = 208\ trips$
	7	Affordable Housing*	$7\ units * 4.0 \frac{trips}{unit} = 28\ trips$
Lot 57	22	Condominium	$22\ units * 8.0\ \frac{trips}{unit} = 176\ trips$
	5	Affordable Housing*	$5\ units * 4.0 \frac{trips}{unit} = 20\ trips$
Lot 58	12	Condominium	$12\ units * 8.0\ \frac{trips}{unit} = 96\ trips$
Subtotal; this Development Plan			

Existing Sub-Area 3	86	Condominium; (assumption)	688 trips
		Total Sub-Area 3	**1,216 trips**
		Assumed Master Plan Sub-Area 3	1,710 trips

*The proposed Affordable Housing in this project is assumed to have a traffic impact similar to "Employee Housing" used in the Master Plan Analysis

This project reflects full buildout of Sub-Area 3 of the Master Plan; based on the Example Development Table, approximately 1,710 trips per day for residential uses was used to perform the Traffic Impact analysis. Based on the above information, the scale of traffic impact is less than was assumed in the master plan.

Grading, Drainage, and Stormwater Management

The access road location and elevation are integral to the building placement on each lot. Providing fire apparatus access to each building, vehicular access to each garage and multi-modal access to the various entrances to each building were key considerations to the site layout and grading. The topography of the site, particularly the steepness of the hillside in the north-south direction is also integral to the grading and building placement on each lot. This consideration resulted in buildings that present a tall elevation from the North and a much smaller elevation from the South.

The current TOJ Land Development Regulations (LDR's) allow post-development stormwater flows to be released from a proposed development at a rate equal to or lower than the pre-development runoff rate. The Master Plan identifies the use of on-site stormwater facilities for storage and controlled release. As previously described, parking for each building is provided in basement garages. The surface of the parking areas will be sloped such that runoff from vehicles will collect at low points through inlet grates and trench drains to route all drainage through a detention system and a controlled progressive discharge prior to release into the public stormwater collection system. Coordination with the mechanical engineering design of the buildings will be required for this effort. Stormwater treatment will be installed in the development area to treat runoff from streets and parking on-site prior to leaving the property.

Preliminary stormwater runoff calculations for each lot for pre and post development are included in Attachment B. These calculations and the grading and stormwater management plans will be refined through the Grading and Erosion Control Permit process as the project develops and as various volume solutions and basin layouts are explored.

This development will utilize the existing storm sewer collection system in Upper Snow King Loop Road which will ultimately discharge into the Town of Jackson system. The routing of this existing system downstream of the development is currently unknown, however this will be determined, and if necessary, the system will be reconfigured to effectively deliver project storm sewer to the Town of Jackson system.

Stormwater design calculations for the 100-year storm are summarized in Table 2. Runoff flowrates and volumes were computed using the modified-rational method and the Intensity-Duration-Frequency Curve Data provided in the TOJ LDRs. Pre and Post Development ground cover coefficients were used with those calculations. Calculations were done separately for each lot.

Table 2 – Stormwater Rational Method Runoff

Stormwater Rational Method Runoff Design Storm Frequency = 100 years			
Lot	Pre-Development Peak Flow Rate (cfs)	Post-Development Peak Flow Rate (cfs)	Water Quantity Storage Required (gal)
Lot 53	0.78	2.37	4,915
Lot 58	1.58	2.48	2,061
Lot 57	0.98	2.49	4,345
Total	**3.35**	**7.34**	**11,321**

Lot 53

Due to the drainage pattern of the proposed improvements on this lot, nearly all the stormwater, including roof drainage, will be captured, routed below grade and stored with a controlled release into the TOJ stormwater system. Positive drainage away from the building will be provided in the landscaped perimeter area though volumes of runoff will be negligible due to the small areas involved and the capture of runoff from developed areas.

Lot 57

Due to the drainage pattern of the proposed improvements on this lot, nearly all the stormwater, besides the road, including roof drainage, will be captured, routed below grade and stored with a controlled release into the TOJ stormwater system. Positive drainage away from the building will be provided in the landscaped perimeter area. Runoff volumes generated on these portions of Lot 57 will be negligible due to the small areas involved and the capture of runoff from developed areas. Runoff from the hillside above the building will be intercepted on the south side of the building using a cutoff ditch and routed around the building to the west. Road drainage will be routed and collected using curb and gutter and existing stormwater inlets which will be adjusted to function with the realigned and regraded roadway.

Lot 58

A large portion of this lot, on the South and West sides of the proposed building will remain undisturbed and drainage patterns will be unchanged. The stormwater in the developed portion of the lot, including roof drainage, will be captured, routed below grade and stored with a controlled release into the TOJ stormwater system. Positive drainage away from the building will be provided in the landscaped perimeter areas immediately adjacent to the building and runoff from the hillside above the building, retaining walls and road will be routed around the development using a combination of surface and subsurface drainage improvements.

Water Supply and Distribution System

Water (domestic and fire) will be supplied to this development by the Snow King Resort Public Water System, a consecutive public water system administered by SKRMA and supplied by the TOJ water system. The system consists of duplex booster pumps located in the garage of Love Ridge Condominium Building 48, an 8" diameter water supply line running uphill to a 110,000 gallon storage tank south/above Lot 58. This system has two fire hydrants in the project vicinity that will be relocated slightly to accommodate the proposed structures and sitework.

Domestic water demand values were developed using 2018 Wyoming DEQ values based on the current building program. Those values are detailed in the Attachment C and summarized in Table 3 below.

Table 3 – Domestic Water Demand

Domestic Water Demand				
	Number of Units	Average TOTAL gpd	Maximum TOTAL gpd	Peak Hour gpm
Lot 53	33	8,750	23,800	66.1
Lot 57	27	7,750	21,080	58.6
Lot 58	12	3,625	9,860	27.4
Subtotal; this Development Plan	**72**	**20,125**	**54,740**	**152.1**
Existing Sub-Area 3	86		60,200	
Total Sub-Area 3			**114,940**	
Assumed Master Plan Sub-Area 3			127,500	

Revised for building program 16 May 2025

Water demand for domestic use was also calculated using the AWWA M22 method and estimated at 75 gpm based on fixture counts for the proposed buildings. The lower value of the M22 is likely due to the peak hour

factor used in the 2018 Wyoming DEQ method (Peak Hour 4) being above average and the irrigation demand not included in the M22 calculation. Large irrigation demand is not expected as part of this development due to limited landscaped areas.

This project reflects full buildout of Sub-Area 3 of the Master Plan; based on the Master Plan Example Development Table, approximately 127,500 gpd (maximum day) domestic water demand for residential uses was used to analyze the availability of water supply. Based on the above information, the scale of the domestic water demand impact on TOJ systems is less than was assumed in the master plan.

The fire suppression system demand was calculated utilizing Appendix B, Table B105.2 and Table 105.1(2) of the 2021 International Fire Code based on building area and Type IIB construction. All buildings will provide a full sprinkler system designed per NFPA 13.

The total water supply available from the SKRMA water system is expected to exceed the total water demanded in a scenario where fire flow is superimposed on the maximum day demand. Water supply and demand calculations are provided in Attachment D.

Wastewater Collection and Treatment Systems

Sanitary sewer will be connected to the existing Town of Jackson sewage collection lines via an extension of the existing sanitary sewer main in Upper Snow King Loop Road and eventually be treated at the TOJ Wastewater Treatment Plant in South Park. The project will extend the existing sewage collection lines approximately 250 lineal feet to a point in Upper Snow King Loop Road in front of the Lot 58 building. The service lines to each building will be the responsibility of the development for operation and maintenance. The sewer system extensions consist of an 8-inch sewer line from an existing manhole near the western property boundary of Lot 53. Each building will connect to the Sanitary sewer main adjacent to the building. Building sewer will be 6" with cleanouts within 5 feet of the building foundation. The building mechanical design plans will show the specific internal layout and location.

Wastewater generation values were developed using 2018 Wyoming DEQ values for the current building program. Those values are detailed in Attachment E and summarized in Table 4 below.

Table 4 – Wastewater Generation

Sanitary Sewer Generation				
	Number of Units	Average TOTAL gpd	Maximum TOTAL gpd	Peak Hour gpm
Lot 53	33	6,300	10,500	29.2
Lot 57	27	5,580	9,300	25.8
Lot 58	12	2,610	4,350	12.1
Subtotal; this Development Plan		**14,490**	**24,150**	**67.1**
Existing Sub-Area 3	86		38,700	
Total Sub-Area 3			**62,850**	
Assumed Master Plan Sub-Area 3			78,750	

Revised for building program 16 May 2025

This project reflects full buildout of Sub-Area 3 of the Master Plan; based on the Master Plan Example Development Table, approximately 78,750 gpd (maximum day) sanitary sewer generation for residential uses was used to analyze the capacity of the TOJ sewer system. Based on the above information, the scale of the sanitary sewer generation impact on TOJ systems is less than was assumed in the master plan and was approved by the Town at the time of Master Plan approval.

The Master Plan discusses various other offsite infrastructure improvements related to buildout of the master plan area and indicates that the Town of Jackson should coordinate with SKRMA on the necessity and timing of these improvements.

Cable Utilities and Gas

Cable utilities and natural gas connections will be coordinated with Lower Valley Energy (Electric and Gas), Century Link Communications (telephone and communication services), Charter Communications (cable television, internet, and other communications), and SilverStar Communications (fiber optic internet). There is an existing Lower Valley 3 phase switch cabinet north of the northeast corner of Lot 53 that will likely serve as the power connection for the project. Service connection pedestals for the other cable utilities, and an existing natural gas main are located along Snow King Loop Road. Utilities will be routed to the proposed building either along a proposed easement on the SKRMA parcel to the east of Lots 53 and 58 or along the Upper Snow King Loop Road. Transformers, meters and service locations are shown on the plans.

Refuse, Trash, and Recycling

Refuse, garbage, and recycling is proposed in a dedicated area within the parking garage level of each building. These areas will not be visible from the exterior of the building and will be inaccessible to wildlife.

Snow Storage

A snow storage area sized to be a minimum of 10% of the area of the plowed off-street parking will be provided for storage of the large amount of snow that can be expected at the bottom of Snow King Mountain. The area between Lots 53 and 58, with a pending snow storage easement from SKRMA, is proposed for snow storage use for all three lots. This will be coordinated with landscaping, fire hydrants, cable utility structures and considered in the design and placement of storm drainage infrastructure.

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

DEVELOPMENT PLAN P24-168, 174, 175 submitted 11/8/2024
Response to Town Engineering comments dated 2/3/2025
DEVELOPMENT – Approved with CONDITIONS

Jorgensen Response to Conditions or comments provided in Blue

CONDITIONS OF APPROVAL

A. LDR 5.7.1.D.3
Review and revise the geotechnical reports and provide updated plans and reports with the Building Permit Application as necessary. The applicant is responsible for the cost of any third-party review of the geotechnical analysis.
Geotechnical report will be updated to reflect final building plans at Building Permit Submittal.

B. LDR 5.7.2.A.1
Provide signed and stamped reports from ATLAS. Update Geotechnical Reports for any changes in design or analysis.
Updated ATLAS Report provided in this submittal.

C. LDR 5.7.2.A
Prior to presenting to Town Council, provide a narrative and exhibits that show how the buildings conform to the general natural form and minimize cuts and fills. In particular, forty-foot-deep retaining walls on the south side of Lot 58 provide a significant break in the form and require a large cut without offsetting fill.

Site Design – Constraints

1. The road must extend along the length of the buildings constructed on Lots 53 and 58. Due to the height of the building on Lot 58 above the road elevation, the road width must be 26’ wide for aerial firefighting equipment use (fire department guidance)
2. A fire apparatus turnaround must be provided within 150’ of the end of the road (fire resolution).
3. Road grades on sections of roadway with a horizontal curve radius greater than 100’ may be up for 15% for no more than 200’ (Fire resolution).
4. The maximum elevation delta between the Lot 53 basement FFE and first floor FFE is 10’ (LDRs)

Site Design Logic

1. Assumptions
    a. The building site on Lot 58 will be on the east end of the lot to take advantage of the least steep slopes (minimizing cut and fill to the extent possible).
    b. The building on Lot 53 will sit no higher than the existing “Flat Spot”.
2. The location of the fire apparatus turnaround was set by:
    a. The fire access road must extend to the east end of the easternmost building on Lot 53 or 58 (approximately the east lot line).
        i. The fire apparatus turnaround must be within 150’ of the end of this road. It is proposed at 146’ from the end of the road.
        ii. It is desirable to place the turnaround as far from the end of the road as allowed; to construct the turnaround requires either an extreme cut into the hillside (for the perpendicular leg of the turnaround) or to be constructed on top of the Lot 53 first floor deck (as is proposed).
3. The lot 53 garage elevation was set at 6402’, 3-4’ below the “flat spot” Elevation to limit the perceived height of the building, which has been a major point of contention in town planning and neighbor reviews

a. This in turn made it necessary to set the fire apparatus turnaround elevation at 6412' (one floor above).

Lot 58: cut and south side well

The garage FFE was initially placed to correspond to the end of the road, thus minimizing the cut required to construct this building. Initial negative feedback from TOJ planning department (the comment that it appears the garage entrance was placed to make the building as high as possible) lead the design team to adjust this elevation downward, placing the garage entrance in the middle of the building and at a correspondingly lower elevation. This lead to a larger total cut to construct this building.

Placement of the garage FFE that near the lowest elevation location on the lot lead to several design challenges including the large cut associated with the building and the deep well on the south side of the building to allow for egress from the bedrooms. The well on the back of the building has been designed in a tiered manner to be a more natural form, however the reduction of tier height and the extension of tier width was limited by diminishing returns due to the steep slope above. It was desirable to avoid disturbing the existing forested portion of the lot above the proposed building. According to the project code consultant, MAP:

At Lot 58, each unit is permitted to have access to only one means of egress per IBC Section 1006.3.4, since they are R-2 occupancy, with occupant loads not exceeding 20 people, and the common path of egress through the stairwells does not exceed 125'-0". Because these dwelling units have access to only one exit, Section 1031 requires that all sleeping rooms be provided with at least one emergency escape and rescue opening. These window openings must open onto a public way or a yard or a court and meet minimum dimensional requirements. Additionally, bedrooms are required to have access to natural ventilation and light per IBC Chapter 12.

At Lot 58, the area on the south side of the building would be viewed as a court, as it is enclosed on at least 3 sides. Section 202 defines a court as "an open, uncovered space, unobstructed to the sky, bounded on three or more sides by exterior building walls or other enclosing devices." Per Section 1205.3: A court that is not bounded on one end by a public way or yard must be a minimum 3' in width and 10'-0" in length. The width must be increased by 1' in width and 2' in length for each additional story above 2 stories in height. Additionally, per 1031.5.2, emergency escape and rescue openings below the adjacent grade may open into area wells, which can be equipped with permanently affixed ladder or steps. The ladder or steps shall not be obstructed by the window when it is in an open position. Ladders shall be at least 12 inches wide, 3 inches from the wall, and spaced no more than 18 inches on center; the code does not state a height limit for a ladder.

D. LDR 5.7.2.B.6

Provide details on the interceptor ditches uphill of the developments that are stable and have the capacity for runoff. Clearly define where the runoff is conveyed. For conveyance off-site, see notes on LDR 5.7.2.B.8.

Drainage swales to be provided on the southern sides of Lot 57 South Building and Lot 58 terraced retaining walls. These will convey stormwater and snowmelt around the buildings, discharging to the west of lot 57 and the west of lot 58, which is consistent with existing hillside general drainage flow paths. Swales will be designed to carry the large amount of water expected to run off the hillsides above and ends of swales will provide large cobbles to dissipate flow velocities and prevent erosion. Details to be provided with Building Permit submittal.

E. LDR 5.7.2.B.8

In the absence of a mutual grading easement between adjacent landowners, the tops and toes of cut and fill slopes shall be within the property lines of the proposal.

a. Permit drawings must show grading within the property lines or submit proposed easements with the building permit and show them on the plans, noting that they need to be executed and recorded prior to permit issuance.
b. Prior to permit approval, the easements need to be executed and recorded.
c. Where work is being completed within an existing road and easement, e.g., between Lots 57 and 58, provide a Letter of Authorization from the landowner to do the work. Show the easements clearly on the plans and cite the legal document that creates them.

Mutual grading easements have been discussed and favorably received with Snow King Mountain Resort. Grading and modification to the retaining wall along the north side of Lot 53 have been discussed with Grand View Townhouses. If an agreement cannot be reached with Grand View, construction methods have been discussed to eliminate grading/modifications beyond the Lot 53 property line. Extents of grading and areas of grading easement to be provided with Building Permit submittal.

F. LDR 5.7.2.B.4 / IBC 1807.2
Provide structural calculations and factors of safety for all retaining walls. Stability analyses must demonstrate minimum factors of safety of at least 1.50 under static conditions and 1.10 under seismic loading conditions. Walls with a separation of at least 2H (H of largest of two walls) from face of wall to face of wall should be considered as separate walls. In a terrace of retaining walls, a minimum horizontal separation of H/2 should be maintained, measured from the back of the lower wall to the face of the higher wall. Provide notes on the plans and details that require Special Inspections by the design professional in responsible charge (IBC 1704 and 1705.1.1). Provide guards as required by IBC 1807.2.5 or as needed to protect wildlife.
Structural calculations to be provided with Building Permit submittal. Some terraced walls do not adhere to H/2 separation due to steep hillsides above walls and inability to provide separation without significantly increasing overall height of walls, however lower terraced walls will be designed to account for the influence of terraces above.

G. LDR 5.7.4.B.1
For connection to the downstream storm system, determine the actual path of discharge, certify that the lines and detention areas are clear and functioning, confirm that the new connections align with the original design, and verify that capacity exists in the system.
Investigation of the existing storm system including path of discharge and pipe sizes to be undertaken in the summer of 2025. Exhibit of storm system information will be provided to the Town prior to or at the time of Building Permit submittal. Final design of storm system to consider actual configuration.

H. LDR 5.7.4.B.2.h
Provide pollution abatement treatment prior to any discharge to a stormwater or infiltration system.
Stormwater pollution abatement to be provided prior to discharge to downstream stormwater system. Final design may include abatement for each lot individually or one point of treatment for all (3) lots.

I. LDR 5.7.1.D.4
Grading Pre-Applications are required for each building prior to Building Permit submittal. If all of the necessary information is prepared for all sites and building permits will be submitted within 6 months of the meeting, then one grading pre-application meeting could be used to cover the projects.
Grading Pre-Application conference will be completed prior to Building Permit submittals.

J. LDR 7.2.2.A.1.b
Provide a striping and signage plan for the development.
To be provided with Building Permit submittal.

K. LDR 7.7.2.A/G
Show compliance with ISO, DEQ, and Fire standards for the number of hydrants and hydrants served on 6-inch lines.
To be provided with Building Permit submittal.

L. LDR 7.7.2.A
Provide a will-serve letter from Snow King Resort that clarifies the entity that owns the improvements

and the status of the water tank (e.g., when last cleaned and if the full volume of the tank is in use or if the tank is partitioned for half capacity). Ownership should coincide with the easements and parcels where the utilities are located. Unless isolated and master metered, the water and sewer need to be owned by Snow King Mountain Resort, which owns the system the development is connecting to.
To be provided with Building Permit submittal and DEQ Permit to construct submittal.

M. LDR 7.7.2.A
Provide hydraulic analysis for the development and its flows. The analysis provided was limited to volume—provide the source for the assumed water demands.
To be provided with Building Permit submittal.

N. LDR 7.7.2.G
Provide a letter from the Fire Marshal confirming that the fire supply, protection, and hydrants proposed are acceptable.
To be provided with Building Permit submittal.

O. LDR 7.7.2
Provide size and location of water meters and backflow devices for each building. Adhere to Town Standards for utility connections. Each building must have a single tap at the main, with branched domestic and fire outside of the building and an individual domestic meter for the building. Provide separate meters for irrigation. Reduced Pressure Backflow is required on domestic, irrigation, and fire systems. Locate meters and backflow as close as possible to the point of entry to the building.
To be provided with Building Permit submittal.

P. P. LDR 7.7.3
Town inspection showed that the sewer line is full of dirt and rocks. Provide a note on the plans to isolate/plug the connection to the active sewer before cleaning and inspecting the line. DO NOT DISCHARGE THE DEBRIS INTO THE ACTIVE SEWER. Depending on the line condition, the lines may need to be retested, repaired, or replaced. Provide video inspections to Town Engineering. Check the status of manholes on the access road—ensure they are open, functioning, and accessible.
To be provided with Building Permit submittal.

Q. LDR 7.7.3
Revise wastewater volumes to correspond with Town of Jackson Capacity Fee Max Day, Code 13.08.020.
To be provided with Building Permit submittal.

R. LDR 8.3.3.C.3
For each building, provide a plan for mail delivery that does not have a significant impact on public facilities and services, e.g., mail and parcel room with USPS Caller service, private mail delivery, etc.

S. IBC CHAPTER 11 / ADA ACCESSIBILITY
Provide an accessibility plan. Final design and compliance are required with the Building Permit Application, but the Development Plan needs to show feasibility. Show compliance with accessibility regulations, including but not limited to:

a. 1104.1: At least one accessible route within the site must be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served.
b. 1104.2: At least one accessible route must connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site.
c. 1104.5: Accessible routes must coincide with or be located in the same area as a general circulation path.
d. Prioritize pedestrian access through intersections and curb cuts with elevated sidewalks adhering to ADA standards and show how drainage will be achieved.

Accessible routes are provided from the pullout on Lot 57 to Lot 57 building, note however that the road grade along this section is greater than 5% so sidewalk grade corresponds to road grade. Accessible route provided from unloading zone near Lot 53 Fire Apparatus Turnaround to buildings on Lots 53 and 58. Accessible routes provided from accessible parking stalls in all garages to elevators/units.

PROJECT SPECIFIC COMMENTS

1. LDR 7.6.3.F.1: Development should provide a reasonable connection to Snow King Drive. The Town of Jackson has an easement in the Snow King Estates development between Lots 10 and 11, which was used during construction in 2018-2019. It would be beneficial to both the Town and the Developer to maintain this alternative access in the event of emergencies or construction. The Town would like to coordinate with the developer and Snow King Mountain Resort to see if there is a feasible design that could be implemented to preserve this access.
   Providing roadway access to Snow King drive through easement is not possible while maintaining road grades that comply with Fire Resolution. See C. LDR 5.7.2.A discussion.
2. The Town standard is no longer for concrete collars on surface features in roadways. It is recommended to remove the concrete collar from manhole and water valve details. Show completion with hot or cold mix pavement.
   Revised details to be provided with Building Permit submittal.
3. Our records show that the stormwater from this development routes to Vine Drive and then out to Kelly Ave.
   Noted
4. Is it necessary to replace the entire 8" line uphill of Building 57, or can the new line tie in at the crossing of the existing near station 2+30?
   The water main on Lot 57 must be replaced because it is beneath or too close to the Lot 57 South building foundation. From roughly STA 2+30 up, the line must be replaced due to modification (lowering) of the road grade and reduction of the cover over the line.

Accounting of Master Plan Development Potential

Floor Area

	Master Plan Allowance	Existing at Master Plan Adoption	Master Plan Example & Site Plan	Development Rights Sales	Remaining Potential (Rights - Built)
Subarea 1-5	915,000	334,675	915,000	915,000	580,325
Subarea 1		135,688	331,000	255,688	120,000
Hotel		135,688	135,688	135,688	0
New		0	195,312	120,000	120,000
Subarea 2		0	244,000	250,000	250,000
Subarea 3		143,655	252,000	256,607	112,952
Love Ridge/Grand View		143,655	143,655	143,655	0
Lot 53		0	52,952	52,952	52,952
Lot 57		0	25,393	30,000	30,000
Lot 58		0	30,000	30,000	30,000
Subarea 4 & 5		55,332	88,000	152,705	97,373
One Town Hill		50,398		57,000	6,602
Snow King Mountain Resort		0		95,705	90,771
King Grill/Ticket Office		4,934			
Mountain Sports		0			
Mountain Maintenance		0			

Notes:

- The existing development numbers for the hotel and Love Ridge implied in the Master Plan by subtracting the Master Site Plan from the Example Development match the Town's GIS record of existing development on January 1, 2023.
- The allowed FARs of 0.4 for Subareas 1-5 and 0.6 for Subareas 1-4 are not applicable because the 915,000 sf total limit meets both FARs.
- The existing development was assumed to have been allocated its existing development rights even though there was no “transfer” documented.
- The One Town Hill floor area is based on the approval staff report for the Development Plan. In addition to the counted floor area, 34,112 sf of exempt parking and 4,255 sf of exempt housing are in the building.

Guests (APOs)

	Master Plan Allowance	Existing at Master Plan Adoption	Master Plan Example & Site Plan	Development Rights Sales	Remaining Potential (Rights - Built)
Subarea 1-5	2,208	832	2,208	2,208	1,376
Subarea 1		408	964	808	400
Hotel		408	408	408	0
New		0	556	400	400
Subarea 2		0	400	400	400
Subarea 3		280	700	520	240
Love Ridge/Grand View		280	280	280	0
Lot 53		0		144	144
Lot 57		0	420	50	50
Lot 58		0		46	46
Subarea 4 & 5		144	144	480	336
One Town Hill		144	144	144	
Snow King Mountain Resort		0	0	336	336
King Grill/Ticket Office		0			
Mountain Sports		0			
Mountain Maintenance		0			

Notes:

- The existing Hotel allocation is based on the 204 rooms identified as existing in the Master Plan.
- The One Town Hill allocation is based on 36 units at 4 APO per unit, consistent with the Development Plan unit count and Town building permit record.
- The 280 APO Love Ridge/Grand View allocation is based on SKRMA's accounting of existing APOs less the existing Hotel and One Town Hill allocations. It is generally consistent with the Town's GIS record of existing development on January 1, 2023.

HOUSING CALCULATORS

LOT 57 (NORTH & SOUTH COMBINED)

Housing Mitigation Plan

updated 1/8/21

Development of a new house, hotel, or commercial space generates the need for employees. The construction workforce builds the space, the commercial workforce or residential service workforce works in the space, and first responders are needed to protect the space. Only about 27% of the employees generated by development can afford housing in the community, but the community's "community first" character goal is that 65% of employees live locally. To bridge this affordability gap, each development is required to include affordable workforce housing proportional to the employees it generates. These housing mitigation requirements are established in Division 6.3 of the Land Development Regulations. This worksheet is intended to assist in meeting the requirements for a project. However, an error in the worksheet does not amend the actual standard; if you find an error please notify the Planning Department. Fill in the highlighted cells, all the other cells will autopopulate.

Calculating the Requirement (Sec. 6.3.2 & 6.3.3)

Step 1: Location: Town of Jackson

The applicable regulations vary by jurisdiction please identify the location of your project using the above dropdown options.

The required housing is based on the existing and proposed use of the site. Step 2 is to enter the existing use and Step 3 is to enter the proposed use. Section 6.3.2 of the LDRs establishes the applicability of the affordable workforce housing standards and Section 6.3.3 establishes the specifics on calculation of the requirement. Enter each use in its own row, add rows if needed. If a building has multiple units with the same use, describe each unit in its own row. (For example: if a duplex is composed of a 2,300 sf attached unit and a 1,700 sf attached unit, put each unit in its own row do not put in 4,000 sf of attached single-family.) If a unit type (e.g. apartment floor plan, or commercial tennant space) is replicated exactly multiple times, you may use the "Use Quantity" column to avoid adding multiple rows.

Step 2: Existing Development

Housing is only required for new development. Please describe the existing use of the site so that it can be credited from the housing requirement. The definition of existing use is Section 6.3.2.A.1 of the LDRs. Generally, the existing use to enter is the use with the highest housing requirement that either existed in 1995, or has been permitted since 1995. Please attach proof of existence.

Existing Use (Sec. 6.3.2.A)	Housing Requirement (Sec. 6.3.3.A)	Use Size: bedrooms	Use Size: habitable sf	Use Quantity	Housing Required
Short-Term Rental Unit	0.102*bedrooms		0	0	0.000

Existing Workforce Housing Credit: 0.000

Step 3: Proposed Development

Please describe the proposed use of the site to determine if affordable workforce housing is required as part of the development. Describe the end result of the proposed development. (For example: in the case of an addition do not enter the square footage of the addition, enter the size of the unit upon completion of the addition.)

Proposed Use	Housing Requirement (Sec. 6.3.3.A)	Use Size: bedrooms	Use Size: habitable sf	Use Quantity	**Housing Required**
Short-Term Rental Unit	0.102*bedrooms	4	2557	2	**0.817**
Short-Term Rental Unit	0.102*bedrooms	3	1947	5	**1.532**
Short-Term Rental Unit	0.102*bedrooms	2	1692	15	**3.064**

Affordable Workforce Housing Required: 5.414 units

Fee-in-Lieu Amount: n/a

If the amount of required affordable workforce housing is less than one unit, you may pay the above fee in-lieu of providing the required housing. If you elect to pay the fee, your Housing Mitgation Plan is complete. If the requirement is greater than one unit, or you would like to provide a unit to meet the requirement, please proceed to the Unit Type Sheet.

Housing Mitigation Plan

updated 1/8/21

Type of Units Required (Sec. 6.3.4)

Step 4: Type of Units Required

The LDRs include a schedule for how many units have to be affordable to each income range and how many units have to have 1, 2, or 3 bedrooms. The LDRs also allow for adjustment, subject to approval by the Housing Director. To propose an adjusted allocation, change the values in the gold cells; the customized allocation must meet the customization rules provided. If a rule is violated, the cell will turn red. See also Section 6.3.4 of the LDRs.

Affordability	LDR Schedule	Proposed	Custom %	Customization Rules
Units Affordable to Households making 50% Median Income	1.414	**1.414**	26%	Custom % shall be ≥ 25%
Units Affordable to Households making 80% Median Income	1.000	**1.000**	18%	Custom % shall be ≥ 19%
Units Affordable to Households making 120% Median Income	3.000	**3.000**	55%	Custom % shall be < 43%
Workforce Units	0.000	**0.000**	0%	Custom % shall be < 13%
Total	5.414	5.414	Proposed total sall be >= Required	

Bedroom Mix	1 Bed/Studio	2 Bedroom	3 Bedroom	Total Units	Total Employees Housed	Customization Rule
LDR Schedule	2.414	2.000	1.000	5.414	9.745	The Proposed total shall be greater than or equal to the Schedule total
Proposed Allocation	**2.414**	**2.000**	**1.000**	5.414	9.600	
Employees per Unit per LDRs	1.45	2.00	2.10	1.80		

Step 5: Distribution of Affordability by Unit Size

The bedroom mix must be proportionaly distributed among the affordability mix. If you modify the distribution (gold cells) the totals must match your allocation totals (they will turn red if they do not). A customized distribution should be within 1 (rounded up or down) of the even distribution displayed (it will turn red if it is not). See also Section 6.3.4 of the LDRs.

Requirement Distribution					Even Distribution		
	1 Bed/Studio	2 Bedroom	3 Bedroom	Total	1 Bed/Studio	2 Bedroom	3 Bedroom
Affordable to 50% Median Income	**0.414**	**1.000**	**0.000**	1.414	0.606	0.606	0.202
Affordable to 80% Median Income	**1.000**	**0.000**	**0.000**	1.000	0.429	0.429	0.143
Affordable to 120% Median Income	**1.000**	**1.000**	**1.000**	3.000	1.286	1.286	0.429
Workforce Restriction	**0.000**	**0.000**	**0.000**	0.000	0.000	0.000	0.000
Total	2.414	2.000	1.000				

Once you have determined the proposed distribution please fill out the Method Sheet regarding how the required housing will be provided.

Housing Mitigation Plan

updated 1/8/21

Method for Providing the Required Units (Sec. 6.3.5)

Step 6: Method of Housing Unit Provision

The LDRs require that unlesss impractical, any housing requirement of 1 unit or greater be provided through consturction of housing. If impractical, the units my be provided by dedication of land, use of a banked unit, or restriction of an existing unit. Only as a last option shall a fee be paid. The distribution of housing types selected in Step 5 is reflected in the chart below. The default method for providing a whole housing unit is on-site construction. If you would like to propose an alternate method, or provide the requirement through various methods, adjust the gold cells. A red cell indicates the adjustment does not match Step 5. The intructions cell indicates the standards that apply to each method. In addition, each unit shall comply with the Jackson Teton/County Housing Department Rules and Regulations. Response to the applicable standards shall be provided with this Housing Mitigation Plan. The in-lieu fee will calculate.

Unit Type	Units	Method	Instructions
2 bed, < 50% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 80% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 120% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
2 bed, < 120% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
3 bed, < 120% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 50% Median Income	0.414	Fee In-Lieu	please document compliance with Sec. 6.3.5.C
Total Units:	**5.414**	**Fee In-Lieu:**	**$170,783.77**

Step 7: Attachments

Please attach to this worksheet any demonstration of existence, independent calculation, rationale for adjustment of unit type, rationale for the proposed method, documentation of the proposed method that is requried by Division 6.3. Please contact the Planning Department with any questions. Information regarding the source of the numbers in this worksheet is available in the Source Sheets.

LOT 53

Housing Mitigation Plan

updated 1/8/21

Development of a new house, hotel, or commercial space generates the need for employees. The construction workforce builds the space, the commercial workforce or residential service workforce works in the space, and first responders are needed to protect the space. Only about 27% of the employees generated by development can afford housing in the community, but the community's "community first" character goal is that 65% of employees live locally. To bridge this affordability gap, each development is required to include affordable workforce housing proportional to the employees it generates. These housing mitigation requirements are established in Division 6.3 of the Land Development Regulations. This worksheet is intended to assist in meeting the requirements for a project. However, an error in the worksheet does not amend the actual standard; if you find an error please notify the Planning Department. Fill in the highlighted cells, all the other cells will autopopulate.

Calculating the Requirement (Sec. 6.3.2 & 6.3.3)

Step 1: Location: Town of Jackson

The applicable regulations vary by jurisdiction please identify the location of your project using the above dropdown options.

The required housing is based on the existing and proposed use of the site. Step 2 is to enter the existing use and Step 3 is to enter the proposed use. Section 6.3.2 of the LDRs establishes the applicability of the affordable workforce housing standards and Section 6.3.3 establishes the specifics on calculation of the requirement. Enter each use in its own row, add rows if needed. If a building has multiple units with the same use, describe each unit in its own row. (For example: if a duplex is composed of a 2,300 sf attached unit and a 1,700 sf attached unit, put each unit in its own row do not put in 4,000 sf of attached single-family.) If a unit type (e.g. apartment floor plan, or commercial tennant space) is replicated exactly multiple times, you may use the "Use Quantity" column to avoid adding multiple rows.

Step 2: Existing Development

Housing is only required for new development. Please describe the existing use of the site so that it can be credited from the housing requirement. The definition of existing use is Section 6.3.2.A.1 of the LDRs. Generally, the existing use to enter is the use with the highest housing requirement that either existed in 1995, or has been permitted since 1995. Please attach proof of existence.

Existing Use (Sec. 6.3.2.A)	Housing Requirement (Sec. 6.3.3.A)	Use Size: bedrooms	Use Size: habitable sf	Use Quantity	Housing Required
Short-Term Rental Unit	0.102*bedrooms		0	0	0.000

Existing Workforce Housing Credit: 0.000

Step 3: Proposed Development

Please describe the proposed use of the site to determine if affordable workforce housing is required as part of the development. Describe the end result of the proposed development. (For example: in the case of an addition do not enter the square footage of the addition, enter the size of the unit upon completion of the addition.)

Proposed Use	Housing Requirement (Sec. 6.3.3.A)	Use Size: bedrooms	Use Size: habitable sf	Use Quantity	**Housing Required**
Short-Term Rental Unit	0.102*bedrooms	4	2557	0	**0.000**
Short-Term Rental Unit	0.102*bedrooms	3	2124	7	**2.145**
Short-Term Rental Unit	0.102*bedrooms	2	1528	18	**3.677**
Short-Term Rental Unit	0.102*bedrooms	1	1500	1	**0.102**

Affordable Workforce Housing Required: 5.925 units

Fee-in-Lieu Amount: n/a

If the amount of required affordable workforce housing is less than one unit, you may pay the above fee in-lieu of providing the required housing. If you elect to pay the fee, your Housing Mitgation Plan is complete. If the requirement is greater than one unit, or you would like to provide a unit to meet the requirement, please proceed to the Unit Type Sheet.

Type of Units Required (Sec. 6.3.4)

Step 4: Type of Units Required

The LDRs include a schedule for how many units have to be affordable to each income range and how many units have to have 1, 2, or 3 bedrooms. The LDRs also allow for adjustment, subject to approval by the Housing Director. To propose an adjusted allocation, change the values in the gold cells; the customized allocation must meet the customization rules provided. If a rule is violated, the cell will turn red. See also Section 6.3.4 of the LDRs.

Affordability	LDR Schedule	Proposed	Custom %	Customization Rules
Units Affordable to Households making 50% Median Income	1.925	**1.925**	32%	Custom % shall be ≥ 25%
Units Affordable to Households making 80% Median Income	1.000	**1.000**	17%	Custom % shall be ≥ 19%
Units Affordable to Households making 120% Median Income	3.000	**3.000**	51%	Custom % shall be < 43%
Workforce Units	0.000	**0.000**	0%	Custom % shall be < 13%
Total	5.925	5.925	Proposed total sall be >= Required	

Bedroom Mix	1 Bed/Studio	2 Bedroom	3 Bedroom	Total Units	Total Employees Housed	Customization Rule
LDR Schedule	2.925	2.000	1.000	5.925	10.664	The Proposed total shall be greater than or equal to the Schedule total
Proposed Allocation	**2.925**	**2.000**	**1.000**	5.925	10.341	
Employees per Unit per LDRs	1.45	2.00	2.10	1.80		

Step 5: Distribution of Affordability by Unit Size

The bedroom mix must be proportionaly distributed among the affordability mix. If you modify the distribution (gold cells) the totals must match your allocation totals (they will turn red if they do not). A customized distribution should be within 1 (rounded up or down) of the even distribution displayed (it will turn red if it is not). See also Section 6.3.4 of the LDRs.

Requirement Distribution					Even Distribution		
	1 Bed/Studio	2 Bedroom	3 Bedroom	Total	1 Bed/Studio	2 Bedroom	3 Bedroom
Affordable to 50% Median Income	**0.925**	**1.000**	**0.000**	1.925	0.825	0.825	0.275
Affordable to 80% Median Income	**1.000**	**0.000**	**0.000**	1.000	0.429	0.429	0.143
Affordable to 120% Median Income	**1.000**	**1.000**	**1.000**	3.000	1.286	1.286	0.429
Workforce Restriction	**0.000**	**0.000**	**0.000**	0.000	0.000	0.000	0.000
Total	2.925	2.000	1.000				

Once you have determined the proposed distribution please fill out the Method Sheet regarding how the required housing will be provided.

Housing Mitigation Plan

updated 1/8/21

Method for Providing the Required Units (Sec. 6.3.5)

Step 6: Method of Housing Unit Provision

The LDRs require that unlesss impractical, any housing requirement of 1 unit or greater be provided through consturction of housing. If impractical, the units my be provided by dedication of land, use of a banked unit, or restriction of an existing unit. Only as a last option shall a fee be paid. The distribution of housing types selected in Step 5 is reflected in the chart below. The default method for providing a whole housing unit is on-site construction. If you would like to propose an alternate method, or provide the requirement through various methods, adjust the gold cells. A red cell indicates the adjustment does not match Step 5. The intructions cell indicates the standards that apply to each method. In addition, each unit shall comply with the Jackson Teton/County Housing Department Rules and Regulations. Response to the applicable standards shall be provided with this Housing Mitigation Plan. The in-lieu fee will calculate.

Unit Type	Units	Method	Instructions
2 bed, < 50% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 80% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 120% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
2 bed, < 120% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
3 bed, < 120% Median Income	1.000	On-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 50% Median Income	0.925	Fee In-Lieu	please document compliance with Sec. 6.3.5.C
Total Units:	**5.925**	**Fee In-Lieu:**	**$381,588.71**

Step 7: Attachments

Please attach to this worksheet any demonstration of existence, independent calculation, rationale for adjustment of unit type, rationale for the proposed method, documentation of the proposed method that is requried by Division 6.3. Please contact the Planning Department with any questions. Information regarding the source of the numbers in this worksheet is available in the Source Sheets.

LOT 58

Housing Mitigation Plan

updated 1/8/21

Development of a new house, hotel, or commercial space generates the need for employees. The construction workforce builds the space, the commercial workforce or residential service workforce works in the space, and first responders are needed to protect the space. Only about 27% of the employees generated by development can afford housing in the community, but the community's "community first" character goal is that 65% of employees live locally. To bridge this affordability gap, each development is required to include affordable workforce housing proportional to the employees it generates. These housing mitigation requirements are established in Division 6.3 of the Land Development Regulations. This worksheet is intended to assist in meeting the requirements for a project. However, an error in the worksheet does not amend the actual standard; if you find an error please notify the Planning Department. Fill in the highlighted cells, all the other cells will autopopulate.

Calculating the Requirement (Sec. 6.3.2 & 6.3.3)

Step 1: Location: Town of Jackson

The applicable regulations vary by jurisdiction please identify the location of your project using the above dropdown options.

The required housing is based on the existing and proposed use of the site. Step 2 is to enter the existing use and Step 3 is to enter the proposed use. Section 6.3.2 of the LDRs establishes the applicability of the affordable workforce housing standards and Section 6.3.3 establishes the specifics on calculation of the requirement. Enter each use in its own row, add rows if needed. If a building has multiple units with the same use, describe each unit in its own row. (For example: if a duplex is composed of a 2,300 sf attached unit and a 1,700 sf attached unit, put each unit in its own row do not put in 4,000 sf of attached single-family.) If a unit type (e.g. apartment floor plan, or commercial tennant space) is replicated exactly multiple times, you may use the "Use Quantity" column to avoid adding multiple rows.

Step 2: Existing Development

Housing is only required for new development. Please describe the existing use of the site so that it can be credited from the housing requirement. The definition of existing use is Section 6.3.2.A.1 of the LDRs. Generally, the existing use to enter is the use with the highest housing requirement that either existed in 1995, or has been permitted since 1995. Please attach proof of existence.

Existing Use (Sec. 6.3.2.A)	Housing Requirement (Sec. 6.3.3.A)	Use Size: bedrooms	Use Size: habitable sf	Use Quantity	Housing Required
Short-Term Rental Unit	0.102*bedrooms		0	0	0.000

Existing Workforce Housing Credit: 0.000

Step 3: Proposed Development

Please describe the proposed use of the site to determine if affordable workforce housing is required as part of the development. Describe the end result of the proposed development. (For example: in the case of an addition do not enter the square footage of the addition, enter the size of the unit upon completion of the addition.)

Proposed Use	Housing Requirement (Sec. 6.3.3.A)	Use Size: bedrooms	Use Size: habitable sf	Use Quantity	**Housing Required**
Short-Term Rental Unit	0.102*bedrooms	3	1800	5	**1.532**
Short-Term Rental Unit	0.102*bedrooms	2	2100	7	**1.430**

Affordable Workforce Housing Required: 2.962 units

Fee-in-Lieu Amount: n/a

If the amount of required affordable workforce housing is less than one unit, you may pay the above fee in-lieu of providing the required housing. If you elect to pay the fee, your Housing Mitgation Plan is complete. If the requirement is greater than one unit, or you would like to provide a unit to meet the requirement, please proceed to the Unit Type Sheet.

Type of Units Required (Sec. 6.3.4)

Step 4: Type of Units Required

The LDRs include a schedule for how many units have to be affordable to each income range and how many units have to have 1, 2, or 3 bedrooms. The LDRs also allow for adjustment, subject to approval by the Housing Director. To propose an adjusted allocation, change the values in the gold cells; the customized allocation must meet the customization rules provided. If a rule is violated, the cell will turn red. See also Section 6.3.4 of the LDRs.

Affordability	LDR Schedule	Proposed	Custom %	Customization Rules
Units Affordable to Households making 50% Median Income	1.000	**1.000**	34%	Custom % shall be ≥ 25%
Units Affordable to Households making 80% Median Income	0.000	**0.000**	0%	Custom % shall be ≥ 19%
Units Affordable to Households making 120% Median Income	1.962	**1.962**	66%	Custom % shall be < 43%
Workforce Units	0.000	**0.000**	0%	Custom % shall be < 13%
Total	2.962	2.962	Proposed total sall be >= Required	

Bedroom Mix	1 Bed/Studio	2 Bedroom	3 Bedroom	Total Units	Total Employees Housed	Customization Rule
LDR Schedule	1.000	1.962	0.000	2.962	5.332	The Proposed total shall be greater than or equal to the Schedule total
Proposed Allocation	**1.000**	**1.962**	**0.000**	2.962	5.375	
Employees per Unit per LDRs	1.45	2.00	2.10	1.80		

Step 5: Distribution of Affordability by Unit Size

The bedroom mix must be proportionaly distributed among the affordability mix. If you modify the distribution (gold cells) the totals must match your allocation totals (they will turn red if they do not). A customized distribution should be within 1 (rounded up or down) of the even distribution displayed (it will turn red if it is not). See also Section 6.3.4 of the LDRs.

Requirement Distribution					Even Distribution		
	1 Bed/Studio	2 Bedroom	3 Bedroom	Total	1 Bed/Studio	2 Bedroom	3 Bedroom
Affordable to 50% Median Income	**0.000**	**1.000**	**0.000**	1.000	0.429	0.429	0.143
Affordable to 80% Median Income	**0.000**	**0.000**	**0.000**	0.000	0.000	0.000	0.000
Affordable to 120% Median Income	**1.000**	**0.962**	**0.000**	1.962	0.841	0.841	0.280
Workforce Restriction	**0.000**	**0.000**	**0.000**	0.000	0.000	0.000	0.000
Total	1.000	1.962	0.000				

Once you have determined the proposed distribution please fill out the Method Sheet regarding how the required housing will be provided.

Housing Mitigation Plan

updated 1/8/21

Method for Providing the Required Units (Sec. 6.3.5)

Step 6: Method of Housing Unit Provision

The LDRs require that unlesss impractical, any housing requirement of 1 unit or greater be provided through consturction of housing. If impractical, the units my be provided by dedication of land, use of a banked unit, or restriction of an existing unit. Only as a last option shall a fee be paid. The distribution of housing types selected in Step 5 is reflected in the chart below. The default method for providing a whole housing unit is on-site construction. If you would like to propose an alternate method, or provide the requirement through various methods, adjust the gold cells. A red cell indicates the adjustment does not match Step 5. The intructions cell indicates the standards that apply to each method. In addition, each unit shall comply with the Jackson Teton/County Housing Department Rules and Regulations. Response to the applicable standards shall be provided with this Housing Mitigation Plan. The in-lieu fee will calculate.

Unit Type	Units	Method	Instructions
2 bed, < 50% Median Income	1.000	Off-Site Construction	please document compliance with Sec. 6.3.5.D.1
1 bed, < 120% Median Income	1.000	Off-Site Construction	please document compliance with Sec. 6.3.5.D.1
2 bed, < 120% Median Income	0.962	Fee In-Lieu	please document compliance with Sec. 6.3.5.C
Total Units:	**2.962**	**Fee In-Lieu:**	**$261,687.53**

Step 7: Attachments

Please attach to this worksheet any demonstration of existence, independent calculation, rationale for adjustment of unit type, rationale for the proposed method, documentation of the proposed method that is requried by Division 6.3. Please contact the Planning Department with any questions. Information regarding the source of the numbers in this worksheet is available in the Source Sheets.

NORTHWORKS

Architectural, Civil & Landscape Plans

NORTHWORKS

Existing Site



LEGEND

- PK nail with washer inscribed "PLS 4270"
- reinforcing steel bar without cap
- reinforcing steel bar with 1" diameter aluminum cap inscribed "PLS 4270" with other appropriate markings
- sectional subdivision line
- boundary, subject property
- boundary, adjoining property
- boundary, road right-of-way
- boundary, record road right-of-way
- N25°25'25"E 100.00' — measured bearing & distance or curve geometry
- [N25°25'25"E] [100.00'] — calculated bearing & distance or curve geometry
- (N25°25'25"E) (100.00') — record bearing & distance or curve geometry, Plat 1236 & Plat 1333
- edge of pavement
- top back of curb
- edge of gravel
- sidewalk, concrete
- flowline
- toe of slope
- top of bank
- 6205 — index contour, 5' interval
- 6208 — intermediate contour, 1' interval
- 6207.5 — spot elevation
- sign
- fence, rail
- BH 1 — bore hole
- MW 1 — monitoring well
- TP 1 — geotechnical test pit
- sewer manhole
- S — sanitary sewer line
- storm drain inlet
- storm drain manhole
- STM — storm drain line
- hydrant, fire suppression
- water valve
- W — water line

SCALE: 1 INCH = 30 FEET
THIS SCALE VALID ONLY FOR 36x48 PRINTS

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwkz.com

©2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION

PROFESSIONAL SEAL

Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number
C1.1

Drawing Name
EXISTING CONDITIONS

EXISTING SITE CONDITIONS


1


2


3


4


5


6


7

SITE PHOTOS









SITE PHOTOS

SITE CONTEXT

The design team has worked hard to incorporate each building into the hillside as much as possible, and to reduce the visual impact of each building at its down-slope facade.

Each building is sunk as deep into in the hillside as the topography will allow for pedestrian and vehicular access. The uphill side of each building is deeply nestled into the terrain (at Lot 58, almost entirely buried at the south).

At the down-slope elevations, stepped terraced walls with planters help to reduce the vertical impact of the facade. Exposed basement walls are no more than 10 feet high, and material changes are used to further break down the appearance of the facade.



SITE CONTEXT

1. SNOW KING MOUNTAIN RESORT BASE



2. LOVE RIDGE CONDOMINIUMS



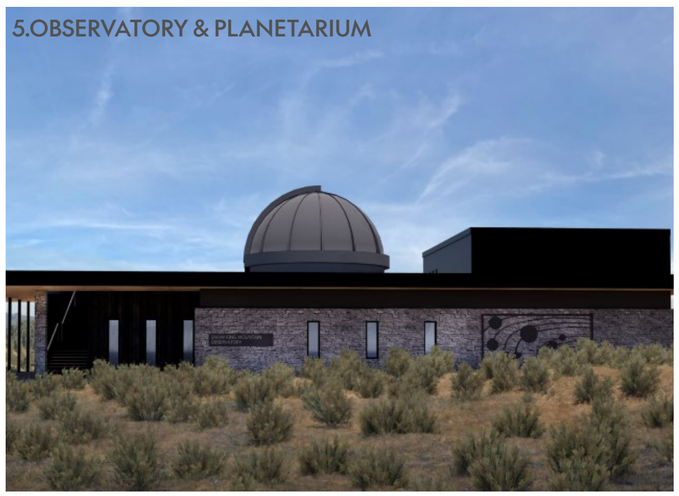
3. ONE TOWN HILL



4. SUMMIT RESTAURANT



5.OBSERVATORY & PLANETARIUM



SURROUNDING CONTEXT

1. Sloped shed roofs, exposed structure on overhangs, modern chimney form, vertical wood siding & “punched” windows

2. Varied siding materials including stone near base and wood siding higher on facade, exposed structure, gabled roof forms and chimney

3. Gabled roof forms, varied siding materials (light and dark), overhangs at base level, dark/metal balconies

4. Flat roof, large overhang, “punched” windows

5. Flat roof, large overhang, varied facade materials including stone and dark wood/metal panels











SURROUNDING CONTEXT

1, 2, 3. Horizontal brown wood siding, green trim windows, gabled roofs, chimneys, garages separate from units

4, 5. Large and varied angled roofs, vertical wood siding, exterior rhythm of balconies with slatted wood railings & vertical wood posts, horizontal bands of windows

NORTHWORKS

Proposed Design Overview



PROPOSED SITE PLAN – LANDSCAPE



GENERAL CONSTRUCTION NOTES

1. ALL SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF WYOMING PUBLIC WORKS STANDARD SPECIFICATIONS AND ARTICLE 4 OF THE TOWN OF JACKSON LAND DEVELOPMENT REGULATIONS.
2. EXISTING BASE MAPPING WAS PERFORMED BY JORGENSEN ASSOCIATES, INC.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN A WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY NPDES STORMWATER PERMIT PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES.
4. CONTRACTOR SHALL CONSTRUCT EROSION CONTROL STRUCTURES PRIOR TO ANY EARTHWORK OR CONSTRUCTION. CONTROL STRUCTURES SHALL BE CONSTRUCTED AND MAINTAINED BY CONTRACTOR UNTIL VEGETATION IS REESTABLISHED IN DISTURBED AREAS.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL PROMPTLY NOTIFY THE ENGINEER OF ANY VARIATIONS OR DISCREPANCIES.
6. BURIED UTILITIES
   - 6.1. CONTRACTOR SHALL VERIFY LOCATION OF ALL BURIED AND OVERHEAD UTILITIES PRIOR TO ANY EXCAVATION IN THE VICINITY. UTILITY LOCATIONS SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. ENGINEER DOES NOT WARRANT THE ACCURACY NOR COMPLETENESS OF THE INFORMATION SHOWN FOR EXISTING UTILITIES.
   - 6.2. CONTRACTOR SHALL COORDINATE WITH THE PROJECT REPRESENTATIVE TO LOCATE AND AVOID DAMAGE TO ANY FUEL PUMPING FACILITIES, IRRIGATION FACILITIES, WATER UTILITIES, AND STATE MONITORING WELLS AND PIPING.
   - 6.3. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES PRIOR TO INSTALLING IMPROVEMENTS.
   - 6.4. CONTRACTOR SHALL NOTIFY WYOMING ONE CALL, 1-800-348-1030, A MINIMUM OF 48 HOURS PRIOR TO EXCAVATION FOR UTILITY LOCATES.
7. ALL EXCAVATION ACTIVITIES SHALL COMPLY WITH PERMIT REQUIREMENTS ISSUED FOR THE PROJECT. CONTRACTOR SHALL REVIEW AND BE RESPONSIBLE FOR PERMIT COMPLIANCE.
8. CONTRACTOR TO CONFIRM STOCKPILE AND STAGING LOCATIONS WITH THE OWNER.
9. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
10. FILL MATERIAL SHALL BE SUITABLE ON-SITE OR IMPORTED MATERIAL WITH ROCKS NO LARGER THAN 6 INCHES IN DIAMETER. LARGER MATERIAL MAY BE PLACED ONLY WHEN AUTHORIZED BY THE ENGINEER.
11. CRUSHED GRAVEL BASE COURSE MATERIAL SHALL BE GRADING H. BASE COURSE SHALL BE MECHANICALLY COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (AASHTO T-180 - MODIFIED PROCTOR DENSITY).
12. DESTRUCTION AND DAMAGE TO TREES AND OTHER NATURAL VEGETATION SHALL BE MINIMIZED AND ALL DISTURBED SURFACES SHALL BE RESEEDED AS SOON AS PRACTICAL IN ACCORDANCE TO THE REVEGETATION SPECIFICATIONS.
13. STRIP AND SALVAGE TOPSOIL FROM ALL EXCAVATED AREAS.
14. WEEDS SHALL BE CONTROLLED BY SPRAYING, LIMITING DISTURBANCE AREA, OR OTHER MEANS PRIOR TO REVEGETATION AND AFTER REVEGETATION IS COMPLETE.
15. FUGITIVE DUST WILL BE CONTROLLED BY WATERING DURING DRY PERIODS OR AS REQUIRED BY ENGINEER.
16. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED AND PROCESSED ON-SITE ONLY AT LOCATIONS AS DESIGNATED ON THE PLANS.
17. TOPS OF CUT AND FILL SLOPES SHALL BE ROUNDED TO AVOID RAVELING AND EROSION.
18. CUT AND FILL SLOPES SHALL NOT EXCEED 2:1.

WATER AND SEWER UTILITY NOTES

1. WATER AND SEWER INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER QUALITY DIVISION RULES AND REGULATIONS AND THE TOWN OF JACKSON STANDARDS FOR CONSTRUCTION.
2. CONTRACTOR SHALL NOTIFY THE TOWN OF JACKSON PUBLIC WORKS DEPARTMENT AT PHONE NUMBER (307) 733-3079, PRIOR TO START OF CONSTRUCTION AND PRIOR TO EACH WATER AND SEWER TEST.
3. CONTRACTOR SHALL MAINTAIN WATER AND SEWER SLOPES CONSISTENT WITH THE PLANS. ABRUPT ELEVATION CHANGES ARE NOT PERMITTED AND MAY REQUIRE ADDITIONAL AIR RELEASE VALVES OR BLOW-OFFS AT THE CONTRACTORS EXPENSE.
4. TYPE A TRENCH BACKFILL SHALL APPLY TO ALL PAVED SURFACES AND AROUND ALL APPURTENANCES INCLUDING VALVES, FIRE HYDRANTS AND MANHOLES. TYPE B TRENCH BACKFILL SHALL APPLY TO NON-TRAVELED AREAS. SEE SPECIFICATION WPWSS 02225.
5. CONTINUOUS RIGID TYPE B PIPELINE INSULATION SHALL BE PROVIDED AS SHOWN ON THE TYPICAL TRENCH DETAIL, UNDER ALL TRAVELED AREAS AND AT ALL LOCATIONS WHERE DEPTH OF COVER IS LESS THAN 5 FEET FOR SEWER MAINS AND SERVICES; LESS THAN 7 FEET FOR SEWER FORCE MAINS, WATER MAINS AND SERVICES OR AS SHOWN ON THE PLANS.
6. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL SEPARATION BETWEEN WATER PIPES AND SEWER PIPES/MANHOLES, MEASURED EDGE TO EDGE. MAINTAIN A MINIMUM OF 18 INCHES VERTICAL SEPARATION AT WATER-SEWER PIPE CROSSINGS. WHERE SEWER PIPE CROSSES ABOVE WATER PIPE, SPECIAL CONSTRUCTION IS REQUIRED. SEE TYPICAL DETAILS.
7. WATER SERVICE LINES 4" AND LARGER SHALL BE DUCTILE IRON PIPE, OR APPROVED EQUAL. FITTINGS FOR WATER MAINS SHALL BE DUCTILE IRON, CONFORMING TO AWWA C110 OR C153. MINIMUM DEPTH OF BURY FOR ALL WATER LINES SHALL BE 7'.
8. SANITARY SEWER LINES AND FITTINGS SHALL BE SCHEDULE 40 PVC AND CONFORM TO ASTM D-3034, OR APPROVED EQUAL.

LEGEND

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- SNOWMELTED HARDSCAPE
- RETAINING WALL
- 8"W — 8" WATER
- 6"W — 6" WATER
- W — WATER SERVICE
- 8"S — 8" SEWER
- S — SEWER SERVICE
- STM — STORMWATER
- GAS — GAS
- P — POWER
- FIRE HYDRANT
- WATER VALVE
- SEWER MANHOLE
- STORMWATER MANHOLE
- STORM INLET
- TRANSFORMER
- ELECTRIC VAULT

SCALE: 1 INCH = 30 FEET
THIS SCALE VALID ONLY FOR 36x48 PRINTS

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwks.com

© 2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION
3	2025-04-28	DEVELOPMENT PLAN REVISION 2

PROFESSIONAL SEAL

Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number
C1.0

Drawing Name
PROPOSED OVERVIEW

PROPOSED SITE PLAN - CIVIL

AREA & UNIT MIX OVERVIEW

SITE	FAR SUBTOTAL (SF)	GROSS AREA SUBTOTAL (SF)	# 1 BEDS	# 2 BEDS	# 3 BEDS	# 4 BEDS	MARKET UNIT COUNT
LOT 57 NORTH	18,571	31,957	0	10	0	0	10
LOT 57 SOUTH	24,539	36,812	0	5	5	2	12
LOT 53	42,314	71,705	1	18	7	0	26
LOT 58	24,905	34,849	0	7	5	0	12
	110,329	**175,323**	**1**	**40**	**17**	**2**	**60**
	TOTAL FAR AREA	TOTAL GROSS AREA	1-BEDS	2-BEDS	3-BEDS	4-BEDS	MARKET UNITS
			2%	67%	28%	3%	

REQ. # OF AFF. UNITS	AFF. 1-BEDS		AFF. 2-BEDS		AFF. 3-BEDS		TOTAL AFF. UNITS	
	REQ.	PROVIDED	REQ.	PROVIDED	REQ.	PROVIDED	REQ.	PROVIDED
5.414	2	**2**	2	**1**	1	**1**	5	**4**
		0		**1**		**0**		**1**
PHASE 1: LOT 57	2	**2**	2	**2**	1	**1**	5	**5**
		AFF. 1-BEDS **OK**		AFF. 2-BEDS **OK**		AFF. 3-BEDS **OK**	TOTAL REQ.	TOTAL AFF. **OK**
5.822	2	**3**	2	**3**	1	**1**	5	**7**
2.962	1	**0**	1	**0**	0	**0**	2	**0**
PHASE 2: LOTS 53 & 58	3	**3**	3	**3**	1	**1**	7	**7**
		AFF. 1-BEDS **OK**		AFF. 2-BEDS **OK**		AFF. 3-BEDS **OK**	TOTAL REQ.	TOTAL AFF. **OK**
	REQ.	PROVIDED	REQ.	PROVIDED	REQ.	PROVIDED	REQ.	PROVIDED
ALL LOTS TOTAL	5	**5**	5	**5**	2	**2**	12	**12**
		AFF. 1-BEDS **OK**		AFF. 2-BEDS **OK**		AFF. 3-BEDS **OK**	TOTAL REQ.	TOTAL AFF. **OK**

MAX. SHORT TERM	112,952
OVER/UNDER	*-2,623*
	UNDER

PARKING COUNTS

SITE	TOTAL REQUIRED PARKING	PARKING PROVIDED	PARKING PROV. INCL. TANDEM	TOTAL # BEDROOMS	REQ. BIKE PARKING	REQ. BIKES, SHORT-TERM (25% x .75/bed)	REQ. BIKES, LONG-TERM (75% x .75/bed)	NOTES
LOT 57 NORTH	14	**15**	**19**	27	21	6	15	EVSE spaces: 6 capable + 1 installed. Short-term bike parking at outdoor spaces; long-term located in garages.
LOT 57 SOUTH	13	**14**	**22**	35	27	7	20	EVSE spaces: 7 capable + 1 installed.
LOT 53	33	**42**	**57**	70	53	14	39	EVSE spaces: 17 capable + 3 installed.
LOT 58	12	**19**	**19**	29	22	6	16	EVSE spaces: 6 capable + 1 installed.
	72	**90**	**117**					
	REQ.	PROVIDED	PROVIDED INCL. TANDEM					

OVERALL UNIT MIX SUMMARY

FAR Area Legend

- Market 2-Bedroom
- Market 3-Bedroom
- Market 4-Bedroom
- Market Circulation Stair/Elev
- Market Circulation Corridor
- Market Circulation N/A
- Affordable Studio
- Affordable 1-Bedroom
- Affordable 2-Bedroom
- Affordable 3-Bedroom
- Mechanical
- Parking

LOT 57 NORTH - FAR AREA

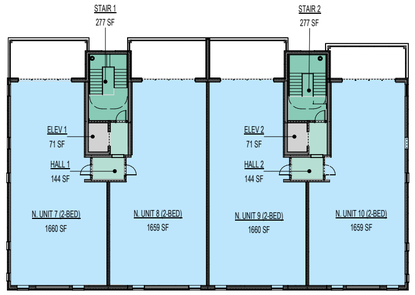
AREA TYPE	ROOM NAME	AREA
T.O. LEVEL 3 SLAB		
Market 2-Bedroom	N. UNIT 10 (2-BED)	1,659 SF
Market 2-Bedroom	N. UNIT 9 (2-BED)	1,660 SF
Market 2-Bedroom	N. UNIT 8 (2-BED)	1,659 SF
Market 2-Bedroom	N. UNIT 7 (2-BED)	1,660 SF
Market Circulation Corridor	HALL 2	144 SF
Market Circulation Corridor	HALL 1	144 SF
Market Circulation Stair/Elev	STAIR 2	277 SF
Market Circulation Stair/Elev	STAIR 1	277 SF
		7,480 SF
T.O. LEVEL 2 SLAB		
Market 2-Bedroom	N. UNIT 6 (2-BED)	1,659 SF
Market 2-Bedroom	N. UNIT 5 (2-BED)	1,660 SF
Market 2-Bedroom	N. UNIT 4 (2-BED)	1,659 SF
Market 2-Bedroom	N. UNIT 3 (2-BED)	1,660 SF
Market Circulation Corridor	N. HALL 2	144 SF
Market Circulation Corridor	N. HALL 1	144 SF
		8,926 SF
T.O. LEVEL 1 SLAB		
Market 2-Bedroom	N. UNIT 2 (2-BED)	1,659 SF
Market 2-Bedroom	N. UNIT 1 (2-BED)	1,660 SF
Market Circulation Corridor	N. HALL 1	144 SF
Market Circulation Stair/Elev	N. STAIR 2	283 SF
Market Circulation Stair/Elev	N. STAIR 1	277 SF
Market Circulation Stair/Elev	N. ELEV 2	71 SF
Market Circulation Stair/Elev	N. ELEV 1	71 SF
		4,165 SF
TOTAL FAR AREA		19,571 SF

LOT 57 NORTH - NOT COUNTED IN FAR

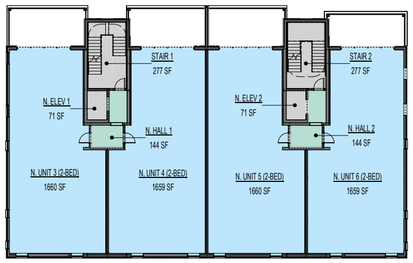
AREA TYPE	ROOM NAME	AREA
T.O. LEVEL 3 SLAB		
Market Circulation N/A	ELEV 1	71 SF
Market Circulation N/A	ELEV 2	71 SF
		142 SF
T.O. LEVEL 2 SLAB		
Market Circulation N/A	N. ELEV 1	71 SF
Market Circulation N/A	N. ELEV 2	71 SF
Market Circulation N/A	STAIR 1	277 SF
Market Circulation N/A	STAIR 2	277 SF
		696 SF
T.O. LEVEL 1 SLAB		
Affordable 1-Bedroom	AFF. UNIT 3	787 SF
Affordable 1-Bedroom	AFF. UNIT 4	800 SF
Affordable 2-Bedroom	AFF. UNIT 1	853 SF
Affordable 3-Bedroom	AFF. UNIT 2	1,317 SF
Market Circulation N/A	AFF. HALL	211 SF
		3,968 SF
T.O. BASEMENT SLAB		
Market Circulation N/A	N. CIRCULATION 1	413 SF
Market Circulation N/A	N. CIRCULATION 2	413 SF
Mechanical	N. MECH	371 SF
Mechanical	N. TRASH	215 SF
Parking	N. PARKING	7,168 SF
		8,580 SF
TOTAL AREA NOT COUNTED TOWARD FAR		13,386 SF

LOT 57 NORTH - GROSS AREA TOTALS

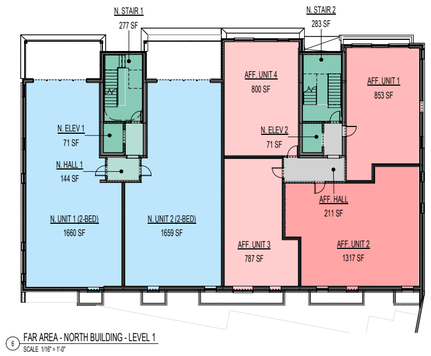
LEVEL	AREA TOTALS BY FLOOR
T.O. LEVEL 3 SLAB	7,622 SF
T.O. LEVEL 2 SLAB	7,622 SF
T.O. LEVEL 1 SLAB	8,133 SF
T.O. BASEMENT SLAB	8,580 SF
TOTAL AREA	31,957 SF



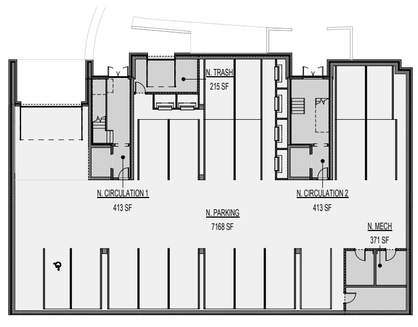
8 FAR AREA - NORTH BUILDING - LEVEL 3
SCALE: 1/16" = 1'-0"



7 FAR AREA - NORTH BUILDING - LEVEL 2
SCALE: 1/16" = 1'-0"



6 FAR AREA - NORTH BUILDING - LEVEL 1
SCALE: 1/16" = 1'-0"



5 FAR AREA - NORTH BUILDING - BASEMENT
SCALE: 1/16" = 1'-0"

FAR Area Legend

- Market 2-Bedroom
- Market 3-Bedroom
- Market 4-Bedroom
- Market Circulation Stair/Elev
- Market Circulation Corridor
- Market Circulation N/A
- Affordable Studio
- Affordable 1-Bedroom
- Affordable 2-Bedroom
- Affordable 3-Bedroom
- Mechanical
- Parking

LOT 57 SOUTH - FAR AREA

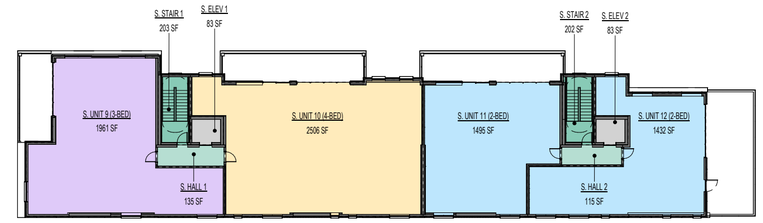
AREA TYPE	ROOM NAME	AREA
T.O. LEVEL 3 SLAB		
Market 2-Bedroom	S. UNIT 12 (2-BED)	1,432 SF
Market 2-Bedroom	S. UNIT 11 (2-BED)	1,495 SF
Market 4-Bedroom	S. UNIT 10 (4-BED)	2,506 SF
Market 2-Bedroom	S. UNIT 9 (3-BED)	1,961 SF
Market Circulation Stair/Elev	S. STAIR 2	202 SF
Market Circulation Stair/Elev	S. STAIR 1	203 SF
Market Circulation Corridor	S. HALL 2	115 SF
Market Circulation Corridor	S. HALL 1	135 SF
		8,049 SF
T.O. LEVEL 2 SLAB		
Market 3-Bedroom	S. UNIT 8 (3-BED)	1,866 SF
Market 2-Bedroom	S. UNIT 7 (2-BED)	1,648 SF
Market 4-Bedroom	S. UNIT 6 (4-BED)	2,506 SF
Market 3-Bedroom	S. UNIT 5 (3-BED)	2,049 SF
Market Circulation Corridor	S. HALL 2	118 SF
Market Circulation Corridor	S. HALL 1	135 SF
		8,322 SF
T.O. LEVEL 1 SLAB		
Market 3-Bedroom	S. UNIT 4 (3-BED)	1,866 SF
Market 2-Bedroom	S. UNIT 3 (2-BED)	1,648 SF
Market 2-Bedroom	S. UNIT 2 (2-BED)	1,773 SF
Market 3-Bedroom	S. UNIT 1 (3-BED)	2,027 SF
Market Circulation Stair/Elev	S. STAIR 2	202 SF
Market Circulation Stair/Elev	S. STAIR 1	203 SF
Market Circulation Corridor	S. HALL 2	118 SF
Market Circulation Corridor	S. HALL 1	165 SF
Market Circulation Stair/Elev	S. ELEV 2	83 SF
Market Circulation Stair/Elev	S. ELEV 1	83 SF
		8,198 SF
TOTAL FAR AREA		24,569 SF

LOT 57 SOUTH - NOT COUNTED IN FAR

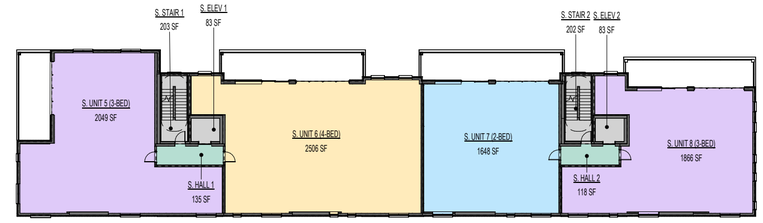
AREA TYPE	ROOM NAME	AREA
T.O. LEVEL 3 SLAB		
Market Circulation N/A	S. ELEV 1	83 SF
Market Circulation N/A	S. ELEV 2	83 SF
		166 SF
T.O. LEVEL 2 SLAB		
Market Circulation N/A	S. ELEV 1	83 SF
Market Circulation N/A	S. ELEV 2	83 SF
Market Circulation N/A	S. STAIR 1	203 SF
Market Circulation N/A	S. STAIR 2	202 SF
		571 SF
T.O. LEVEL 1 SLAB		
Affordable 2-Bedroom	AFF. UNIT 5 (2-BED)	725 SF
		725 SF
T.O. BASEMENT SLAB		
Market Circulation N/A	S. CIRCULATION 1	398 SF
Market Circulation N/A	S. CIRCULATION 2	398 SF
Mechanical	TRASH / MECH	367 SF
Parking	S. PARKING	9,648 SF
		10,811 SF
TOTAL AREA NOT COUNTED TOWARD FAR		12,273 SF

LOT 57 SOUTH - GROSS AREA TOTALS

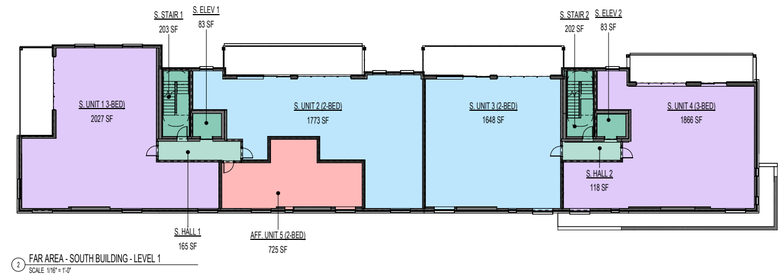
LEVEL	AREA TOTALS BY FLOOR
T.O. LEVEL 3 SLAB	8,215 SF
T.O. LEVEL 2 SLAB	8,893 SF
T.O. LEVEL 1 SLAB	8,893 SF
T.O. BASEMENT SLAB	10,811 SF
TOTAL AREA	36,812 SF



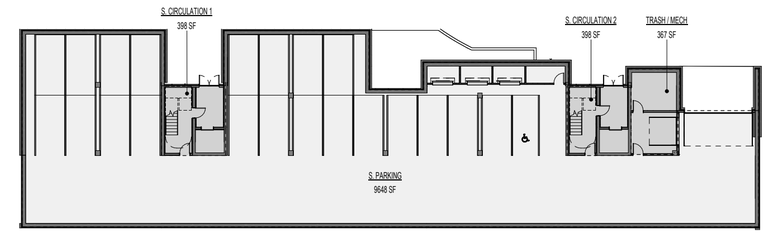
4 FAR AREA - SOUTH BUILDING - LEVEL 3
SCALE: 1/16" = 1'-0"



3 FAR AREA - SOUTH BUILDING - LEVEL 2
SCALE: 1/16" = 1'-0"



2 FAR AREA - SOUTH BUILDING - LEVEL 1
SCALE: 1/16" = 1'-0"



1 FAR AREA - SOUTH BUILDING - GARAGE
SCALE: 1/16" = 1'-0"

0 8 16 32 64

UNIT MIX & F.A.R. AREAS – LOT 57

LOT 53 - FAR AREA SCHEDULE

AREA TYPE	ROOM NAME	AREA
LEVEL 3		
Market 2-Bedroom	UNIT 26 (2-BED)	1,271 SF
Market 2-Bedroom	UNIT 25 (2-BED)	1,371 SF
Market 2-Bedroom	UNIT 24 (2-BED)	1,359 SF
Market 3-Bedroom	UNIT 23 (3-BED)	2,433 SF
Market 3-Bedroom	UNIT 22 (3-BED)	2,302 SF
Market 2-Bedroom	UNIT 21 (2-BED)	1,365 SF
Market 2-Bedroom	UNIT 20 (2-BED)	1,359 SF
Market 3-Bedroom	UNIT 19 (3-BED)	1,269 SF
Market Circulation Stair	STAIR 5	235 SF
Market Circulation Stair	STAIR 4	235 SF
Market Circulation Stair	STAIR 2	232 SF
Market Circulation Stair	STAIR 1	235 SF
Market Circulation Corridor	HALL 5	65 SF
Market Circulation Corridor	HALL 4	65 SF
Market Circulation Corridor	HALL 2	64 SF
Market Circulation Corridor	HALL 1	65 SF
		13,925 SF
LEVEL 2		
Market 2-Bedroom	UNIT 18 (2-BED)	1,277 SF
Market 2-Bedroom	UNIT 17 (2-BED)	1,371 SF
Market 2-Bedroom	UNIT 16 (2-BED)	1,359 SF
Market 3-Bedroom	UNIT 15 (3-BED)	2,434 SF
Market 3-Bedroom	UNIT 14 (3-BED)	2,296 SF
Market 2-Bedroom	UNIT 13 (2-BED)	1,365 SF
Market 2-Bedroom	UNIT 12 (2-BED)	1,359 SF
Market 3-Bedroom	UNIT 11 (3-BED)	1,823 SF
Market Circulation Corridor	HALL 5	65 SF
Market Circulation Corridor	HALL 4	65 SF
Market Circulation Corridor	HALL 2	65 SF
Market Circulation Corridor	HALL 1	65 SF
		13,544 SF
LEVEL 1		
Market 2-Bedroom	UNIT 10 (2-BED)	1,276 SF
Market 2-Bedroom	UNIT 9 (2-BED)	1,371 SF
Market 2-Bedroom	UNIT 8 (2-BED)	1,365 SF
Market 1-Bedroom	UNIT 7 (1-BED+DEN)	1,116 SF
Market 2-Bedroom	UNIT 6 (2-BED)	1,428 SF
Market 2-Bedroom	UNIT 5 (2-BED)	1,078 SF
Market 2-Bedroom	UNIT 4 (2-BED)	1,067 SF
Market 2-Bedroom	UNIT 3 (2-BED)	1,365 SF
Market 2-Bedroom	UNIT 2 (2-BED)	1,359 SF
Market 3-Bedroom	UNIT 1 (3-BED)	1,823 SF
Market Circulation Stair	STAIR 5	235 SF
Market Circulation Stair	STAIR 4	232 SF
Market Circulation Stair	STAIR 2	235 SF
Market Circulation Stair	STAIR 1	235 SF
Market Circulation Corridor	HALL 5	65 SF
Market Circulation Corridor	HALL 4	64 SF
Market Circulation Corridor	HALL 3	81 SF
Market Circulation Corridor	HALL 2	65 SF
Market Circulation Corridor	HALL 1	65 SF
Market Circulation Elevator	ELEV 5	83 SF
Market Circulation Elevator	ELEV 4	81 SF
Market Circulation Elevator	ELEV 2	78 SF
Market Circulation Elevator	ELEV 1	78 SF
		14,845 SF
TOTAL FAR AREA		42,314 SF

LOT 53 - NOT COUNTED TOWARD FAR AREA

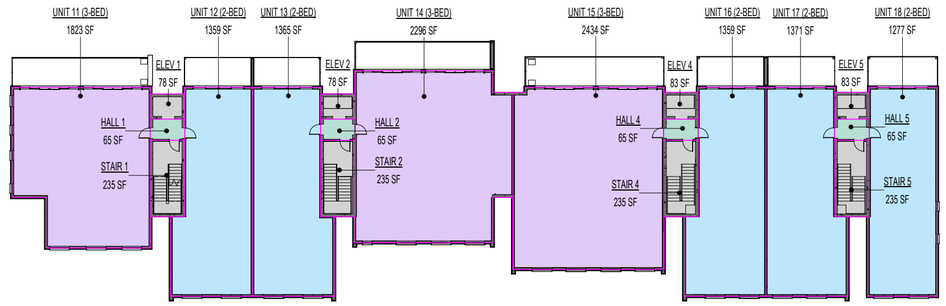
AREA TYPE	ROOM NAME	AREA
LEVEL 3		
Market Circulation N/A	ELEV 1	78 SF
Market Circulation N/A	ELEV 2	76 SF
Market Circulation N/A	ELEV 4	78 SF
Market Circulation N/A	ELEV 5	83 SF
		315 SF
LEVEL 2		
Market Circulation N/A	ELEV 1	78 SF
Market Circulation N/A	ELEV 2	78 SF
Market Circulation N/A	ELEV 4	83 SF
Market Circulation N/A	ELEV 5	83 SF
Market Circulation N/A	STAIR 1	235 SF
Market Circulation N/A	STAIR 2	235 SF
Market Circulation N/A	STAIR 4	235 SF
Market Circulation N/A	STAIR 5	235 SF
		1,262 SF
BASEMENT		
Affordable 1-Bedroom	AFF. UNIT 3 (1-BED)	530 SF
Affordable 1-Bedroom	AFF. UNIT 6 (1-BED)	527 SF
Affordable 1-Bedroom	AFF. UNIT 7 (STUDIO)	490 SF
Affordable 2-Bedroom	AFF. UNIT 1 (2-BED)	832 SF
Affordable 2-Bedroom	AFF. UNIT 2 (2-BED)	817 SF
Affordable 2-Bedroom	AFF. UNIT 5 (2-BED)	706 SF
Affordable 3-Bedroom	AFF. UNIT 4 (3-BED)	1,004 SF
Market 2-Bedroom non-FAR	UNIT 4 (2-BED)	508 SF
Market 2-Bedroom non-FAR	UNIT 5 (2-BED)	553 SF
Market Circulation N/A	ELEV 1	73 SF
Market Circulation N/A	ELEV 2	73 SF
Market Circulation N/A	ELEV 4	75 SF
Market Circulation N/A	ELEV 5	83 SF
Market Circulation N/A	HALL 1	404 SF
Market Circulation N/A	HALL 2	149 SF
Market Circulation N/A	HALL 4	215 SF
Market Circulation N/A	HALL 5	170 SF
Market Circulation N/A	STAIR 1	210 SF
Market Circulation N/A	STAIR 2	206 SF
Market Circulation N/A	STAIR 3	133 SF
Market Circulation N/A	STAIR 4	210 SF
Market Circulation N/A	STAIR 5	210 SF
Mechanical	MECH	443 SF
Parking	PARKING	19,193 SF
		27,814 SF
TOTAL AREA NOT COUNTED TOWARD FAR		29,391 SF

LOT 53 - AREA TOTALS

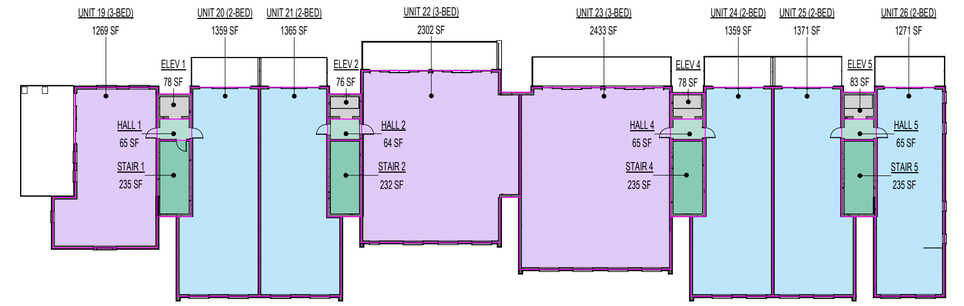
LEVEL	AREA TOTALS BY FLOOR
LEVEL 3	14,240 SF
LEVEL 2	14,806 SF
LEVEL 1	14,845 SF
BASEMENT	27,814 SF
TOTAL AREA	71,705 SF

FAR Area Legend

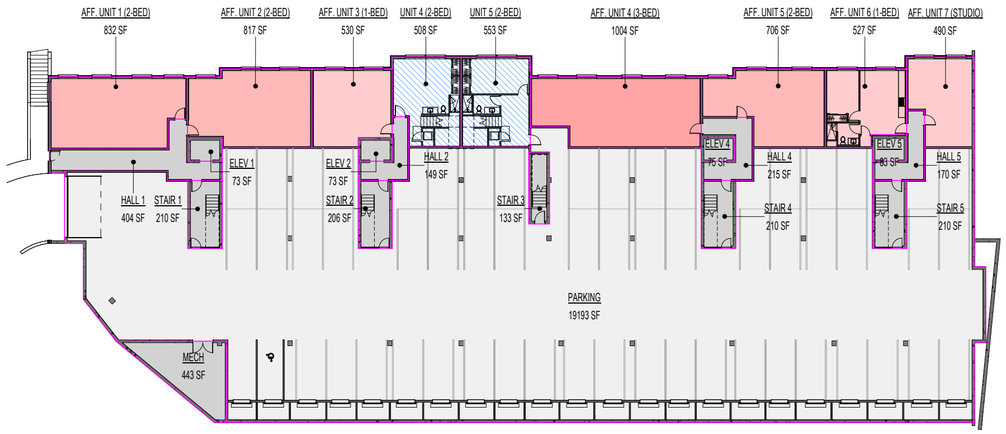
- Market 2-Bedroom
- Market 2-Bedroom non-FAR
- Market 3-Bedroom
- Affordable Studio
- Affordable 1-Bedroom
- Market 1-Bedroom
- Affordable 2-Bedroom
- Affordable 3-Bedroom
- Market Circulation Elevator
- Market Circulation Corridor
- Market Circulation Stair
- Market Circulation N/A
- Mechanical
- Parking



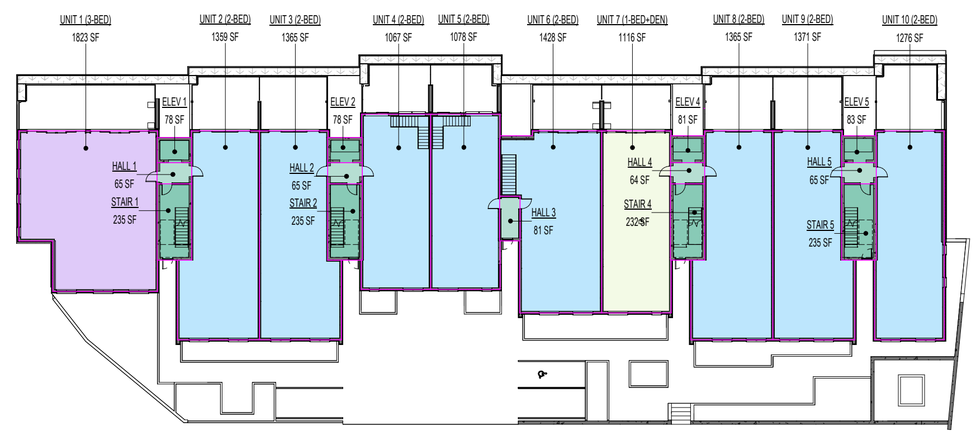
3 LOT 53 - FAR AREA PLAN - 2ND FLOOR
SCALE 1" = 20'-0"



4 LOT 53 - FAR AREA PLAN - 3RD FLOOR
SCALE 1" = 20'-0"



2 LOT 53 - FAR AREA PLAN - BASEMENT
SCALE 1" = 20'-0"



1 LOT 53 - FAR AREA PLAN - 1ST FLOOR
SCALE 1" = 20'-0"

0 10 20 40 80

UNIT MIX & F.A.R. AREAS – LOT 53

LOT 58 - FAR AREA SCHEDULE

AREA TYPE	ROOM NAME	AREA
LEVEL 3		
Market 3-Bedroom	UNIT 12 (3-BED)	2,086 SF
Market 2-Bedroom	UNIT 11 (2-BED)	1,790 SF
Market 2-Bedroom	UNIT 10 (2-BED)	1,790 SF
Market 3-Bedroom	UNIT 9 (3-BED)	2,086 SF
Market Circulation Stair	STAIR 2	197 SF
Market Circulation Stair	STAIR 1	197 SF
Market Circulation Corridor	HALL 2	116 SF
Market Circulation Corridor	HALL 1	116 SF
		8,378 SF
LEVEL 2		
Market 3-Bedroom	UNIT 8 (3-BED)	2,086 SF
Market 2-Bedroom	UNIT 7 (2-BED)	1,790 SF
Market 2-Bedroom	UNIT 6 (2-BED)	1,790 SF
Market 3-Bedroom	UNIT 5 (3-BED)	2,086 SF
Market Circulation Corridor	HALL 2	116 SF
Market Circulation Corridor	HALL 1	116 SF
		7,984 SF
LEVEL 1		
Market 2-Bedroom	UNIT 4 (2-BED)	2,087 SF
Market 2-Bedroom	UNIT 3 (2-BED)	1,790 SF
Market 2-Bedroom	UNIT 2 (2-BED)	1,790 SF
Market 3-Bedroom	UNIT 1 (3-BED)	2,086 SF
Market Circulation Stair	STAIR 2	197 SF
Market Circulation Stair	STAIR 1	197 SF
Market Circulation Corridor	HALL 2	116 SF
Market Circulation Corridor	HALL 1	116 SF
Market Circulation Elevator	ELEV 1	82 SF
Market Circulation Elevator	ELEV 1	82 SF
		8,543 SF
TOTAL FAR AREA		24,905 SF

LOT 58 - NOT COUNTED TOWARD FAR AREA

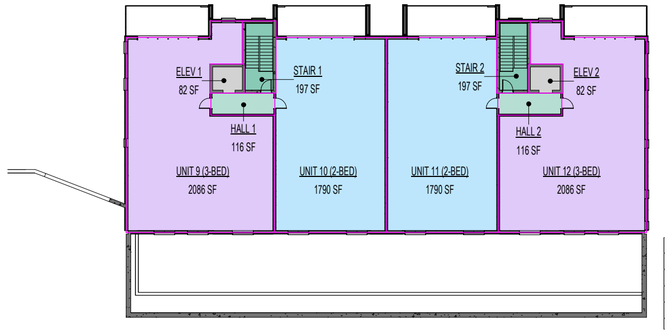
AREA TYPE	ROOM NAME	AREA
LEVEL 3		
Market Circulation N/A	ELEV 1	82 SF
Market Circulation N/A	ELEV 2	82 SF
		164 SF
LEVEL 2		
Market Circulation N/A	ELEV 1	82 SF
Market Circulation N/A	ELEV 2	82 SF
Market Circulation N/A	STAIR 1	197 SF
Market Circulation N/A	STAIR 2	197 SF
		558 SF
BASEMENT		
Market Circulation N/A	ELEV 1	77 SF
Market Circulation N/A	ELEV 2	77 SF
Market Circulation N/A	HALL 1	129 SF
Market Circulation N/A	HALL 2	129 SF
Market Circulation N/A	STAIR 1	196 SF
Market Circulation N/A	STAIR 2	196 SF
Mechanical	MECH	207 SF
Mechanical	TRASH	167 SF
Parking	PARKING GARAGE	8,044 SF
		9,222 SF
TOTAL AREA NOT COUNTED TOWARD FAR		9,944 SF

LOT 58 - AREA TOTALS

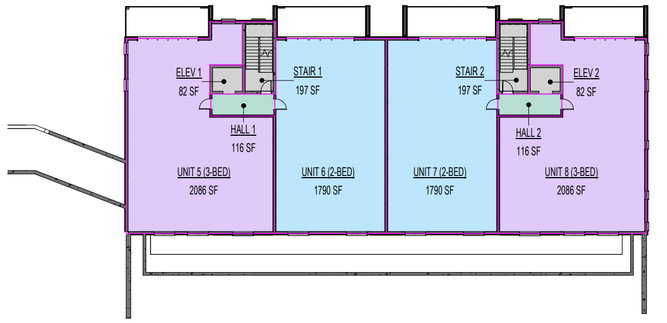
LEVEL	AREA TOTALS BY FLOOR
LEVEL 3	8,542 SF
LEVEL 2	8,542 SF
LEVEL 1	8,543 SF
BASEMENT	9,222 SF
TOTAL AREA	34,849 SF

FAR Area Legend

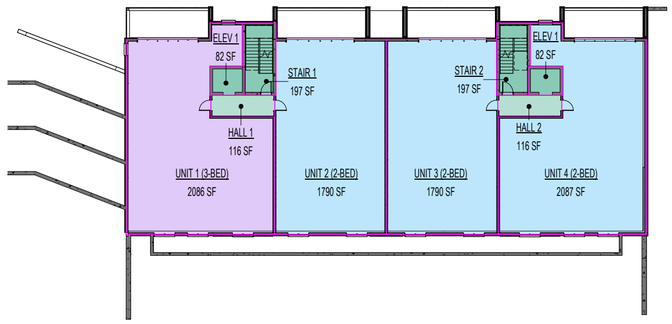
- Market 1-Bedroom
- Market 2-Bedroom
- Market 3-Bedroom
- Market Circulation Elevator
- Market Circulation Corridor
- Market Circulation Stair
- Market Circulation N/A
- Mechanical
- Parking



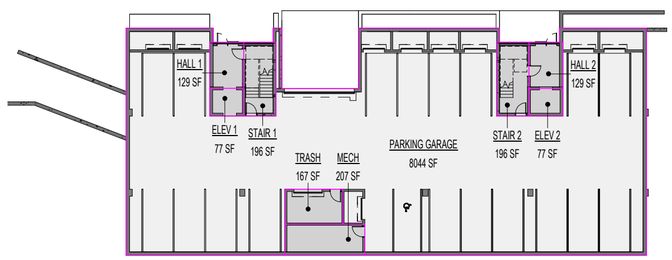
4 LOT 58 - FAR AREA PLAN - 3RD FLOOR
SCALE 1" = 20'-0"



3 LOT 58 - FAR AREA PLAN - 2ND FLOOR
SCALE 1" = 20'-0"



1 LOT 58 - FAR AREA PLAN - 1ST FLOOR
SCALE 1" = 20'-0"



2 LOT 58 - FAR AREA PLAN - BASEMENT
SCALE 1" = 20'-0"

0 10 20 40 80

UNIT MIX & F.A.R. AREAS – LOT 58

NORTHWORKS

Overall Renderings



BLACK METAL WALL AND
ROOF CLADDING



WOOD SIDING
BUILDING WALL CLADDING



SILVERTIP LIMESTONE
BUILDING WALL CLADDING



BOARD FORM CONCRETE
SITE RETAINING WALLS



MATERIAL PALETTE





FULL SITE AERIAL - WINTER





FULL SITE AERIAL - SUMMER





LOT 57 NORTH – RENDERED ELEVATION





LOVE RIDGE CONDOS & LOT 57 NORTH BUILDING





LOT 57 SOUTH RENDERED ELEVATION





LOT 57 COURTYARD





LOT 57 SOUTH BUILDING MASSING REDUCTION





LOT 57 SOUTH BUILDING MASSING REDUCTION





LOT 53 APPROACH





LOT 53 RENDERED ELEVATION





LOT 53 MAIN ENTRY & VEHICULAR DROPOFF





LOT 53 NORTH PATH AT LOVE RIDGE CONDOS





LOT 58 RENDERED ELEVATION

NORTHWORKS

Lot 57



LOT 57 SITE PLAN - LANDSCAPE

IN WINTER, THE ENTIRE MOUNTAIN CASTS A SHADOW ON ITSELF TOWARDS THE NORTH.

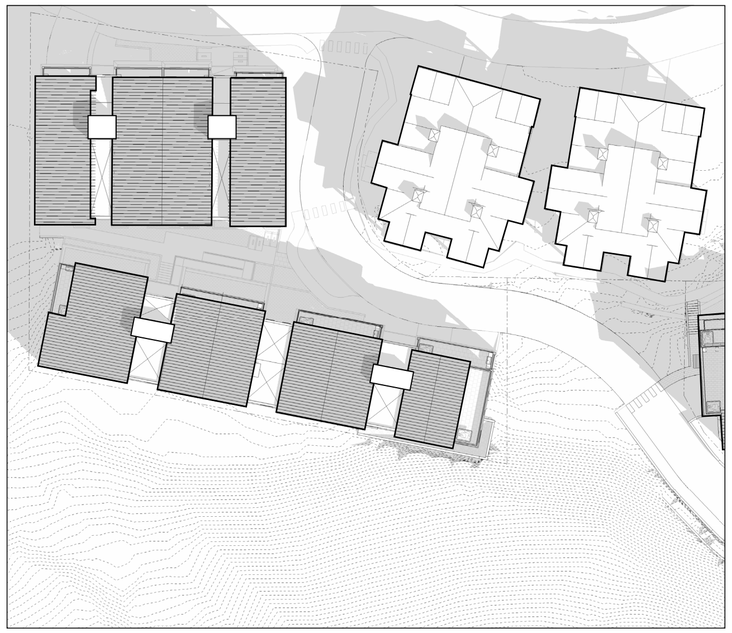
IN SPRING, THE SOUTH BUILDING'S SHADOW BARELY REACHES THE CONDOS TO THE NORTH.

IN SUMMER, PLENTY OF SUNLIGHT REACHES THE SPACE BETWEEN THE BUILDINGS.

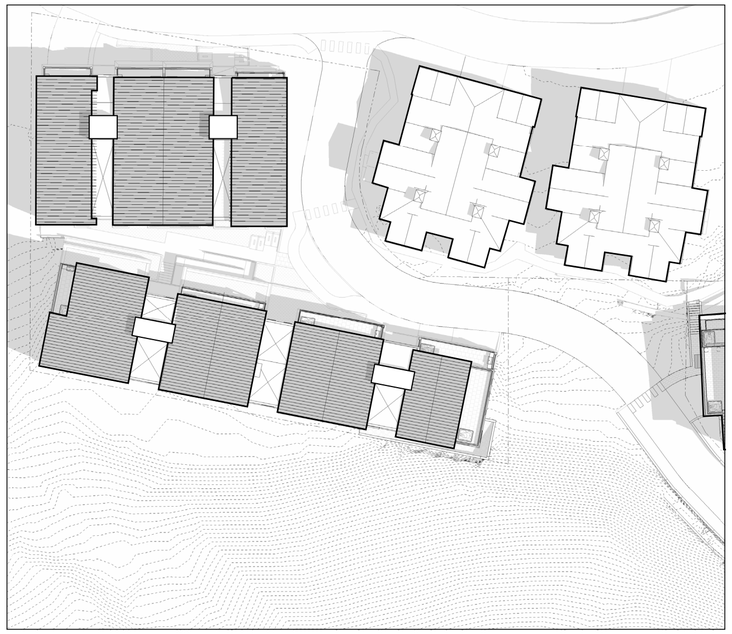
10:00AM



WINTER SOLSTICE (Dec 21, 10:00 AM)



SPRING EQUINOX (Mar 20, 10:00 AM)



SUMMER SOLSTICE (Jun 20, 10:00 AM)

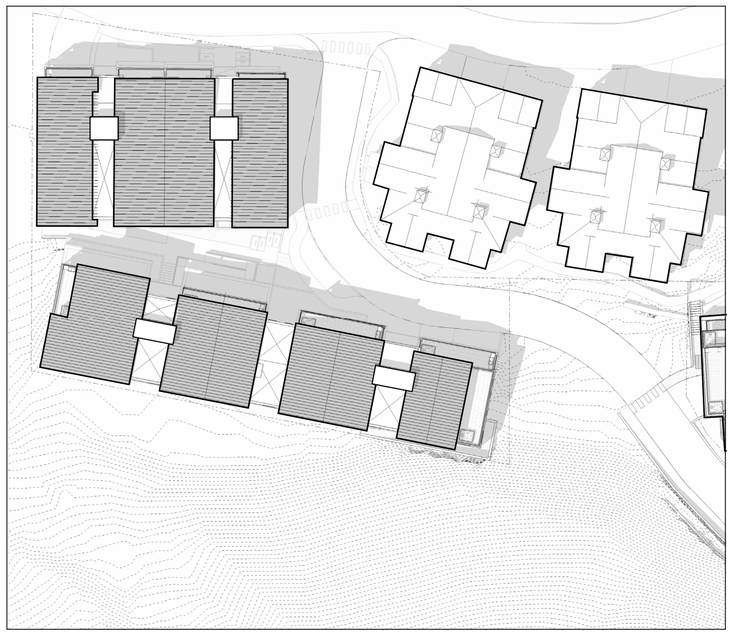
2:00PM



WINTER SOLSTICE (Dec 21, 2:00 PM)



SPRING EQUINOX (Mar 20, 2:00 PM)



SUMMER SOLSTICE (Jun 20, 2:00 PM)

SOLAR ACCESS



LOT 57 SITE PLAN – CIVIL



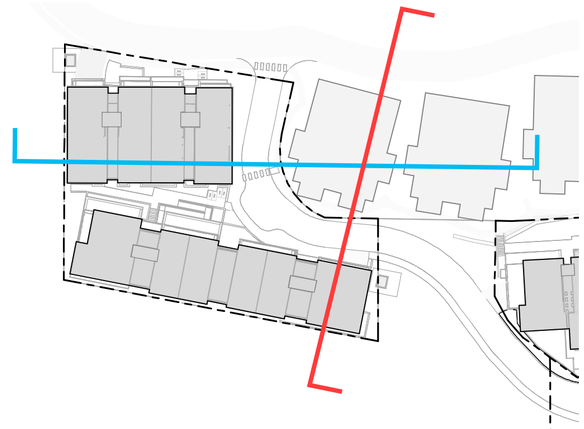
NORTH BUILDING, NORTH ELEVATION

LOT 57 NORTH – RENDERED ELEVATION



SOUTH BUILDING, NORTH ELEVATION

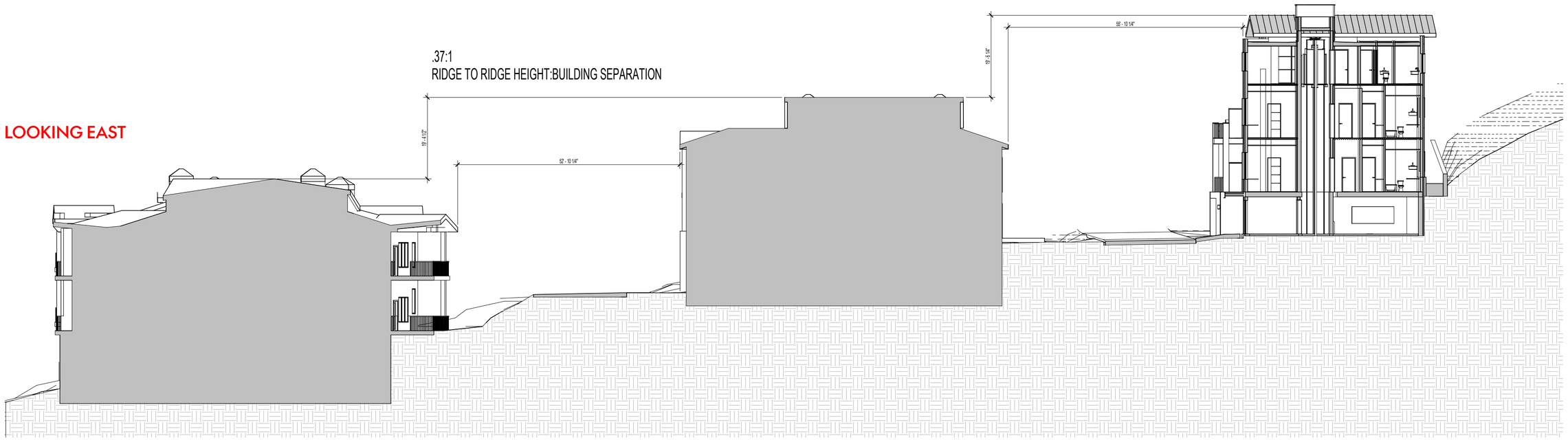
LOT 57 SOUTH – RENDERED ELEVATION



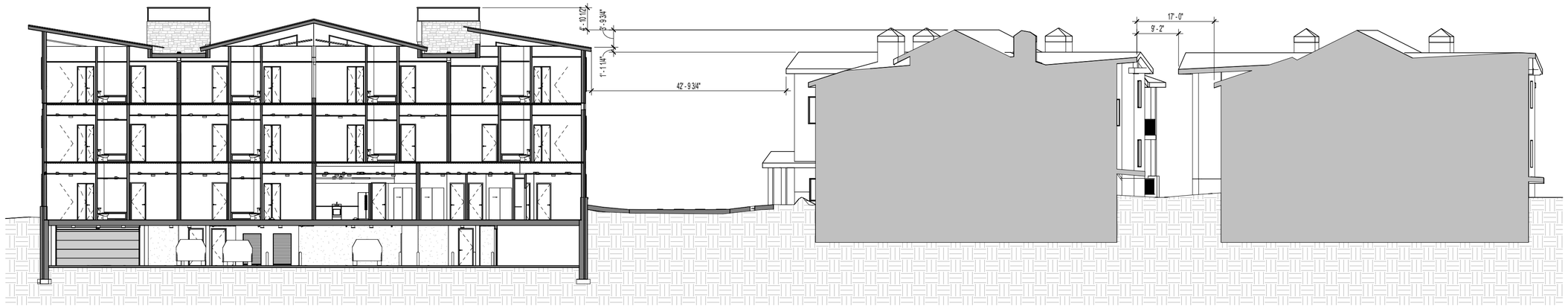
.35:1
RIDGE TO RIDGE HEIGHT:BUILDING SEPARATION

.37:1
RIDGE TO RIDGE HEIGHT:BUILDING SEPARATION

LOOKING EAST



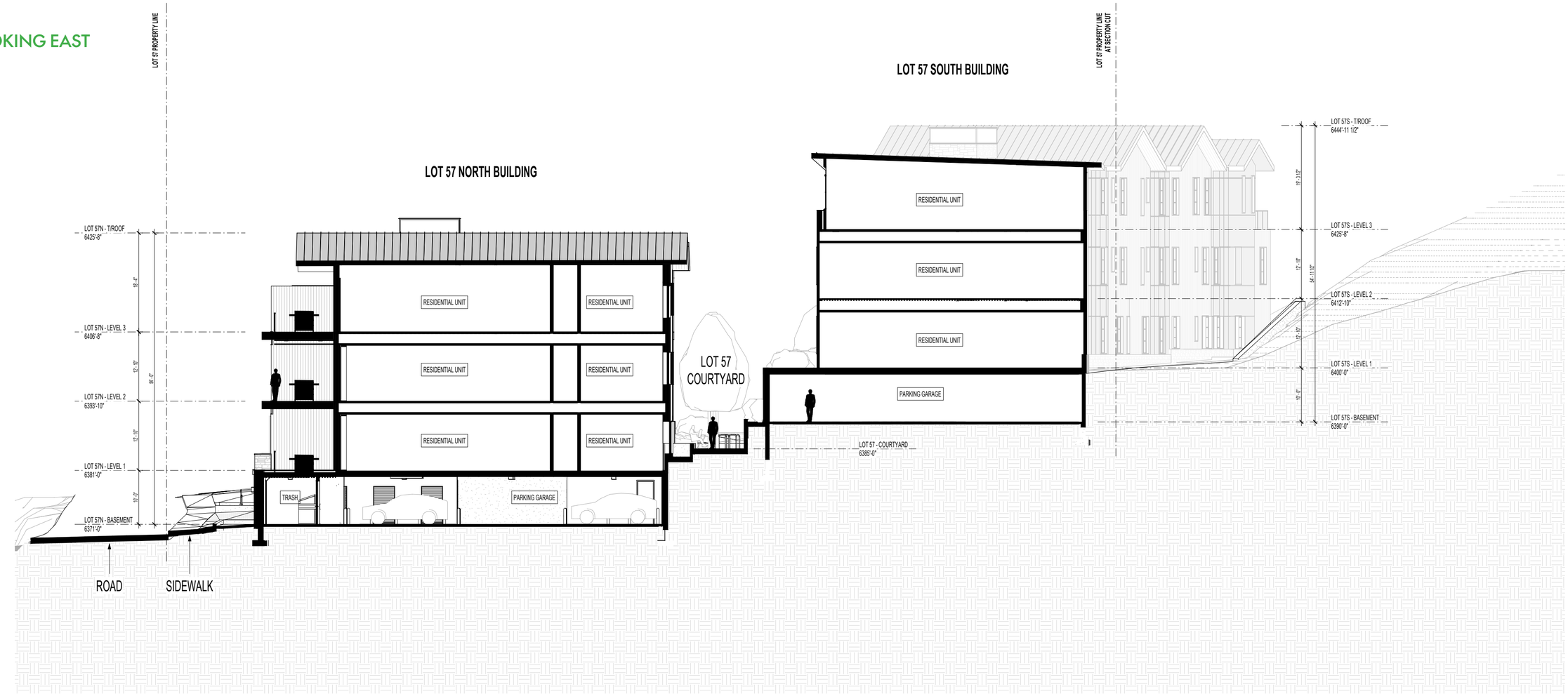
LOOKING NORTH



SITE SECTIONS THROUGH LOVE RIDGE CONDOS & LOT 57



LOOKING EAST



SITE SECTION THROUGH LOT 57 NORTH & SOUTH, LOOKING EAST

SUMMARY

NORTH BUILDING

- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

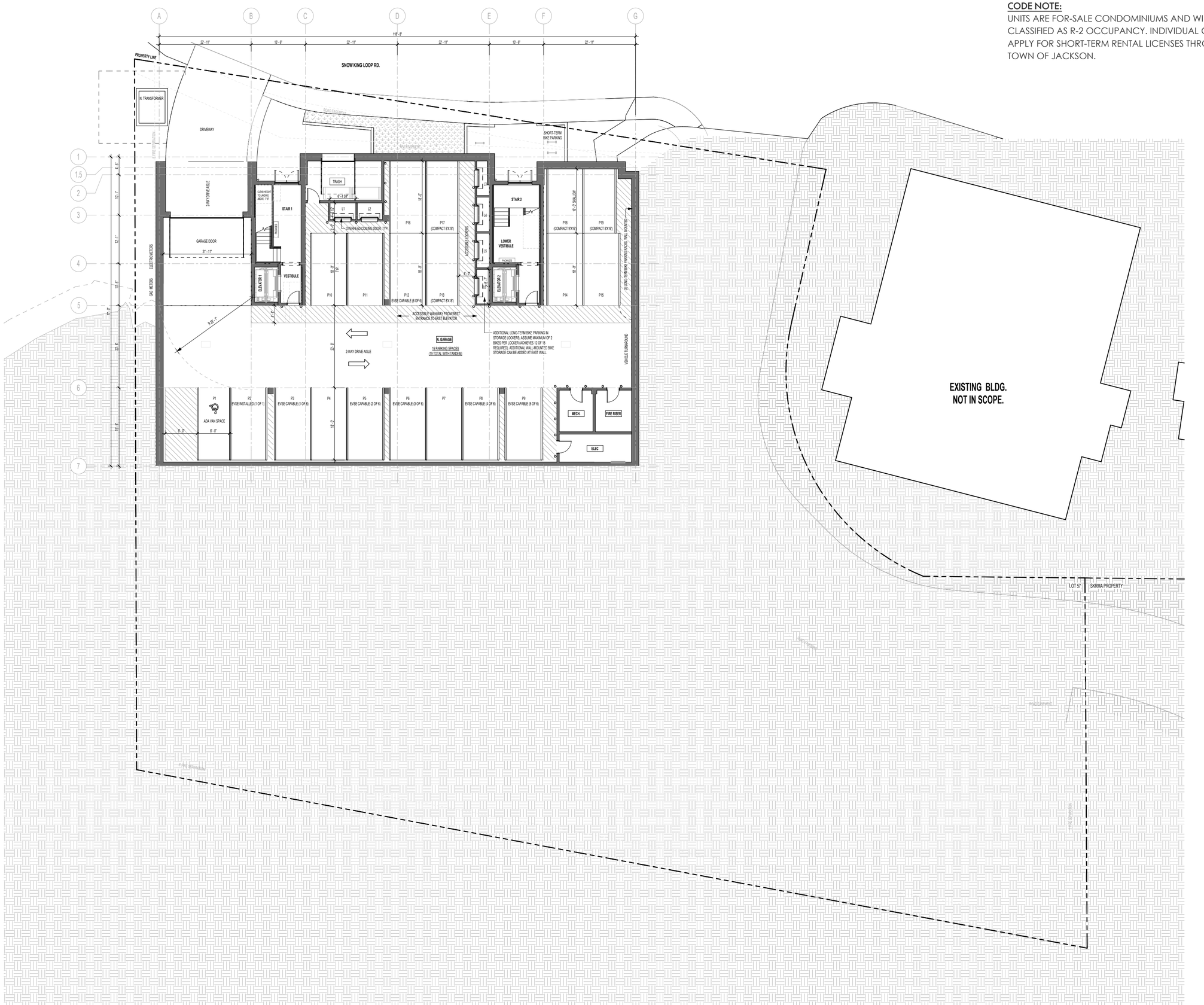
SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

57 NORTH:
BASEMENT

57 SOUTH:
SUBGRADE



SCALE: 1 / 16" = 1' - 0"

LOT 57 PLANS

SUMMARY

NORTH BUILDING

- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

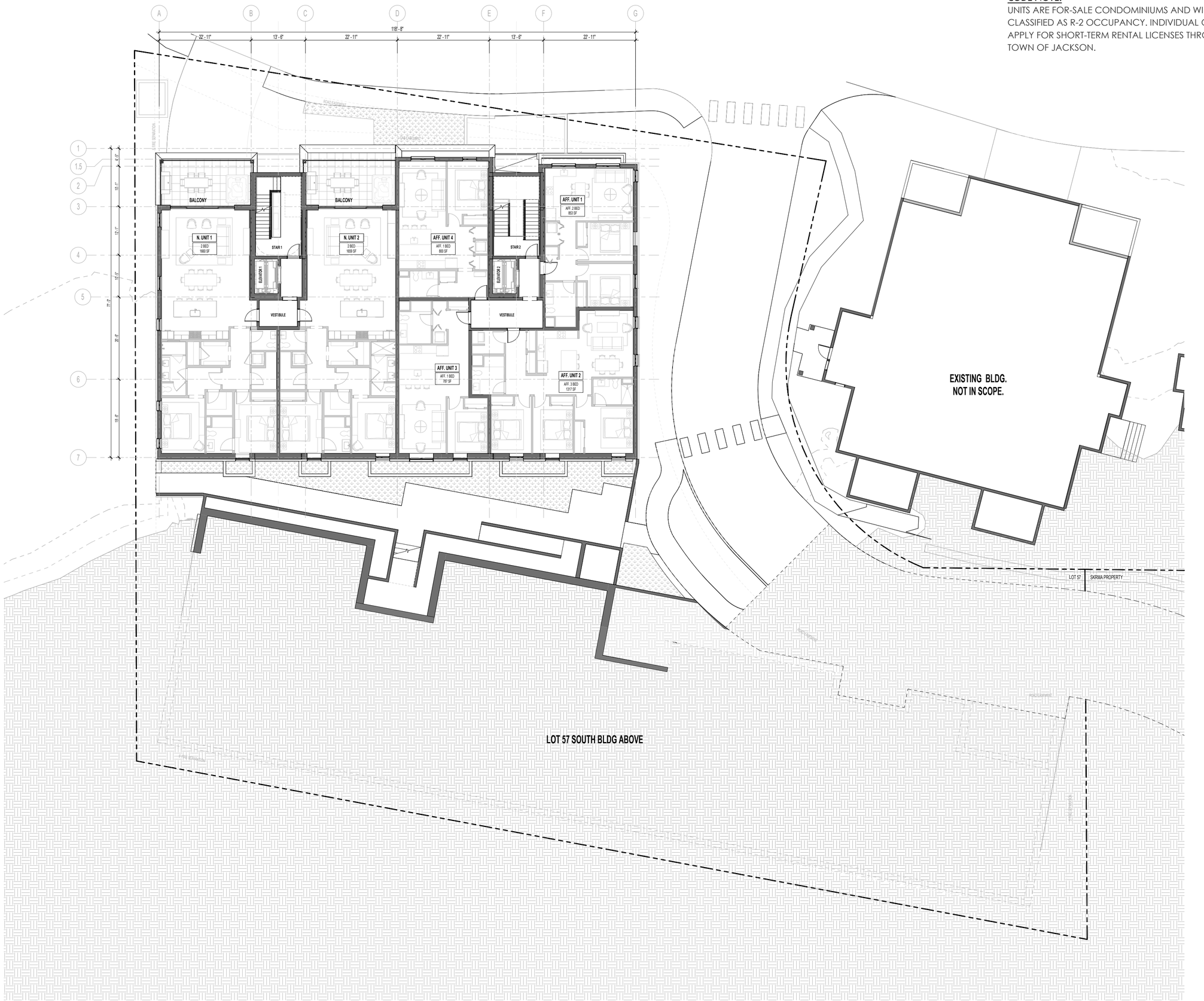
SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

57 NORTH:
LEVEL 1

57 SOUTH:
SUBGRADE



0 4 8 16 32

SCALE: 1 / 16" = 1' - 0"

LOT 57 PLANS

SUMMARY

NORTH BUILDING

- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

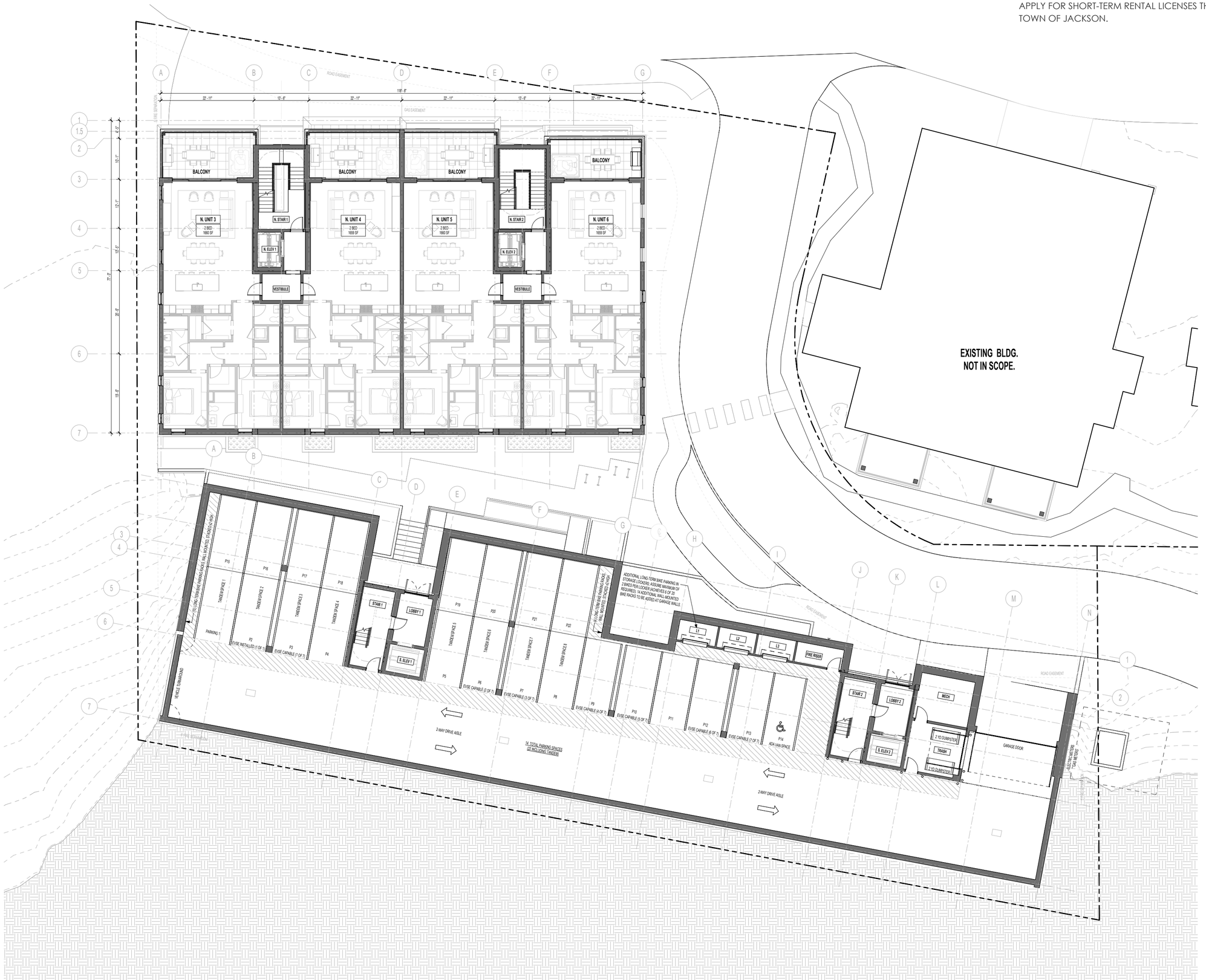
SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

57 NORTH:
LEVEL 2

57 SOUTH:
BASEMENT



LOT 57 PLANS

SCALE: 1 / 16" = 1' - 0"

SUMMARY

NORTH BUILDING

- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

57 NORTH:
LEVEL 3



57 SOUTH:
LEVEL 1

SCALE: 1 / 16" = 1' - 0"

LOT 57 PLANS

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

SUMMARY

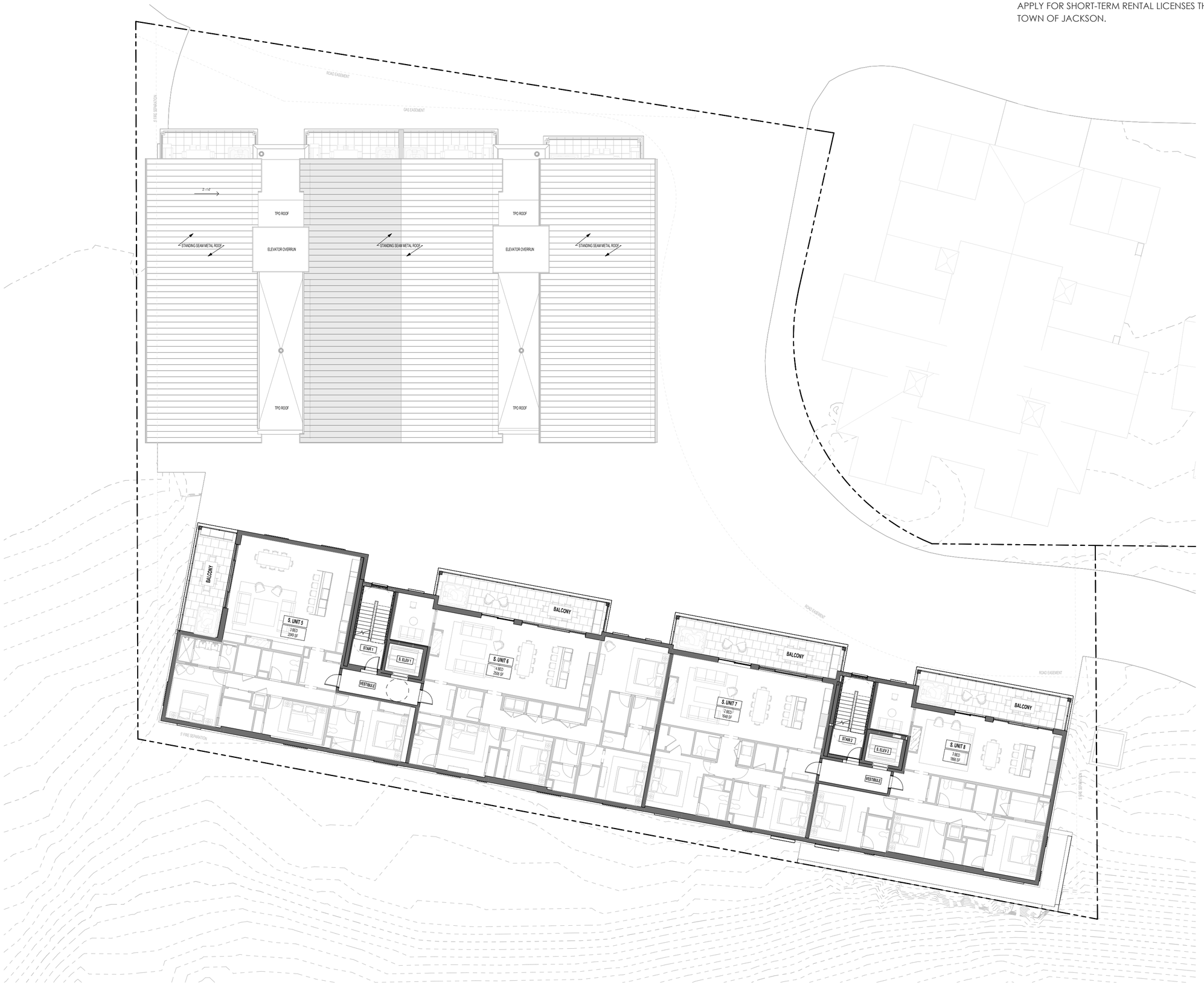
NORTH BUILDING

- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

57 NORTH:
ROOF



57 SOUTH:
LEVEL 2

0 4 8 16 32

SCALE: 1 / 16" = 1' - 0"

LOT 57 PLANS

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

SUMMARY

NORTH BUILDING

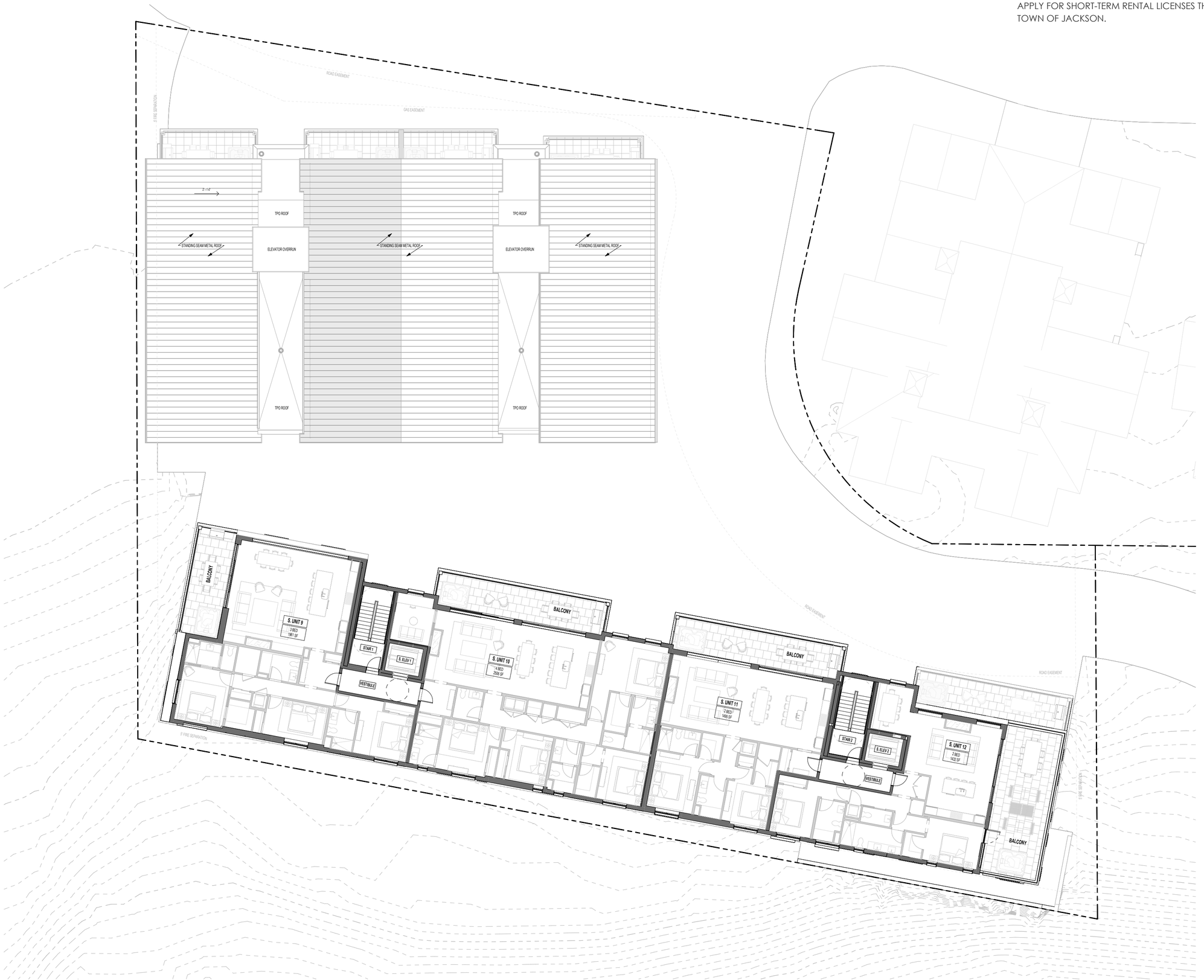
- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

57 NORTH:
ROOF BELOW

57 SOUTH:
LEVEL 3



SCALE: 1 / 16" = 1' - 0"

LOT 57 PLANS

SUMMARY

NORTH BUILDING

- PARKING SPACES : 15
- 2-BEDROOMS: 10
- AFFORDABLE UNITS: 4

SOUTH BUILDING

- PARKING SPACES : 14
- 2-BEDROOMS: 5
- 3-BEDROOMS: 5
- 4-BEDROOMS: 2
- AFFORDABLE UNITS: 1

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

57 NORTH:
ROOF BELOW



57 SOUTH:
LEVEL 3

0 4 8 16 32

SCALE: 1 / 16" = 1' - 0"

LOT 57 PLANS

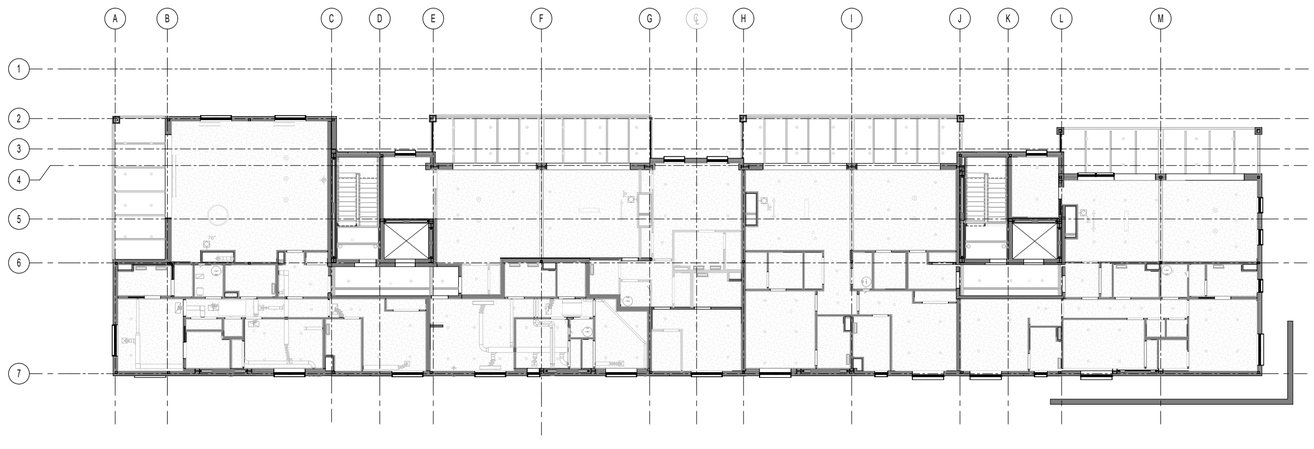
RCP LEGEND	
○	RECESSED LIGHT FIXTURE
□	EXTERIOR LIGHT FIXTURE
═	CEILING-MOUNTED STRIP LIGHT

ELECTRICAL NOTES:
1. ALL ELECTRICAL WORK SHALL FULLY COMPLY WITH CURRENT EDITIONS OF ALL APPLICABLE CODES.
2. GENERAL CONTRACTOR TO COORDINATE WALKTHROUGH WITH OWNER & ARCHITECT TO VERIFY FINAL LOCATIONS OF ALL FIXTURES & SWITCHES PRIOR TO INSTALLATION.
3. ELECTRICIAN TO COORDINATE WITH GENERAL CONTRACTOR, ARCHITECT, & HVAC CONTRACTOR FOR LOCATIONS OF ALL THERMOSTATS & THERMOSTATIC SENSORS.
4. ELECTRICIAN & GENERAL CONTRACTOR TO COORDINATE WORK WITH ALL THIRD-PARTY CONTRACTORS (SECURITY, AUDIO/VIDEO, HOME AUTOMATION AND SIMILAR).

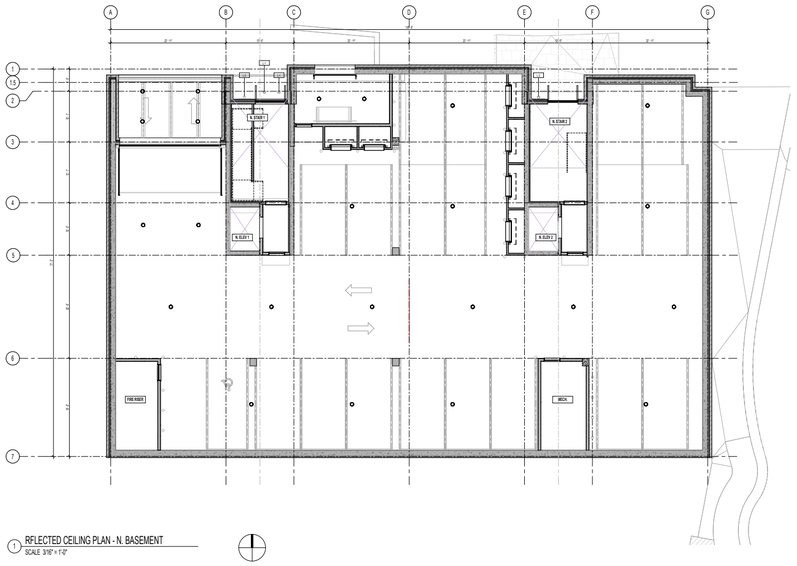
LOW VOLTAGE NOTES:
1. ALL SPEAKER WIRE SHALL BE FOUR CONDUCTOR WIRE (UNLESS OTHERWISE NOTED)
2. ALL SPEAKER WIRED TO SINGLE HOMERUN POINT (UNLESS OTHERWISE NOTED)



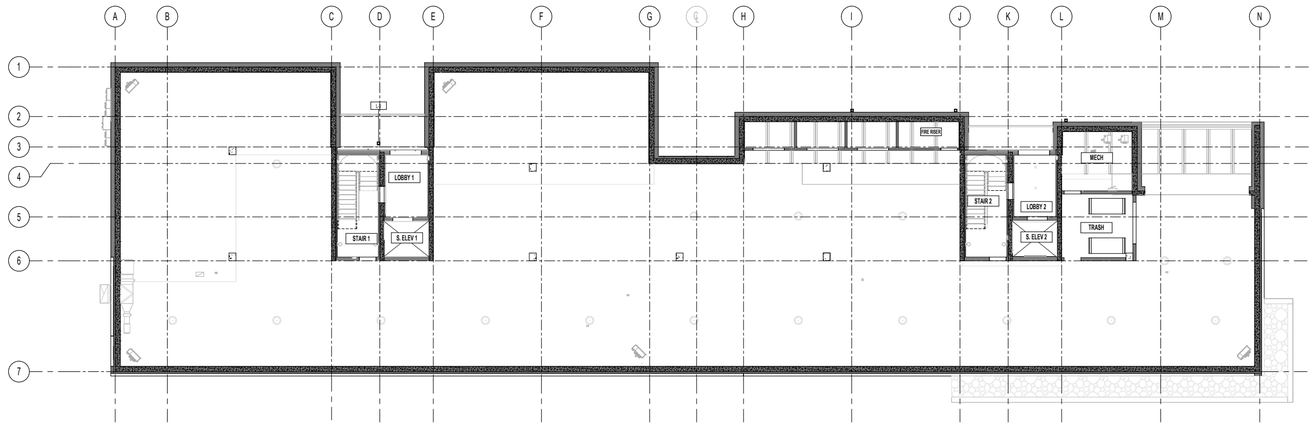
1 REFLECTED CEILING PLAN - N. LEVEL 1
SCALE: 3/16" = 1'-0"



A REFLECTED CEILING PLAN - S. LEVEL 1
SCALE: 1/8" = 1'-0"

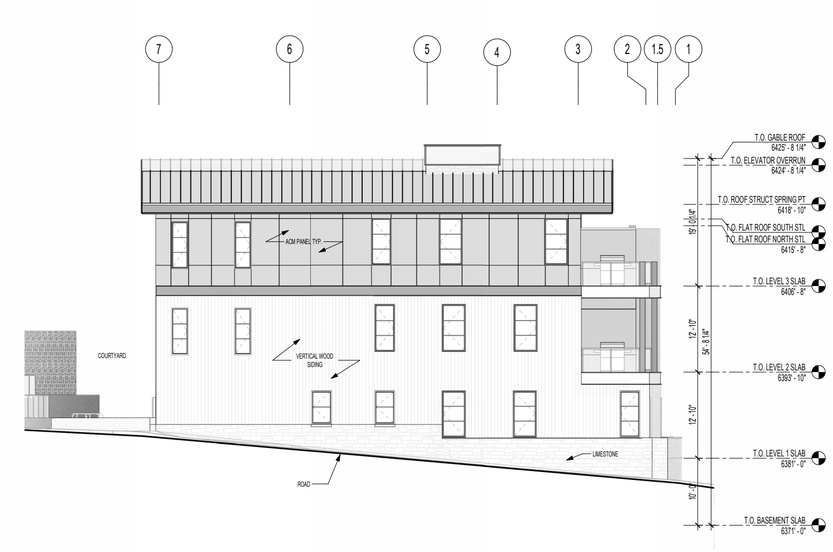


1 RFLECTED CEILING PLAN - N. BASEMENT
SCALE: 3/16" = 1'-0"



A REFLECTED CEILING PLAN - S. BASEMENT
SCALE: 1/8" = 1'-0"

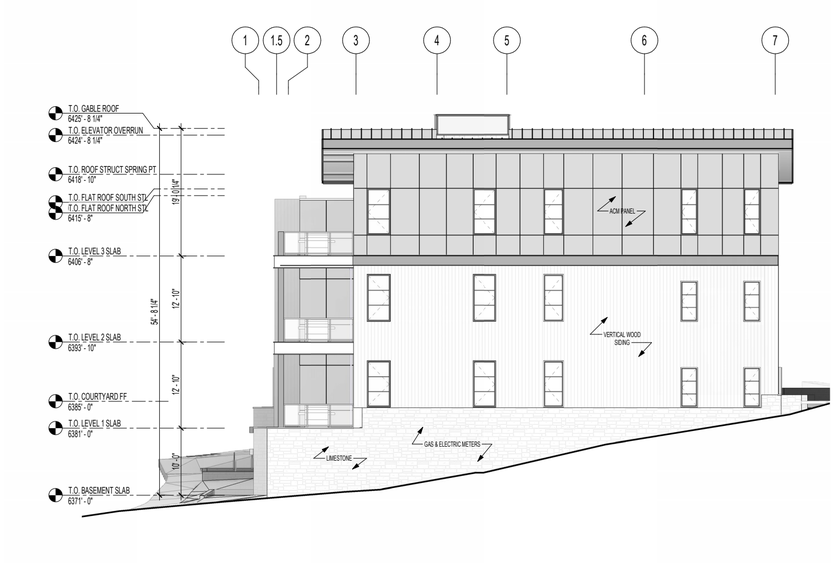
LOT 57 – EXTERIOR LIGHTING PLANS



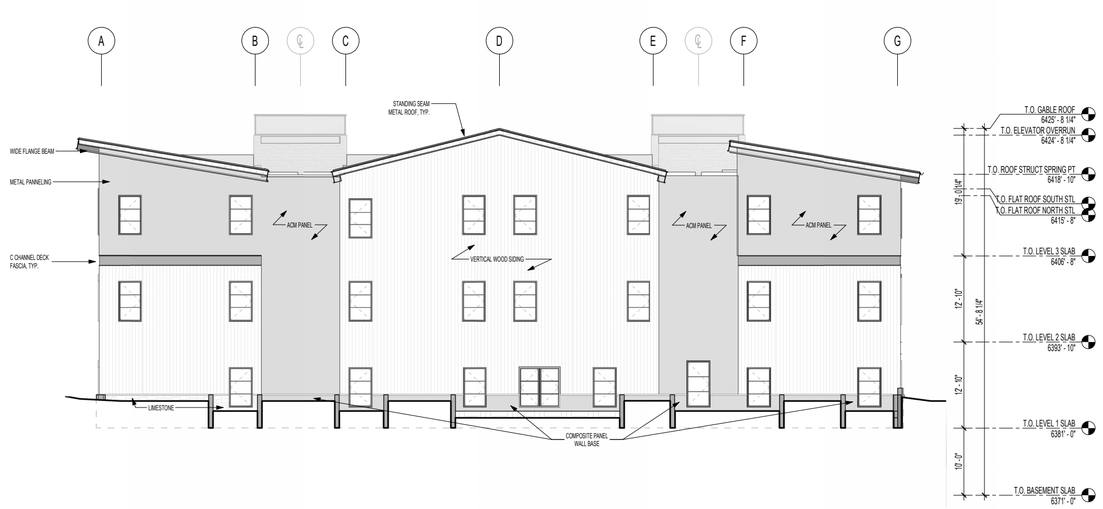
EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

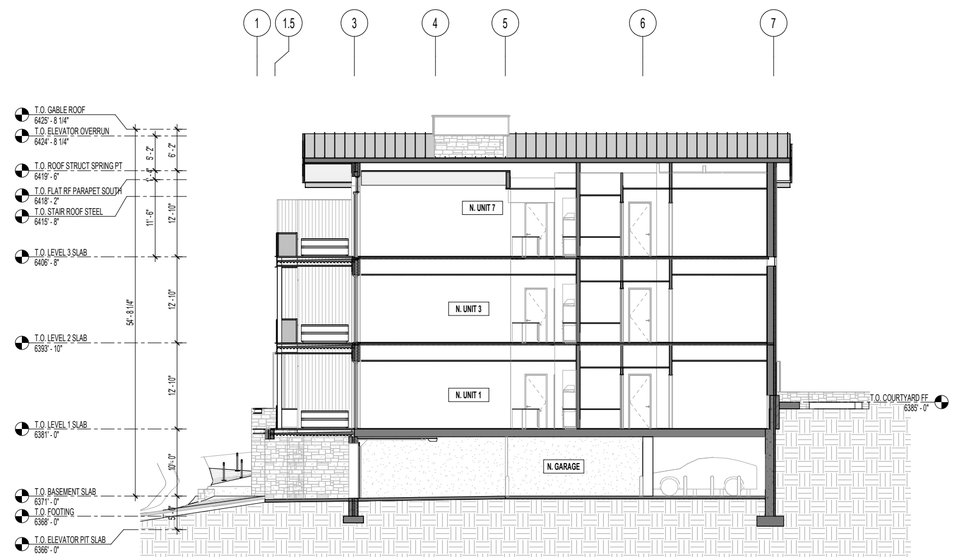


SOUTH ELEVATION

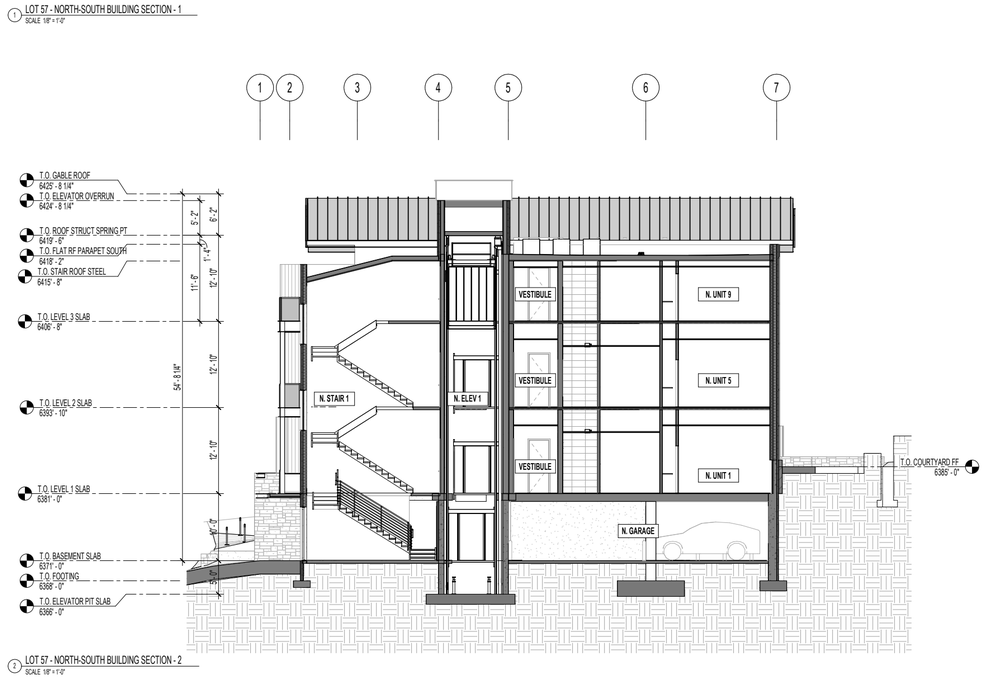
LOT 57 NORTH BUILDING – ELEVATIONS

0 4 8 16 32

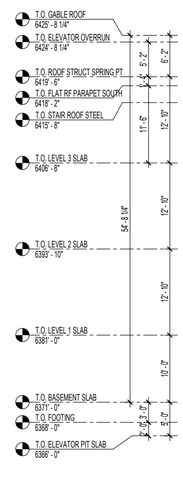
SCALE: 1 / 16" = 1' - 0"



1 LOT 57 - NORTH-SOUTH BUILDING SECTION - 1
SCALE: 1/8" = 1'-0"

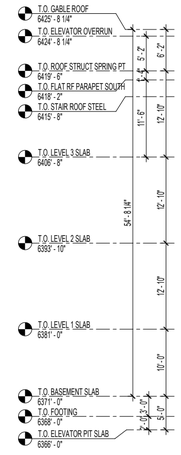


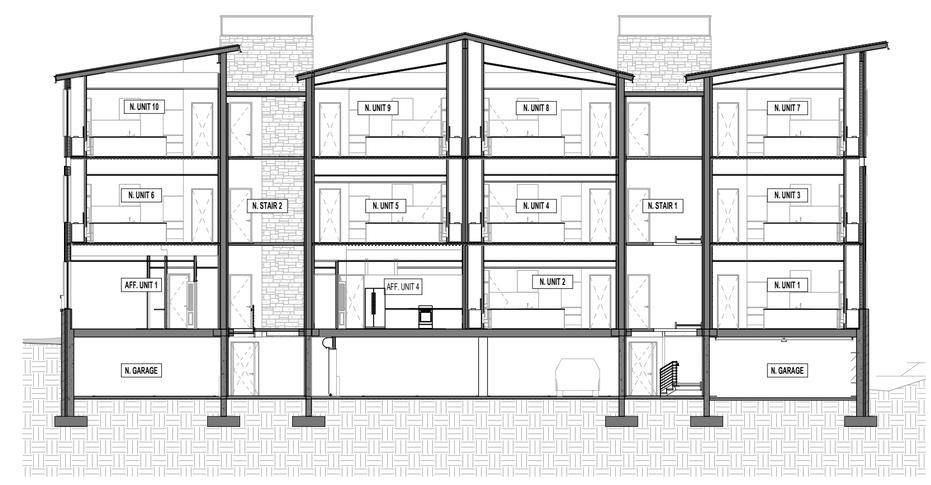
2 LOT 57 - NORTH-SOUTH BUILDING SECTION - 2
SCALE: 1/8" = 1'-0"





1 LOT 57 NORTH - E/W SECTION LOOKING SOUTH - 11
SCALE: 1/8" = 1'-0"



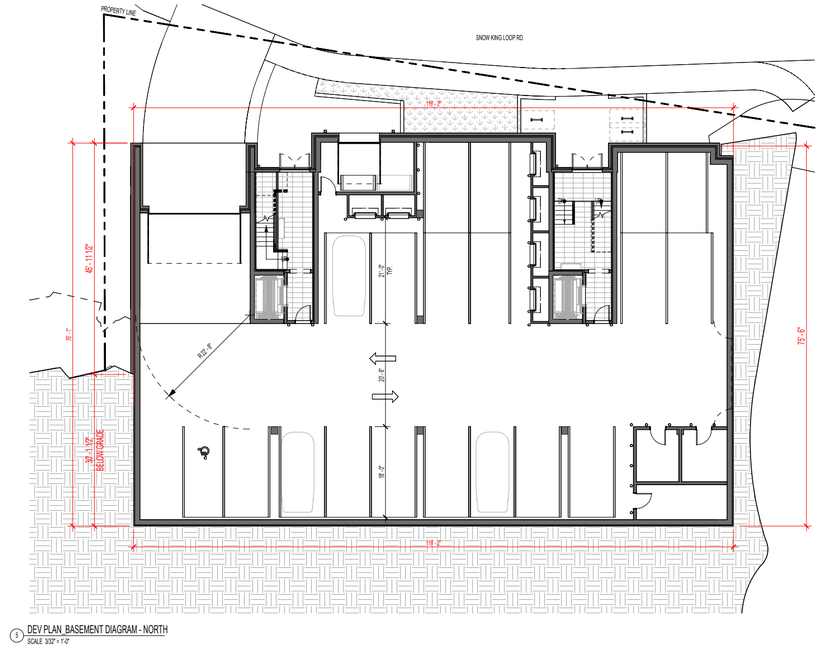


2 LOT 57 NORTH - E/W SECTION LOOKING SOUTH - 1
SCALE: 1/8" = 1'-0"

LOT 57 NORTH BUILDING – BUILDING SECTIONS

0 4 8 16 32

SCALE: 1 / 16" = 1' - 0"

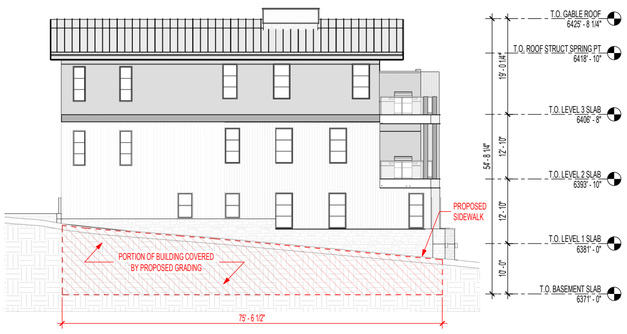


3 DEV PLAN_BASEMENT DIAGRAM - NORTH
SCALE 3/32" = 1'-0"

BASEMENT DEFINITION
1. NO MORE THAN 4'-0" OF WALL FROM THE T/1ST FLOOR SLAB DOWN CAN BE EXPOSED (6'-0" FROM THE T/BASEMENT SLAB MUST BE BELOW GRADE).
2. AT LEAST 50% OF THE PERMITER MUST MEET THIS REQUIREMENT.

LOT 57 NORTH BUILDING
NORTH ELEVATION - 119'-2"
EAST ELEVATION - 75'-6" (75'-6" BELOW GRADE)
SOUTH ELEVATION - 119'-2" (119'-2" BELOW GRADE)
WEST ELEVATION - 76'-1" (30'-1" BELOW GRADE)

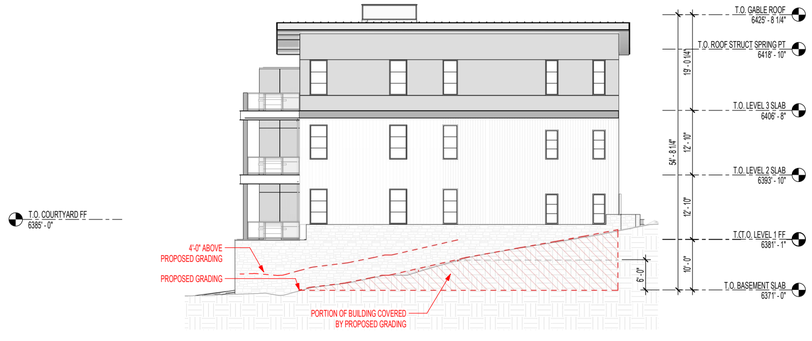
TOTAL PERIMETER = 389'-11" (224'-9" BELOW GRADE)
TOTAL PERCENTAGE BELOW GRADE = 58%



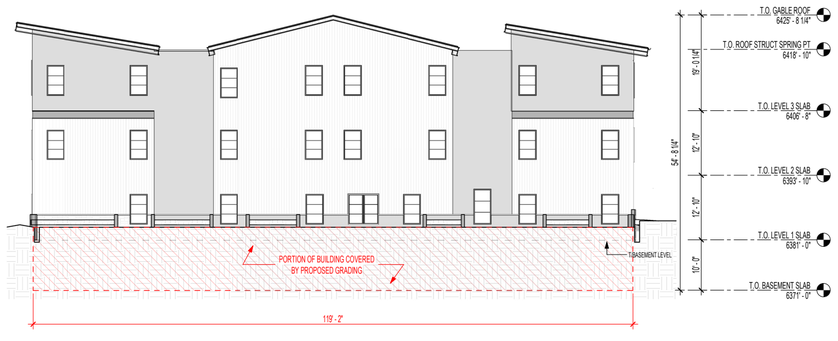
1 NORTH BUILDING BASEMENT DIAGRAM - EAST
SCALE 3/32" = 1'-0"



1 NORTH BUILDING BASEMENT DIAGRAM - NORTH
SCALE 3/32" = 1'-0"



4 NORTH BUILDING BASEMENT DIAGRAM - WEST
SCALE 3/32" = 1'-0"



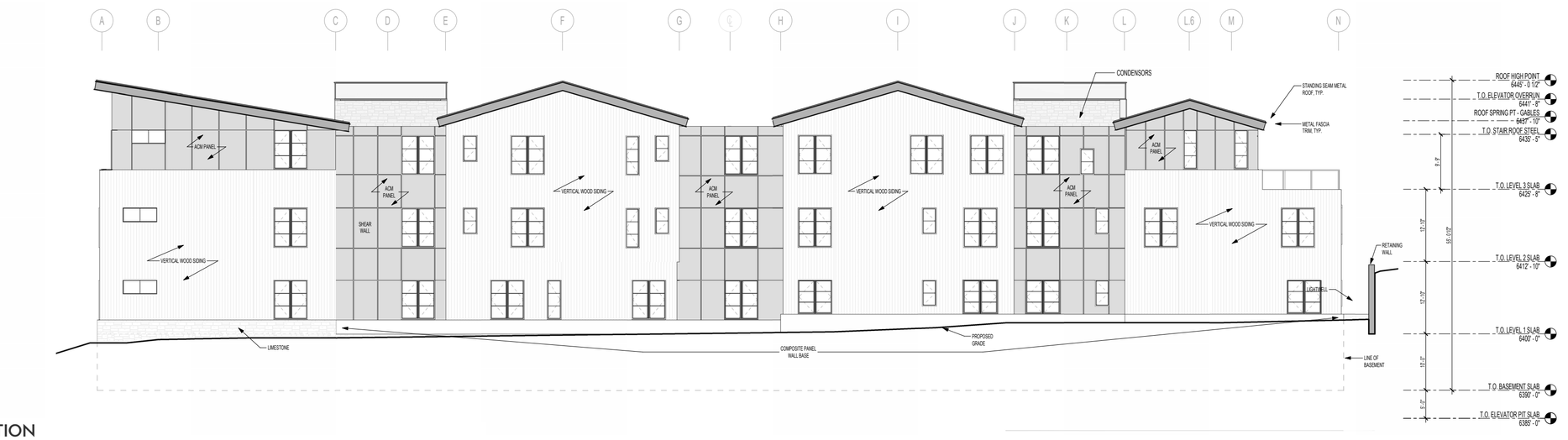
2 NORTH BUILDING BASEMENT DIAGRAM - SOUTH
SCALE 3/32" = 1'-0"

0 4 8 16 32

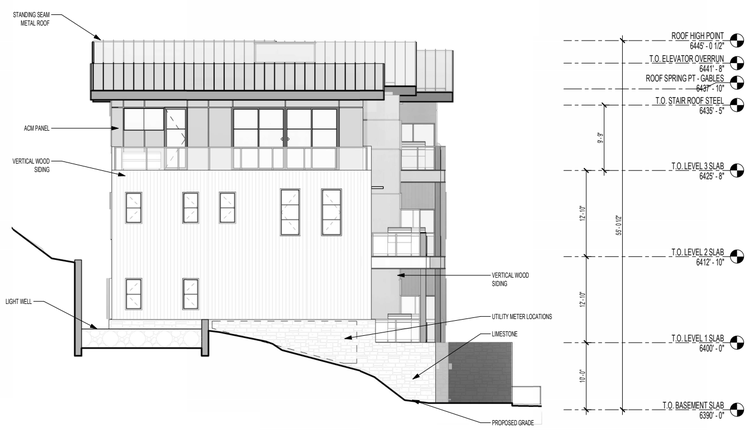
LOT 57 NORTH BUILDING – BASEMENT CALCULATIONS



NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

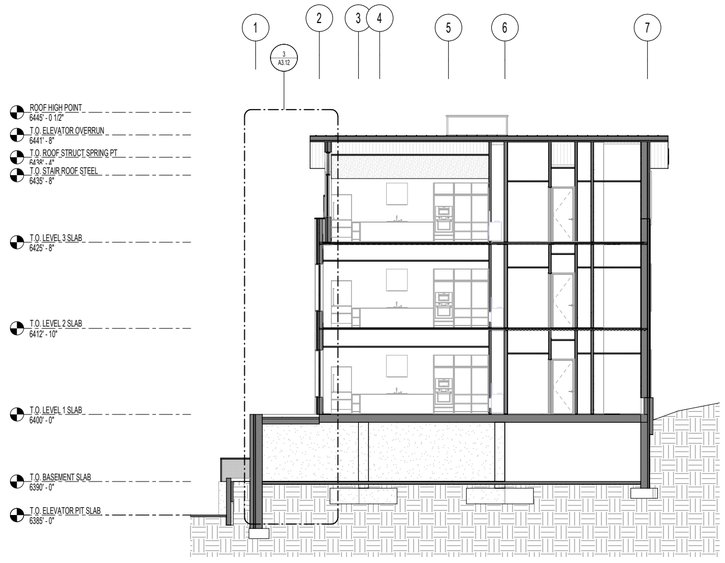
LOT 57 SOUTH BUILDING – ELEVATIONS

0 4 8 16 32

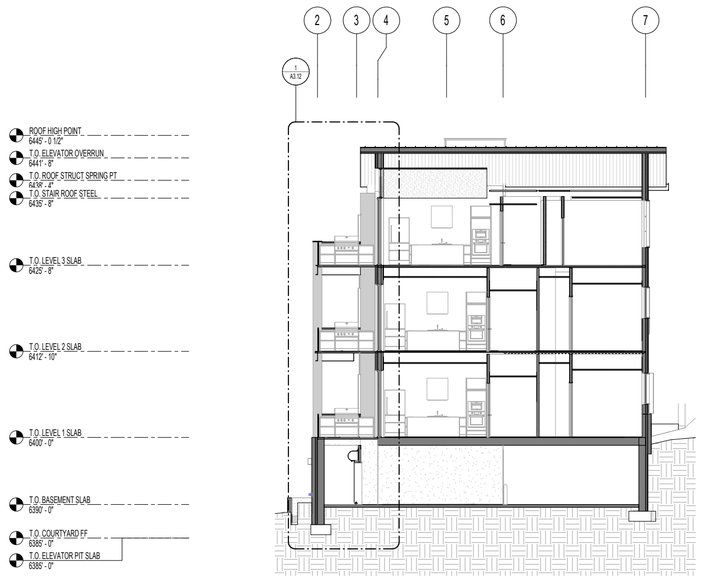
SCALE: 1 / 16" = 1' - 0"



E/W SECTION LOOKING SOUTH



N/S SECTION LOOKING EAST - 1

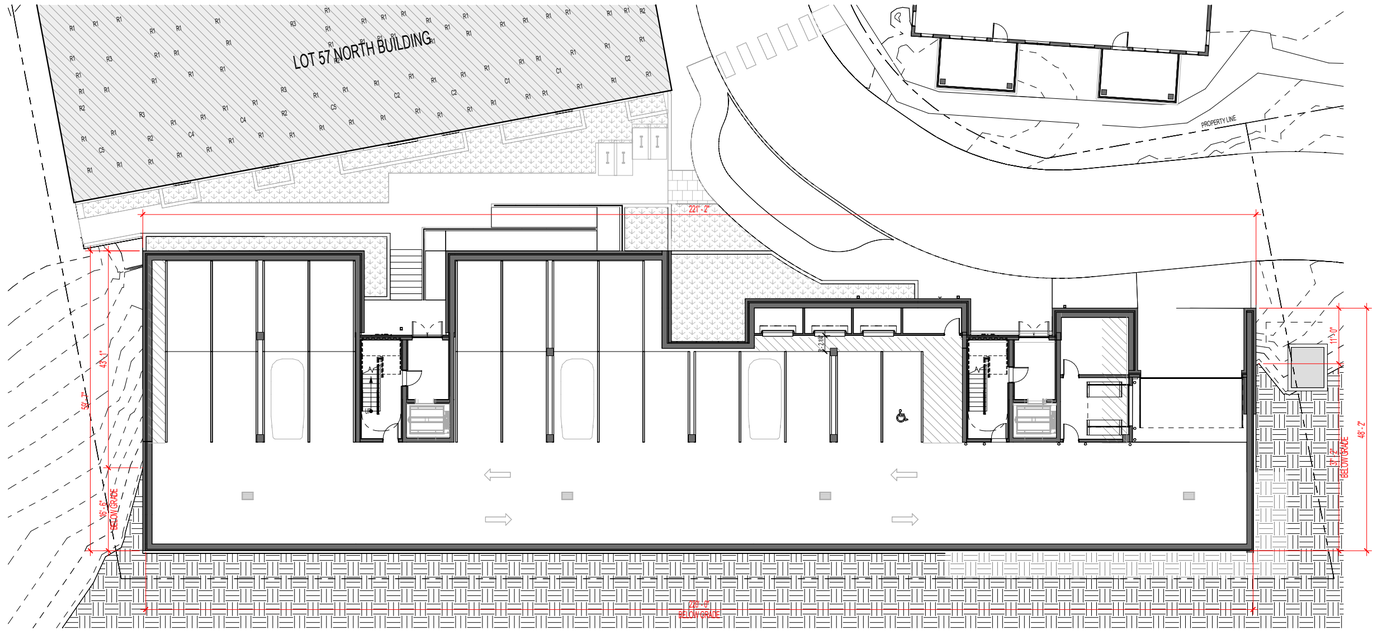


N/S SECTION LOOKING EAST - 2

LOT 57 SOUTH BUILDING – SECTIONS

0 4 8 16 32

SCALE: 1 / 16" = 1' - 0"



5 BASEMENT DIAGRAM - SOUTH
SCALE: 3/32" = 1'-0"

BASEMENT DEFINITION
1. NO MORE THAN 4'-0" OF WALL FROM THE T/1ST FLOOR SLAB DOWN CAN BE EXPOSED (6'-0" FROM THE T/BASEMENT SLAB MUST BE BELOW GRADE).
2. AT LEAST 50% OF THE PERMITER MUST MEET THIS REQUIREMENT.

LOT 57 SOUTH BUILDING
NORTH ELEVATION - 221'-2"
EAST ELEVATION - 48'-2" (37'-2" BELOW GRADE)
SOUTH ELEVATION - 220'-0" (220'-0" BELOW GRADE)
WEST ELEVATION - 59'-7" (16'-6" BELOW GRADE)

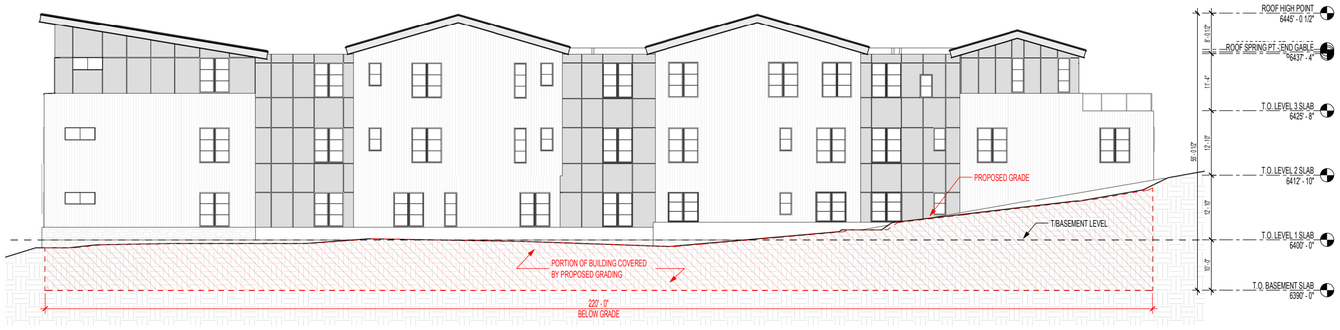
TOTAL PERIMETER = 548'-11" (273'-8" BELOW GRADE)
TOTAL PERCENTAGE BELOW GRADE = 50%



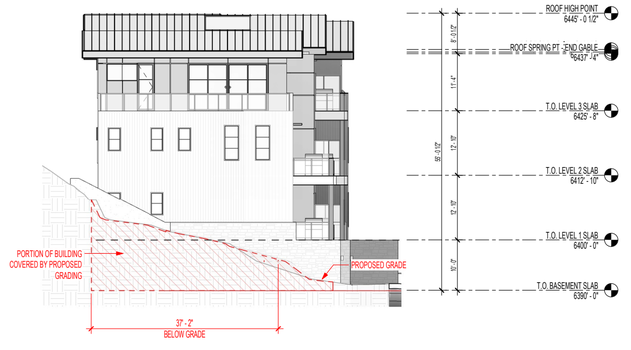
1 SOUTH BUILDING BASEMENT DIAGRAM - NORTH
SCALE: 3/32" = 1'-0"



4 SOUTH BUILDING BASEMENT DIAGRAM - WEST
SCALE: 3/32" = 1'-0"



2 SOUTH BUILDING BASEMENT DIAGRAM - SOUTH
SCALE: 3/32" = 1'-0"



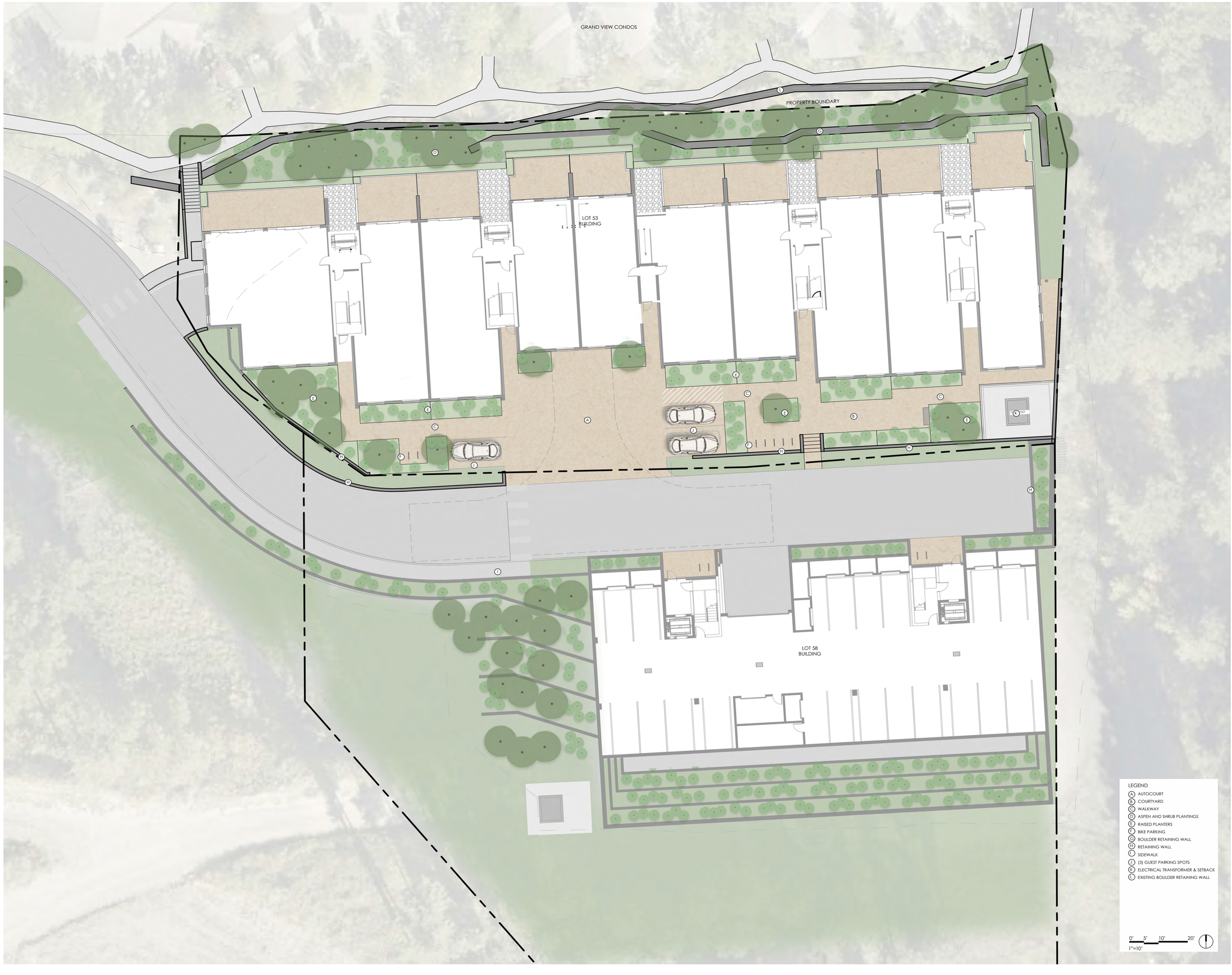
3 SOUTH BUILDING BASEMENT DIAGRAM - EAST
SCALE: 3/32" = 1'-0"

0 4 8 16 32

LOT 57 SOUTH BUILDING – BASEMENT CALCULATIONS

NORTHWORKS

Lot 53



LOT 53 SITE PLAN – LANDSCAPE



LOT 53 SITE PLAN – CIVIL

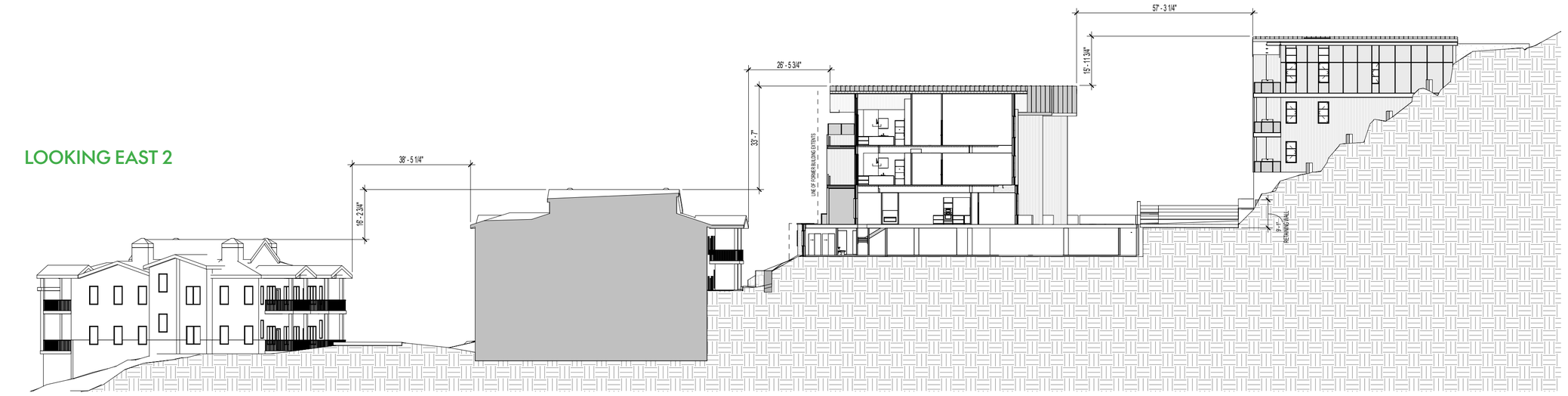


NORTH ELEVATION

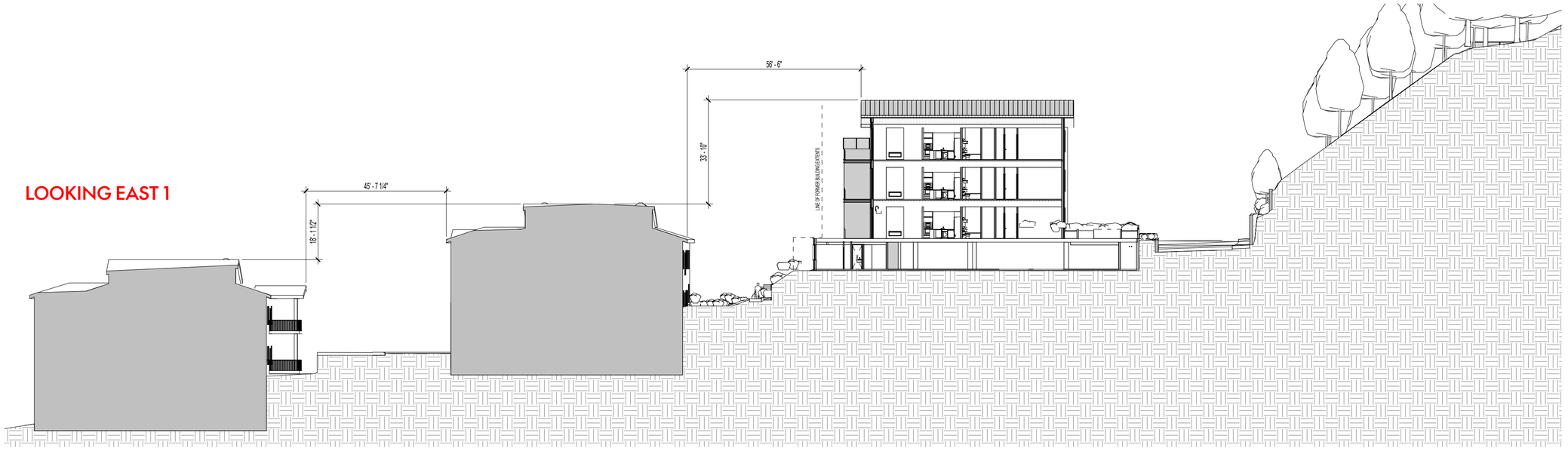
LOT 53 – RENDERED ELEVATION



LOOKING EAST 2



LOOKING EAST 1

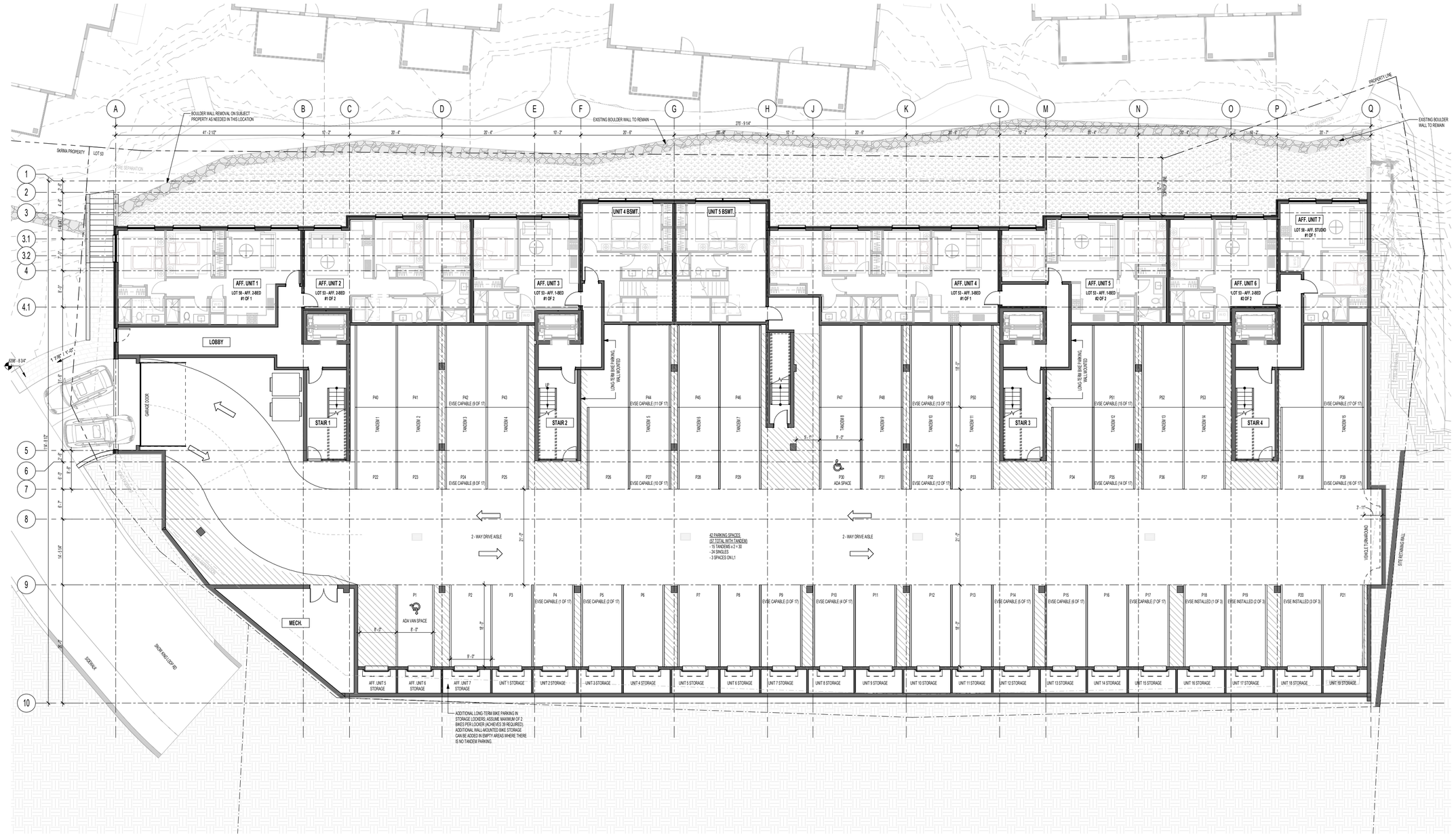


SITE SECTIONS THROUGH LOVE RIDGE CONSOS & LOT 53

LOT 53 SUMMARY

- PARKING SPACES : 43
- 1-BEDROOMS: 1
- 2-BEDROOMS: 18
- 3-BEDROOMS: 7
- AFFORDABLE UNITS: 7

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



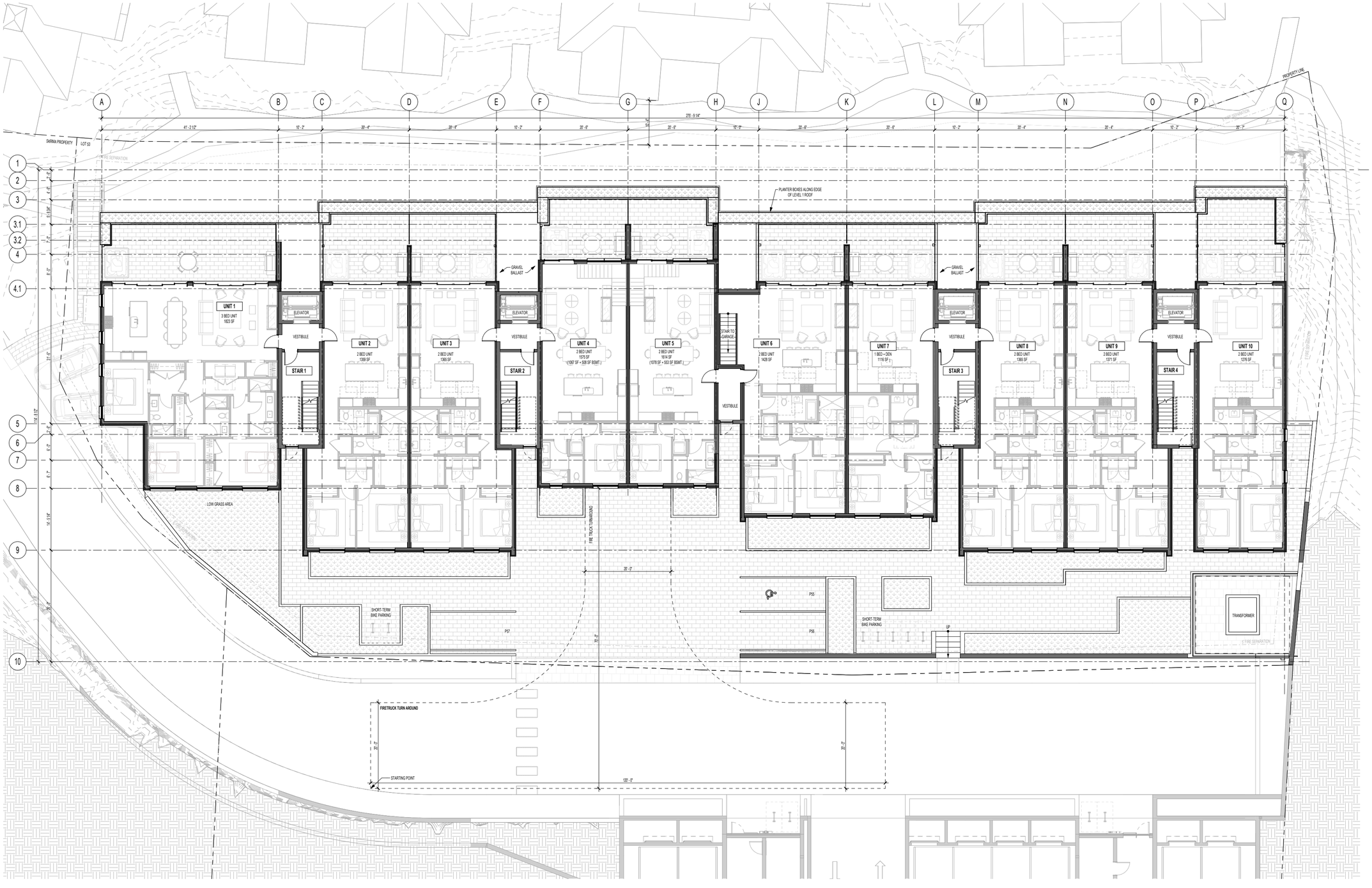
LOT 53 – BASEMENT FLOOR PLAN

SCALE: 1 / 16" = 1' - 0"

LOT 53 SUMMARY

- PARKING SPACES : 43
- 1-BEDROOMS: 1
- 2-BEDROOMS: 18
- 3-BEDROOMS: 7
- AFFORDABLE UNITS: 7

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



0 4 8 16 32

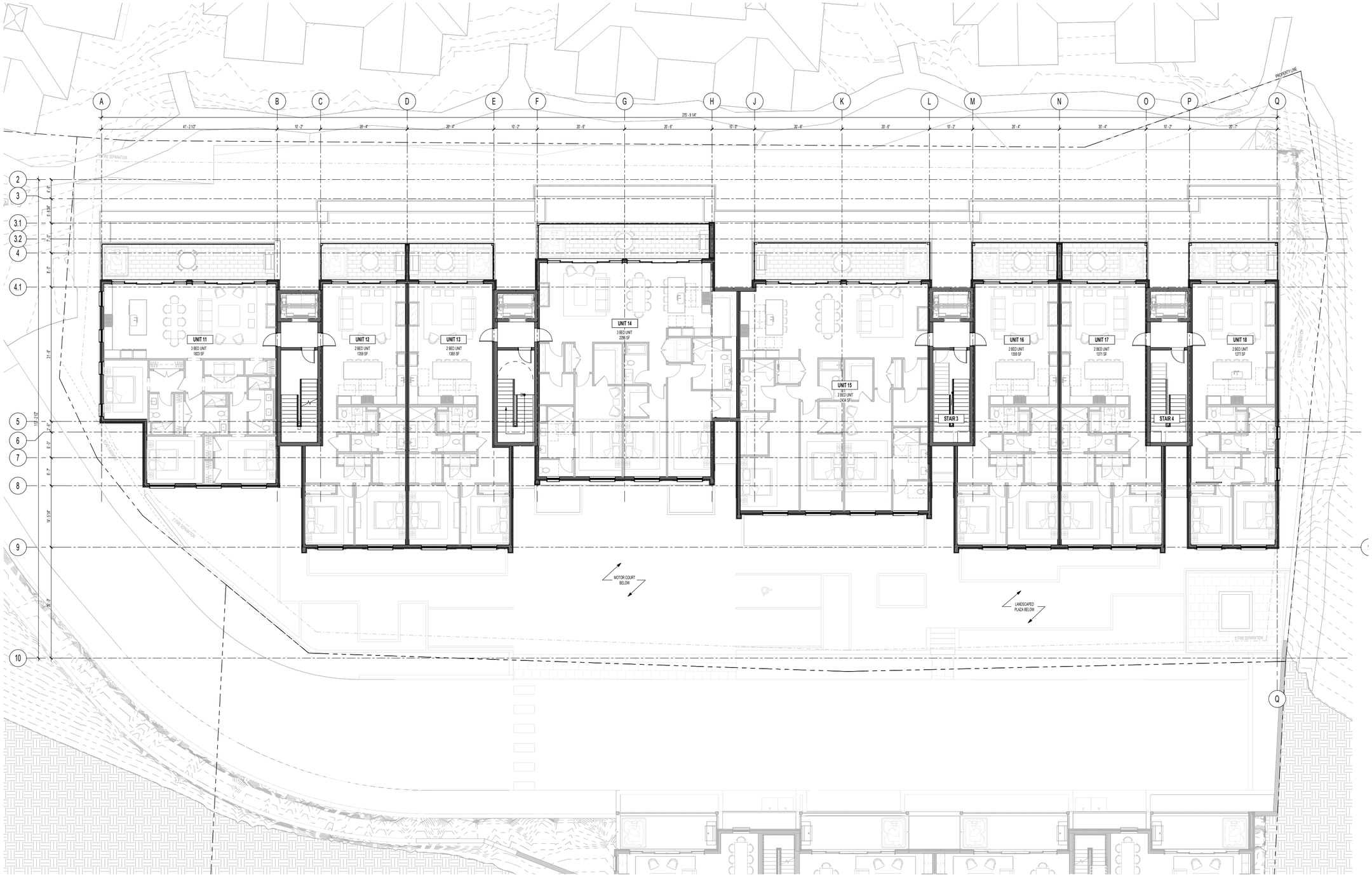
LOT 53 – FIRST FLOOR PLAN

SCALE: 1 / 16" = 1' - 0"

LOT 53 SUMMARY

- PARKING SPACES : 43
- 1-BEDROOMS: 1
- 2-BEDROOMS: 18
- 3-BEDROOMS: 7
- AFFORDABLE UNITS: 7

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



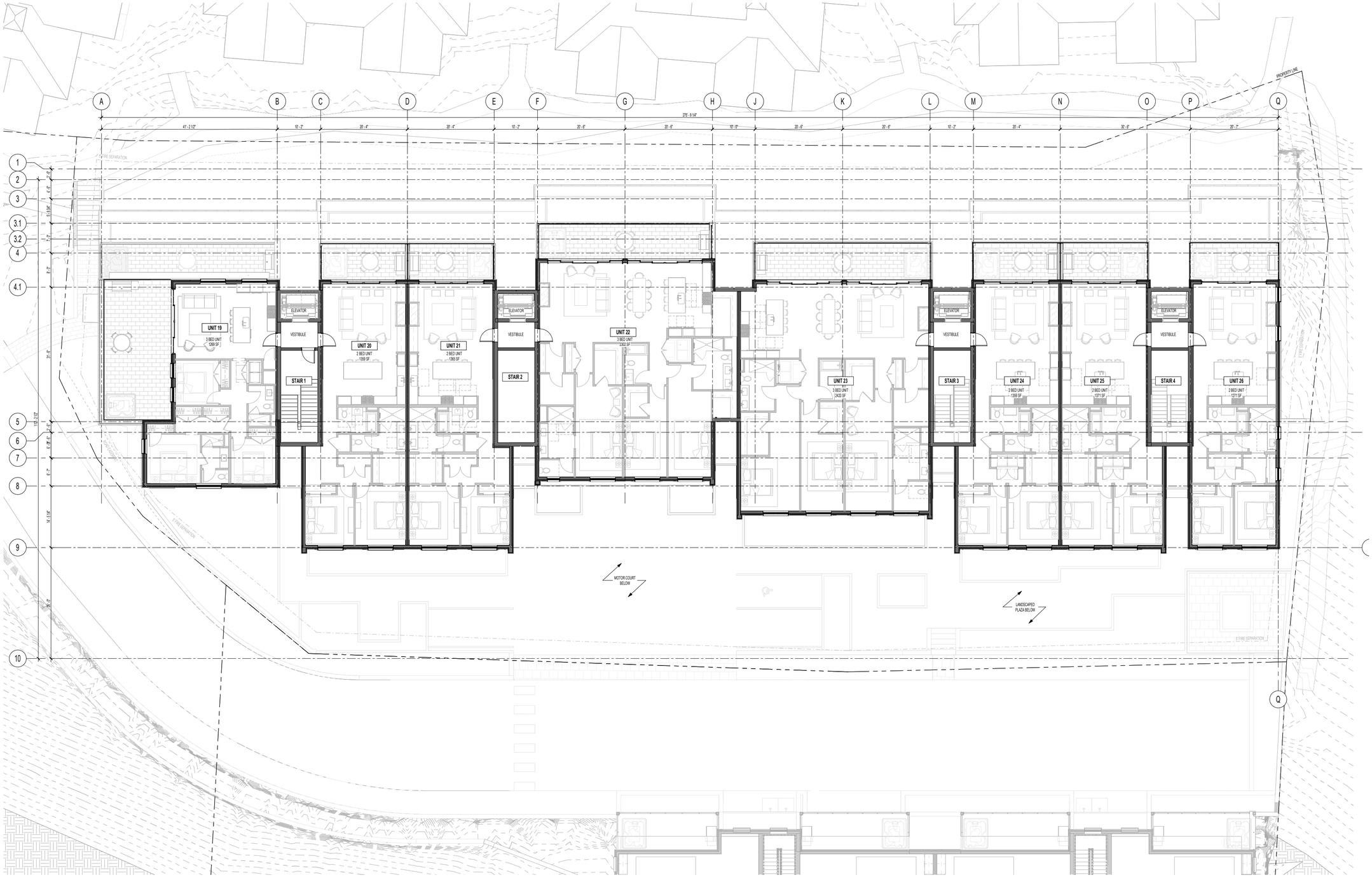
LOT 53 – SECOND FLOOR PLAN

SCALE: 1 / 16" = 1' - 0"

LOT 53 SUMMARY

- PARKING SPACES : 43
- 1-BEDROOMS: 1
- 2-BEDROOMS: 18
- 3-BEDROOMS: 7
- AFFORDABLE UNITS: 7

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



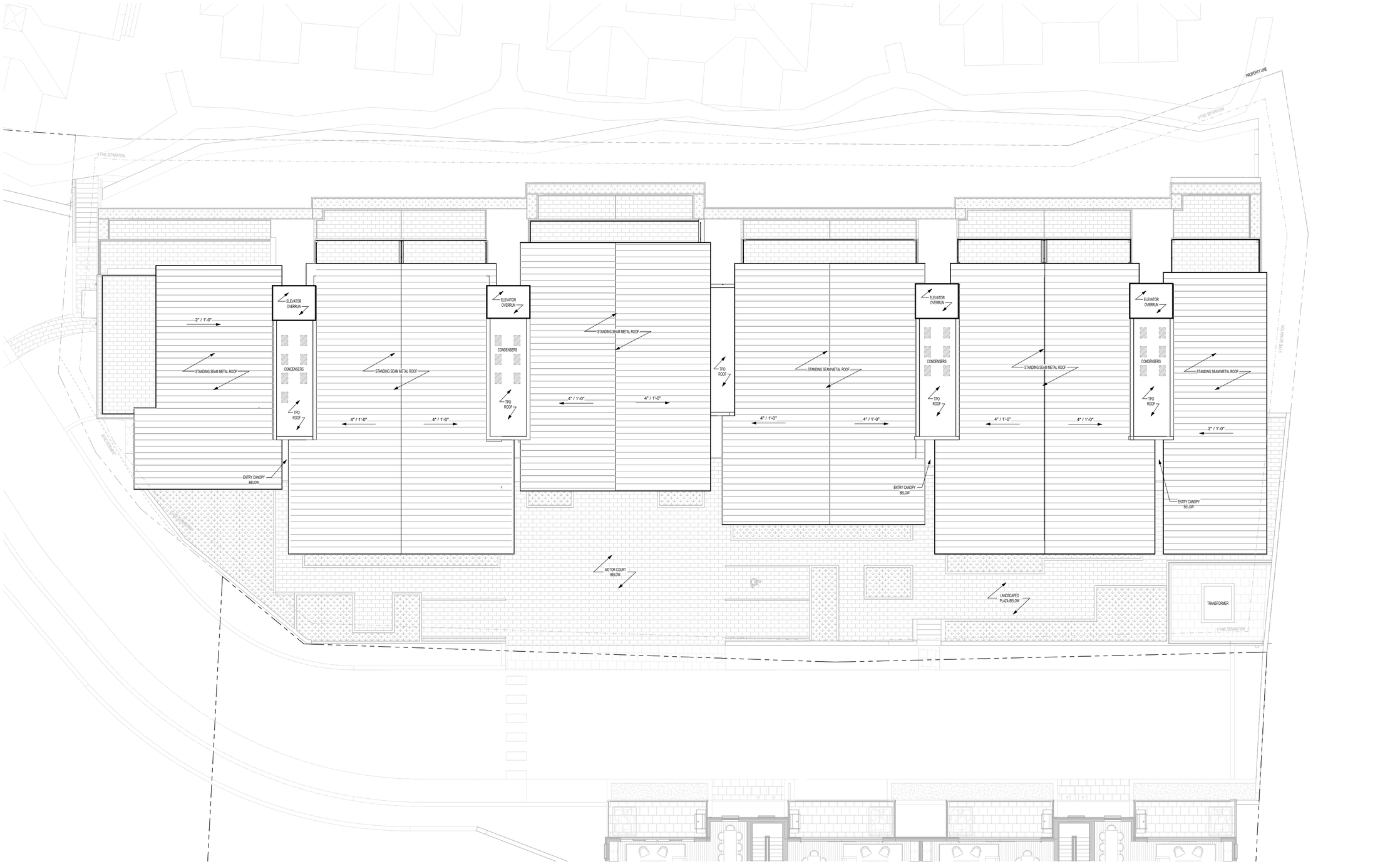
LOT 53 – THIRD FLOOR PLAN

SCALE: 1 / 16" = 1' - 0"

LOT 53 SUMMARY

- PARKING SPACES : 43
- 1-BEDROOMS: 1
- 2-BEDROOMS: 18
- 3-BEDROOMS: 7
- AFFORDABLE UNITS: 7

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.

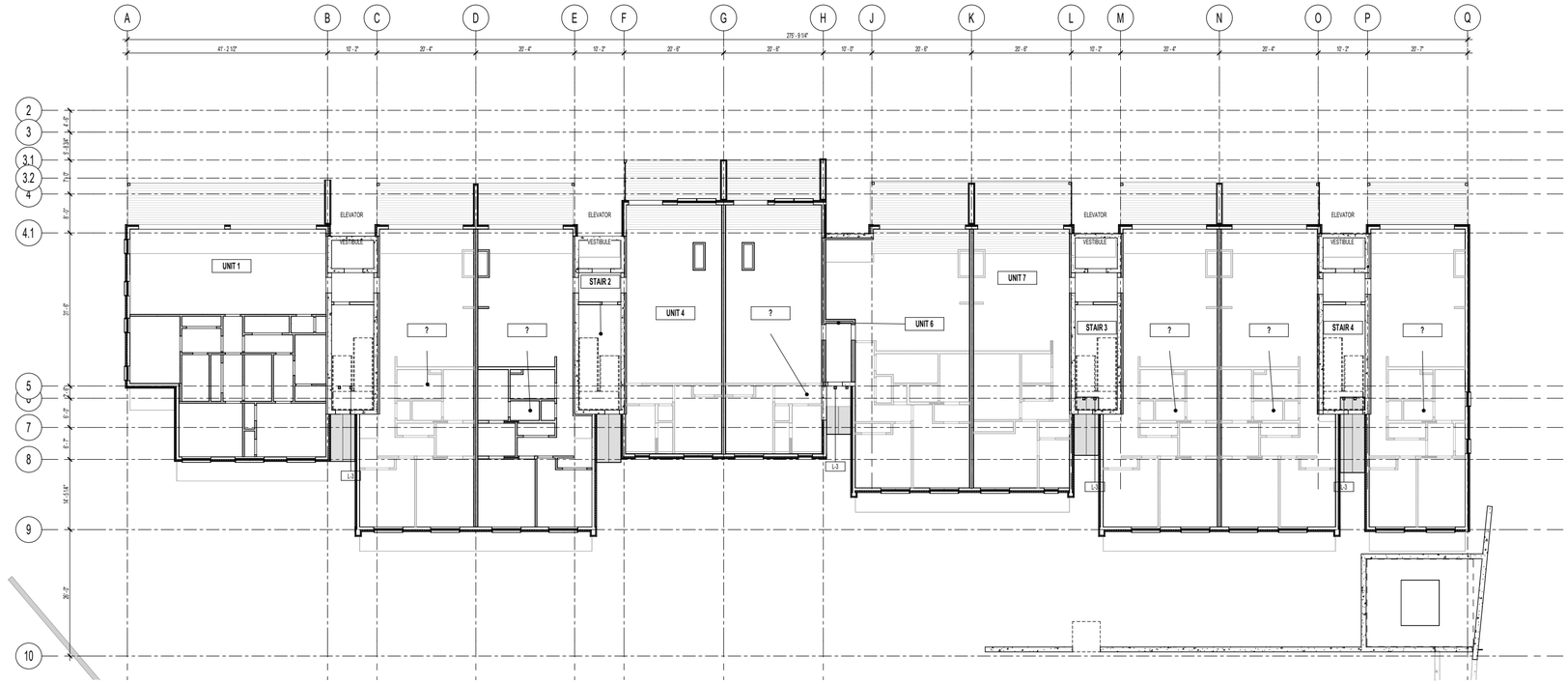


0 4 8 16 32

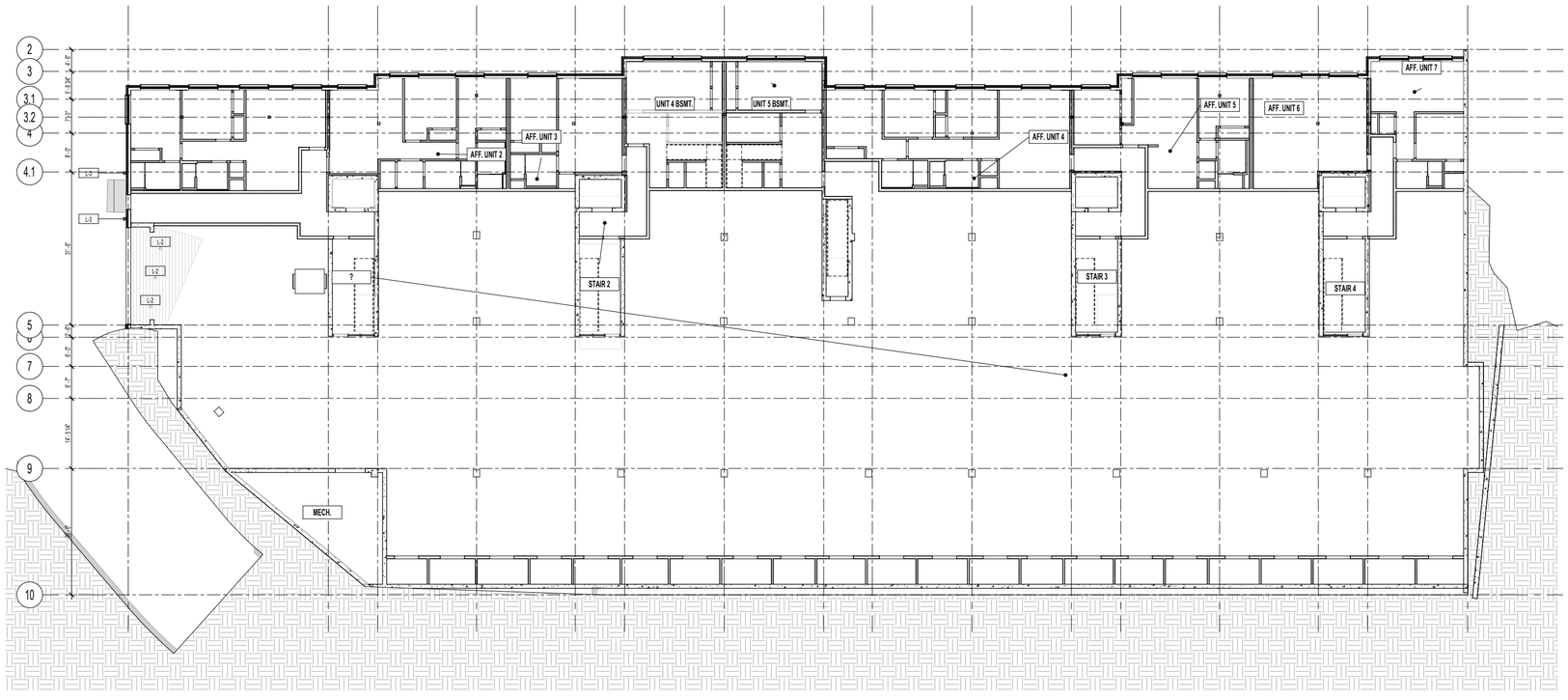
SCALE: 1 / 16" = 1' - 0"

LOT 53 – ROOF PLAN

LEVELS 1-3



BASEMENT



RCP LEGEND	
○	RECESSED LIGHT FIXTURE
□	EXTERIOR LIGHT FIXTURE
▭	CEILING-MOUNTED STRIP LIGHT

ELECTRICAL NOTES:
1. ALL ELECTRICAL WORK SHALL FULLY COMPLY WITH CURRENT EDITIONS OF ALL APPLICABLE CODES.
2. GENERAL CONTRACTOR TO COORDINATE WALKTHROUGH WITH OWNER & ARCHITECT TO VERIFY FINAL LOCATIONS OF ALL FIXTURES & SWITCHES PRIOR TO INSTALLATION.
3. ELECTRICIAN TO COORDINATE WITH GENERAL CONTRACTOR, ARCHITECT, & HVAC CONTRACTOR FOR LOCATIONS OF ALL THERMOSTATS & THERMOSTATIC SENSORS.
4. ELECTRICIAN & GENERAL CONTRACTOR TO COORDINATE WORK WITH ALL THIRD-PARTY CONTRACTORS (SECURITY, AUDIO/VIDEO, HOME AUTOMATION AND SIMILAR).

LOW VOLTAGE NOTES:
1. ALL SPEAKER WIRE SHALL BE FOUR CONDUCTOR WIRE (UNLESS OTHERWISE NOTED)
2. ALL SPEAKER WIRED TO SINGLE HOMERUN POINT (UNLESS OTHERWISE NOTED)

NOTE: INTERIOR LIGHTING NOT SHOWN.

0 4 8 16 32

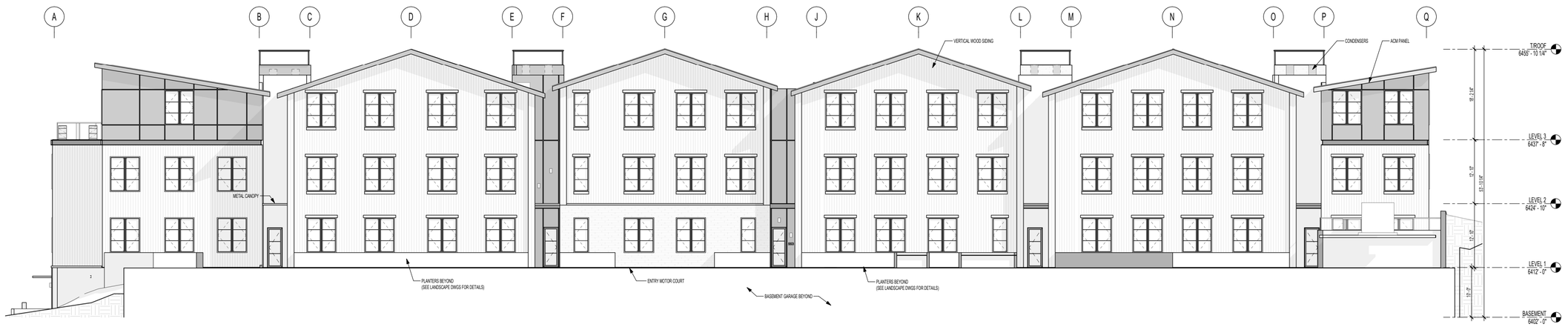
SCALE: 3/64" = 1' - 0"

LOT 53 – EXTERIOR LIGHTING PLANS

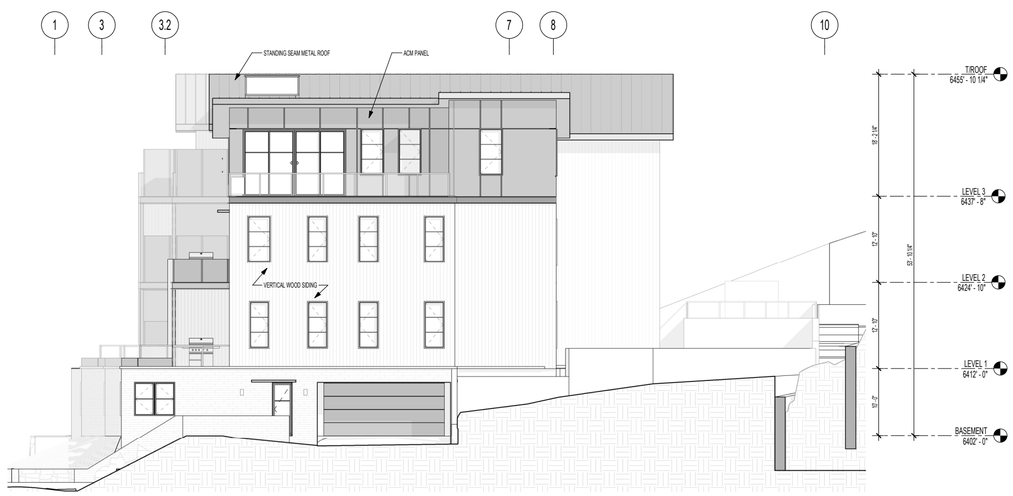
NORTH ELEVATION

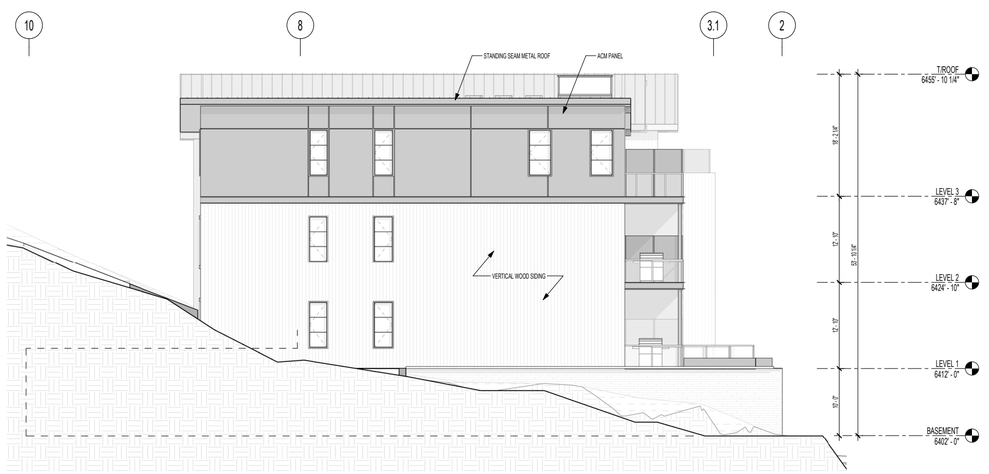


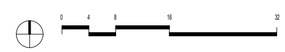
SOUTH ELEVATION



WEST ELEVATION







SCALE: 1 / 16" = 1' - 0"

LOT 53 – ELEVATIONS (REVISED)

E/W SECTION LOOKING SOUTH - 1



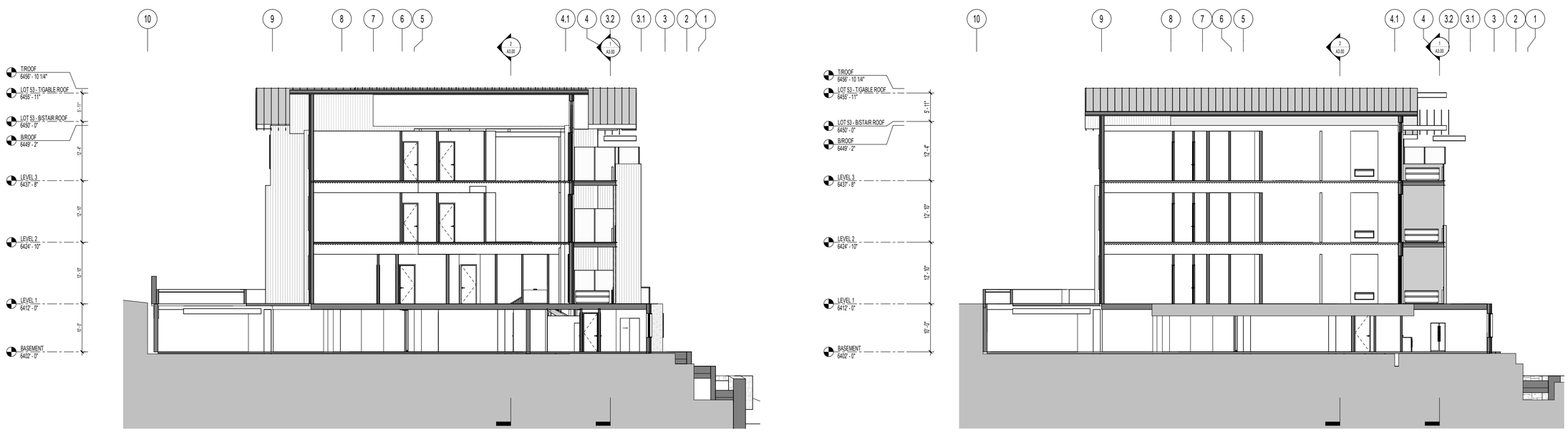
1 LOT 53 - E/W SECTION LOOKING SOUTH - 1
SCALE: 1/8" = 1'-0"

E/W SECTION LOOKING SOUTH - 2

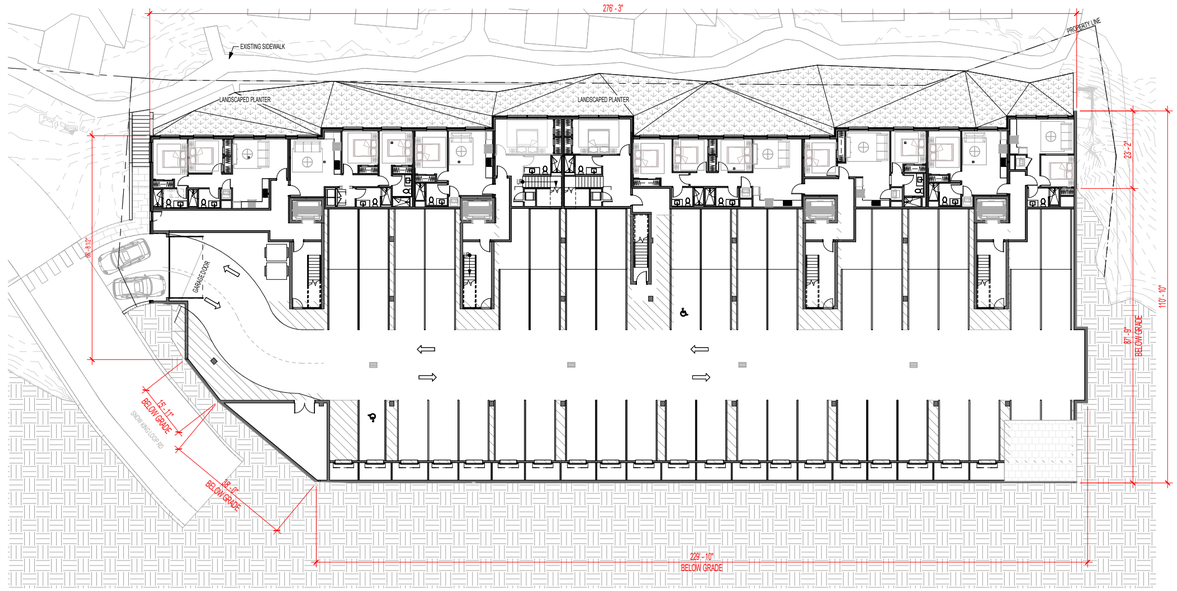


2 LOT 53 - E/W SECTION LOOKING SOUTH - 2
SCALE: 1/8" = 1'-0"

N/S SECTION LOOKING EAST - 1



LOT 53 – BUILDING SECTIONS (REVISED)



5 BASEMENT PLAN DIAGRAM
SCALE: 1/16" = 1'-0"

BASEMENT DEFINITION
1. NO MORE THAN 4'-0" OF WALL FROM THE T/1ST FLOOR SLAB DOWN CAN BE EXPOSED (6'-0" FROM THE T/BASEMENT SLAB MUST BE BELOW GRADE).
2. AT LEAST 50% OF THE PERMITER MUST MEET THIS REQUIREMENT.

LOT 53 SOUTH BUILDING
NORTH ELEVATION - 276'-3"
EAST ELEVATION - 110'-10" (87'-9" BELOW GRADE)
SOUTH ELEVATION - 229'-10" (229'-10" BELOW GRADE)
SOUTHWEST ELEVATION - 53'-11" (53'-11" BELOW GRADE)
WEST ELEVATION - 66'-8 1/2"

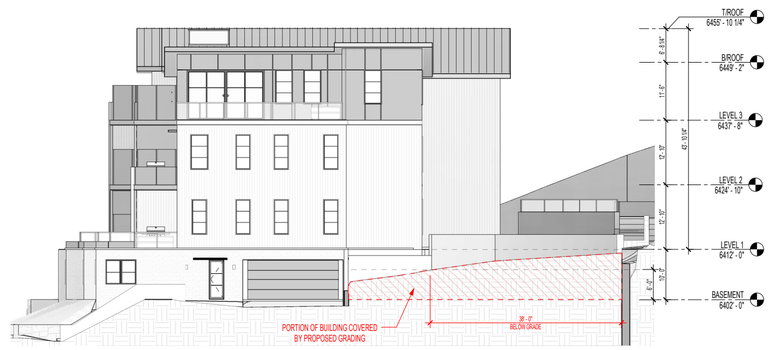
TOTAL PERIMETER = 737'-6 1/2" (371'-6" BELOW GRADE)
TOTAL PERCENTAGE BELOW GRADE = 50%



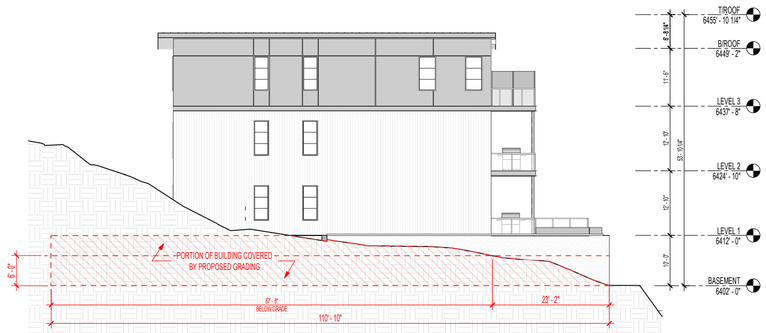
2 BASEMENT DIAGRAM - NORTH
SCALE: 3/32" = 1'-0"



1 BASEMENT DIAGRAM - SOUTH
SCALE: 3/32" = 1'-0"



3 BASEMENT DIAGRAM - WEST
SCALE: 3/32" = 1'-0"



4 BASEMENT DIAGRAM - EAST
SCALE: 3/32" = 1'-0"



LOT 53 – BASEMENT CALCULATIONS

NORTHWORKS

Lot 58

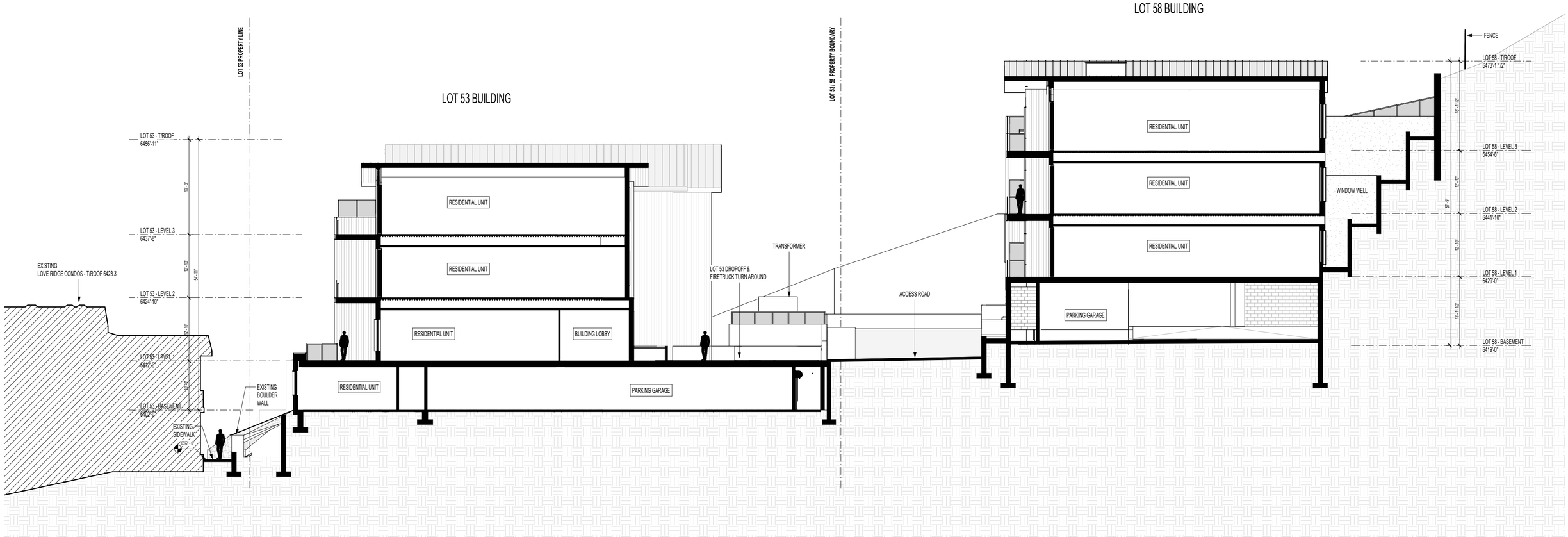


LOT 58 SITE PLAN – LANDSCAPE



LOT 58 SITE PLAN – CIVIL





SITE SECTION THROUGH LOT 53 & LOT 58, LOOKING EAST



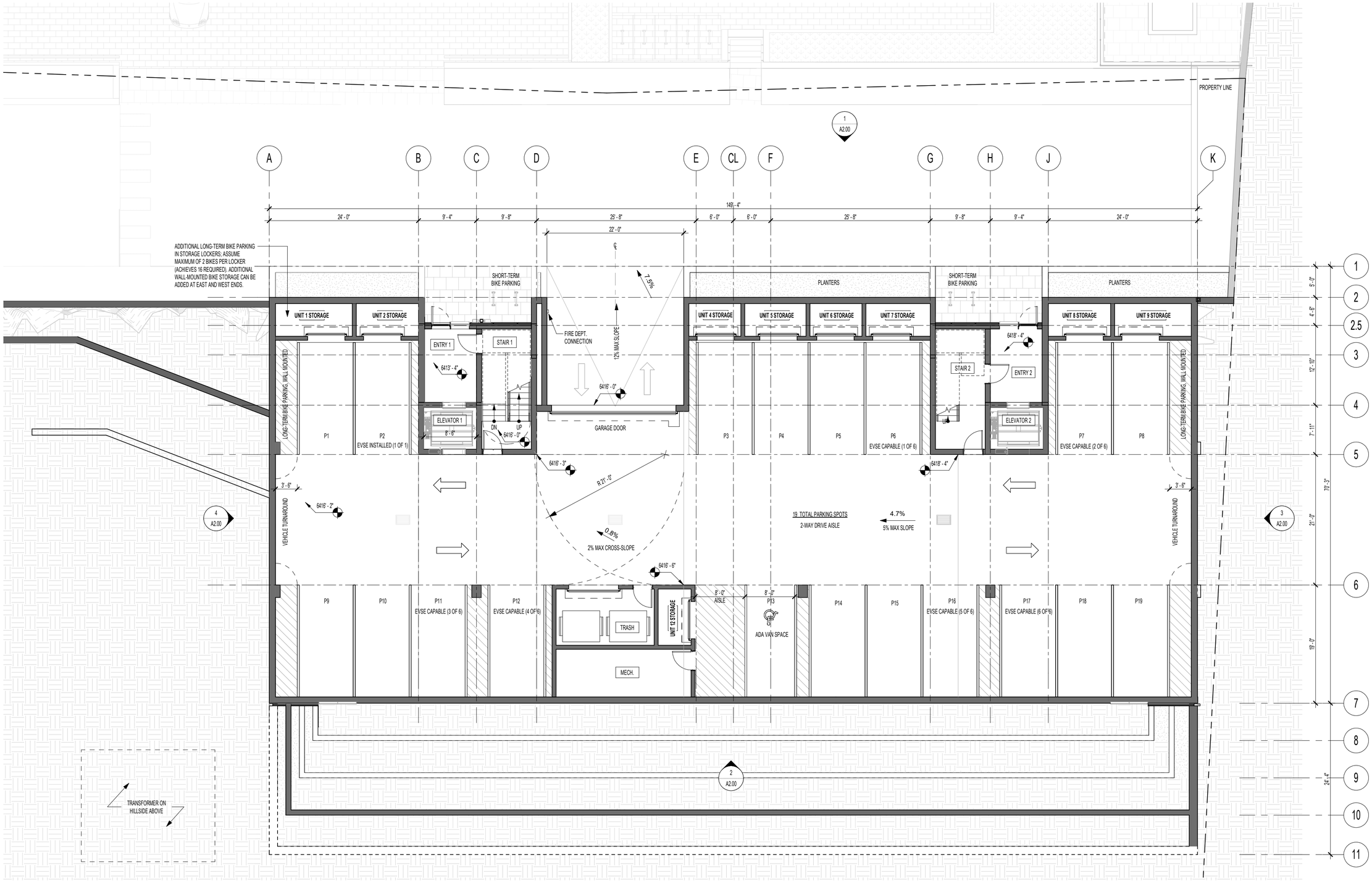
NORTH ELEVATION

LOT 58 – RENDERED ELEVATION

LOT 58 SUMMARY

- PARKING SPACES : 19
- 2-BEDROOMS: 7
- 3-BEDROOMS: 5
- AFFORDABLE UNITS: 0

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



LOT 58 – BASEMENT FLOOR PLAN

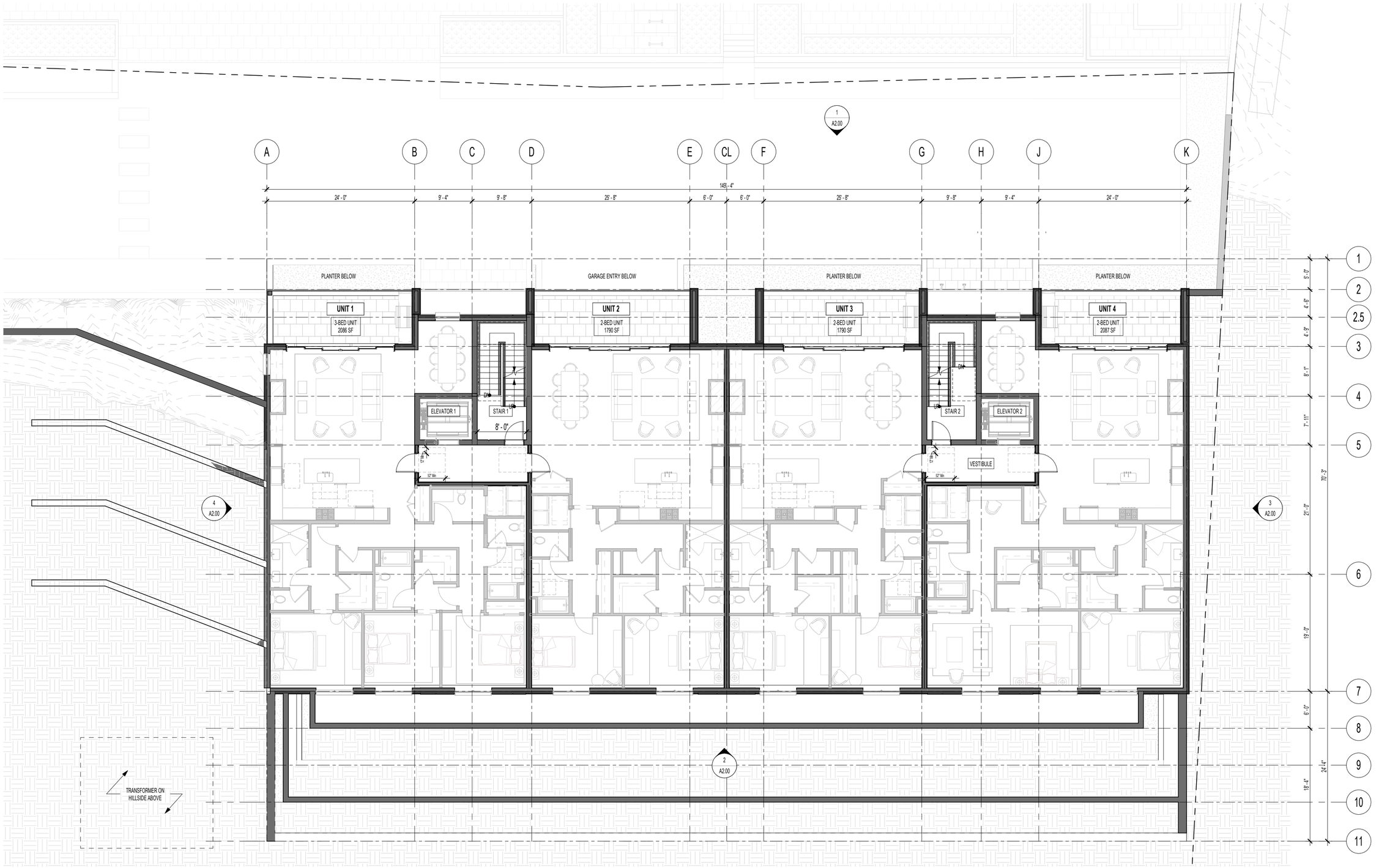
0 4 8 16

SCALE: 3/64" = 1' - 0"

LOT 58 SUMMARY

- PARKING SPACES : 19
- 2-BEDROOMS: 7
- 3-BEDROOMS: 5
- AFFORDABLE UNITS: 0

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



LOT 58 – FIRST FLOOR PLAN

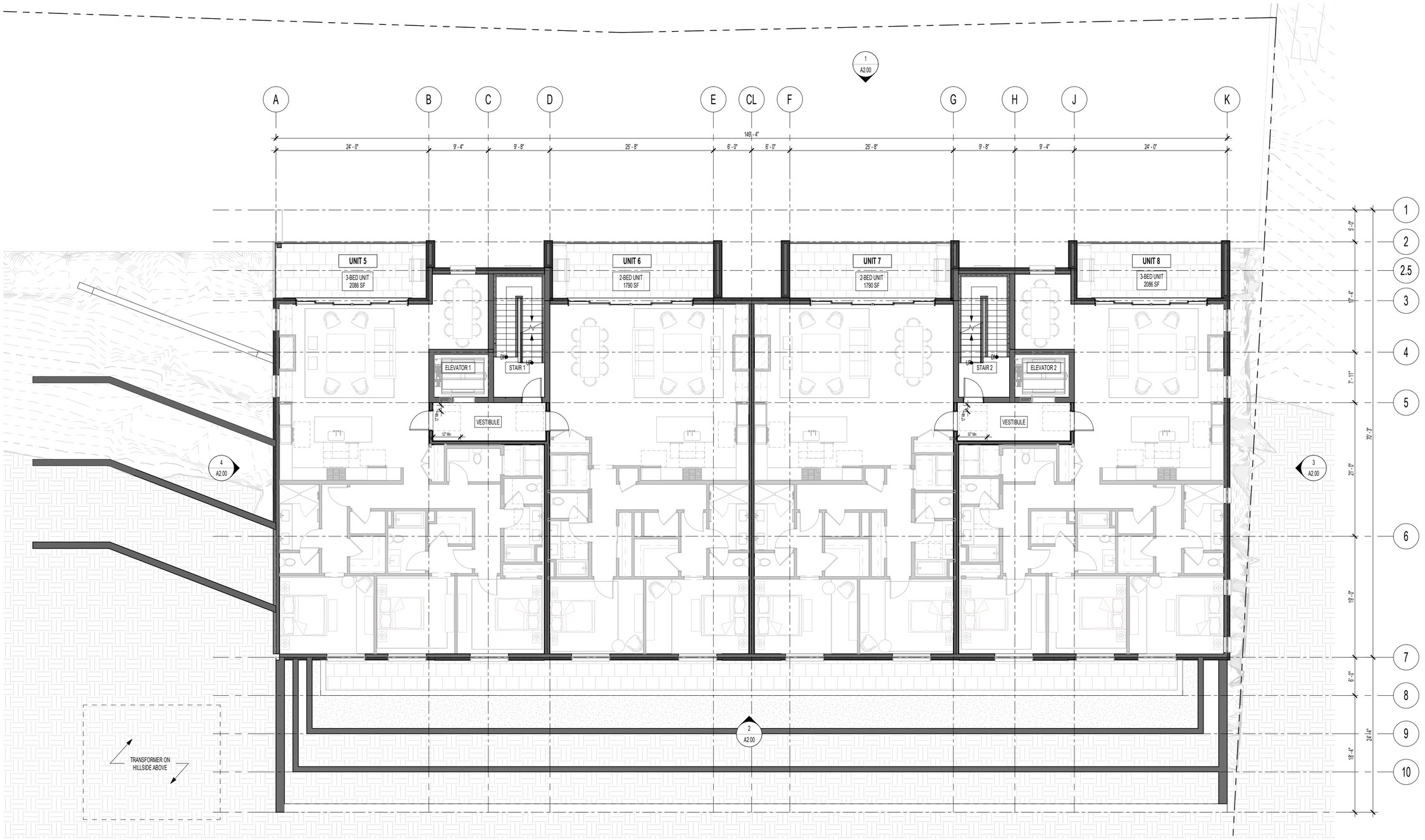
0 4 8 16

SCALE: 3/64" = 1' - 0"

LOT 58 SUMMARY

- PARKING SPACES : 19
- 2-BEDROOMS: 7
- 3-BEDROOMS: 5
- AFFORDABLE UNITS: 0

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



LOT 58 – SECOND FLOOR PLAN

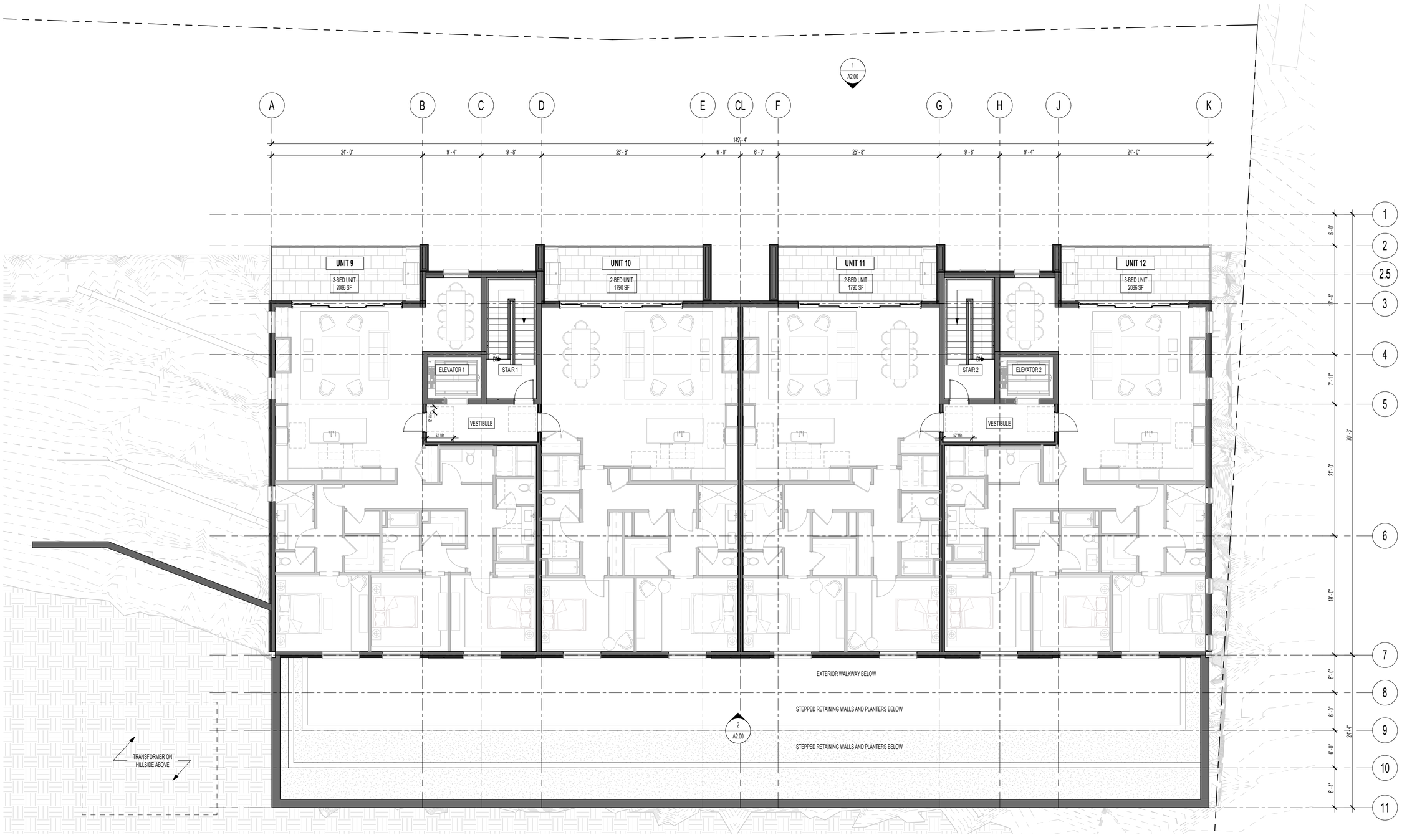
0 4 8 16

SCALE: 3/64" = 1' - 0"

LOT 58 SUMMARY

- PARKING SPACES : 19
- 2-BEDROOMS: 7
- 3-BEDROOMS: 5
- AFFORDABLE UNITS: 0

CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



LOT 58 – THIRD FLOOR PLAN

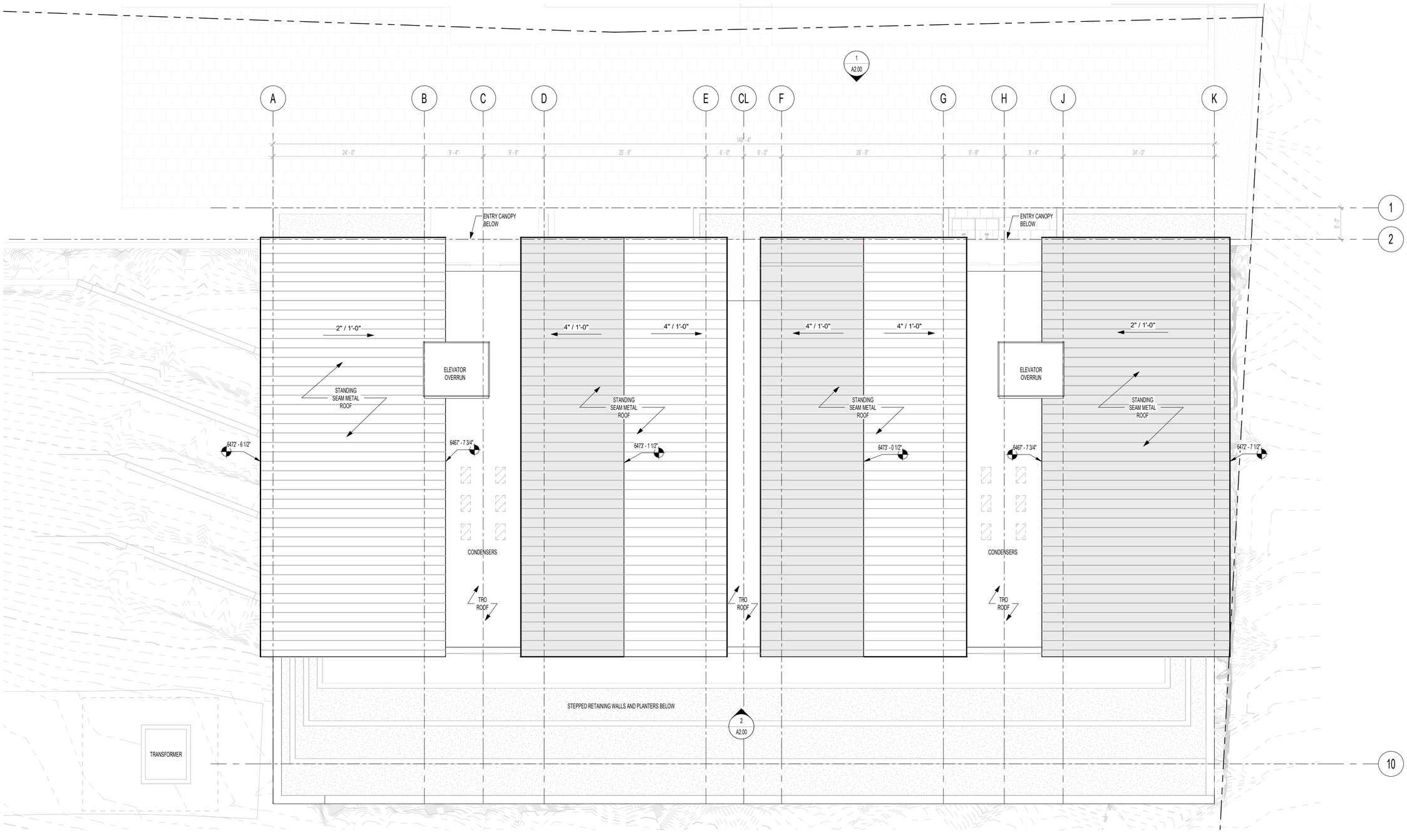
0 4 8 16

SCALE: 3/64" = 1' - 0"

LOT 58 SUMMARY

- PARKING SPACES : 19
- 2-BEDROOMS: 7
- 3-BEDROOMS: 5
- AFFORDABLE UNITS: 0

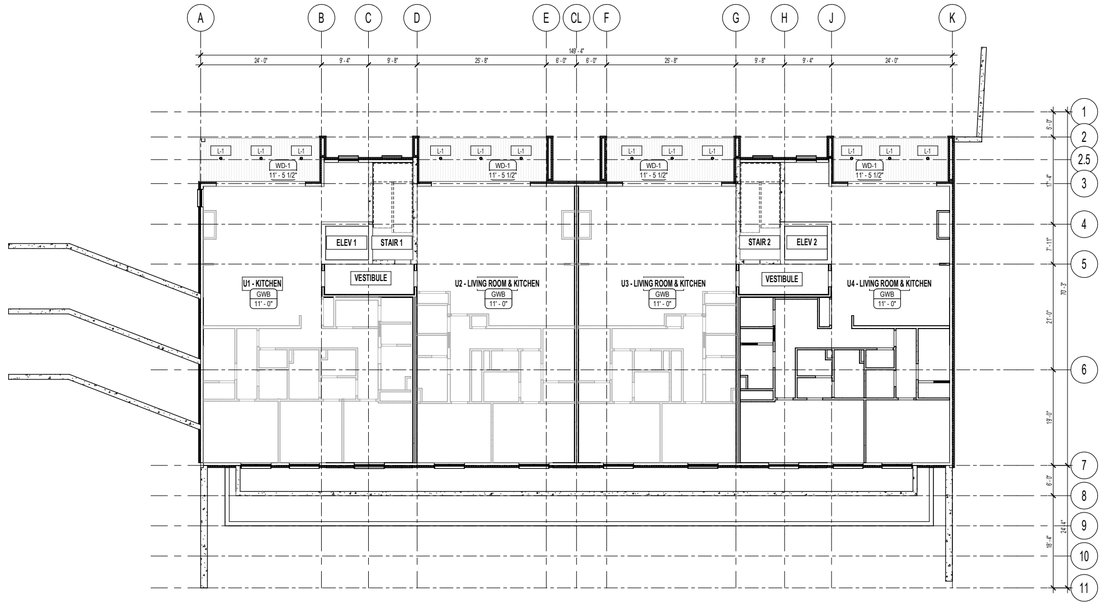
CODE NOTE:
UNITS ARE FOR-SALE CONDOMINIUMS AND WILL BE CLASSIFIED AS R-2 OCCUPANCY. INDIVIDUAL OWNERS MAY APPLY FOR SHORT-TERM RENTAL LICENSES THROUGH THE TOWN OF JACKSON.



LOT 58 – ROOF PLAN

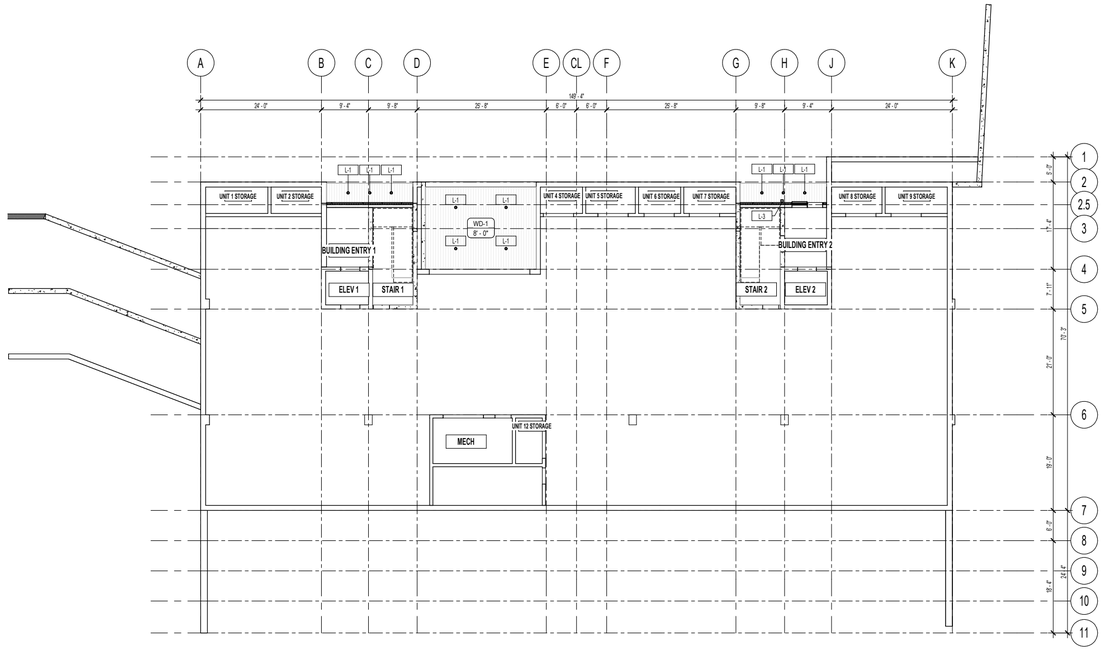
0 4 8 16

SCALE: 3/64" = 1' - 0"



2 REFLECTED CEILING PLAN - 1ST FLOOR PLAN
SCALE 3/32" = 1'-0"

0 4 8 16 32



1 REFLECTED CEILING PLAN - BASEMENT
SCALE 3/32" = 1'-0"

0 4 8 16 32

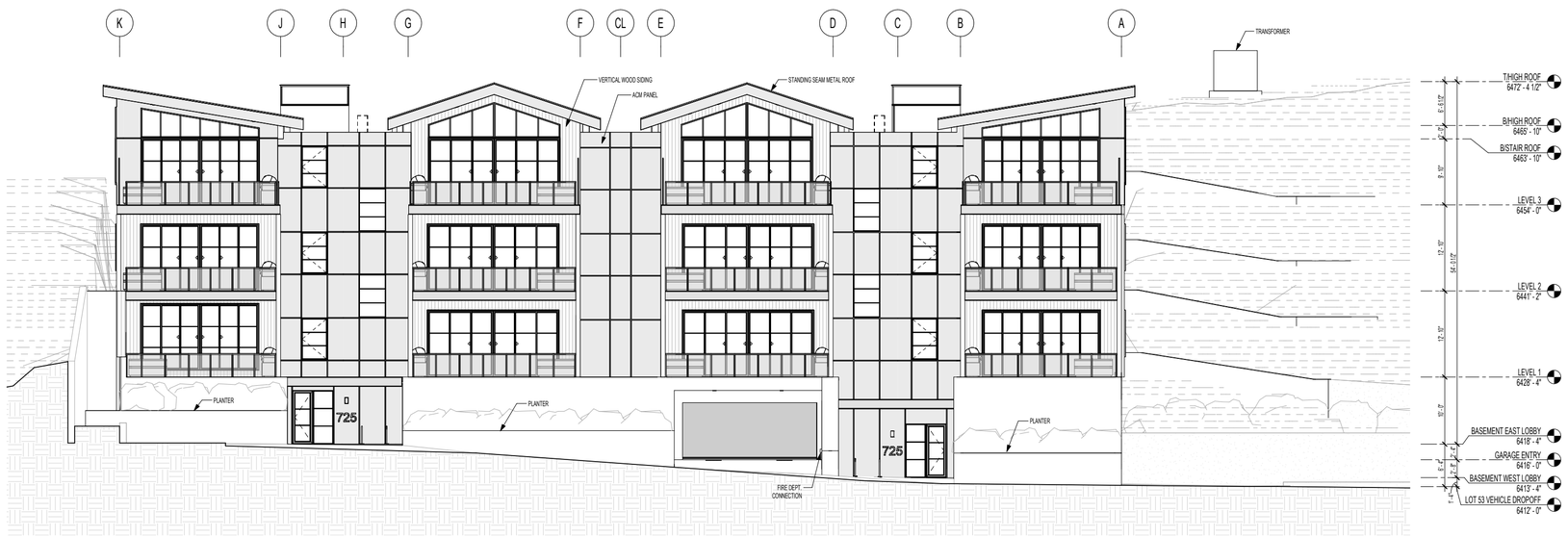
RCP LEGEND	
○	RECESSED LIGHT FIXTURE
▢	EXTERIOR LIGHT FIXTURE
═══	CEILING-MOUNTED STRIP LIGHT

ELECTRICAL NOTES:
1. ALL ELECTRICAL WORK SHALL FULLY COMPLY WITH CURRENT EDITIONS OF ALL APPLICABLE CODES.
2. GENERAL CONTRACTOR TO COORDINATE WALKTHROUGH WITH OWNER & ARCHITECT TO VERIFY FINAL LOCATIONS OF ALL FIXTURES & SWITCHES PRIOR TO INSTALLATION.
3. ELECTRICIAN TO COORDINATE WITH GENERAL CONTRACTOR, ARCHITECT, & HVAC CONTRACTOR FOR LOCATIONS OF ALL THERMOSTATS & THERMOSTATIC SENSORS.
4. ELECTRICIAN & GENERAL CONTRACTOR TO COORDINATE WORK WITH ALL THIRD-PARTY CONTRACTORS (SECURITY, AUDIO/VIDEO, HOME AUTOMATION AND SIMILAR).

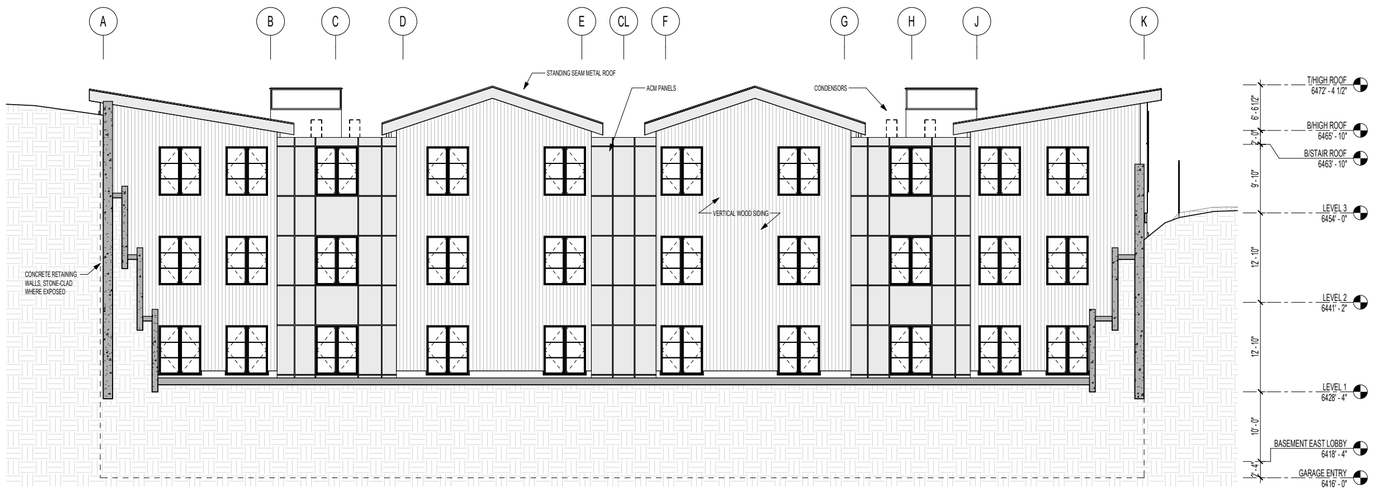
LOW VOLTAGE NOTES:
1. ALL SPEAKER WIRE SHALL BE FOUR CONDUCTOR WIRE (UNLESS OTHERWISE NOTED)
2. ALL SPEAKER WIRED TO SINGLE HOMERUN POINT (UNLESS OTHERWISE NOTED)

NOTE: INTERIOR LIGHTING NOT SHOWN.

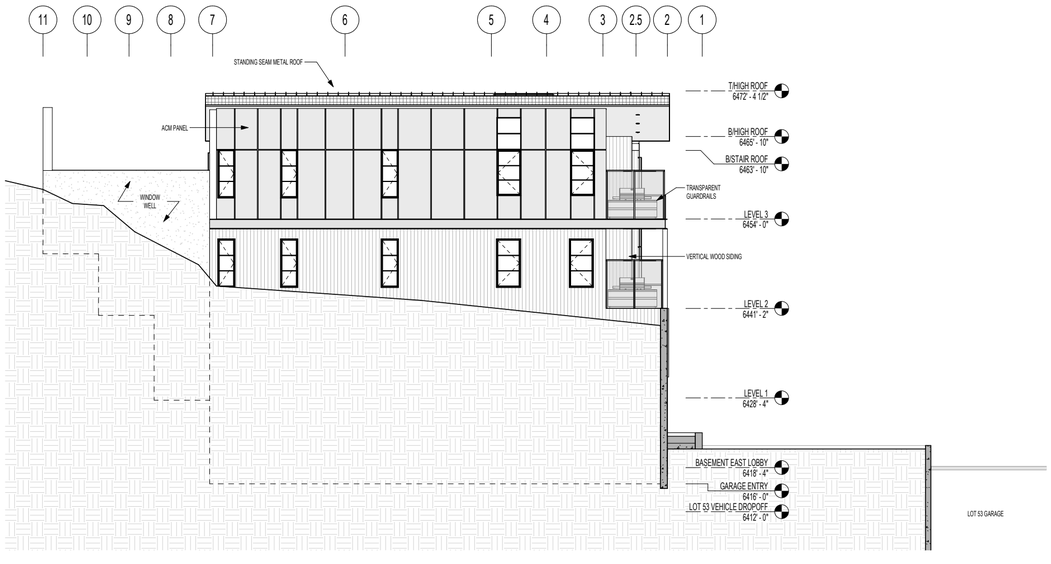
LOT 58 – EXTERIOR LIGHTING PLANS



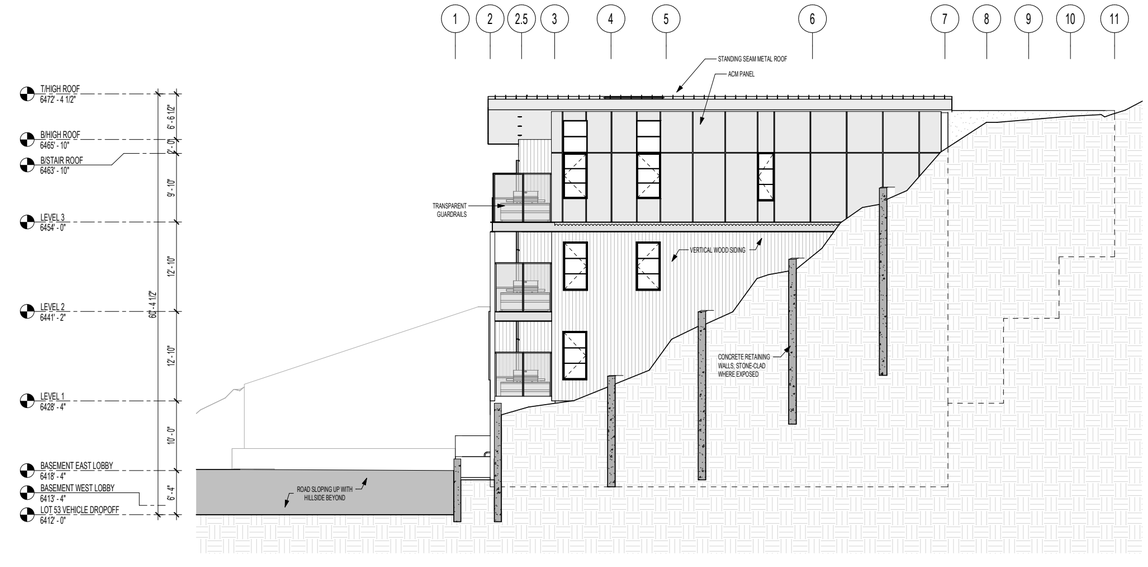
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION

MATERIAL LEGEND

- VERTICAL WOOD SIDING
- HORIZONTAL WOOD SIDING
- ACM PANEL
- BOARD FORM CONCRETE

LOT 58 – ELEVATIONS

SCALE: 1 / 16" = 1' - 0"

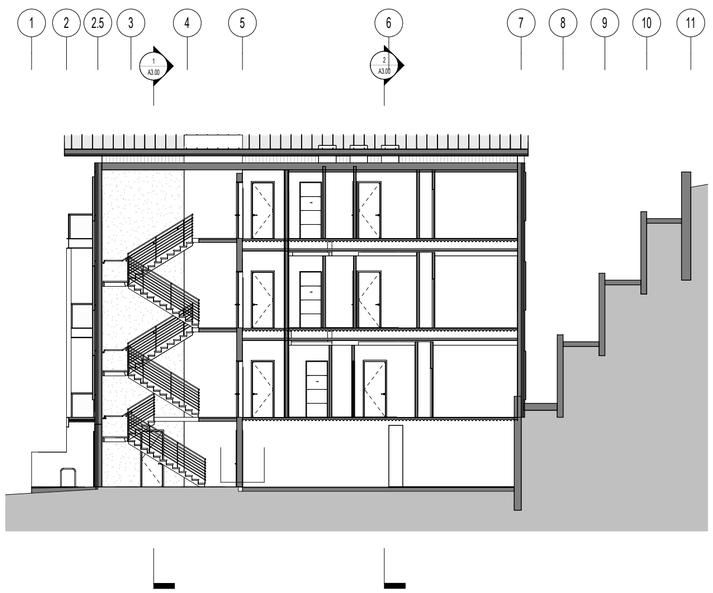
E/W SECTION LOOKING SOUTH - 1



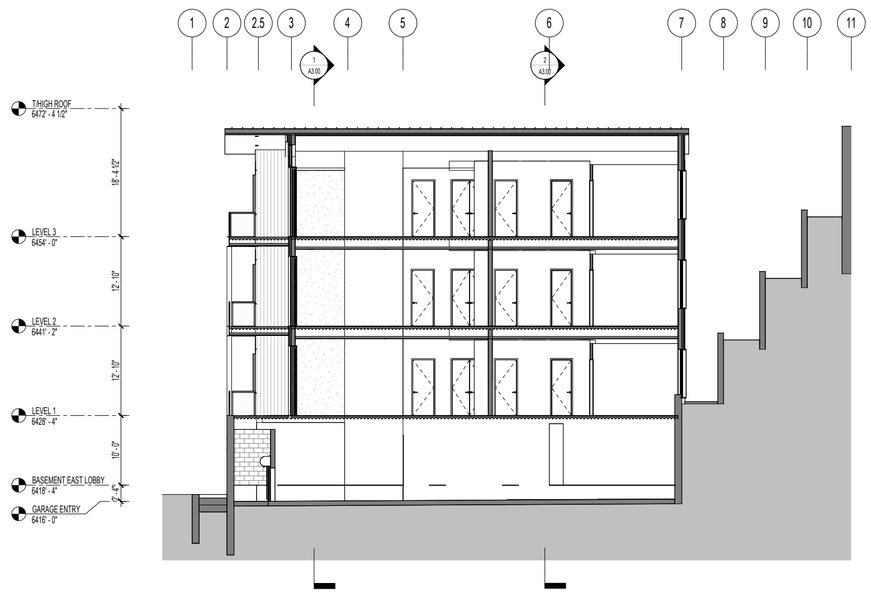
E/W SECTION LOOKING SOUTH - 2



N/S SECTION LOOKING EAST - 1



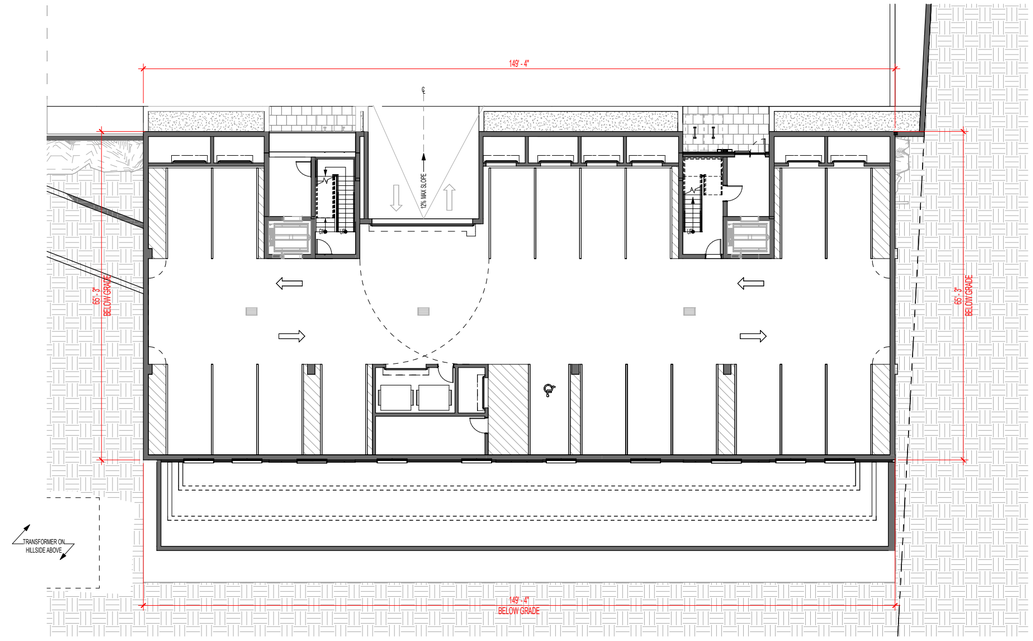
N/S SECTION LOOKING EAST- 2



0 4 8 16 32

SCALE: 1 / 16" = 1' - 0"

LOT 58 – BUILDING SECTIONS



5 BASEMENT DEFINITION PLAN
SCALE: 3/32" = 1'-0"

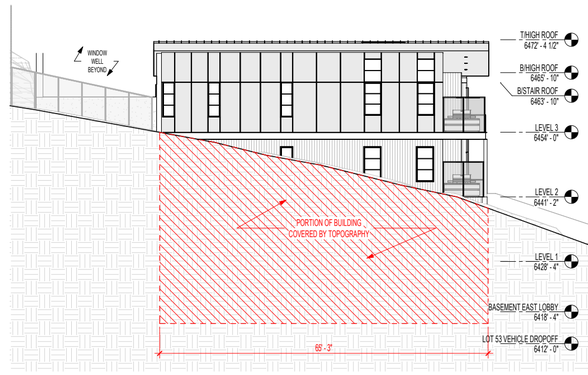
BASEMENT DEFINITION
1. NO MORE THAN 4'-0" OF WALL FROM THE T/1ST FLOOR SLAB DOWN CAN BE EXPOSED (6'-0" FROM THE T/BASEMENT SLAB MUST BE BELOW GRADE).
2. AT LEAST 50% OF THE PERMITER MUST MEET THIS REQUIREMENT.

LOT 58 BUILDING
NORTH ELEVATION - 149'-4"
EAST ELEVATION - 65'-3" (65'-3" BELOW GRADE)
SOUTH ELEVATION - 149'-4" (149'-4" BELOW GRADE)
WEST ELEVATION - 65'-3" (65'-3" BELOW GRADE)

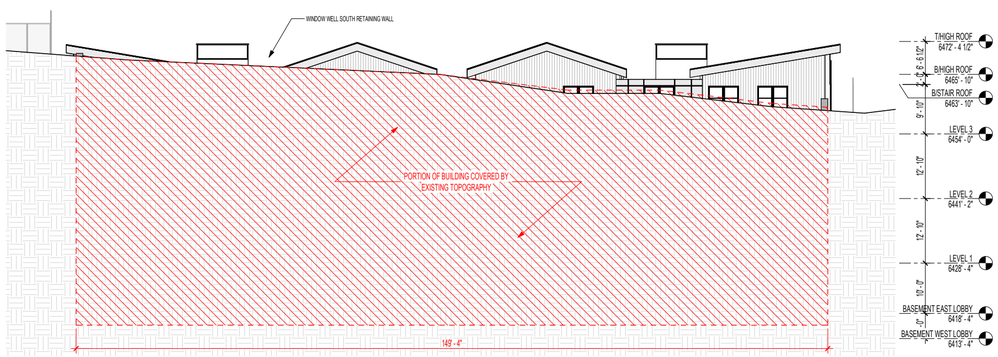
TOTAL PERIMETER = 429'-2" (279'-10" BELOW GRADE)
TOTAL PERCENTAGE BELOW GRADE = 65%



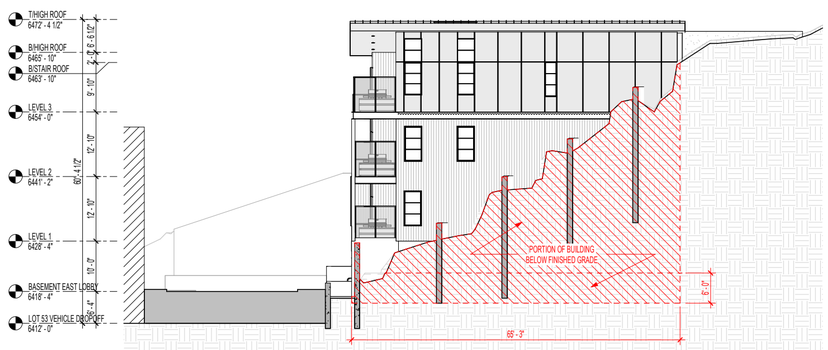
1 BASEMENT DEFINITION - NORTH ELEVATION
SCALE: 3/32" = 1'-0"



3 BASEMENT DEFINITION - EAST ELEVATION
SCALE: 3/32" = 1'-0"



2 BASEMENT DEFINITION - SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



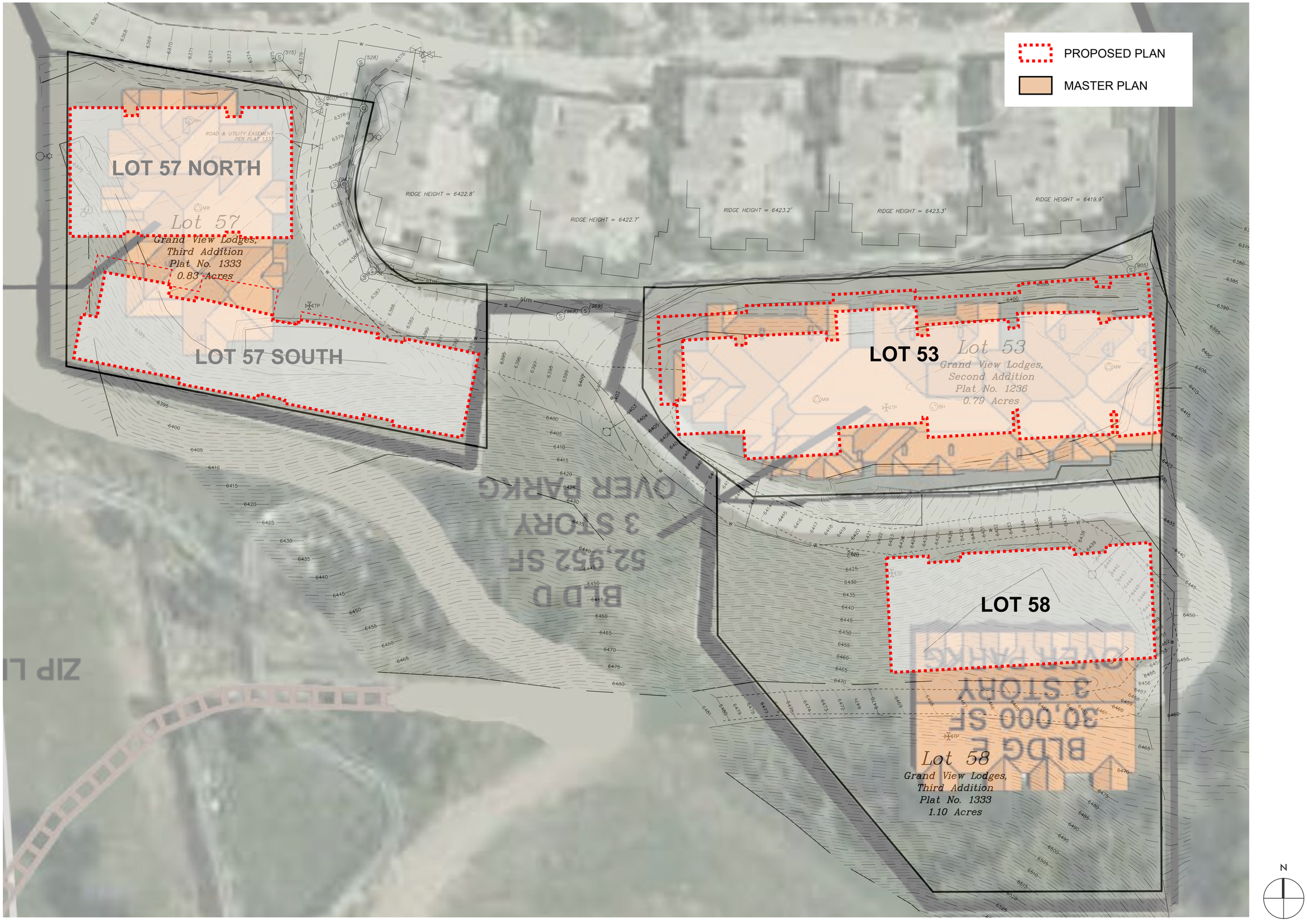
4 BASEMENT DEFINITION - WEST ELEVATION
SCALE: 3/32" = 1'-0"

0 4 8 16 32

LOT 58 – BASEMENT CALCULATIONS

NORTHWORKS

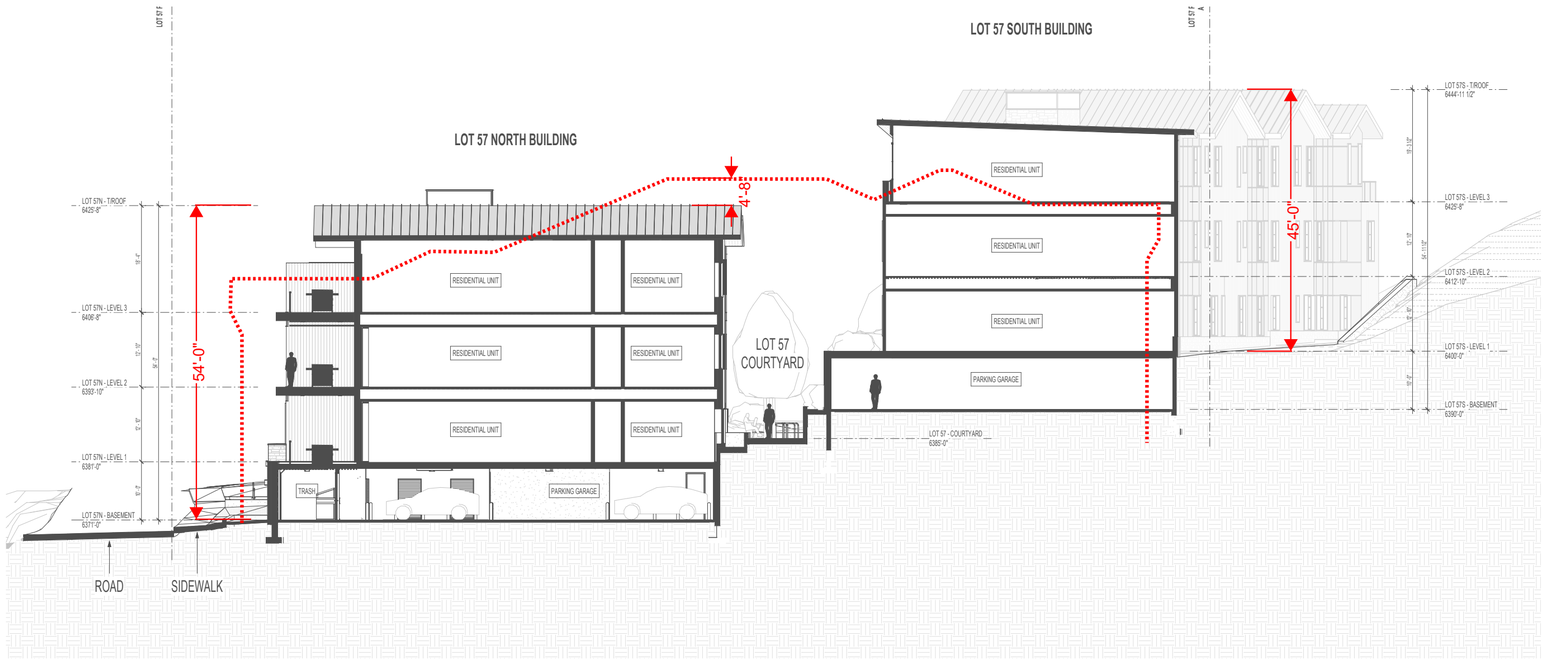
Master Plan Analysis



SITE PLAN OVERLAY – MASTER PLAN & NEW PROPOSAL

MASTER PLAN - WEST ELEVATION





PROPOSED PLAN - WEST ELEVATION

The original Master Plan design for Lot 57 did not account for garage access from the road with allowable road slopes. Our proposal splits the site into 2 buildings to solve this issue, while maintaining a scale that matches that of the original design.

MASTER PLAN - NORTH ELEVATION





PROPOSED PLAN - NORTH ELEVATION

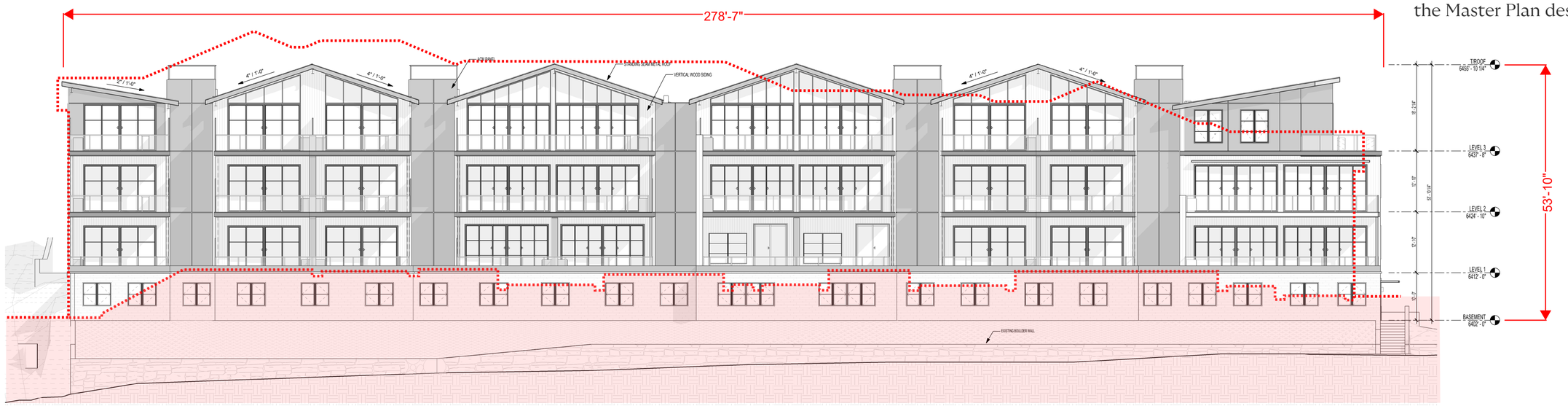
LOT 57 MASTER PLAN VS. NEW PROPOSAL



MASTER PLAN - NORTH ELEVATION

This design would have created a very tall retaining wall along the Love Ridge condos.

The proposed design at Lot 53 is shorter on average than the Master Plan design.

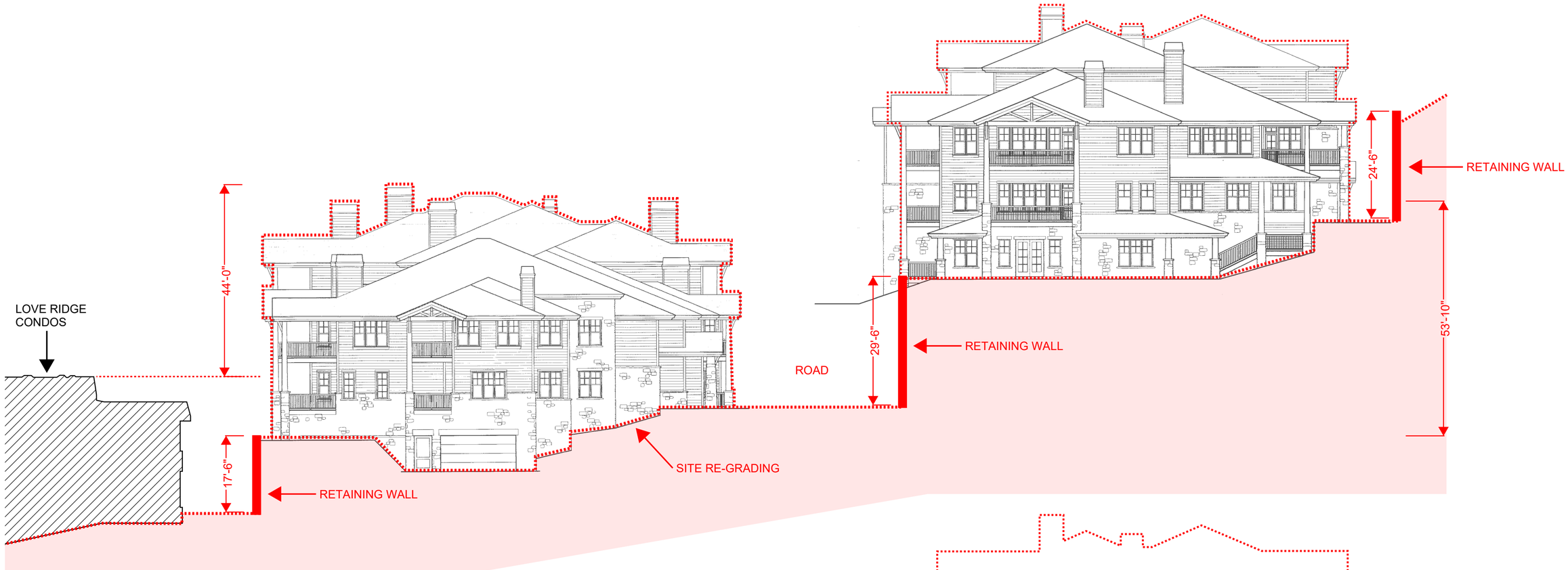


PROPOSED PLAN - NORTH ELEVATION

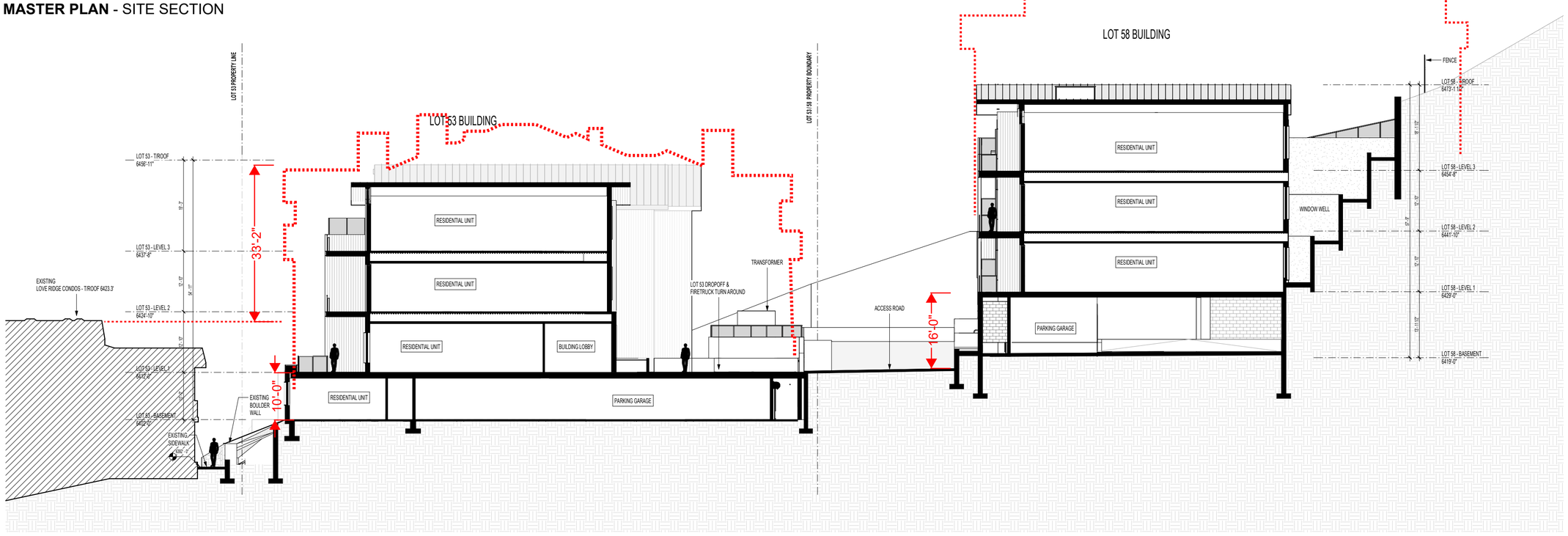


MASTER PLAN - WEST ELEVATION

LOT 53 MASTER PLAN VS. NEW PROPOSAL

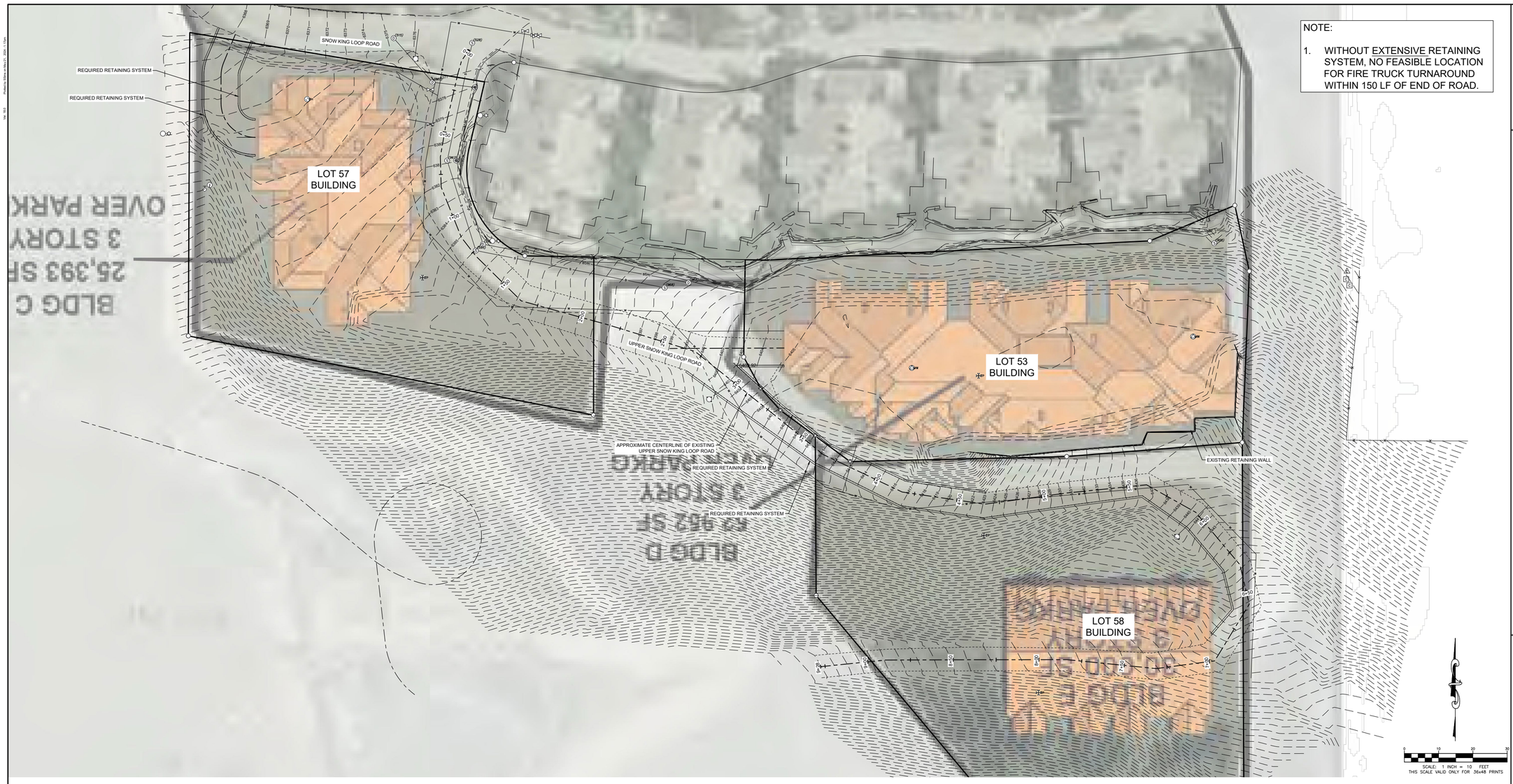


MASTER PLAN - SITE SECTION



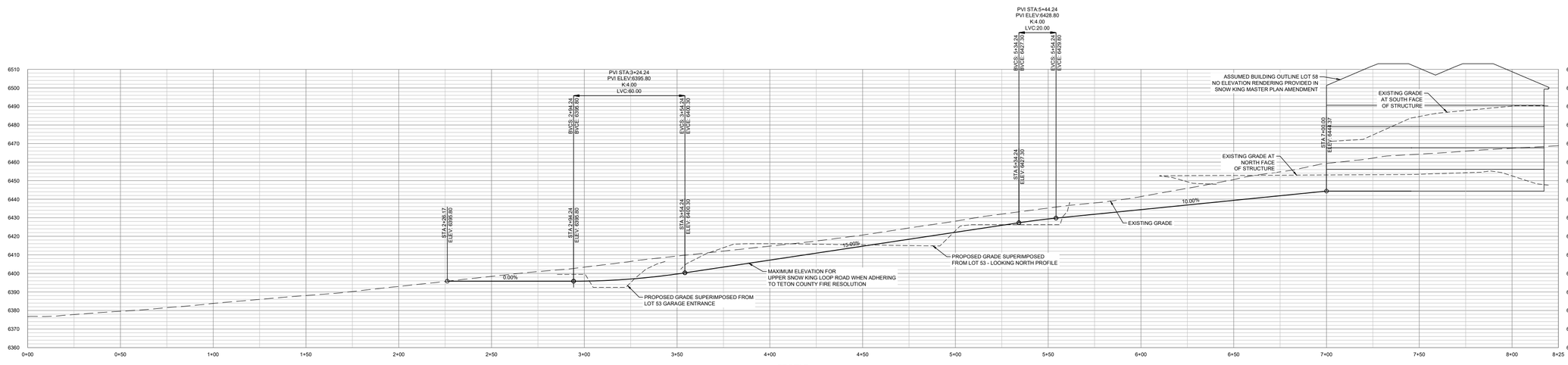
PROPOSED PLAN - SITE SECTION

LOT 53 AND LOT 58 – MASTER PLAN VS. NEW PROPOSAL – SITE SECTION



NOTE:

1. WITHOUT EXTENSIVE RETAINING SYSTEM, NO FEASIBLE LOCATION FOR FIRE TRUCK TURNAROUND WITHIN 150 LF OF END OF ROAD.



=PROFILE=
Upper Snow King Loop Road
SCALE: HORIZONTAL: 1"=10
VERTICAL 1"=10

– PRELIMINARY –
SUBJECT TO CORRECTION
AND APPROVAL

JORGENSEN
KEMMERER, WYOMING
307.877.9093
www.jorgeng.com

PROJECT TITLE:
SNOW KING - BEAR DEVELOPMENT

SHEET TITLE:
SNOW KING MASTER PLAN AMENDMENT - SUB-AREA 3
SITE OVERVIEW ANALYSIS

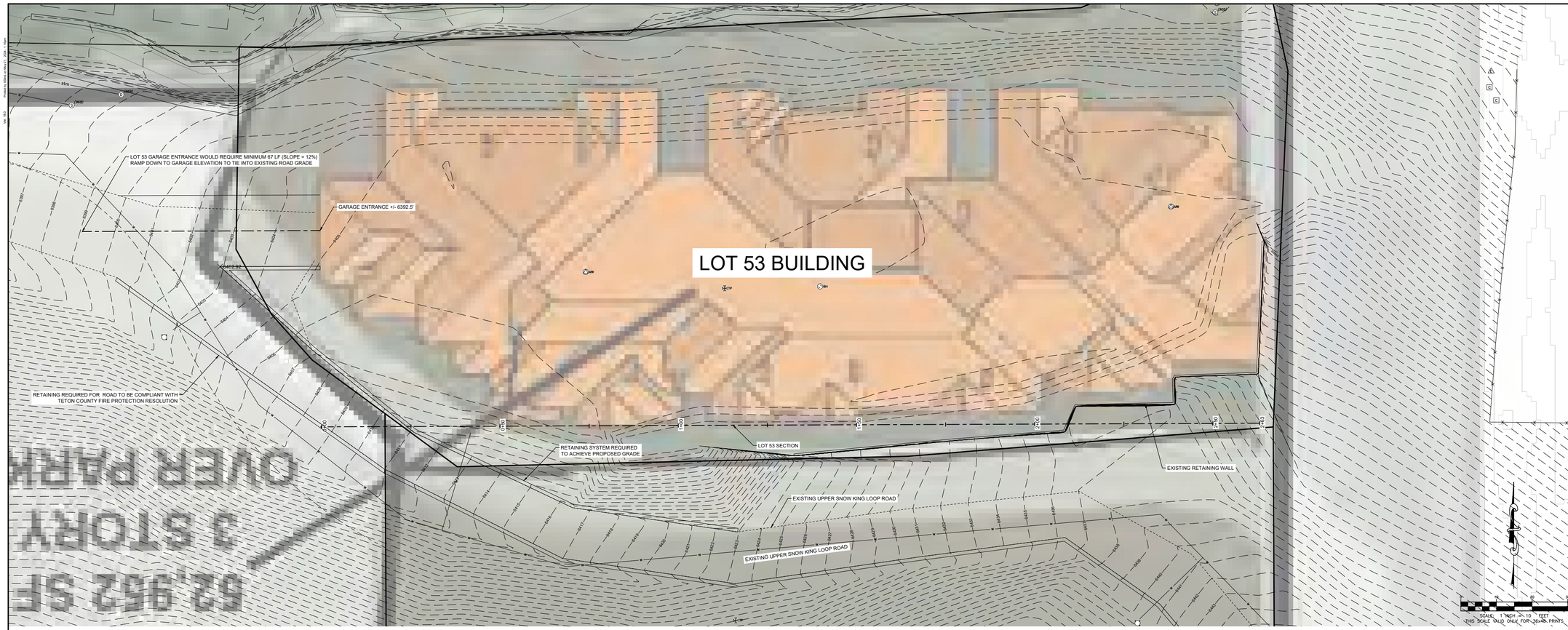
DESIGNED BY:	SS
REVIEWED BY:	JL
PLAN VERSION	DATE
EXHIBIT	2024-05-21

PROJECT NUMBER
23072

SHEET
1

© 2024 JORGENSEN

MASTER PLAN – CIVIL ENGINEER COMMENTARY





=PROFILE=
Lot 53 XS-Looking North
SCALE: HORIZONTAL 1"=10
VERTICAL 1"=10

– PRELIMINARY –
SUBJECT TO CORRECTION AND APPROVAL

JORGENSEN
KEMMERER, WYOMING
307.877.9093
www.jorgeng.com

PROJECT TITLE:
SNOW KING - BEAR DEVELOPMENT

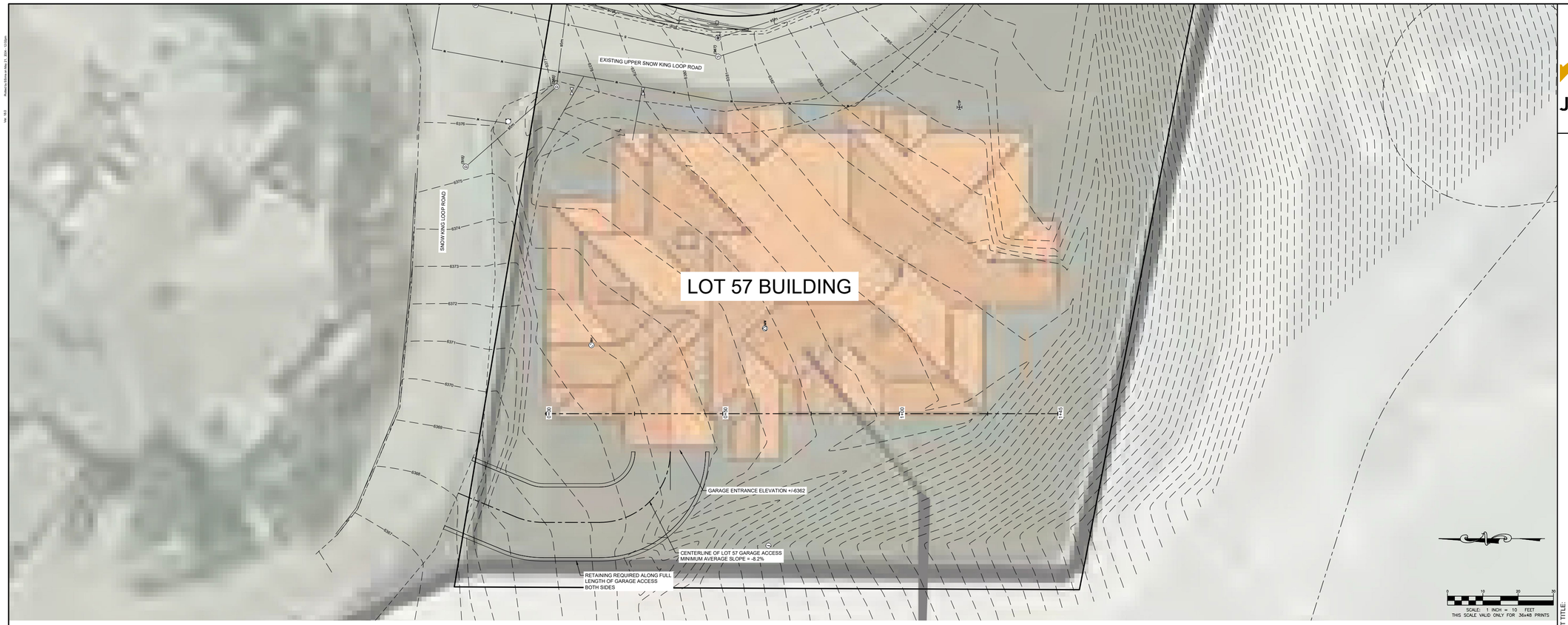
SHEET TITLE:
SNOW KING MASTER PLAN AMENDMENT - SUB-AREA 3
LOT 53 ANALYSIS

DESIGNED BY:	SS
REVIEWED BY:	JL
PLAN VERSION	DATE
EXHIBIT	2024-05-21

PROJECT NUMBER
23072

SHEET
2

MASTER PLAN – CIVIL ENGINEER COMMENTARY





=PROFILE=
Lot 57 - Looking East
SCALE: HORIZONTAL 1"=10
VERTICAL 1"=10

– PRELIMINARY –
SUBJECT TO CORRECTION
AND APPROVAL

JORGENSEN
KEMMERER, WYOMING
307.877.9093
www.jorgeng.com

PROJECT TITLE
SNOW KING - BEAR DEVELOPMENT

SHEET TITLE
SNOW KING MASTER PLAN AMENDMENT - SUB-AREA 3
LOT 57 ANALYSIS

DESIGNED BY:	SS
REVIEWED BY:	JL
PLAN VERSION	DATE
EXHIBIT	2024-05-21

PROJECT NUMBER
23072

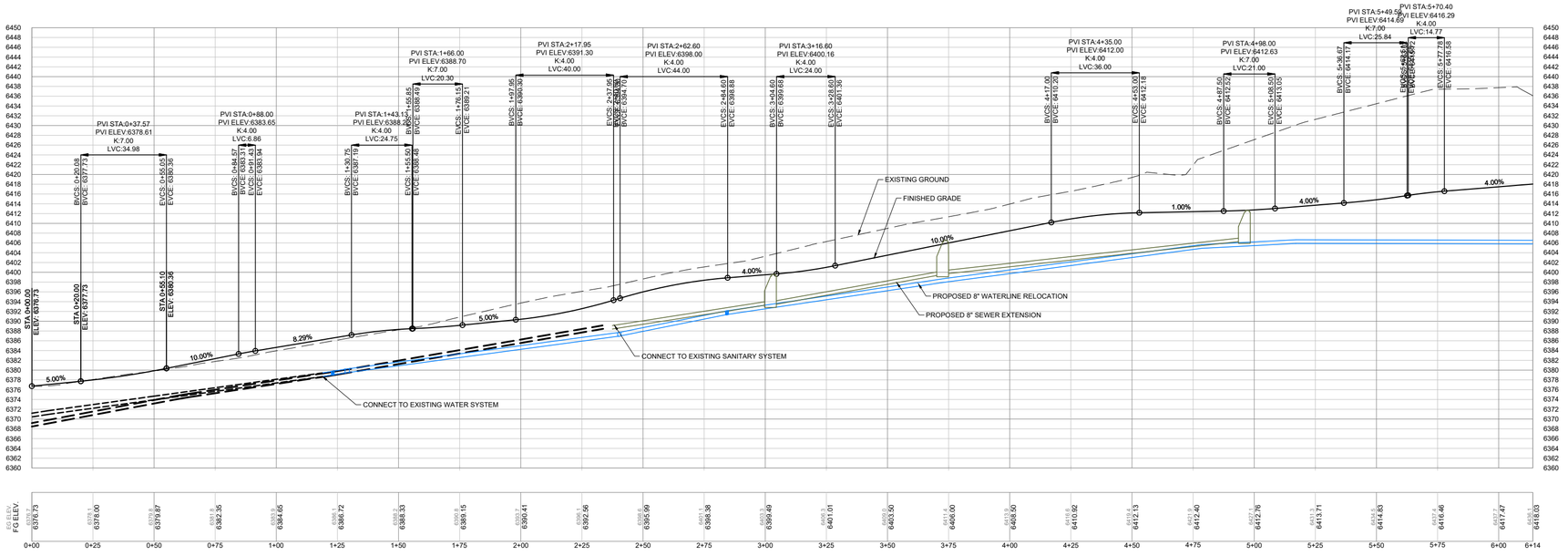
SHEET
3

MASTER PLAN – CIVIL ENGINEER COMMENTARY

NORTHWORKS

Civil & Landscape Details





NOTE:

REFER TO RESPONSE TO TOWN ENGINEERING COMMENTS DATED 2/3/2025, CONDITIONS OF APPROVAL C. LDR 5.7.2.A FOR DISCUSSION OF ROAD STEEPNESS, FIRE APPARATUS TURN AROUND AND DEVELOPMENT ROAD CONNECTION TO THE EAST.

=PROFILE=
UPPER SNOW KING LOOP ROAD
SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwkz.com

© 2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION
3	2025-04-28	DEVELOPMENT PLAN REVISION 2

PROFESSIONAL SEAL

Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

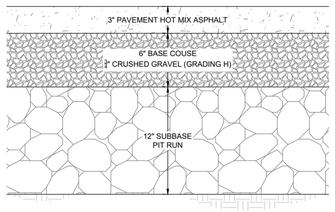
23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number

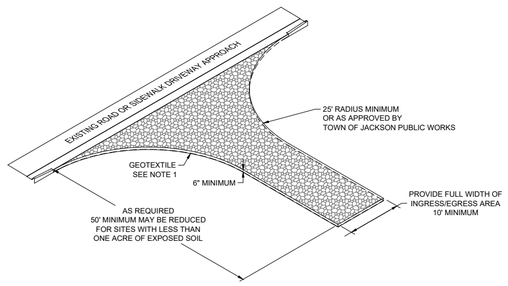
C2.3

Drawing Name

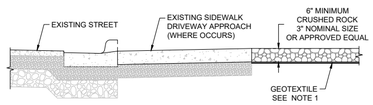
UPPER SNOW KING LOOP PLAN & PROFILE



PAVEMENT SECTION
NOT TO SCALE



CONSTRUCTION ENTRANCE ISOMETRIC VIEW

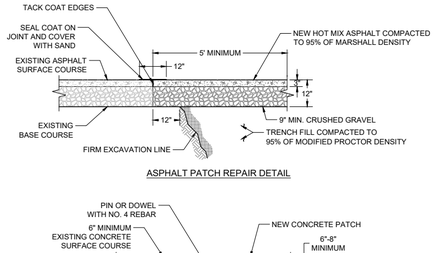


CONSTRUCTION ENTRANCE SECTION

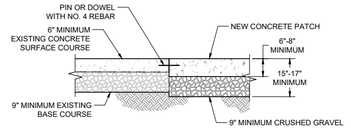
NOTE

1. PLACE CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION UNDER THE CRUSHED ROCK FROM THE EDGE OF THE EXISTING ROADWAY OR SIDEWALK TO THE RADIUS RETURNS, OR AS DIRECTED BY PUBLIC WORKS.
2. ENTRANCE SHALL BE REMOVED ABD RECONSTRUCTED AS REQUIRED TO PREVENT EXCESS TRACKING OF MATERIALS INTO RIGHT-OF-WAY, OR WHEN DIRECTED BY THE TOWN PUBLIC WORKS DEPARTMENT.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE TOJ ST-119



ASPHALT PATCH REPAIR DETAIL

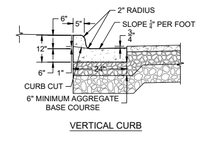


CONCRETE PATCH REPAIR DETAIL

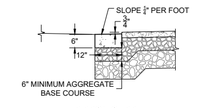
NOTE

1. REPLACEMENT ASPHALT SHALL BE 1" THICKER THAN EXISTING WITH A MINIMUM THICKNESS OF 3".
2. ASPHALT SHALL BE PLACED IN TWO (2) LIFTS, EACH NO LESS THEN ½" IN THICKNESS, AND COMPACTED TO 95% OF MARSHALL DENSITY.
3. BITUMINOUS MATERIAL SHALL MEET THE APPLICABLE REQUIREMENTS OF SECTION 02545 BITUMINOUS MATERIAL OF WYOMING PUBLIC WORKS STANDARDS AND SPECIFICATIONS.
4. PORTLAND CEMENT CONCRETE PAVEMENT SHALL MEET APPLICABLE REQUIREMENTS OF SECTION 02520, 02776 AND 03304 AS DIRECTED BY TOWN OF JACKSON PUBLIC WORKS DEPARTMENT.

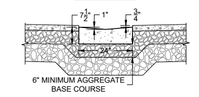
CONCRETE AND ASPHALT PATCH DETAIL
NOT TO SCALE TOJ ST-118



VERTICAL CURB



RIBBON CURB

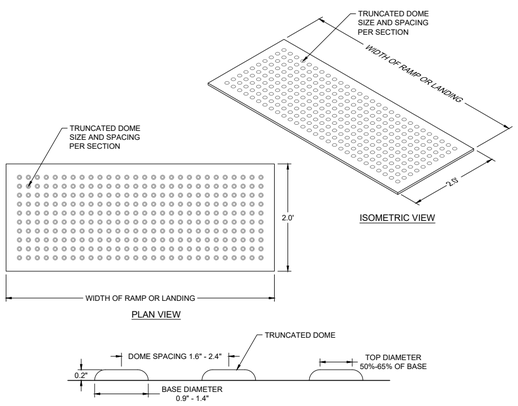


2' WIDE VALLEY GUTTER

NOTE

1. CURBS SHALL CONFORM TO WPWSS SECTION 02525, EXCEPT THAT PORTLAND CEMENT CONCRETE SHALL BE FIBERMESH-REINFORCED CLASS 4000 CONCRETE CONFORMING WITH WPWSS SECTION 03304, PART 2.07.
2. AGGREGATE BASE COURSE SHALL BE SIX INCH MINIMUM THICKNESS, CONFORM TO WPWSS SECTION 02190, PART 2.03, GRADING H, AND BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
3. REMOVAL AND REPLACEMENT OF CURB SHALL TAKE PLACE IN FULL PANELS.
4. ROLL CURB SHALL NOT BE ALLOWED.

CURB SECTION DETAIL
NOT TO SCALE TOJ ST-110 mod



ISOMETRIC VIEW

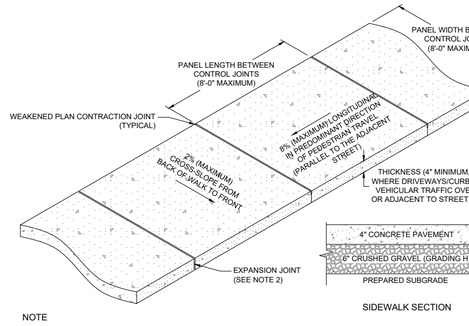
PLAN VIEW

TRUNCATED DOME SECTION

NOTE

1. DETECTABLE WARNING PANELS SHALL BE RED BRICK COLORED CAST IRON
2. PANELS PLACED ON PUBLIC SIDEWALKS SHALL BE PROVIDED BY TOWN OF JACKSON

DETECTABLE WARNING PANEL DETAIL
NOT TO SCALE

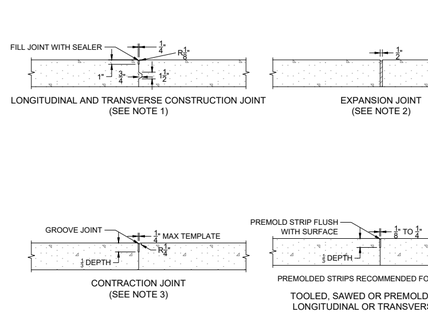


SIDEWALK SECTION

NOTE

1. SIDEWALK SHALL CONFORM TO ALL APPLICABLE ADA STANDARD REQUIREMENTS SIDEWALKS SHALL CONFORM TO WPWSS SECTION 02776, EXCEPT THAT PORTLAND CEMENT CONCRETE SHALL BE FIBERMESH-REINFORCED CLASS 4000 CONCRETE CONFORMING WITH WPWSS SECTION 03304, PART 2.07.
2. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT THE SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS ADJACENT TO CURB. (PER WPWSS SECTION 03251, PART 3.04 SPACING SHALL NOT EXCEED 32'-0" ON CENTER.)
3. FOR SIDEWALKS GREATER THAN EIGHT FEET IN WIDTH, A LONGITUDINAL CONTROL JOINT SHALL BE INSTALLED AT THE CENTER OF THE WALK.
4. REMOVAL AND REPLACEMENT OF SIDEWALK SHALL TAKE PLACE IN FULL PANELS.
5. AGGREGATE BASE COURSE SHALL BE FOUR INCH MINIMUM THICKNESS, CONFORM TO WPWSS SECTION 02190, PART 2.03 GRADING H, AND BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
6. CLEAR VEGETATION AND STRIP TOPSOIL TO SUBGRADE. SCARIFY, CONDITION, AND COMPACT. PROOF ROLL IN THE PRESENCE OF THE ENGINEER
7. MATERIAL STRIPPED TO DEPTH LOWER THAN SUBGRADE SHALL BE REPLACED WITH STRUCTURAL MATERIAL TO SUBGRADE ELEVATION.
8. WHERE UNSUITABLE SUBGRADE SOIL EXISTS, OVER EXCAVATION AND REPLACEMENT WILL BE REQUIRES. GEOGRID MAY BE SUBSTITUTED FOR OVER EXCAVATION UPON APPROVAL FROM GEOTECHNICAL ENGINEER.

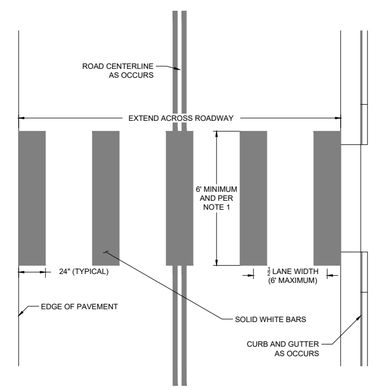
TYPICAL CONCRETE SIDEWALK DETAIL
NOT TO SCALE TOJ ST-127



NOTES

1. KEYWAY FORMED BY FASTENING METAL KEY TO FORM.
2. ¼" PREMOLDED NON-EXTRUDING EXPANSION JOINT MATERIAL TO MEET AASHTO M-59. EXPANSION MATERIAL SHALL BE INSTALLED WHEN ABUTTING EXISTING CONCRETE OR FIXED STRUCTURES SUCH AS INLETS AND DRIVEWAYS, AND EVERY 300' ON LONG STRAIGHT CONCRETE STRETCHES.
3. FORM WITH TEMPLATE OR SAWCUT JOINTS. IF SAWCUT JOINTS ARE USED, THEY SHALL BEGIN AS SOON AS CONCRETE IS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT EXCESSIVE RAVELING AND BEFORE UNCONTROLLABLE CRACKING OCCURS. MAXIMUM DISTANCE BETWEEN JOINTS IS 8'. MINIMUM DISTANCE IS 4'.
4. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT THE SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS ADJACENT TO CURB. (PER WPWSS SECTION 03251, PART 3.04 SPACING SHALL NOT EXCEED 32'-0" ON CENTER.)

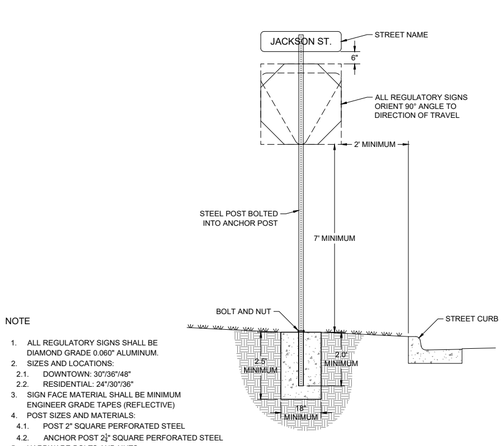
PAVING AND CONCRETE JOINT DETAILS
NOT TO SCALE



CROSSWALK STRIPING DETAIL
NOT TO SCALE TETON COUNTY STANDARD

NOTE

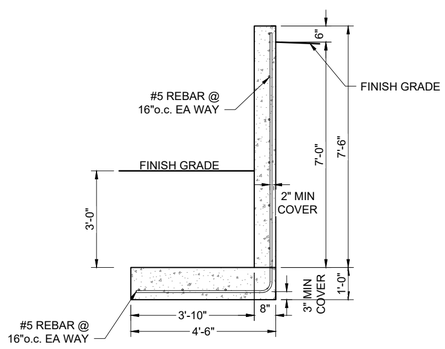
1. CROSSWALK WIDTH SHALL BE 2' WIDER THAN THE WIDEST APPROACH SIDEWALK.
2. TO REDUCE WEAR, SPACE CROSSWALK LINES TO AVOID VEHICLE WHEEL PATHS. GENERALLY LOCATE CROSSWALK LINES AT THE EDGE AND CENTER OF LANES.
3. ROAD SURFACE SHALL BE CLEANED THOROUGHLY WITH A PRESSURE WASHER AND ALLOWED TO DRY COMPLETELY PRIOR TO PAINTING.



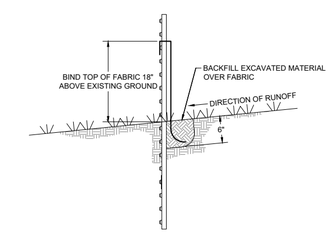
NOTE

1. ALL REGULATORY SIGNS SHALL BE DIAMOND GRADE 0.060" ALUMINUM.
2. SIZES AND LOCATIONS:
   2.1. DOWNTOWN: 30"/36"/48"
   2.2. RESIDENTIAL: 24"/30"/36"
3. SIGN FACE MATERIAL SHALL BE MINIMUM ENGINEER GRADE TAPES (REFLECTIVE)
4. POST SIZES AND MATERIALS:
   4.1. POST 2" SQUARE PERFORATED STEEL
   4.2. ANCHOR POST 2½" SQUARE PERFORATED STEEL
5. HARDWARE-BOLTS AND NUTS.
6. STREET NAMES SHALL BE 6" ABOVE STOP OR YIELD SIGNS.
7. MINIMUM EMBEDMENT OF ANCHOR POST SHALL BE 2' FROM GROUND LEVEL.
8. ALL TRAFFIC SIGNS SHALL MEET THE TOWN OF JACKSON STANDARDS. REFER TO WYDOT SPECIFICATIONS OR MUTCD FOR ITEMS NOT FOUND IN THE TOWN OF JACKSON STANDARDS.

TYPICAL TRAFFIC SIGN DETAIL
NOT TO SCALE



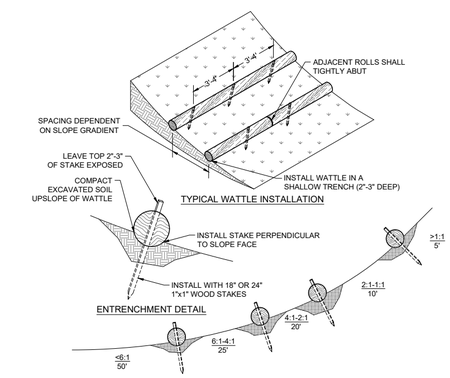
RETAINING WALL DETAIL
NOT TO SCALE



NOTE

1. USE MIRAFI 100X FILTER FABRIC WITH STEEL FENCE POSTS AT 10' ON CENTER OR APPROVED EQUAL.
2. PLACE SILT FENCE DOWN GRADIENT OF CONSTRUCTION OPERATIONS AS SHOWN ON THE PLANS TO CONTROL SILF FROM LEAVING SITE.

SILT FENCE DETAIL
NOT TO SCALE



TYPICAL WATTLE INSTALLATION

TYPICAL WATTLE SPACING BASE ON SLOPE GRADIENT

NOTE

1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2"-3" DEEP BY 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHALL BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18"-24" STAKES EVERY 3'-4' AND WITH A STAKE ON EACH END. STAKES SHALL BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2"-3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHALL BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.
4. EROSION CONTROL PLAN AND LOCATION OF STRAW WATTLES SHALL BE AS SHOWN ON PLANS OR AS APPROVED BY THE ENGINEER.

TYPICAL STRAW WATTLE DETAIL
NOT TO SCALE

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwkrp.com

©2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION
3	2025-04-28	DEVELOPMENT PLAN REVISION 2

PROFESSIONAL SEAL

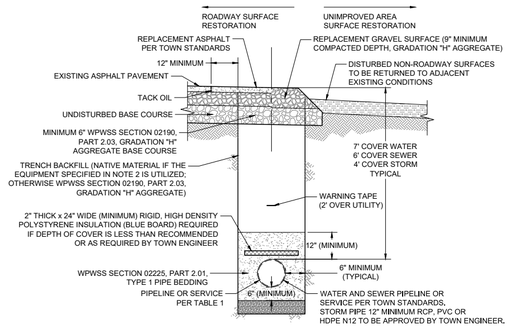
Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number
C3.0

Drawing Name
GRADING DETAILS

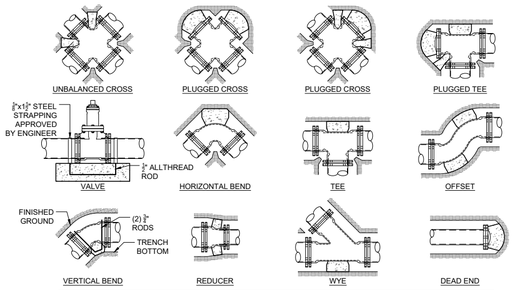


NOTE

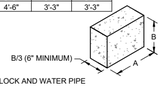
1. TRENCH BACKFILL BELOW THE SURFACE SHALL MEET THE FOLLOWING CRITERIA:
   - 95% MODIFIED PROCTOR DENSITY WITHIN STREET AND ALLEY RIGHTS-OF-WAY.
   - 90% MODIFIED PROCTOR DENSITY OUTSIDE STREET AND ALLEY RIGHTS-OF-WAY.
2. COMPACTION OF NATIVE TRENCH BACKFILL, WITH ALL ROCK LARGER THAN 6" REMOVED, SHALL BE CARRIED OUT IN 2' LIFTS WITH A HOE-PACK OR A VIBRATORY SHEEPS FOOT ROLLER (COMPACTION METHOD AND EQUIPMENT SHALL BE REVIEWED AND APPROVED BY TOWN ENGINEER PRIOR TO BACKFILLING).
3. PIPE BEDDING SHALL BE PLACED IN 6" LIFTS AND THOROUGHLY COMPACTED WITH A JUMPING JACK TO PROVIDE UNIFORM PIPE SUPPORT.
4. UNLESS OTHERWISE DIRECTED, ALL BASE COURSE AND GRAVEL SURFACE REPLACEMENT SHALL BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.
5. ALL TRENCH EXCAVATION SHALL CONFORM TO WYOMING OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (WYOSHA) REGULATIONS.
6. PROVIDE INSULATION WHERE COVER OVER WATER LINES AND FORCE MAINS ARE LESS THAN 7 FEET AND WHERE SANITARY SEWER AND STORM LINES ARE LESS THAN 5 FEET.

PIPE TRENCH DETAIL

NOT TO SCALE — TOJ W-100, SS-100, STM-100



MINIMUM DIMENSIONS FOR THRUST BLOCKING NOTES										
FITTING SIZE	TEES AND PLUGS		90° BENDS		45° BENDS AND WYES		REDUCERS AND 22 1/2° BENDS		11 1/2° BENDS	
	A	B	A	B	A	B	A	B	A	B
4"	1'-7"	1'-2"	1'-9"	1'-6"	1'-8"	0'-10"	1'-7"	0'-6"	0'-6"	0'-6"
6"	2'-0"	1'-11"	2'-5"	2'-2"	1'-10"	1'-7"	1'-9"	0'-10"	1'-0"	0'-6"
8"	2'-8"	2'-6"	3'-2"	3'-0"	2'-5"	2'-1"	1'-9"	1'-6"	1'-0"	1'-0"
10"	3'-4"	3'-3"	4'-0"	3'-10"	3'-0"	2'-9"	2'-2"	1'-11"	1'-6"	1'-0"
12"	4'-0"	3'-10"	4'-8"	4'-8"	3'-8"	3'-3"	2'-7"	2'-3"	2'-0"	1'-0"
14"	5'-5"	3'-10"	6'-6"	4'-11"	4'-9"	3'-5"	3'-5"	2'-5"	2'-0"	1'-6"
20"	5'-0"	5'-0"	6'-0"	6'-0"	5'-0"	4'-0"	3'-6"	3'-0"	3'-0"	2'-0"
24"	6'-0"	6'-0"	7'-0"	7'-0"	5'-0"	5'-0"	4'-6"	3'-0"	3'-0"	3'-0"
30"	7'-6"	7'-6"	8'-0"	8'-0"	6'-3"	6'-3"	4'-9"	4'-6"	3'-3"	3'-3"

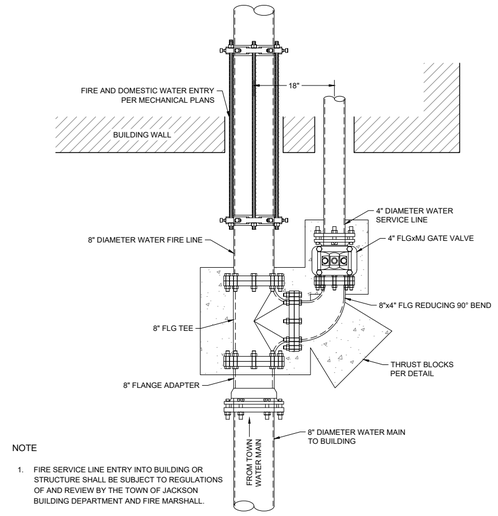


NOTE

1. SIZE BLOCKS SHALL BE A MINIMUM OF 6" THICK
2. ALL BLOCKING SHALL BEAR AGAINST UNDISTRIBUTED MATERIAL
3. DESIGN IS BASED ON 150 PSI MAIN PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
4. 4 MIL POLYETHELENE PLASTIC BOND BREAKER SHALL BE PROVIDED BETWEEN THRUST BLOCK AND WATER PIPE

THRUST BLOCK DETAIL

NOT TO SCALE — TOJ W-111

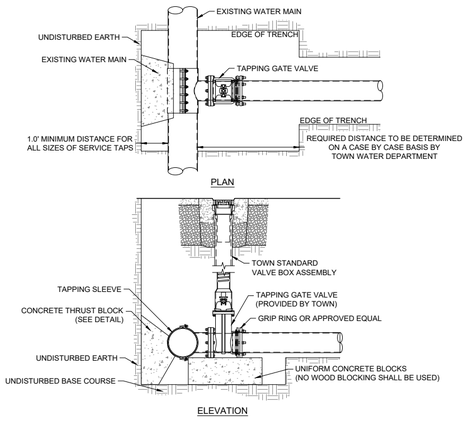


NOTE

1. FIRE SERVICE LINE ENTRY INTO BUILDING OR STRUCTURE SHALL BE SUBJECT TO REGULATIONS OF AND REVIEW BY THE TOWN OF JACKSON BUILDING DEPARTMENT AND FIRE MARSHALL.

WATER CONNECTION DETAIL

NOT TO SCALE

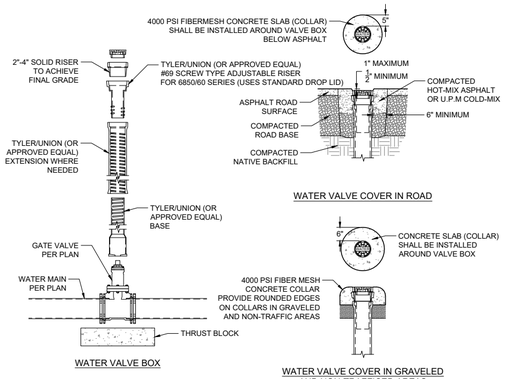


NOTE

1. THE TOWN SHALL COMPLETE THE TAPPING OF THE MAIN. NO OTHER PERSONS SHALL COMPLETE TAP WITHOUT CONSENT OF TOWN. ALL OTHER WATER MAIN WORK SHALL BE THE RESPONSIBILITY OF THE OWNER.
2. TRENCH WILL BE EXCAVATED TO MEET ALL WYOSHA STANDARDS PRIOR TO TAPPING.
3. EXCAVATION OF TAPPING LOCATION SHALL BE APPROVED BY TOJ WATER DEPARTMENT PRIOR TO TAPPING.

WATER MAIN TAPPING DETAIL

NOT TO SCALE — TOJ W-118

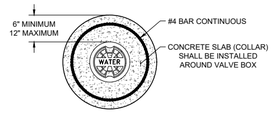


NOTE

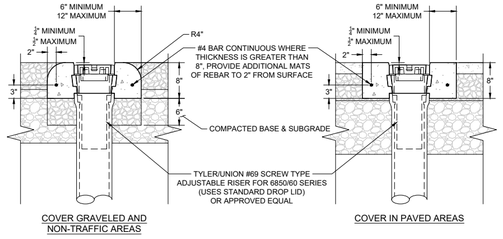
1. ADJUST WATER VALVE BOX UPWARD OR DOWNWARD AS REQUIRED. FINAL ADJUSTMENT SHALL BE MADE AFTER PAVING AND BEFORE SEAL COATING
2. THE TOWN SHALL INSPECT THE VERTICAL ALIGNMENT BEFORE AND AFTER BACKFILLING.
3. MUD PLUGS ARE REQUIRED TO BE PLACED IN ALL VALVE BOXES

WATER GATE VALVE DETAIL

NOT TO SCALE — TOJ W-106



WATER VALVE COVER

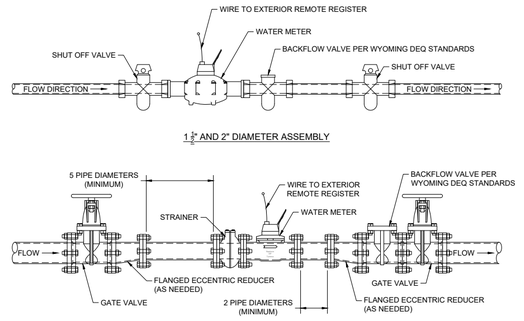


NOTE

1. ADJUST WATER VALVES UPWARD OR DOWNWARD AS REQUIRED.
2. FIBERMESH CONCRETE MAY BE SUBSTITUTED FOR REBAR.

WATER VALVE ADJUSTMENT DETAIL

NOT TO SCALE

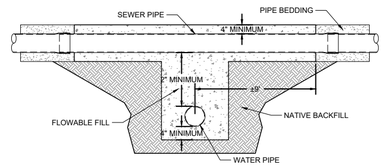


NOTE

1. SERVICE PIPE MATERIAL SHALL MEET ADOPTED PLUMBING CODE REQUIREMENTS.
2. METER SHALL BE INSTALLED IN HORIZONTAL ALIGNMENT ONLY.
3. CONNECTIONS WITHIN THE ASSEMBLY SHALL BE THREADED OR BOLTED FLANGED, AS APPROPRIATE.
4. METER SHALL BE PURCHASED FROM AND SUPPLIED BY THE TOWN OF JACKSON

1 ½" & LARGER WATER METER INSTALLATION DETAIL

NOT TO SCALE — INTERIOR TOJ W-113



NOTE

PARALLEL INSTALLATION:
NORMAL CONDITIONS:
SEWER MAINS AND MANHOLES SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY WATER MAIN WHENEVER POSSIBLE.

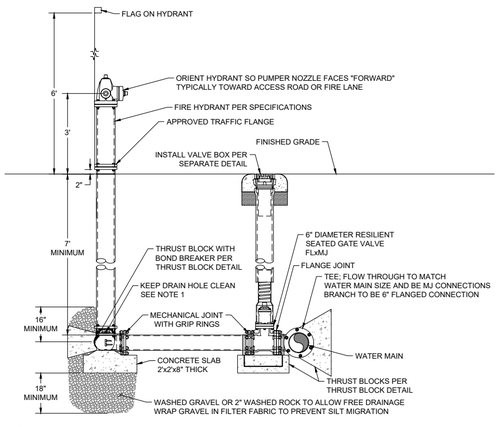
UNUSUAL CONDITIONS:
WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, A SEWER MAIN MAY BE LAID CLOSER TO A WATER MAIN, PROVIDED THAT:
1. THE TOP OF THE SEWER MAIN IS AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN;
2. WHERE 18" VERTICAL SEPARATION AS NOTED ABOVE CANNOT BE OBTAINED, THE SEWER MAIN SHALL BE:
   2A. CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION, AND TESTED TO ASSURE WATERTIGHTNESS BY SEWER LINE METHODS, OR;
   2B. PLACED IN A SEPARATE CASING PIPE, OR;
   2C. THE PIPE ENCASED IN CEMENT TREATED FILL (FLOW FILL).

CROSSING:
NORMAL CONDITIONS:
SEWERS CROSSING WATER MAINS SHALL BE LAID BELOW THE WATER MAINS TO PROVIDE A VERTICAL SEPARATION OF AT LEAST 18" WHENEVER POSSIBLE. THE DISTANCE SHALL BE MEASURED BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER.

UNUSUAL CONDITIONS:
WHEN LOCAL CONDITIONS PREVENT A VERTICAL SEPARATION OF AT LEAST 18" AS NOTED ABOVE, THE FOLLOWING CONSTRUCTION SHALL BE USED:
1. THE SANITARY SEWER, STORM SEWER OR WATER MAIN SHALL BE PLACED IN A SEPARATE CASING PIPE EXTENDING A MINIMUM OF 9' EACH SIDE OF THE CROSSING; OR
2. THE SEWER LINE SHALL BE CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION AND TESTED TO ASSURE WATER TIGHTNESS BY SEWER LINE METHODS, AND SHALL EXTEND A MINIMUM OF 9' EACH SIDE OF THE CROSSING
3. WATER MAINS PASSING UNDER A SEWER LINE SHALL, IN ADDITION TO THE ABOVE REQUIREMENTS, BE PROTECTED BY PROVIDING ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER LINE. SOIL STRUCTURAL SUPPORT SHALL CONSIST OF CEMENT TREATED BACKFILL (FLOW FILL).

WATER SEWER UNUSUAL PROXIMITY DETAIL

NOT TO SCALE

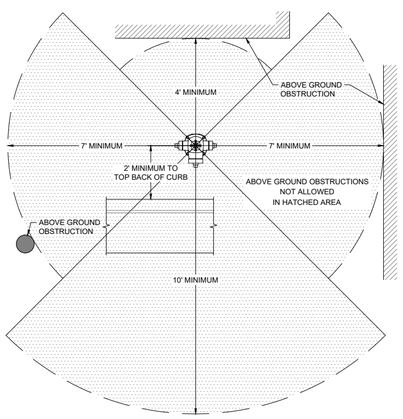


NOTE

1. REFER TO THE FIRE HYDRANT CLEARANCE REQUIREMENTS DETAIL FOR PLACEMENT INFORMATION
2. HYDRANT DRAIN HOLE NOT PERMITTED IF IT IS LOCATED BELOW THE WATER TABLE
3. HYDRANT TO BE LOCATED AS SHOWN ON PLANS

FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

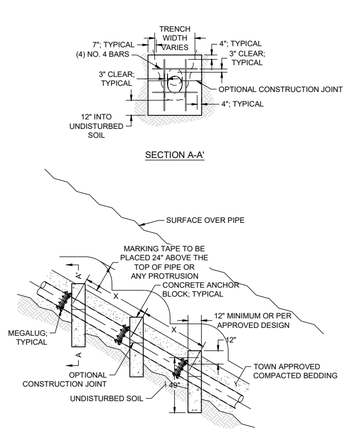


NOTE

1. REFER TO THE FIRE HYDRANT CLEARANCE REQUIREMENTS DETAIL FOR PLACEMENT INFORMATION
2. HYDRANT DRAIN HOLE NOT PERMITTED IF IT IS LOCATED BELOW THE WATER TABLE
3. HYDRANT TO BE LOCATED AS SHOWN ON PLANS

FIRE HYDRANT CLEARANCE REQUIREMENTS

NOT TO SCALE



NOTE

1. DRAINS TO DAYLIGHT ARE TO BE LOCATED ON THE UPHILL SIDE OF CONCRETE BLOCKS.
2. DISTANCE "X" TO BE DETERMINED BY THE ENGINEER AND SUBMITTED TO THE TOWN FOR REVIEW PRIOR TO CONSTRUCTION.

WATER PIPE ANCHOR BLOCK DETAIL

NOT TO SCALE — W-109

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwkrz.com

©2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION
3	2025-04-28	DEVELOPMENT PLAN REVISION 2

PROFESSIONAL SEAL

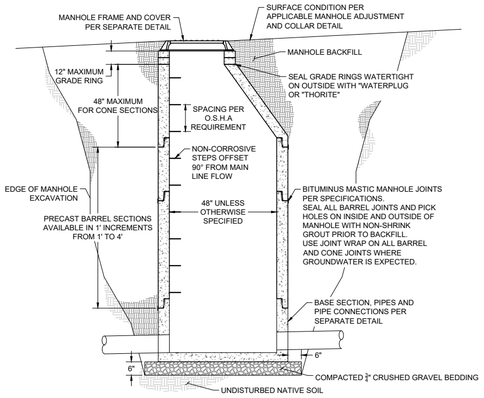
Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number
C3.1

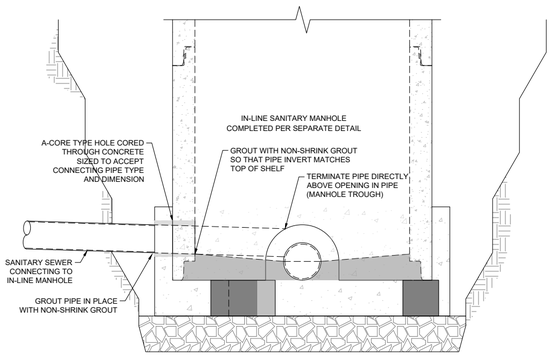
Drawing Name
WATER DETAILS



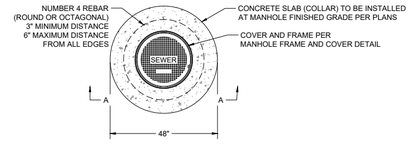
NOTE

1. REINFORCEMENT FOR PRECAST SECTIONS SHALL BE AS PER ASTM C-478.
2. C.I. RING AND COVER HS-20-44 ONE VENT HOLE OR AS SHOWN ON PLAN SHEET.
3. MOUND CRUSHED GRAVEL BASE AROUND TOP OF MANHOLE AT ROAD SURFACING LOCATIONS.
4. ALL SEWER MANHOLE BASES, BARRELS, AND CONES SHALL BE VACUUM TESTED.

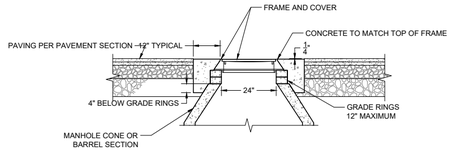
STANDARD MANHOLE CONSTRUCTION DETAIL
NOT TO SCALE



SEWER CONNECTION TO IN-LINE MANHOLE DETAIL
NOT TO SCALE



COVER AND COLLAR PLAN

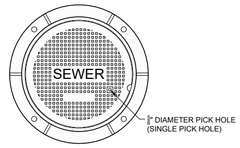


ADJUSTMENT DETAIL SECTION A-A

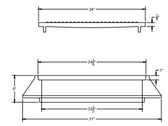
NOTE

1. ADJUST MANHOLE UPWARD WITH ADJUSTING RINGS UNDER FRAME. ADJUST MANHOLE DOWNWARD BY REMOVING A PORTION OF THE MANHOLE RISER AND REBUILDING TO PROPER HEIGHT. SLOPE MANHOLE RING AS REQUIRED TO MATCH STREET GRADE AND CROSS SLOPE. MAKE FINAL MANHOLE ADJUSTMENT AFTER PAVING AND BEFORE SEAL COATING. IF REQUIRED ADJUSTMENT EXCEEDS GRADE RINGS, REMOVE MANHOLE CONE AND ADD OR SUBTRACT BARREL SECTIONS.

MANHOLE ADJUSTMENT & COLLAR IN ASPHALT
NOT TO SCALE



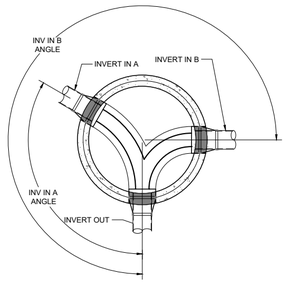
MANHOLE COVER



NOTE

1. MANHOLE FRAME AND COVER SHALL BE MODEL NO. A-1055, AS MANUFACTURED BY D&L SUPPLY OF LINDON, UTAH, MODIFIED AS SHOWN, OR APPROVED SUBSTITUTE.
2. GREY IRON CONFORMS TO ASTM A-48, CLASS 35B. MEETS H-20 WHEEL LOAD.

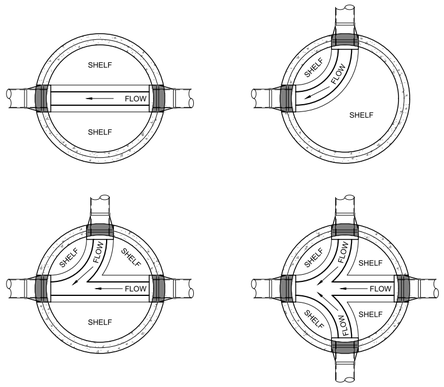
SEWER MANHOLE FRAME AND COVER DETAIL
NOT TO SCALE



NOTE

INVERT IN ANGLES LESS THAN 90° OR GREATER THAN 270° ARE PROHIBITED

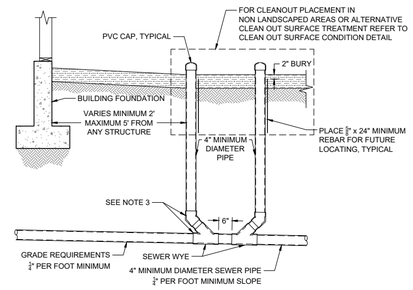
MANHOLE ANGLE MEASUREMENT METHOD



NOTE

1. SLOPE ALL SHELVES TO CHANNEL AT 1" PER FOOT.
2. SLOPE OF CHANNEL SHALL BE 0.1' ACROSS MANHOLE FOR ALL MAIN RUNS. SEE PROFILE SHEETS.
3. MANHOLE INVERTS SHALL MATCH INFLOW AND OUTFLOW PIPE INVERTS
4. 4" SERVICE PIPES ENTERING MANHOLES SHALL HAVE CROWN OF 4" PIPE MATCH CROWN OF MAIN WHERE INVERTS INDICATE.

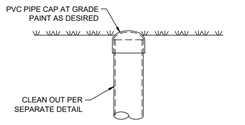
TYPICAL MANHOLE CHANNEL DETAILS
NOT TO SCALE



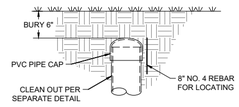
NOTE

1. PRIOR TO BACKFILLING THE TOWN PUBLIC WORKS DEPARTMENT MUST INSPECT ALL PIPE, FITTINGS, COUPLINGS, GRADE AND COMPLETE LEAK TESTING.
2. INSTALL AND COMPACT ALL BACKFILL MATERIAL PER TOWN PUBLIC WORKS DEPARTMENT STANDARD SPECIFICATIONS AND AS SHOWN WITHIN THE TRENCH DETAIL.
3. ALL PVC FITTINGS SHALL MEET ASTM D3034 SPECIFICATIONS, AND SHALL ALSO MEET ASTM D312 SPECIFICATIONS FOR RUBBER GASKETED BELL AND SPIGOT TYPE WITH INTEGRAL BELL.

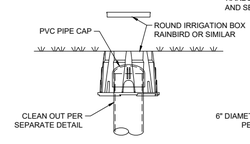
BUILDING CLEANOUT DETAIL
NOT TO SCALE REV TOJ SS-114



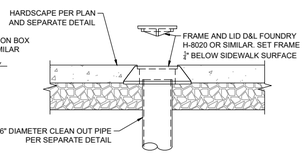
DAYLIGHT IN LANDSCAPE AREA



BURIED IN LANDSCAPE AREA



IRRIGATION BOX IN LANDSCAPE AREA



HARDSCAPE AREA

CLEAN OUT SURFACE CONDITION DETAIL
NOT TO SCALE

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwkz.com

©2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION
3	2025-04-28	DEVELOPMENT PLAN REVISION 2

PROFESSIONAL SEAL

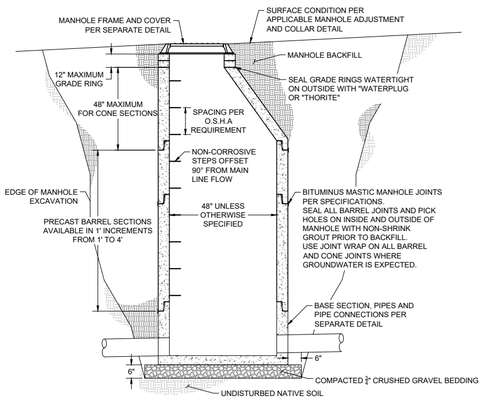
Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number
C3.2

Drawing Name
SEWER DETAILS

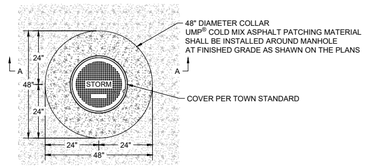


NOTE

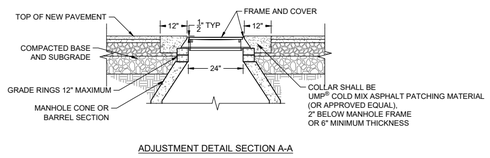
1. REINFORCEMENT FOR PRECAST SECTIONS SHALL BE AS PER ASTM C-478.
2. C.I. RING AND COVER HS-20-44 ONE VENT HOLE OR AS SHOWN ON PLAN SHEET.
3. MOUND CRUSHED GRAVEL BASE AROUND TOP OF MANHOLE AT ROAD SURFACING LOCATIONS.
4. ALL SEWER MANHOLE BASES, BARRELS, AND CONES SHALL BE VACUUM TESTED.

STANDARD MANHOLE CONSTRUCTION DETAIL

NOT TO SCALE



COVER AND COLLAR PLAN



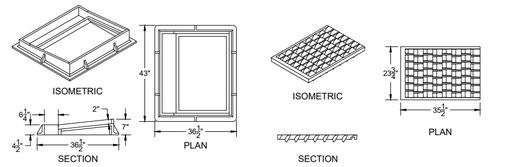
ADJUSTMENT DETAIL SECTION A-A

NOTE

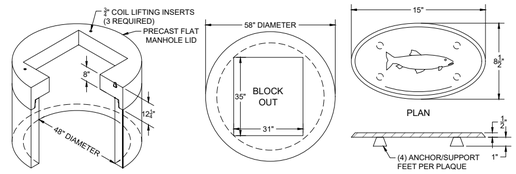
1. ADJUST MANHOLE UPWARD WITH ADJUSTING RINGS UNDER FRAME. ADJUST MANHOLE DOWNWARD BY REMOVING A PORTION OF THE MANHOLE RISER AND REBUILDING TO PROPER HEIGHT. SLOPE MANHOLE RING AS REQUIRED TO MATCH STREET GRADE AND CROSS SLOPE. MAKE FINAL MANHOLE ADJUSTMENT AFTER PAVING AND BEFORE SEAL COATING.
2. IF SEWER MANHOLE IS WITHIN UNPAVED AREA USE TAPERED COLLAR. SEE TOWN SANITARY SEWER DETAIL SS-110.

MANHOLE ADJUSTMENT & COLLAR IN ASPHALT

NOT TO SCALE TOJ STM-103



FRAME



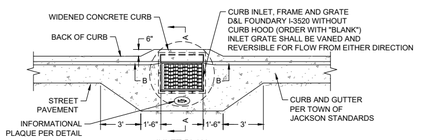
MANHOLE FLAT LID INFORMATIONAL PLAQUE

NOTE

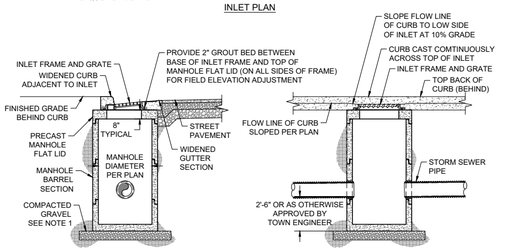
1. INLET GRATE AND FRAME SHALL BE MODEL NOUMBER I-3520 AS MANUFACTURED BY D&L SUPPLY OF LINDON UTAH, OR APPROVED EQUAL.
2. INLET GRATE SHALL BE VANED AND REVERSIBLE FOR EITHER LEFT-TO-RIGHT OR RIGHT-TO-LEFT FLOW.
3. PLAQUE SHALL BE SUBSTANTIALLY AS SHOWN, AS SUPPLIED BY D&L SUPPLY OF LINDON, UTAH, OR APPROVED EQUAL.

INLET FRAME, GRATE, LID AND PLAQUE DETAIL

NOT TO SCALE



INLET PLAN



SECTION B-B SECTION A-A

NOTE

1. GRAVEL SHALL BE EIGHT INCH MINIMUM THICKNESS, CONFORM TO WPWSS SECTION 02190, PART 2.03, GRADING H, AND BE INSTALLED PER WPWSS SECTION 02231, PART 3.03.

CURB INLET WITHOUT HOOD DETAIL

NOT TO SCALE REVISED TOJ STM-101

NORTHWORKS
185 E. Hansen Avenue
T 307-201-5324
Jackson, Wyoming 83001
www.nwkrj.com

©2023 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

JORGENSEN
JACKSON, WYOMING
307.733.5150
www.jorgeng.com

NO.	ISSUED DATE	ISSUED FOR
1	2024-10-29	DEVELOPMENT PLAN REVIEW
2	2025-03-24	DEVELOPMENT PLAN REVISION
3	2025-04-28	DEVELOPMENT PLAN REVISION 2

PROFESSIONAL SEAL

Project
SNOW KING LOOP CONDOMINIUMS

553, 725, & 510 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

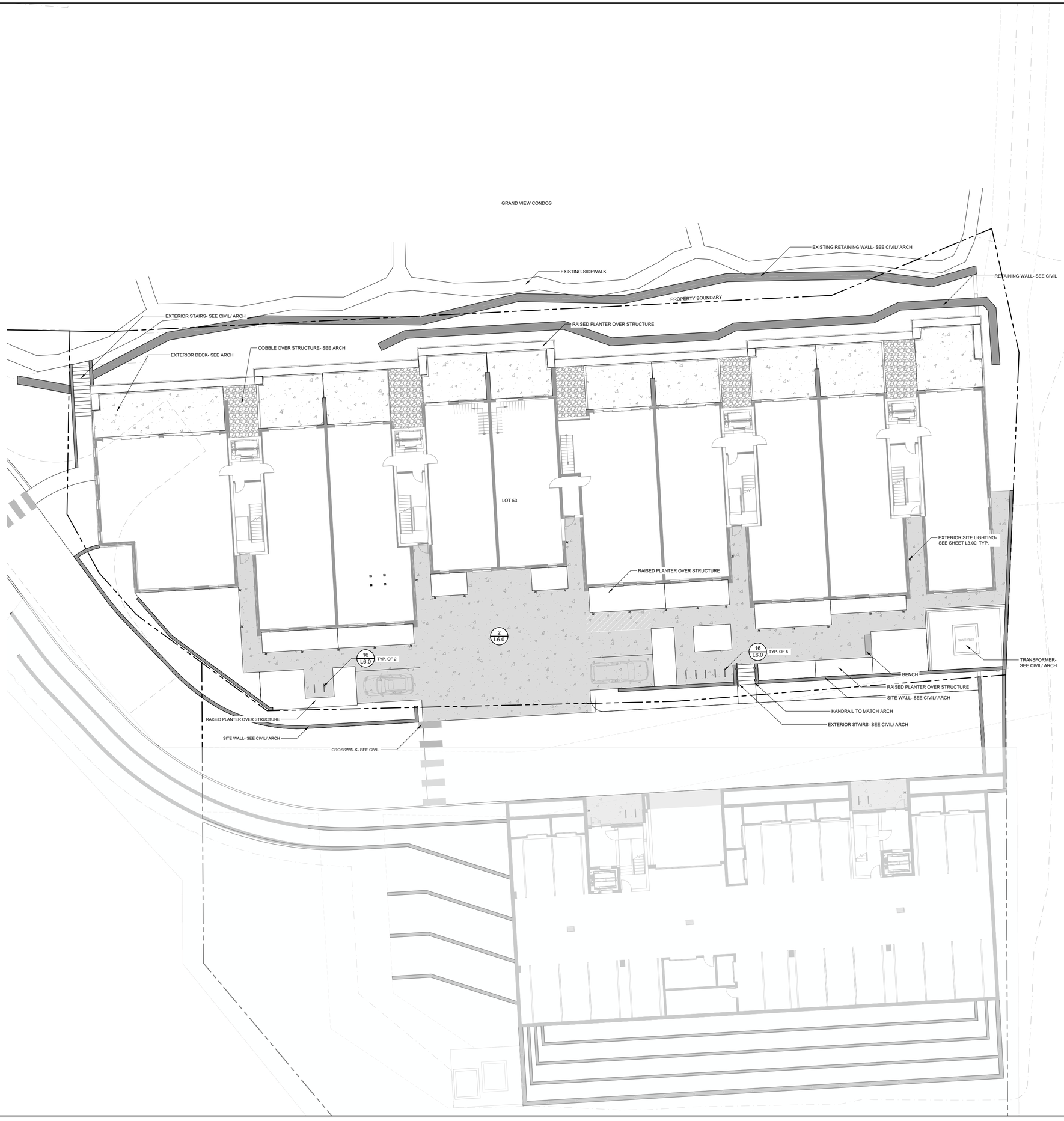
23072	Project No.
SS	Drawn By
JL	Checked By

Discipline & Drawing Number

C3.3

Drawing Name

STORMWATER DETAILS



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

DETAIL REPORT

NUMBER	TITLE
1/L6.0	MORTAR-SET CONCRETE PAVERS
2/L6.0	MORTAR-SET CONCRETE PAVERS W/SNOWMELT
3/L6.0	MORTAR-SET PAVERS
4/L6.0	MORTAR-SET PAVERS W/ SNOWMELT
5/L6.0	PED SLAB TURNDOWN - TYP REINFORCEMENT
6/L6.0	PATH LIGHT IN MORTAR-SET PAVERS
7/L6.0	MORTAR-SET STONE ENTRY - FLUSH CONDITION
8/L6.0	PAVERS / PAVERS W/ SNOWMELT
9/L6.0	EXPANSION JOINT
10/L6.0	MORTAR-SET PAVER ENTRY - FLUSH CONDITION
11/L6.0	CONIFEROUS TREE PLANTING
12/L6.0	SHRUB PLANTING
13/L6.0	ORNAMENTAL GRASS / PERENNIAL PLANTING
14/L6.0	MEADOW SOD
15/L6.0	DECIDUOUS TREE PLANTING
16/L6.0	INVERTED U-STYLE BIKE RACK
17/L6.0	RECESSED WALL LIGHT
18/L6.0	COBBLE MULCH

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

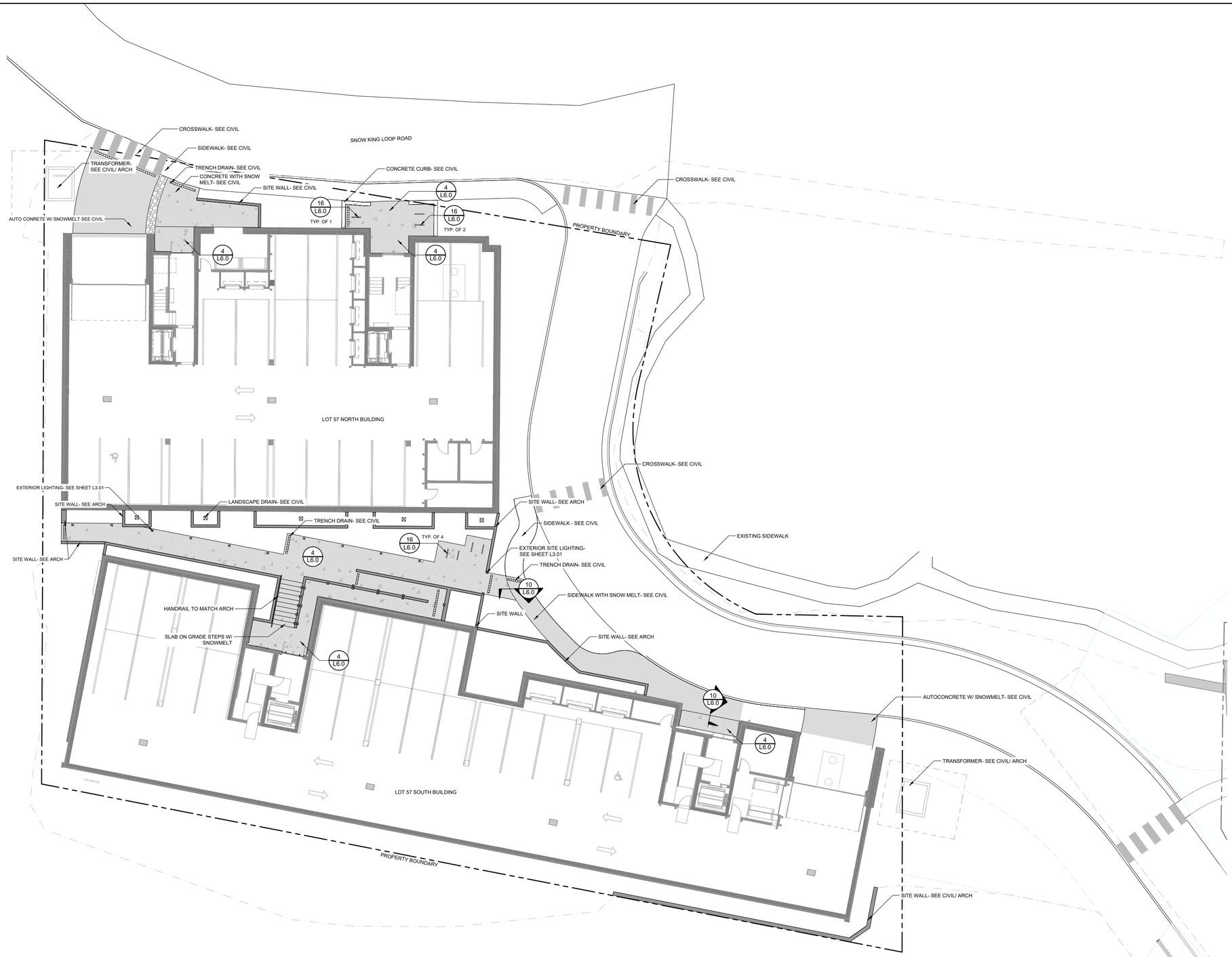
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53 MATERIALS PLAN

Drawing Name

L2.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

DETAIL REPORT

NUMBER	TITLE
1/L6.0	MORTAR-SET CONCRETE PAVERS
2/L6.0	MORTAR-SET CONCRETE PAVERS W/SNOWMELT
3/L6.0	MORTAR-SET PAVERS
4/L6.0	MORTAR-SET PAVERS W/ SNOWMELT
5/L6.0	PED SLAB TURNDOWN - TYP REINFORCEMENT
6/L6.0	PATH LIGHT IN MORTAR-SET PAVERS
7/L6.0	MORTAR-SET STONE ENTRY - FLUSH CONDITION
8/L6.0	PAVERS / PAVERS W/ SNOWMELT
9/L6.0	EXPANSION JOINT
10/L6.0	MORTAR-SET PAVER ENTRY - FLUSH CONDITION
11/L6.0	CONIFEROUS TREE PLANTING
12/L6.0	SHRUB PLANTING
13/L6.0	ORNAMENTAL GRASS / PERENNIAL PLANTING
14/L6.0	MEADOW SOD
15/L6.0	DECIDUOUS TREE PLANTING
16/L6.0	INVERTED U-STYLE BIKE RACK
17/L6.0	RECESSED WALL LIGHT
18/L6.0	COBBLE MULCH

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
Chicago, Illinois 60642
T 312-440-9800 F 312-440-9851
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

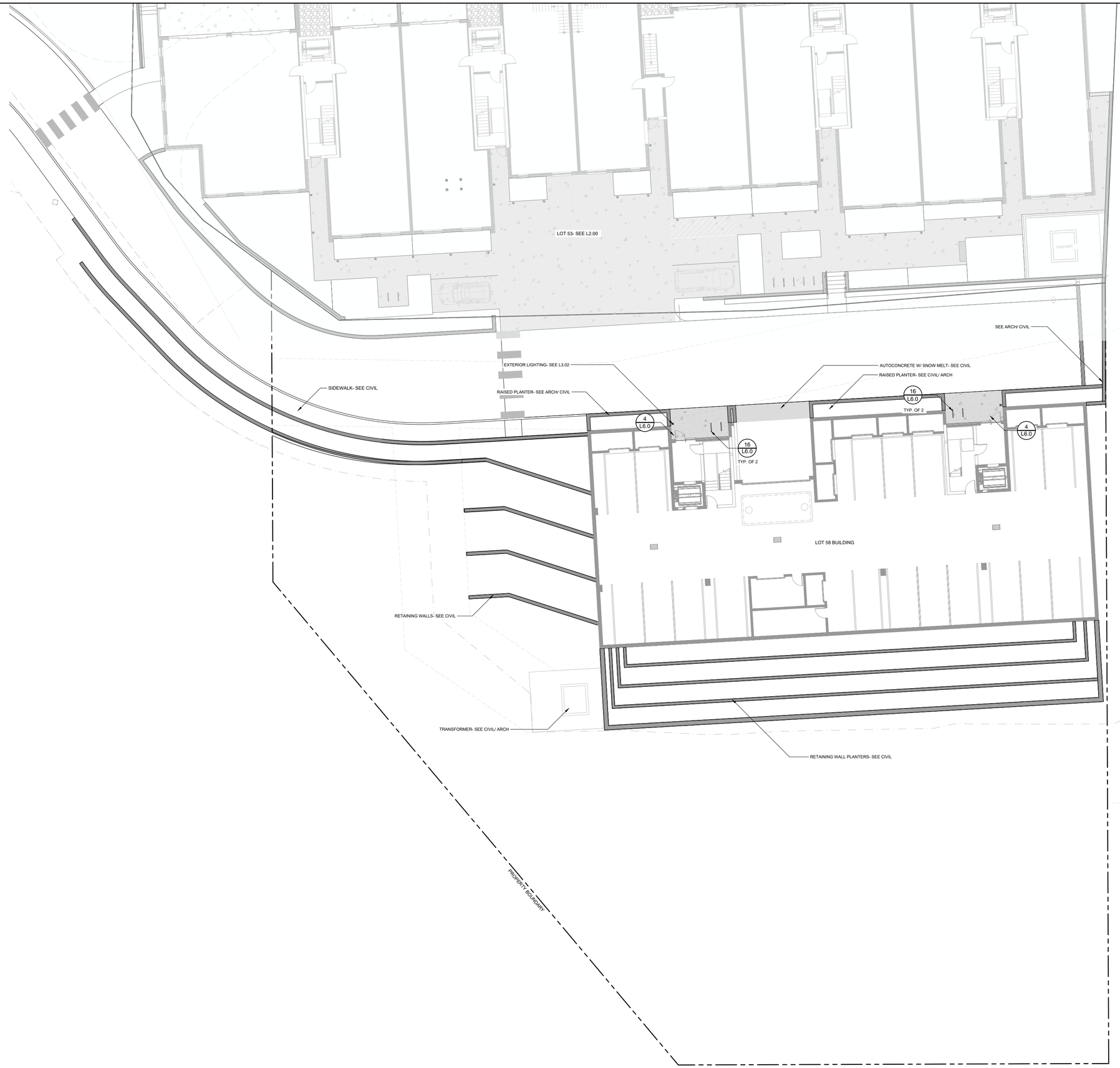
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 57 MATERIALS PLAN

Drawing Name

L2.01



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

DETAIL REPORT

NUMBER	TITLE
1/L6.0	MORTAR-SET CONCRETE PAVERS
2/L6.0	MORTAR-SET CONCRETE PAVERS W/SNOWMELT
3/L6.0	MORTAR-SET PAVERS
4/L6.0	MORTAR-SET PAVERS W/ SNOWMELT
5/L6.0	PED SLAB TURNDOWN - TYP REINFORCEMENT
6/L6.0	PATH LIGHT IN MORTAR-SET PAVERS
7/L6.0	MORTAR-SET STONE ENTRY - FLUSH CONDITION
8/L6.0	PAVERS / PAVERS W/ SNOWMELT
9/L6.0	EXPANSION JOINT
10/L6.0	MORTAR-SET PAVER ENTRY - FLUSH CONDITION
11/L6.0	CONIFEROUS TREE PLANTING
12/L6.0	SHRUB PLANTING
13/L6.0	ORNAMENTAL GRASS / PERENNIAL PLANTING
14/L6.0	MEADOW SOD
15/L6.0	DECIDUOUS TREE PLANTING
16/L6.0	INVERTED U-STYLE BIKE RACK
17/L6.0	RECESSED WALL LIGHT
18/L6.0	COBBLE MULCH

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

563 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

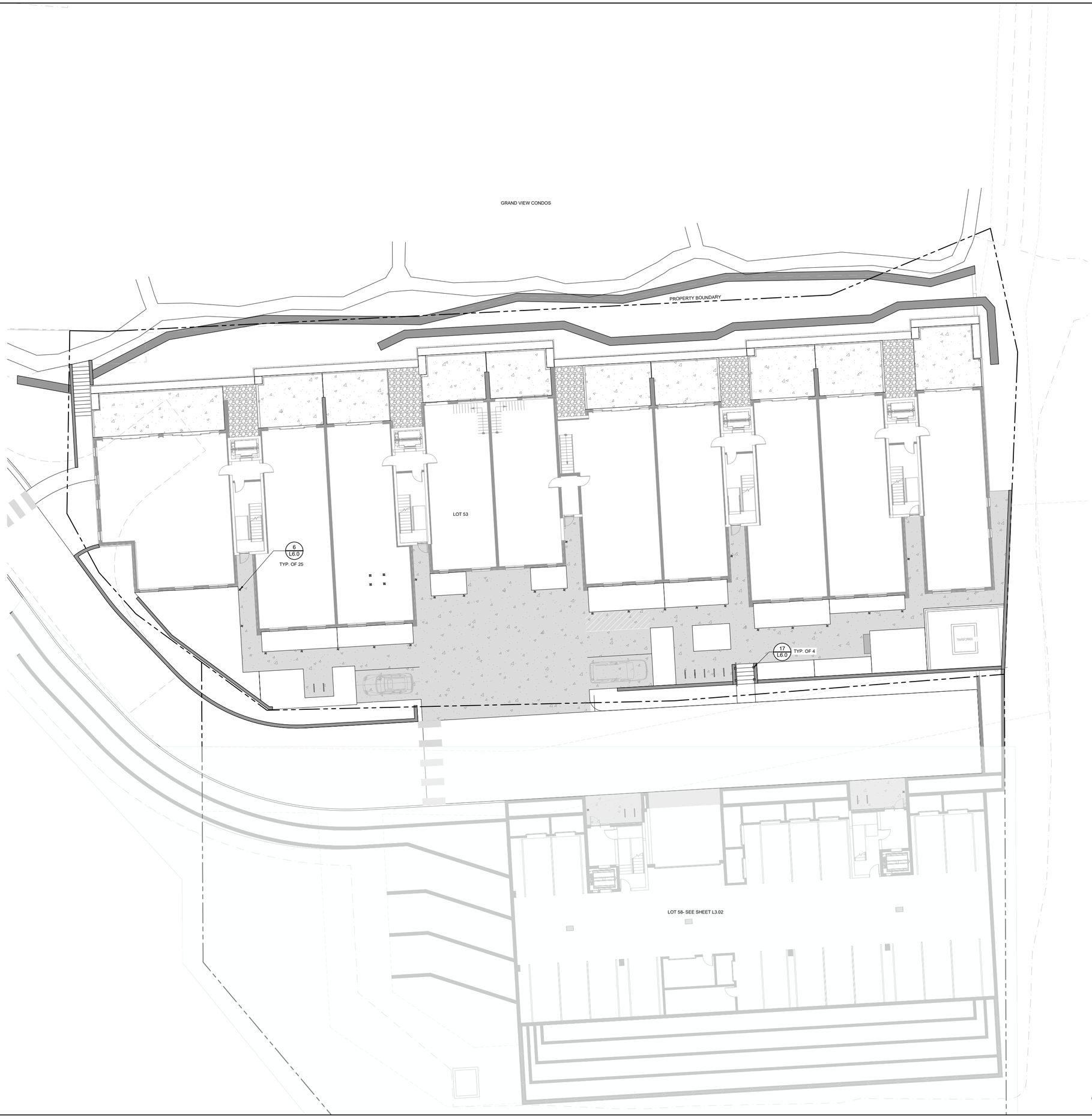
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 58 MATERIALS PLAN

Drawing Name

L2.02



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

SITE LIGHTING SCHEDULE

		QTY	LIGHT COLOR	DETAIL
	BK LIGHTING MINI-MICRO DRIVESTAR (EXACT MODEL, COLOR, FINISH TBD)	4	2700k	6 / L6.0
	BEGA B24202 LED 2.9W (EXACT MODEL, COLOR, FINISH TBD)	18	2700k	17 / L6.0

NOTES:
1. Light symbols are not to scale.
2. See Architecture and Electrical drawings for all circuitry/control/conduit, etc. and ALL exterior lighting associated with the building.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

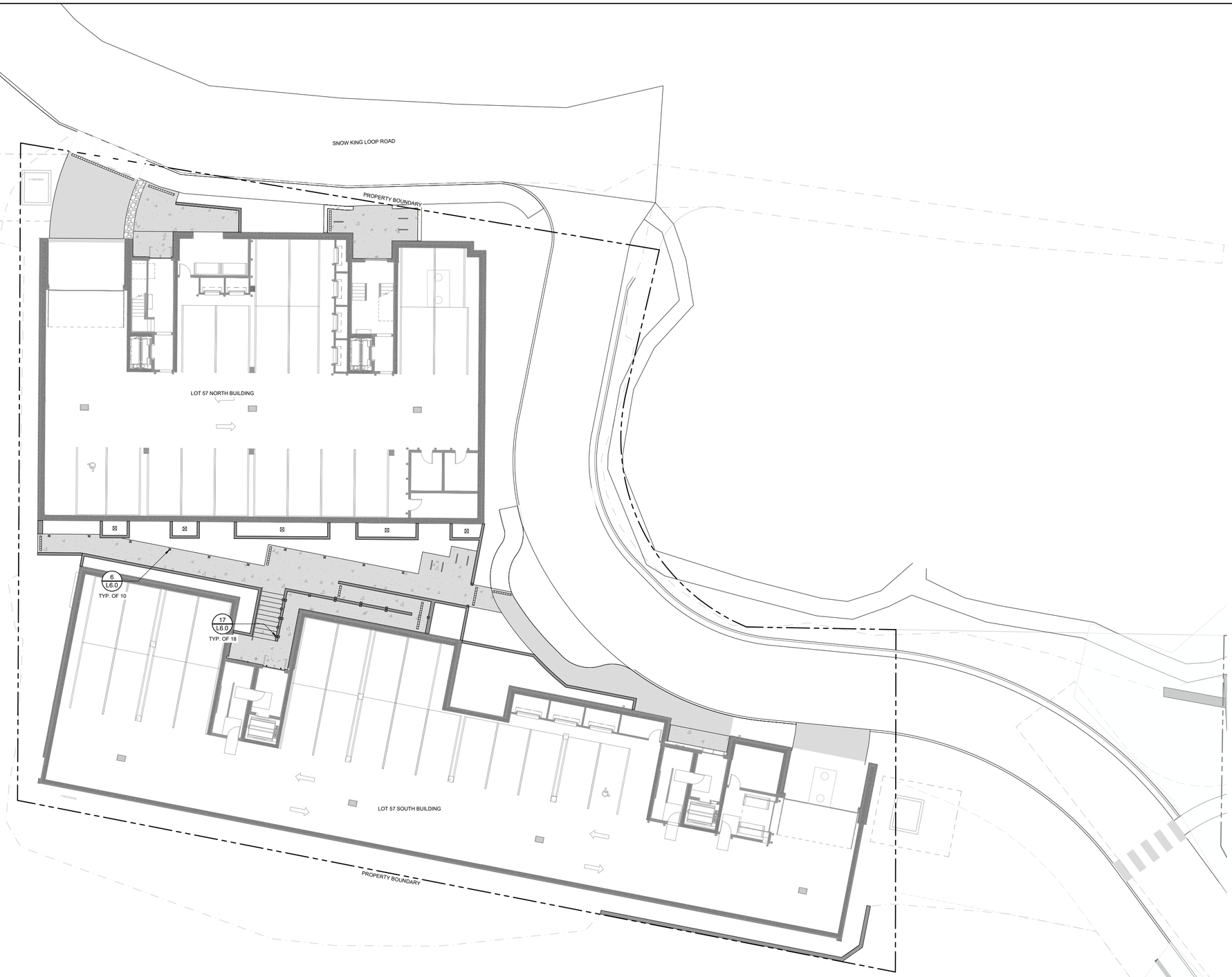
Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number LOT 53
EXTERIOR SITE LIGHTING PLAN

Drawing Name
L3.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

SITE LIGHTING SCHEDULE

		QTY	LIGHT COLOR	DETAIL
	BK LIGHTING MINI-MICRO DRIVESTAR PATHWAY LIGHT (EXACT MODEL, COLOR, FINISH TBD)	10	2700k	6 / L6.0
	BEGA B24202 LED 2.9W (EXACT MODEL, COLOR, FINISH TBD)	18	2700k	17 / L6.0

NOTES:
1. Light symbols are not to scale.
2. See Architecture and Electrical drawings for all circuitry/control/conduit, etc. and ALL exterior lighting associated with the building.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

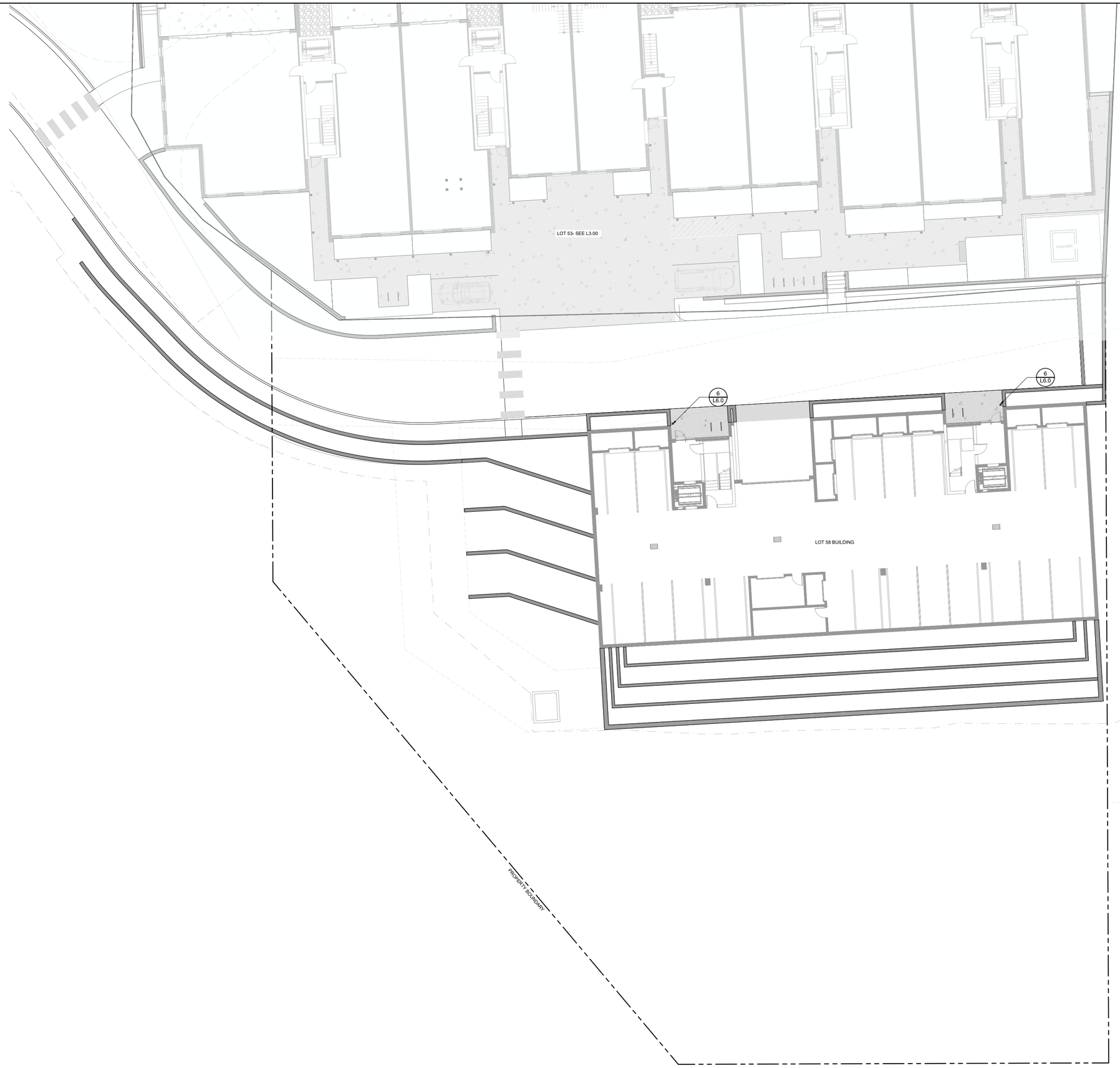
Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.
Drawn By LN
Checked By MK

Discipline & Drawing Number
LOT 57
EXTERIOR SITE LIGHTING PLAN

Drawing Name
L3.01



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

SITE LIGHTING SCHEDULE

	QTY	LIGHT COLOR	DETAIL
BK LIGHTING MINI-MICRO DRIVESTAR (EXACT MODEL, COLOR, FINISH TBD)	2	2700k	6 / L6.0

NOTES:
1. Light symbols are not to scale.
2. See Architecture and Electrical drawings for all circuitry/control/conduit, etc. and ALL exterior lighting associated with the building.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwla.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

563 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

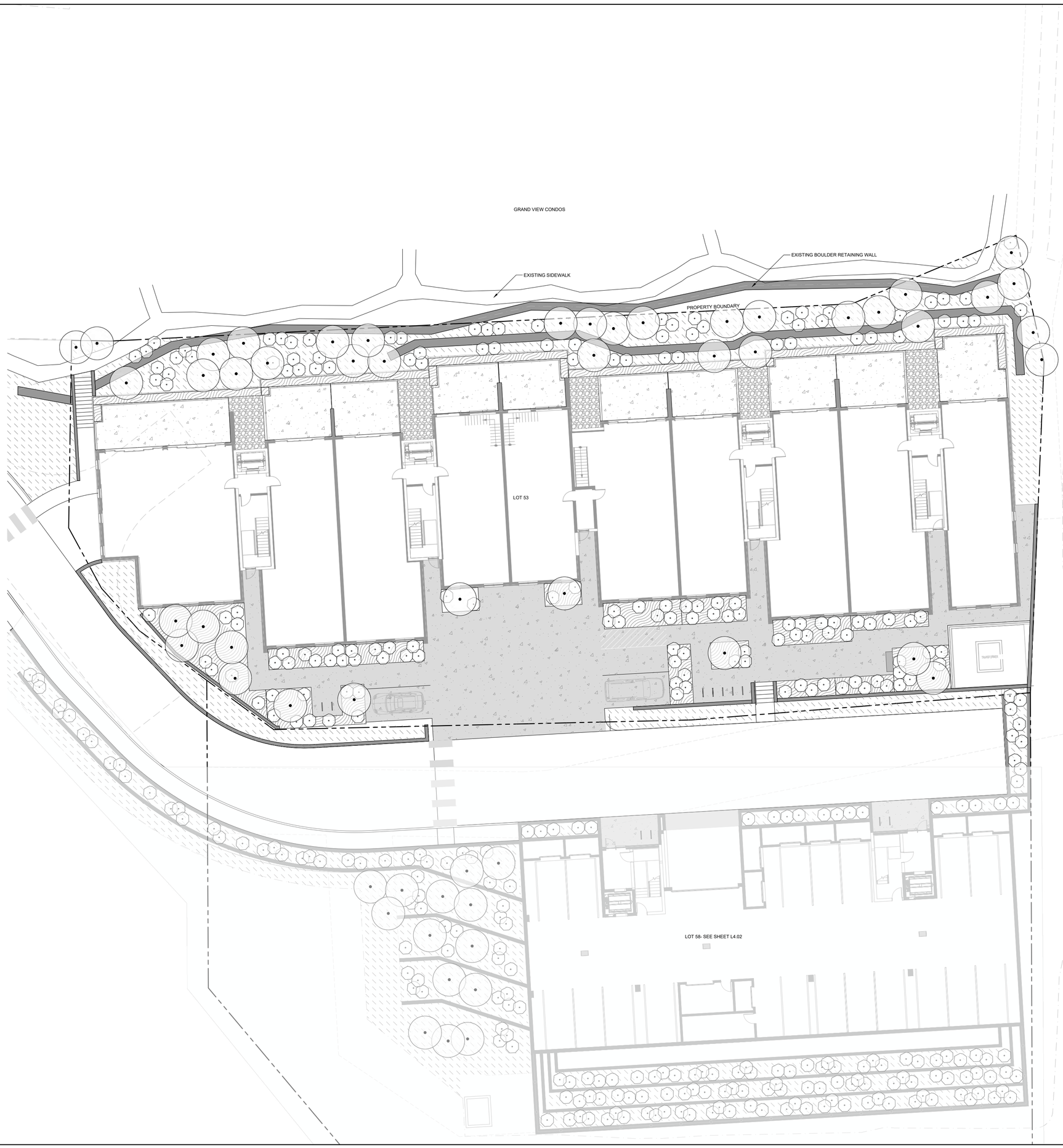
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 58 EXTERIOR SITE LIGHTING PLAN

Drawing Name

L3.02



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

PLANT SCHEDULE- LOT 53

TREES:

	NAME	SIZE	CONT.	QTY
	Quaking Aspen/ Populous tremuloides	3" Cal. 3.5" Cal.	B&B B&B	30 19

SHRUBS:

	Native Shrubs- species TBD	5-6' H	B&B	146

GROUND COVERS:

Native Meadow Sod	SOD	3,060 SF
Perennials and ornamental grasses - Species TBD	1 gal 18" OC	1,245

BIKE PARKING SUMMARY - LOT 53

Required Short-Term Bike Parking Spaces, Lot 53: 14 spaces (4 must accommodate Cargo Bikes)
Proposed Short-Term Bike Parking Spaces, Lot 53: 14 spaces (4 accommodate Cargo Bikes)

LSR SUMMARY - LOT 53

Required LSR, Lot 53: 3,441 SF (34,412 SF x .1)
Proposed LSR, Lot 53: 7,245 SF
Proposed LSR Ratio, Lot 53: .2

PLANTING & IRRIGATION NOTES

1. Refer to Civil Engineer's utility and grading plans. If site conditions vary from what is shown, contact the Landscape Architect and Civil Engineer for direction before proceeding.
2. Verify locations and timing of site improvements installed under other sections. If any part of the work cannot be completed due to site conditions, contact the Landscape Architect for direction before proceeding.
3. Excavation near underground utilities shall be done carefully and, if necessary, by hand. The Contractor is fully responsible for this work and any disruption to utilities or damage to the site and/or improvements shall be repaired immediately at no expense to the Owner.
4. Obtain approval of finish grading from Landscape Architect prior to installing any plant material. The finish grades of planting areas and lawns shall be 1½ inches below adjacent edging or paving. Confirm mulch depth and whether lawns are to be seed or sod.
5. Confirm all plant counts and square footages. Quantities shown are provided as Owner information only. If quantities indicated in the plant list differ from symbols shown on the plans, then the plans shall govern the plant count.
6. Contractor to verify suitability of native or imported topsoil. Suitable topsoil shall be free of roots, plants, sod, stones greater than ½" in any dimension, clay lumps, and other extraneous materials detrimental to plant growth.
7. For areas to receive sod or seed and/or to produce planting soil for areas indicated on details, amend suitable topsoil with organic compost to a ratio of 1 part compost to 4 parts topsoil by volume.
8. Compost shall be organic, well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8.0; moisture content 35 to 55 percent by weight, with organic matter content 50 to 60 percent of dry weight with 16-16-8 nutrient composition. If compost is not 16-16-8 composition, add commercial fertilizer in necessary quantities to meet 16-16-8 nutrient composition. Source: Glacier Gold Compost or approved equal.
9. Contractor to supplement existing native surface topsoil as necessary. Obtain supplemental topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep. Do not obtain from agricultural lands, bogs, or marshes.
10. Compost mulch shall be organic, well-composted, stable, and weed-free organic matter, pH range of 5.5-8.0; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 2 to 5 decisiemens/m; not to exceed 0.5 percent inert contaminants and free of substances toxic to planting, organic matter content 50 to 60 percent of dry weight. Source: Glacier Gold Compost or approved equal.
11. The Landscape Architect shall review all plant materials at the source or nursery or by photographs provided by Contractor prior to shipment. The Landscape Architect reserves the right to reject any unacceptable plant material either at the source or when delivered to the project site.
12. Carefully align and space plant materials as indicated in these notes, drawings, and details. The final location of plant materials is to be approved by the Landscape Architect on site prior to installation. The Contractor is responsible for staking or marking the location of all plant materials on site for review by the Landscape Architect. The Landscape Architect reserves the right to adjust the exact locations of plants on site.
13. All plants shall be planted at the same level with relation to finish grade as they were grown in the field or nursery.
14. All plant material shall be irrigated by a pressurized subsurface irrigation system with automatic controller. All trees, shrubs, and perennials shall be drip irrigated and all turf areas shall be irrigated with a spray or rotor system. Irrigation system shall be design-build by Contractor. Contractor shall provide an irrigation shop-drawing for review by Landscape Architect before proceeding. Contractor shall demonstrate full system coverage prior to acceptance and before plant material installation. Contractor shall provide a reproducible as-built drawing of installed irrigation system at conclusion of project.
15. The irrigation system shall be operational prior to plant installation or temporary irrigation measures shall be provided in the interim. The method of temporary irrigation shall be approved by the Landscape Architect prior to plant material installation.
16. No pruning of existing or newly planted trees or shrubs shall be allowed without the direction and approval of the Landscape Architect.
17. For ball & burlap trees, remove burlap from top 1/3 of rootball and entire wire basket as tree pits are backfilled.
18. All installed trees shall be staked. The Landscape Architect shall review and reserves the right to reject the method and/or installation of tree staking and guying systems prior to acceptance.
19. During construction and prior to final acceptance, Contractor shall observe the project site for the growth of noxious weeds. Contractor shall report the growth of noxious weeds to the Teton County Weed and Pest District Office. Contractor and Owner shall implement a weed control program to control noxious weeds.
20. All disturbed areas not receiving other planting treatment shall be seeded with specified or subdivision-specific seed mix.
21. Apply 16-16-8 fertilizer at the rate of 15 lbs per 1,000 SF and till into top 4" of areas to receive sod or seed.
22. Planting period for seed and sod shall be immediately after finish grading and irrigation installation are accepted but no later than September 30 for sod. Seed shall be installed after September 30 or no later than June 1.
23. Final sod and seed quantities shall be calculated by Contractor based on sod perimeter marked in field by Landscape Architect, and all remaining areas of disturbance for seed.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 53
PLANTING PLAN

Drawing Name
L4.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

PLANT SCHEDULE- LOT 58

TREES:

NAME	SIZE	CONT.	QTY
Quaking Aspen/ Populous tremuloides	3" Cal.	B&B	7
	3.5" Cal.	B&B	7

SHRUBS:

Native Shrubs- species TBD	5-6' H	B&B	165

GROUND COVERS:

Native Meadow Sod		SOD	4,330 SF

BIKE PARKING SUMMARY - LOT 58

Required Short-Term Bike Parking Spaces: 6 spaces (2 must accommodate Cargo Bikes)
Proposed Short-Term Bike Parking Spaces: 8 spaces (8 accommodate Cargo Bikes)

LSR SUMMARY - LOT 58

Required LSR, Lot 58: 4,792 SF (47,916 x .1)
Proposed LSR, Lot 58: 27,401SF
Proposed LSR Ratio, Lot 58: .57

PLANTING & IRRIGATION NOTES

1. Refer to Civil Engineer's utility and grading plans. If site conditions vary from what is shown, contact the Landscape Architect and Civil Engineer for direction before proceeding.
2. Verify locations and timing of site improvements installed under other sections. If any part of the work cannot be completed due to site conditions, contact the Landscape Architect for direction before proceeding.
3. Excavation near underground utilities shall be done carefully and, if necessary, by hand. The Contractor is fully responsible for this work and any disruption to utilities or damage to the site and/or improvements shall be repaired immediately at no expense to the Owner.
4. Obtain approval of finish grading from Landscape Architect prior to installing any plant material. The finish grades of planting areas and lawns shall be 1½ inches below adjacent edging or paving. Confirm mulch depth and whether lawns are to be seed or sod.
5. Confirm all plant counts and square footages. Quantities shown are provided as Owner information only. If quantities indicated in the plant list differ from symbols shown on the plans, then the plans shall govern the plant count.
6. Contractor to verify suitability of native or imported topsoil. Suitable topsoil shall be free of roots, plants, sod, stones greater than ½" in any dimension, clay lumps, and other extraneous materials detrimental to plant growth.
7. For areas to receive sod or seed and/or to produce planting soil for areas indicated on details, amend suitable topsoil with organic compost to a ratio of 1 part compost to 4 parts topsoil by volume.
8. Compost shall be organic, well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8.0; moisture content 35 to 55 percent by weight, with organic matter content 50 to 60 percent of dry weight with 16-16-8 nutrient composition. If compost is not 16-16-8 composition, add commercial fertilizer in necessary quantities to meet 16-16-8 nutrient composition. Source: Glacier Gold Compost or approved equal.
9. Contractor to supplement existing native surface topsoil as necessary. Obtain supplemental topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep. Do not obtain from agricultural lands, bogs, or marshes.
10. Compost mulch shall be organic, well-composted, stable, and weed-free organic matter, pH range of 5.5-8.0; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 2 to 5 decisiemens/m; not to exceed 0.5 percent inert contaminants and free of substances toxic to planting, organic matter content 50 to 60 percent of dry weight. Source: Glacier Gold Compost or approved equal.
11. The Landscape Architect shall review all plant materials at the source or nursery or by photographs provided by Contractor prior to shipment. The Landscape Architect reserves the right to reject any unacceptable plant material either at the source or when delivered to the project site.
12. Carefully align and space plant materials as indicated in these notes, drawings, and details. The final location of plant materials is to be approved by the Landscape Architect on site prior to installation. The Contractor is responsible for staking or marking the location of all plant materials on site for review by the Landscape Architect. The Landscape Architect reserves the right to adjust the exact locations of plants on site.
13. All plants shall be planted at the same level with relation to finish grade as they were grown in the field or nursery.
14. All plant material shall be irrigated by a pressurized subsurface irrigation system with automatic controller. All trees, shrubs, and perennials shall be drip irrigated and all turf areas shall be irrigated with a spray or rotor system. Irrigation system shall be design-build by Contractor. Contractor shall provide an irrigation shop-drawing for review by Landscape Architect before proceeding. Contractor shall demonstrate full system coverage prior to acceptance and before plant material installation. Contractor shall provide a reproducible as-built drawing of installed irrigation system at conclusion of project.
15. The irrigation system shall be operational prior to plant installation or temporary irrigation measures shall be provided in the interim. The method of temporary irrigation shall be approved by the Landscape Architect prior to plant material installation.
16. No pruning of existing or newly planted trees or shrubs shall be allowed without the direction and approval of the Landscape Architect.
17. For ball & burlap trees, remove burlap from top 1/3 of rootball and entire wire basket as tree pits are backfilled.
18. All installed trees shall be staked. The Landscape Architect shall review and reserves the right to reject the method and/or installation of tree staking and guying systems prior to acceptance.
19. During construction and prior to final acceptance, Contractor shall observe the project site for the growth of noxious weeds. Contractor shall report the growth of noxious weeds to the Teton County Weed and Pest District Office. Contractor and Owner shall implement a weed control program to control noxious weeds.
20. All disturbed areas not receiving other planting treatment shall be seeded with specified or subdivision-specific seed mix.
21. Apply 16-16-8 fertilizer at the rate of 15 lbs per 1,000 SF and till into top 4" of areas to receive sod or seed.
22. Planting period for seed and sod shall be immediately after finish grading and irrigation installation are accepted but no later than September 30 for sod. Seed shall be installed after September 30 or no later than June 1.
23. Final sod and seed quantities shall be calculated by Contractor based on sod perimeter marked in field by Landscape Architect, and all remaining areas of disturbance for seed.

NORTH
0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

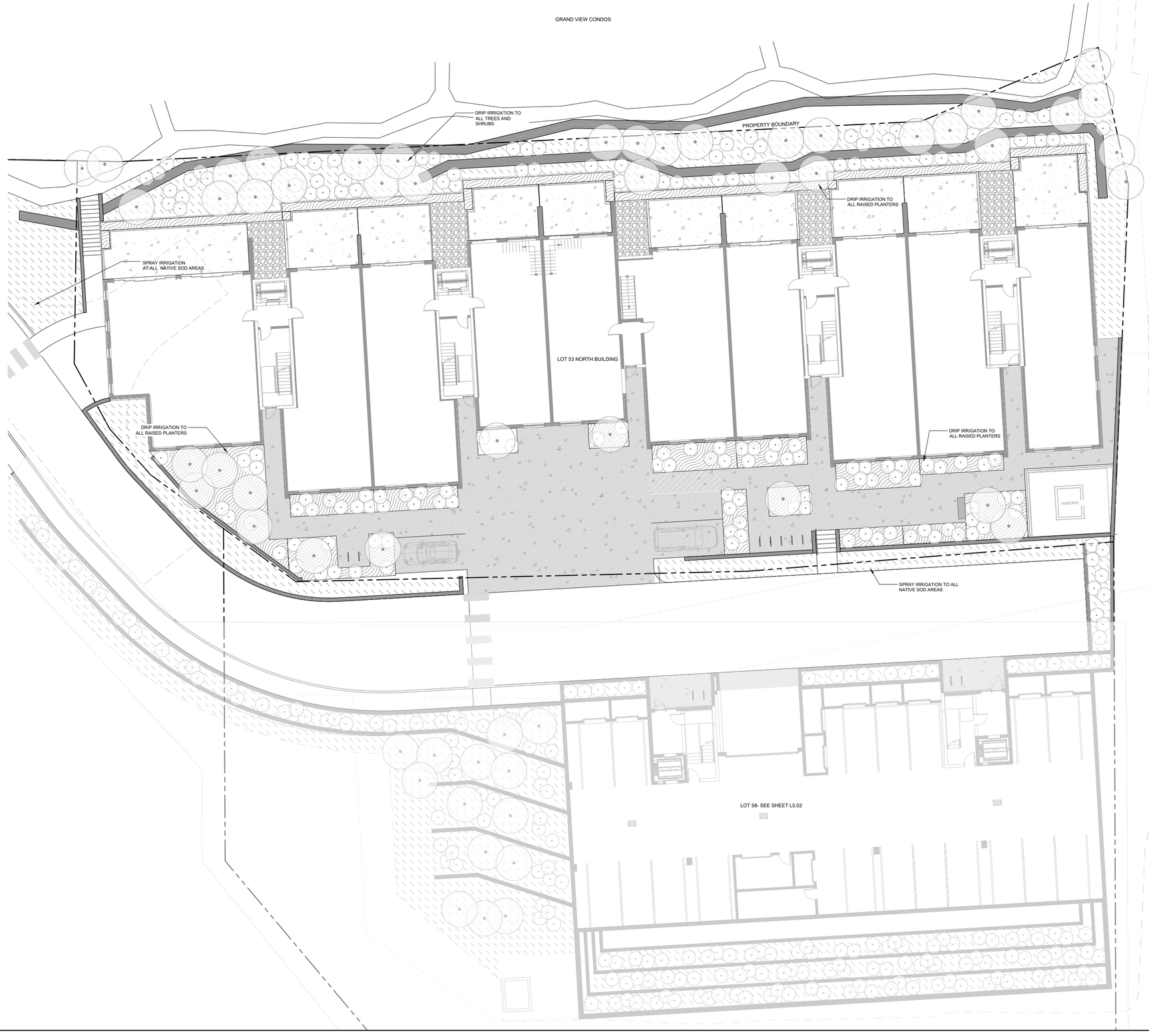
Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 58
PLANTING PLAN

Drawing Name
L4.02



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

IRRIGATION NOTES

1. All plant material shall be irrigated by a pressurized subsurface irrigation system with automatic controller. All trees, shrubs, and perennials shall be drip irrigated and all turf areas shall be irrigated with a spray system. Irrigation system shall be design-build by Contractor based on the specifications identified on this irrigation intent plan. Contractor shall provide an irrigation shop-drawing for review by Landscape Architect before proceeding. Contractor shall demonstrate full system coverage prior to acceptance and before plant material installation. Contractor shall provide a reproducible as-built drawing of installed irrigation system at conclusion of project.
2. The irrigation system shall be operational prior to plant installation or temporary irrigation measures shall be provided in the interim. The method of temporary irrigation shall be approved by the Landscape Architect prior to plant material installation.
3. Irrigation Main Line shall be HDPE DR-11, size TBD by contractor based on required GPM and pressure.
4. Irrigation controller shall be located in the mechanical room of the building. Exact location to be determined in coordination with architect, mechanical engineer and landscape architect.
5. Point of irrigation connection and backflow preventer location to be determined in coordination with architect, mechanical engineer and landscape architect. Backflow Preventer specification TBD by landscape contractor and plumber and shall be installed by a licensed plumber and meet all local codes. If backflow preventer is located in an exterior location, an appropriate enclosure (Hot-Box or similar) shall be provided.
6. Irrigation sleeving shall be PVC Class 160 pipe.
7. Irrigation lateral lines shall be #100 NSF.
8. Irrigation spray heads within the native sod areas shall be 12" Rainbird Pop-Up Spray Heads or equal.
9. Qty (2) Netafim drip rings shall be installed at each tree location shown on the plans.
10. Irrigation valves shall be Rain Bird EFB-CO Series valves for all spray zones and Rain Bird XCZ-100-PRF for all drip zones. Utilize a two-wire decoder system for all irrigation valves. Coordinate exact locations with Landscape Architect prior to installation.
11. Install a manual drain valve at the termination of the mainline at all dead ends. Manual drain valve shall be set in a 10" round valve box and shall allow a 3/4" globe valve to be opened to allow the water in the pressurized mainline to be blown out (after water supply is shut off) through the manual drain valve. Following the main line being blown out, each lateral and drip zone can then be winterized.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9800
Chicago, Illinois 60642
F 312-440-9851
www.nwkd.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

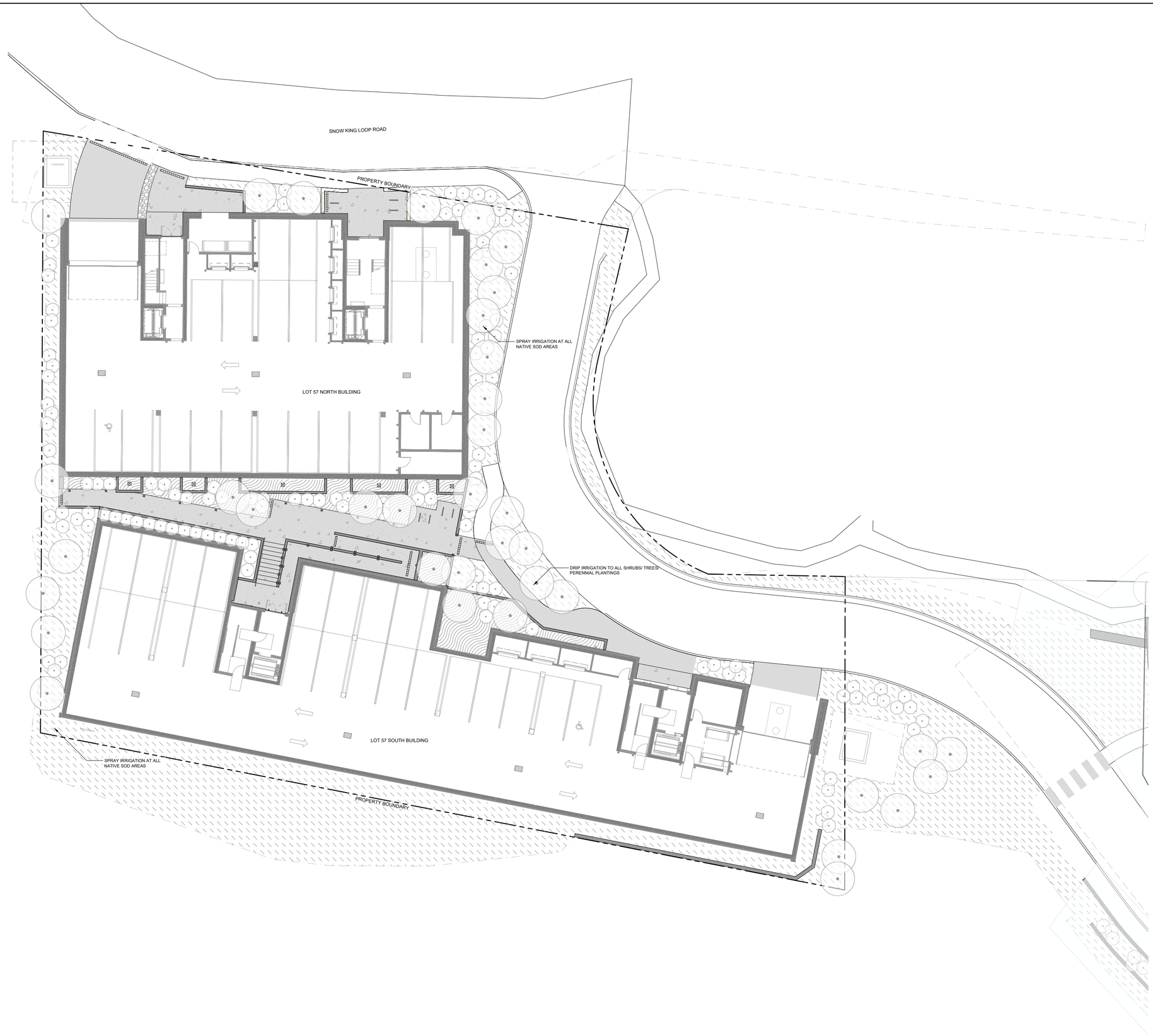
Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 53
IRRIGATION PLAN

Drawing Name
L5.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

IRRIGATION NOTES

1. All plant material shall be irrigated by a pressurized subsurface irrigation system with automatic controller. All trees, shrubs, and perennials shall be drip irrigated and all turf areas shall be irrigated with a spray system. Irrigation system shall be design-build by Contractor based on the specifications identified on this irrigation intent plan. Contractor shall provide an irrigation shop-drawing for review by Landscape Architect before proceeding. Contractor shall demonstrate full system coverage prior to acceptance and before plant material installation. Contractor shall provide a reproducible as-built drawing of installed irrigation system at conclusion of project.
2. The irrigation system shall be operational prior to plant installation or temporary irrigation measures shall be provided in the interim. The method of temporary irrigation shall be approved by the Landscape Architect prior to plant material installation.
3. Irrigation Main Line shall be HDPE DR-11, size TBD by contractor based on required GPM and pressure.
4. Irrigation controller shall be located in the mechanical room of the building. Exact location to be determined in coordination with architect, mechanical engineer and landscape architect.
5. Point of irrigation connection and backflow preventer location to be determined in coordination with architect, mechanical engineer and landscape architect. Backflow Preventer specification TBD by landscape contractor and plumber and shall be installed by a licensed plumber and meet all local codes. If backflow preventer is located in an exterior location, an appropriate enclosure (Hot-Box or similar) shall be provided.
6. Irrigation sleeving shall be PVC Class 160 pipe.
7. Irrigation lateral lines shall be #100 NSF.
8. Irrigation spray heads within the native sod areas shall be 12" Rainbird Pop-Up Spray Heads or equal.
9. Qty (2) Netafim drip rings shall be installed at each tree location shown on the plans.
10. Irrigation valves shall be Rain Bird EFB-CO Series valves for all spray zones and Rain Bird XCZ-100-PRF for all drip zones. Utilize a two-wire decoder system for all irrigation valves. Coordinate exact locations with Landscape Architect prior to installation.
11. Install a manual drain valve at the termination of the mainline at all dead ends. Manual drain valve shall be set in a 10" round valve box and shall allow a $\frac{3}{4}$" globe valve to be opened to allow the water in the pressurized mainline to be blown out (after water supply is shut off) through the manual drain valve. Following the main line being blown out, each lateral and drip zone can then be winterized.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
Chicago, Illinois 60642
T 312-440-9650 F 312-440-9851
www.hdla.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

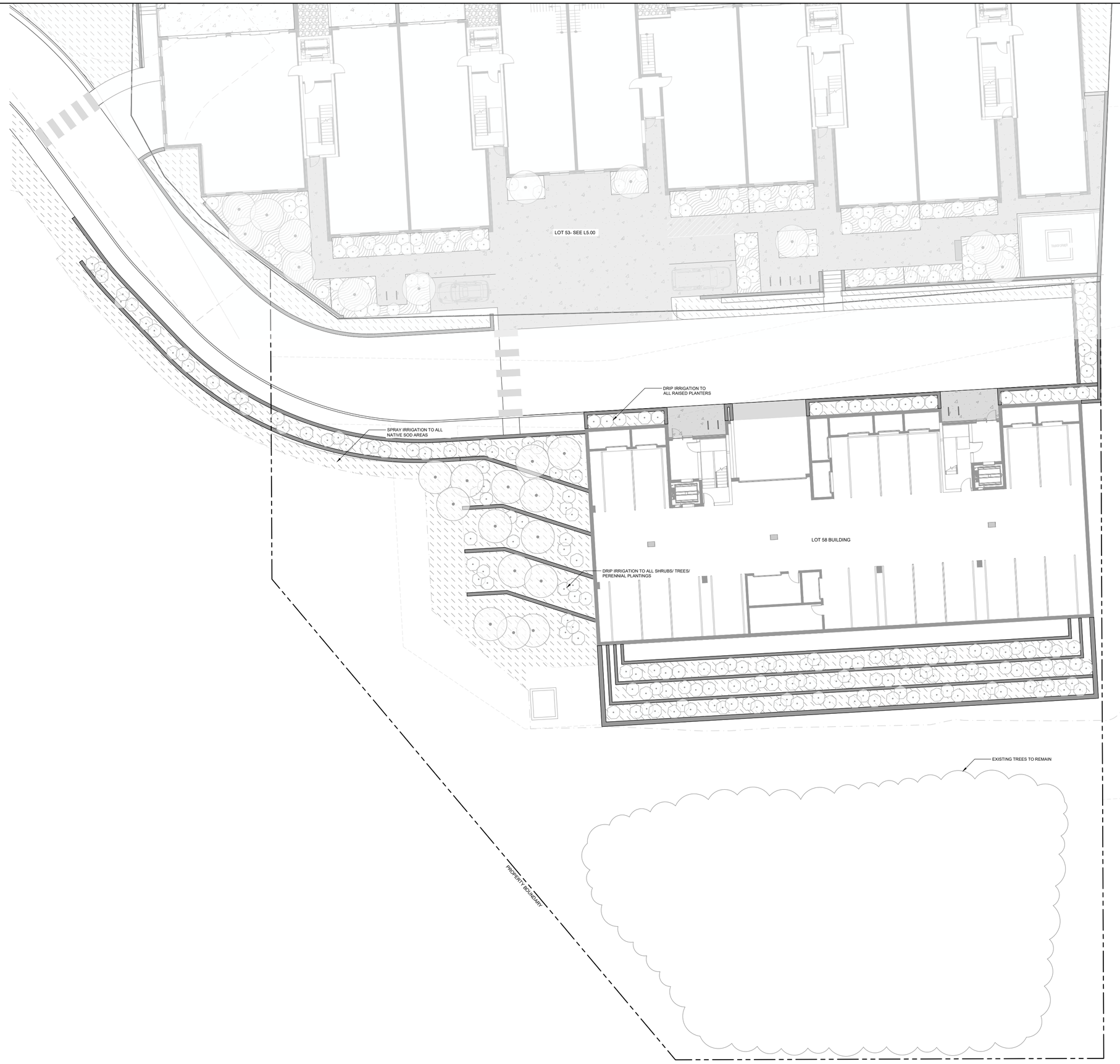
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 57 IRRIGATION PLAN

Drawing Name

L5.01



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- CONCRETE
- CONCRETE WITH SNOWMELT
- COBBLE
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- EXTERIOR SITE LIGHTING
- EXTERIOR SITE DRAINAGE

IRRIGATION NOTES

1. All plant material shall be irrigated by a pressurized subsurface irrigation system with automatic controller. All trees, shrubs, and perennials shall be drip irrigated and all turf areas shall be irrigated with a spray system. Irrigation system shall be design-build by Contractor based on the specifications identified on this irrigation intent plan. Contractor shall provide an irrigation shop-drawing for review by Landscape Architect before proceeding. Contractor shall demonstrate full system coverage prior to acceptance and before plant material installation. Contractor shall provide a reproducible as-built drawing of installed irrigation system at conclusion of project.
2. The irrigation system shall be operational prior to plant installation or temporary irrigation measures shall be provided in the interim. The method of temporary irrigation shall be approved by the Landscape Architect prior to plant material installation.
3. Irrigation Main Line shall be HDPE DR-11, size TBD by contractor based on required GPM and pressure.
4. Irrigation controller shall be located in the mechanical room of the building. Exact location to be determined in coordination with architect, mechanical engineer and landscape architect.
5. Point of irrigation connection and backflow preventer location to be determined in coordination with architect, mechanical engineer and landscape architect. Backflow Preventer specification TBD by landscape contractor and plumber and shall be installed by a licensed plumber and meet all local codes. If backflow preventer is located in an exterior location, an appropriate enclosure (Hot-Box or similar) shall be provided.
6. Irrigation sleeving shall be PVC Class 160 pipe.
7. Irrigation lateral lines shall be #100 NSF.
8. Irrigation spray heads within the native sod areas shall be 12" Rainbird Pop-Up Spray Heads or equal.
9. Qty (2) Netafim drip rings shall be installed at each tree location shown on the plans.
10. Irrigation valves shall be Rain Bird EFB-CO Series valves for all spray zones and Rain Bird XCZ-100-PRF for all drip zones. Utilize a two-wire decoder system for all irrigation valves. Coordinate exact locations with Landscape Architect prior to installation.
11. Install a manual drain valve at the termination of the mainline at all dead ends. Manual drain valve shall be set in a 10" round valve box and shall allow a 3/4" globe valve to be opened to allow the water in the pressurized mainline to be blown out (after water supply is shut off) through the manual drain valve. Following the main line being blown out, each lateral and drip zone can then be winterized.

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

1512 N. Throop Street
T 312-440-9650
Chicago, Illinois 60642
F 312-440-9851
www.nwks.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

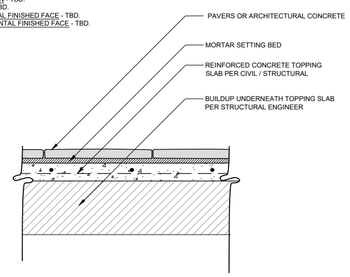
953 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

	Project No.	
	Drawn By	LN
	Checked By	MK

Discipline & Drawing Number
LOT 58
IRRIGATION PLAN

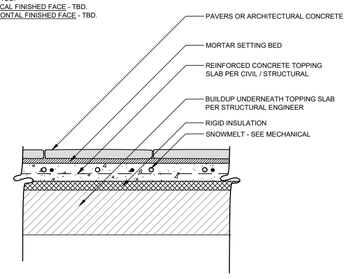
Drawing Name
L5.02

NOTES:
PAVERS - TYPE TBD.
PATTERN - TBD.
SIZE - TBD.
VERTICAL FINISHED FACE - TBD.
HORIZONTAL FINISHED FACE - TBD.



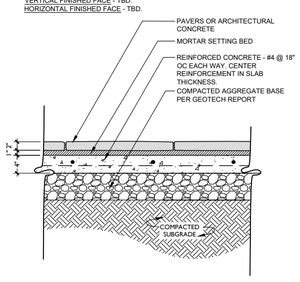
1 MORTAR-SET PAVERS OVER STRUCTURE
1" = 1'-0"

NOTES:
PAVERS - TYPE TBD.
PATTERN - TBD.
SIZE - TBD.
VERTICAL FINISHED FACE - TBD.
HORIZONTAL FINISHED FACE - TBD.



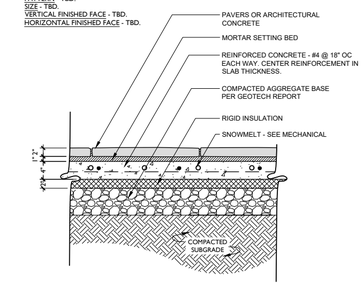
2 MORTAR-SET PAVERS W/SNOWMELT OVER STRUCTURE
1" = 1'-0"

NOTES:
PAVERS - TYPE TBD.
PATTERN - TBD.
SIZE - TBD.
VERTICAL FINISHED FACE - TBD.
HORIZONTAL FINISHED FACE - TBD.

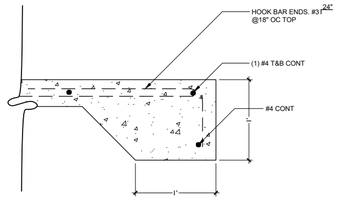


3 MORTAR-SET PAVERS
1" = 1'-0"

NOTES:
PAVERS - TYPE TBD.
PATTERN - TBD.
SIZE - TBD.
VERTICAL FINISHED FACE - TBD.
HORIZONTAL FINISHED FACE - TBD.

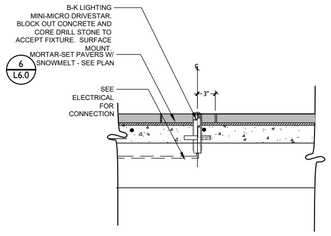


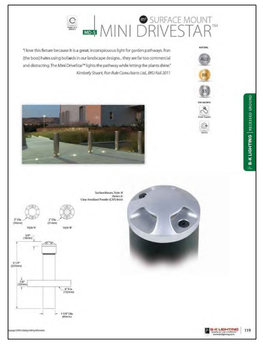
4 MORTAR-SET PAVERS W/ SNOWMELT
1" = 1'-0"



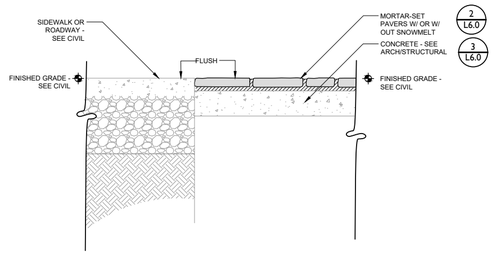
5 PED SLAB TURNDOWN - TYP REINFORCEMENT
1 1/2" = 1'-0"

NOTES:
1. CONTRACTOR TO SEE ELECTRICAL FOR ALL FIXTURE AND CONNECTION INFORMATION
2. CONTRACTOR TO FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION
3. WHEN PATH LIGHT IS INSTALLED ON A STAIR TREAD, LIGHT FIXTURE SHALL BE CENTERED IN TREAD, 3" FROM EDGE OF VERTICAL STRUCTURE.

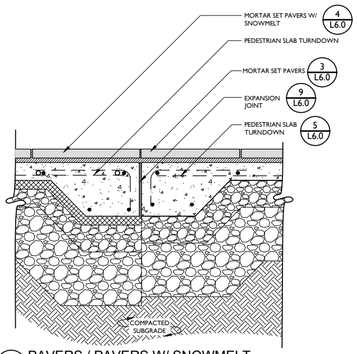




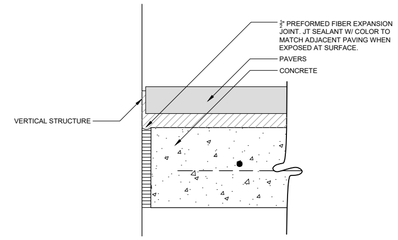
6 PATH LIGHT IN MORTAR-SET PAVERS
1" = 1'-0"



7 MORTAR-SET PAVER ENTRY ABOVE STRUCTURE - FLUSH CONDITION
1" = 1'-0"

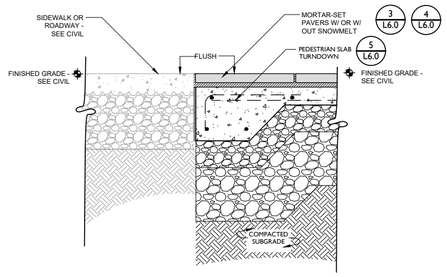


8 PAVERS / PAVERS W/ SNOWMELT
1" = 1'-0"

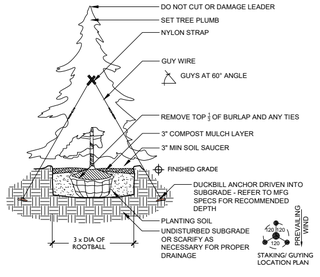


9 EXPANSION JOINT
3" = 1'-0"

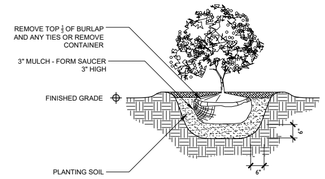
NOTE:
1. SEE CIVIL/ARCH FOR NUMBER OF RISERS AND RISER DIMENSIONS AT EACH STEP LOCATION.



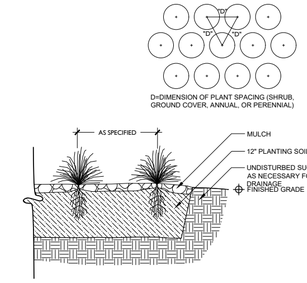
10 MORTAR-SET PAVER ENTRY - FLUSH CONDITION
1" = 1'-0"



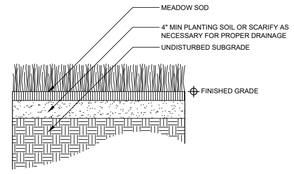
11 CONIFEROUS TREE PLANTING
1/4" = 1'-0"



12 SHRUB PLANTING
1/2" = 1'-0"

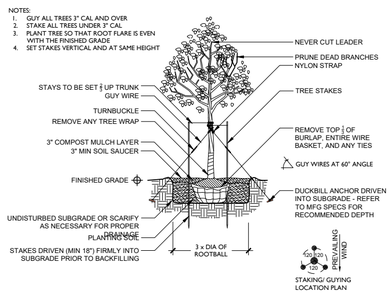


13 ORNAMENTAL GRASS / PERENNIAL PLANTING
1" = 1'-0"



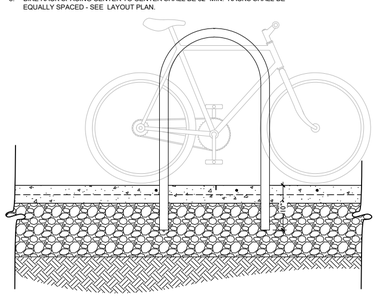
14 MEADOW SOD
1" = 1'-0"

NOTES:
1. GUY ALL TREES 3" CAL AND OVER
2. STAKE ALL TREES UNDER 3" CAL
3. PLANT TREE SO THAT ROOT FLARE IS EVEN WITH THE FINISHED GRADE
4. SET STAKES VERTICAL AND AT SAME HEIGHT

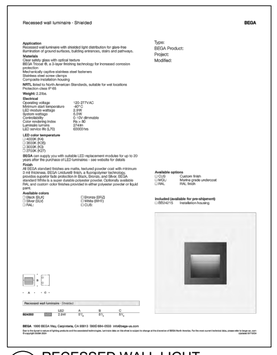


15 DECIDUOUS TREE PLANTING
1/4" = 1'-0"

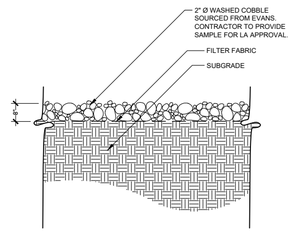
NOTES:
1. DOWNTOWN RACK BY DERO INVERTED U-STYLE BIKE RACK OR APPROVED EQUAL TO BE IN-GROUND MOUNTED PER MFG SPECS
2. FINISH AND GAUGE TBD BY CLIENT AND LANDSCAPE ARCHITECT
3. BIKE RACK SPACING CENTER TO CENTER SHALL BE 32" MIN. RACKS SHALL BE EQUALLY SPACED - SEE LAYOUT PLAN.



16 INVERTED U-STYLE BIKE RACK
1" = 1'-0"



17 RECESSED WALL LIGHT
1" = 1'-0"



18 COBBLE MULCH
1" = 1'-0"

1512 N. Throop Street
T 312-440-9800
Chicago, Illinois 60642
F 312-440-9851
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001
www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/29/2024	DEVELOPMENT PLAN
	03/24/2025	DEVELOPMENT PLAN REVISION
	04/28/2025	DEVELOPMENT PLAN REVISION 2

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

SITE DETAILS

Drawing Name

L6.00

NORTHWORKS

Construction Management Plan

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

SHAW CONSTRUCTION
www.shawwyoming.com

October 28, 2024

Construction Management Plan: Snow King Condos Phase 1 (Lot 57)

Project Scope:

The Snow King Condos Phase 1 will consist of 2 buildings on Lot 57 which will yield 22 market units and 5 affordable units. The Phase 1 buildings square feet total to 43,678 sf. The buildings generally include repeating floor plans with three levels of living area(s) and common stairs and elevators. Parking spaces are included in the building floor plan, with 41 total spaces including designated ADA spaces. Public utilities will include domestic water tie in, sanitary sewer tie in, and storm sewer tie-in. Electricity will be brought to the site and coordinated with Lower Valley Energy and the Town of Jackson as necessary. The estimated start of construction activities is June 1st, 2025 upon approved building permit. The total approximate project duration 36 months, finishing up in approximately June 2028. During construction of Phase 1, Lot 53 (Phase 2) will be used as construction base of operations, snow storage, laydown, and parking. A construction fence will be erected to connect all three lots for safety. This construction management and staging plan will cover and review the stages starting from Mobilization to Completion.

Phase 2 construction management and staging plan will be submitted prior to start of construction of Phase. It includes 2 additional buildings with a total of 38 market units and 7 affordable units in 67,219 sf of Lot 53 & 58.

Public Impact:

Shaw will coordinate with Town of Jackson (TOJ) to identify the properties and businesses most impacted by the construction to create an email contact list, to provide information as the project schedule and work. This list is attached at the end of this submission and includes the TOJ Engineering Division. Shaw will work to minimize any effect on adjacent properties by maintaining proactive communication including giving a minimum 48-hour notice of any closures and after-hours work. Shaw acknowledges that the right-of-way (R.O.W.) is a shared public use area and will coordinate with TOJ and neighbors for special event planning and construction activities that will encroach on the R.O.W. of the surrounding streets. Activities that will affect the Town of Jackson include domestic water tie in and the storm system connection, but impact to the neighbors should be minimal if any. During said activities best practice traffic control practices will be implanted including a well-defined drive aisle, signage at intersections and property boundaries, and personnel for the direction and control of traffic flow. Pedestrian traffic will be re-routed to the opposite side of the street when necessary. The inconvenience to pedestrian traffic should be noted as our entrance will be disrupting the sidewalk. All necessary permits will be obtained prior to any closures including a traffic control plan.

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

In the event that intermittent sidewalk closures are required, they will be coordinated with neighboring property owners. Please note that public safety will be best served by temporarily rerouting all pedestrians to the sidewalk on the North side of Snow King Loop Rd. The reasons for this are as follows: 1) Trucks will be entering and exiting the property at most hours of the day. 2) The North sidewalk of Snow King Loop Rd is not impacted by construction. 3) Public Safety is paramount and would not be best served by allowing foot traffic in front of the main construction entrance and exit. The Town has the authority to require modifications to the Construction Management Plan.

Construction Parking:

Contractor shall implement a clear and self-enforcing construction parking plan that does not use or encumber downtown on street and/or public parking lot parking spaces. Contractor will encourage carpooling and bus riding, and when possible, provide shuttles into the project. The site plan as designed will allow for all construction parking, deliveries and staging to the site alone. The size of the site gives ample room for all the parking required for all onsite construction personnel.

Site Logistics, General Staging Plan:

A site logistics and general staging plan is attached to this document. Throughout the entirety of the project staging and parking will be strictly maintained within the project boundary, no offsite yard needs are foreseen for Phase 1. The construction lot will contain the job office trailer, dumpsters, concrete washout, recycling, temporary toilets, and an area designated to snow storage based on the master site plan.

Due to the site steep slopes, site fences will be erected around Lot 57 and the laydown/storage area (Lot 53) separately. The construction fences will be a temporary metal fence with fabric screens. At the south edge of the property, to protect pedestrians & skiers, signage and a wood & fabric fence will be erected. The fence will be placed along the property line around the designated areas of the site, with a silt fence along the inner margin as part of the erosion control BMP's. Worker and vehicle access is minimized to one access point along Snow King Loop Rd to minimize disturbance for the businesses and residences. The vehicle entrance gates will include vehicle tracking control pads as needed and a skid steer with sweeper attachment will remain on site to maintain clean roads. Throughout all stages, trucks arriving or leaving the site will utilize the town truck route.

Construction work hours, unless by special exception, will be Monday-Friday 7AM-7PM and 8AM-5PM during weekends and holidays.

During construction, a tower crane will be utilized. The crane will not encroach on any PROW and will be installed interior to the site itself.

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

Parking, Street, and Alley Encroachments:

It is not anticipated that site logistics will require portions of the adjacent street travel lanes (Snow King Loop Rd) to be occupied by construction equipment or staging at different times during the project. The attached Staging Plan shows those areas that will be occupied on a continuous basis and those areas that will be occupied on an intermittent basis throughout the project.

Shaw will coordinate with Town officials and adjacent property owners to minimize the impact of these encroachment activities and to assure all Town rules and permitting procedures are properly followed. The intermittent encroachments for Utility improvements along the surrounding streets will be necessary during construction activities. All necessary permits will be obtained prior to any closures, including a traffic control plan. Site barriers shall not interfere with Town snow removal. Contractor shall be responsible for all snow removal from along the barrier after each time the town plows. Public safety will be held paramount during crane and concrete pumping activities.

Performance Bonds and Guarantees:

All required bonds, guarantees, and warranty to be provided by Owner at prior to permit release. Town to notify Owner of required amounts.

Stormwater Management:

All erosion control measures and BMPs will be implemented per plan as developed by the civil engineer, including inlet protection and perimeter controls. All stormwaters of the site will be managed in accordance to TOJ standards & will not affect TOJ stormwater systems. During any rain event, storm water monitoring and reporting will be recorded. A stabilized entrance with tracking control mats will be installed and maintained at the vehicle access point. Concrete washout location clearly defined and accessible. Temporary toilets will be properly bedded and staked. Gas, diesel, and oils will be stored in proper containment vessels. Spoils piles will be covered and staked. Final measures will be reviewed with the building or grading permit.

Snow Removal:

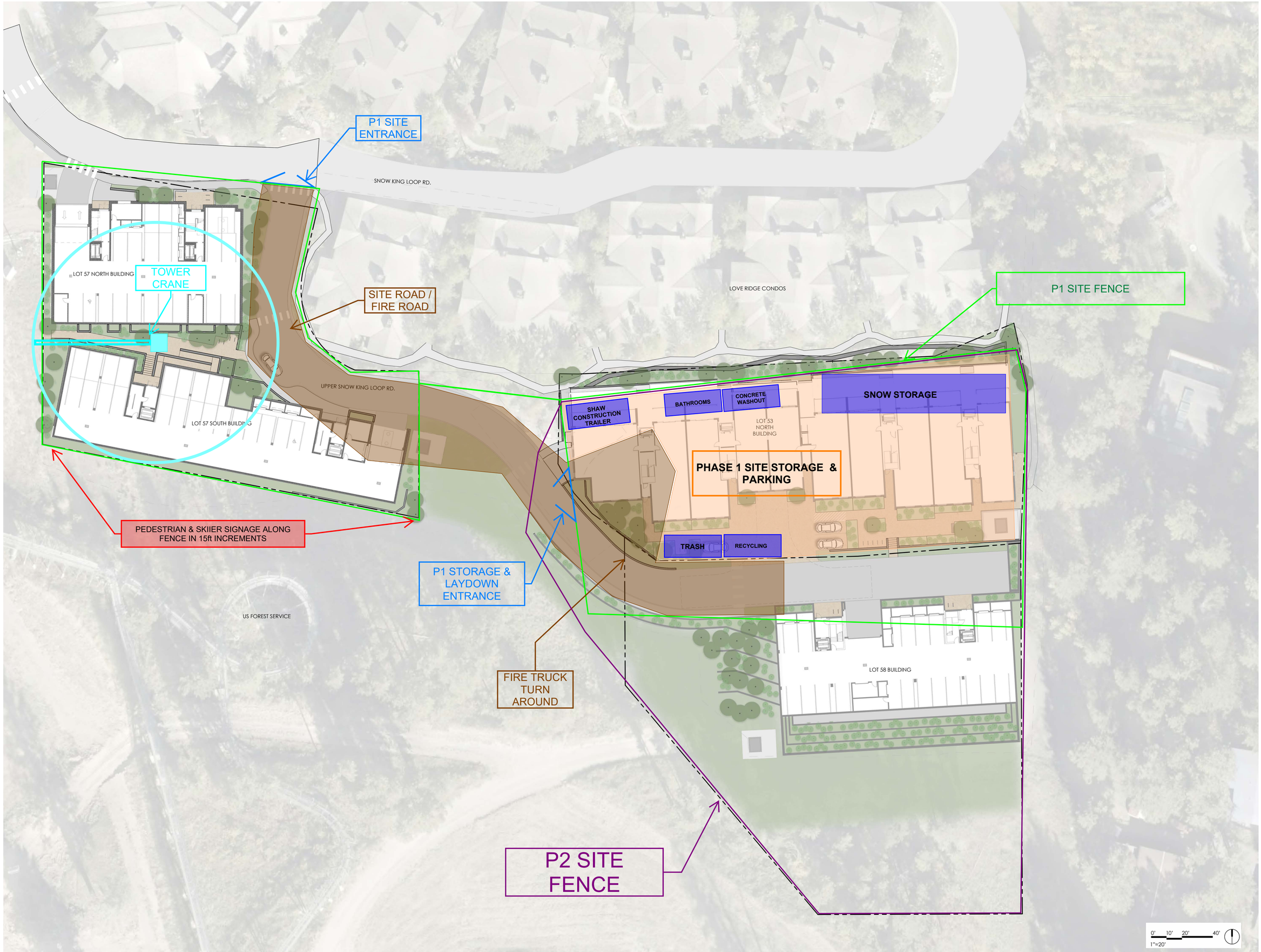
Snow removal within the property will be collected and relocated to the closest locations shown on the site logistics map. Any snow that accumulates along property margins, will be removed after city plows have been through and the snow has accumulated enough to restrict access. Shaw will have the snow removed each time the Town plows. Site barriers shall not interfere with Town snow removal.

Shaw Wyoming
460 South Cache
Jackson, WY 83001
TEL: 303-733-8401

SHAW CONSTRUCTION
www.shawwyoming.com

Neighborhood Contact List

Business Name	Contact Name	Phone	Email
Town of Jackson			townengineering@jacksonwy.gov
Grand View Lodge		(307) 734 3000	
Snow King Mountain Resort		(307) 201-5464	info@Snowkingmountain.Com
Snow King Resort & Condos		(307) 733-5200	


P1 SITE ENTRANCE
SNOW KING LOOP RD.
LOT 57 NORTH BUILDING
TOWER CRANE
SITE ROAD / FIRE ROAD
LOT 57 SOUTH BUILDING
UPPER SNOW KING LOOP RD.
LOVE RIDGE CONDOS
P1 SITE FENCE
SHAW CONSTRUCTION TRAILER
BATHROOMS
CONCRETE WASHOUT
SNOW STORAGE
LOT 53 NORTH BUILDING
PHASE 1 SITE STORAGE & PARKING
TRASH
RECYCLING
PEDESTRIAN & SKIIER SIGNAGE ALONG FENCE IN 15ft INCREMENTS
P1 STORAGE & LAYDOWN ENTRANCE
US FOREST SERVICE
FIRE TRUCK TURN AROUND
LOT 58 BUILDING
P2 SITE FENCE
0' 10' 20' 40'
1"=20'

NORTHWORKS

Engineering Report Attachments

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

BY: SS & JL
Date: 2025-05-16

Average Day Occupancy Rate [1]	50%
Max Day Factor [1], MDF	2.72
Peak Hour Factor [2], PHF	4

WATER DEMAND							
a				b	c=a*b	d=MDF*c	e=d/1440 * PHF
Unit Type			No. of Units	Average gpd/unit	Average TOTAL, gpd	Maximum TOTAL, gpd	PEAK HOUR, gpm
Lot 53							
Condo	1	Bedroom	1	125	125	340	0.9
Affordable	1	Bedroom	3	125	375	1020	2.8
Condo	2	Bedroom	18	125	4500	12240	34.0
Affordable	2	Bedroom	3	125	750	2040	5.7
Condo	3	Bedroom	7	125	2625	7140	19.8
Affordable	3	Bedroom	1	125	375	1020	2.8
Condo	4	Bedroom	0	125	0	0	0.0
Subtotal Domestic Water Demand					8750	23800	66.1
Lot 58							
Condo	1	Bedroom	0	125	0	0	0.0
Condo	2	Bedroom	7	125	1750	4760	13.2
Condo	3	Bedroom	5	125	1875	5100	14.2
Condo	4	Bedroom	0	125	0	0	0.0
Subtotal Domestic Water Demand					3625	9860	27.4
Lot 57 North							
Condo	1	Bedroom	0	125	0	0	0.0
Affordable	1	Bedroom	2	125	250	680	1.9
Condo	2	Bedroom	10	125	2500	6800	18.9
Affordable	2	Bedroom	1	125	250	680	1.9
Condo	3	Bedroom	0	125	0	0	0.0
Affordable	3	Bedroom	1	125	375	1020	2.8
Condo	4	Bedroom	0	125	0	0	0.0
Subtotal Domestic Water Demand					3375	9180	25.5
Lot 57 South							
Condo	1	Bedroom	0	125	0	0	0.0
Affordable	1	Bedroom	0	125	0	0	0.0
Condo	2	Bedroom	5	125	1250	3400	9.4
Affordable	2	Bedroom	1	125	250	680	1.9
Condo	3	Bedroom	5	125	1875	5100	14.2
Affordable	3	Bedroom	0	125	0	0	0.0
Condo	4	Bedroom	2	125	1000	2720	7.6
Subtotal Domestic Water Demand					4375	11900	33.1
Total Domestic Water Demand					20,125	54,740	152.1

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

FIRE SUPPRESSION						
Total Building Size	Building Type	Required Pressure [4]	Required Duration [4]	Total Fire Flow [4]	Sprinkler Reduction [5]	Adjusted Fire Flow [5]
(SF)	(IBC)	(psi)	(hours)	(gpm)	(%)	(gpm)
Lot 53						
73,743	IIB	20	4	6000	75%	1500
Lot 58						
34,849	IIB	20	4	4000	75%	1000
Lot 57 North						
32,455	IIB	20	3	3750	75%	1000
Lot 57 South						
38,378	IIB	20	4	4000	75%	1000

Note:

[1] Based on daily rates from the WYDEQ CH 12, Section 8

[2] Peak Hour Factor based on busiest hour occuring during the busiest quarter of the day.

[3] IFC - Appendix B, Table B105.1, Type II-B

[4] IFC - Appendix B, Section B105.2, 75% reduction for automatic sprinkler systems, minimum 1500 gpm

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

BY: SS & JL
Date: 2025-05-16

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**
Lot 53					
Condo 1 Bedroom	1	Lavatory Sink	1	1.5	2
		Shower	1	2.5	3
		Bath Tub	1	8	8
		Toilet	1	6	6
		Kitchen Sink	1	1.8	2
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	3
		Utility Sink	0	4	0
Affordable 1 Bedroom	3	Lavatory Sink	1	1.5	5
		Shower	1	2.5	8
		Bath Tub	1	8	24
		Toilet	1	6	18
		Kitchen Sink	1	1.8	5
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	9
		Utility Sink	0	4	0
Condo 2 Bedroom	18	Lavatory Sink	3	1.5	81
		Shower	1	2.5	45
		Bath Tub	1	8	144
		Toilet	2	6	216
		Kitchen Sink	1	1.8	32
		Dishwasher	1	1.3	23
		Laundry (washer)	1	3	54
		Utility Sink	0	4	0
Additional Sinks		Lavatory Sink	12	1.5	18
Additional Toilets		Toilet	5	6	30
Affordable 2 Bedroom	3	Lavatory Sink	2	1.5	9
		Shower	1	2.5	8
		Bath Tub	1	8	24
		Toilet	2	6	36
		Kitchen Sink	1	1.8	5
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	9
		Utility Sink	0	4	0
Condo 3 Bedroom	7	Lavatory Sink	5	1.5	53
		Shower	3	2.5	53
		Bath Tub	1	8	56

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**
		Toilet	3	6	126
		Kitchen Sink	1	1.8	13
		Dishwasher	1	1.3	9
		Laundry (washer)	1	3	21
		Utility Sink	0	4	0
Affordable 3 Bedroom	1	Lavatory Sink	1	1.5	2
		Bath Tub	1	8	8
		Shower	1	2.5	3
		Toilet	1	6	6
		Kitchen Sink	1	1.8	2
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	3
		Utility Sink	0	4	0
Lot 58					
Condo 2 Bedroom	7	Lavatory Sink	3	1.5	32
		Shower	1	2.5	18
		Bath Tub	1	8	56
		Toilet	2	6	84
		Kitchen Sink	1	1.8	13
		Dishwasher	1	1.3	9
		Laundry (washer)	1	3	21
		Utility Sink	0	4	0
Condo 3 Bedroom	5	Lavatory Sink	5	1.5	38
		Shower	3	2.5	38
		Bath Tub	1	8	40
		Toilet	3	6	90
		Kitchen Sink	1	1.8	9
		Dishwasher	1	1.3	7
		Laundry (washer)	1	3	15
		Utility Sink	0	4	0
Lot 57					
Affordable 1 Bedroom	2	Lavatory Sink	1	1.5	3
		Shower	1	2.5	5
		Bath Tub	1	8	16
		Toilet	1	6	12
		Kitchen Sink	1	1.8	4
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	6
		Utility Sink	0	4	0
Condo 2 Bedroom	15	Lavatory Sink	3	1.5	68
		Shower	1	2.5	38

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**
		Bath Tub	1	8	120
		Toilet	2	6	180
		Kitchen Sink	1	1.8	27
		Dishwasher	1	1.3	20
		Laundry (washer)	1	3	45
		Utility Sink	0	4	0
Additional Sinks		Lavatory Sink	3	1.5	5
Affordable 2 Bedroom	2	Lavatory Sink	2	1.5	6
		Shower	1	2.5	5
		Bath Tub	1	8	16
		Toilet	2	6	24
		Kitchen Sink	1	1.8	4
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	6
		Utility Sink	0	4	0
Affordable 3 Bedroom	1	Lavatory Sink	2	1.5	3
		Shower	2	2.5	5
		Bath Tub	1	8	8
		Toilet	2	6	12
		Kitchen Sink	1	1.8	2
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	3
		Utility Sink	0	4	0
Condo 3 Bedroom	5	Lavatory Sink	3	1.5	23
		Shower	2	2.5	25
		Bath Tub	1	8	40
		Toilet	2	6	60
		Kitchen Sink	1	1.8	9
		Dishwasher	1	1.3	7
		Laundry (washer)	1	3	15
		Utility Sink	0	4	0
Condo 4 Bedroom	2	Lavatory Sink	6	1.5	18
		Shower	3	2.5	15
		Bath Tub	1	8	16
		Toilet	3	6	36
		Kitchen Sink	1	1.8	4
		Dishwasher	1	1.3	3
		Laundry (washer)	1	3	6
		Utility Sink	0	4	0

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**

TOTAL FIXTURE VALUE	2,538
Probable Water Flow Demand (AWWA M22 - Figure 4-3)	75
Design Pressure Adjustment Factor (AWWA M22 - 60 psi)	1.00
Adjusted Probable Demand (gpm)[3]	**75**

Note:

[1] Fixture Value based on AWWA M22

[2] Fixture count based 2024.07.02 program

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Attachment D: Water System Evaluation

The existing Snow King Resort Public Water System consists of a duplex booster pump located in the garage of Love Ridge Condominium Building 48, at 6,372 feet, a 1,160LF long, 8" diameter water supply line running uphill to a 110,000 gallon storage tank south/above at roughly 6,600 feet.

System Configuration

The following information was drawn from the Grand View Lodges – Phase B Wyoming DEQ Permit to Construct.

Static Headloss:

Water surface elevation in tank, full:

Tank Floor Elevation:	6583.0'
Depth to shutoff:	+ 13.0'
	6596.0'

	6596.0'
Booster Station Elevation:	- 6,372.0'
	224.0'

Friction Loss:

Fittings

Fittings	Number of Fittings
8" Diameter Gate Valve	3
8" Diameter Tee; flow through	5
8" Diameter Tee; branch flow	1
8" Diameter 90° Bend	2
8" Diameter 45° Bend	6
8" Diameter 22.5° Bend	2
8" Diameter 11.25° Bend	2

Minor Head Loss; calculated for various flow scenarios

$$H_m = \frac{K*V^2}{2*g}$$

Flowrate	136 gpm	272 gpm	1,000 gpm	1,190.6 gpm
Minor Losses	0.05 ft-H_2O	0.19 ft-H_2O	2.59 ft-H_2O	3.67 ft-H_2O

Pipe

1,160 LF of 8" Diameter CL-350 Ductile Iron Pipe, Cement Lined

C coefficient	140.0
Inside Diameter	8.43"

Major Head Loss; calculated for various flow scenarios using Flowmaster

Flowrate	136 gpm	272 gpm	1,000 gpm	1,190.6 gpm
Major Losses	0.36' ft-H_2O	1.28 ft-H_2O	14.32 ft-H_2O	19.78 ft-H_2O

System Total Head Loss

Flowrate	136 gpm	272 gpm	1,000 gpm	1,190.6 gpm
Head	224.41' ft-H_2O	225.47 ft-H_2O	240.91 ft-H_2O	247.45 ft-H_2O

Water Available

Storage Tank

The tank provides 110,000 gallons of water storage

Pumped

Using 272 gpm flow scenario, for both pumps operating simultaneously

System Total Head: 45psi = 225.47 ft-H_2O

Pump Intake Head: - 103.83 ft-H_2O

121.64 ft-H_2O → 60.82 ft-H_2O per stage

National Pump M6HC Pump Curve used, 2-stage, 4.400 impeller configuration

Pump flowrate, Q = 155 gpm

System Demands

Existing Demands

Existing Love Ridge Condominiums Water Demand				
	Units No. of Units	Average TOTAL, gpd	Maximum TOTAL, gpd	Peak Hour gpm
Condos	20	10,944	27,072	37.6

Proposed Demands

Domestic Water Demand				
Lot	Units No. of Units	Average TOTAL, gpd	Maximum TOTAL, gpd	Peak Hour gpm
Lot 53	33	8,750	23,800	66.1
Lot 58	12	3,625	9,860	27.4
Lot 57	27	7,750	21,080	58.6
Total	**72**	**20,125**	**54,740**	**152.1**

Fire Flow

Combined fire sprinkler and hydrant flow: 1,000 gpm for 2 hours

System Capacity Analysis

Fire Flow Event: 2-hour duration

Water Supply

Storage Tank; at pump on level, assuming 5,000-gallon operating range between pump on and pump off level

105,000 gallons

Pumped; both booster pumps operating

Pump 1, starts at beginning of fire flow event

$$155\ gpm * 120\ minutes = 18{,}600\ gallons$$

Pump 2, starts when lag pump on level is reached in the tank. Assuming 5,000 gallons to lag pump on, this takes 4 minutes at fire flows

$$155\ gpm * 116\ minutes = 17{,}980\ gallons$$

Total volume of water available: $105{,}000 + 18{,}600 + 17{,}980 = \mathbf{141{,}580\ gallons}$

Water Demands

Existing Domestic Demands

Peak Hour: $37.6\ gpm * 60\ minutes = 2{,}256\ gallons$

Typical hour of maximum day: $27{,}072\ gpd \Big/ 24\ \frac{hours}{day} = 1{,}128\ gallons$

$$2{,}256 + 1{,}128 = 3{,}384\ gallons$$

Proposed Domestic Demands

Peak Hour: $152.1\ gpm * 60\ minutes = 9{,}126\ gallons$

Typical hour of maximum day: $54{,}740\ gpd \Big/ 24\ \frac{hours}{day} = 2{,}281\ gallons$

$$9{,}126 + 2{,}281 = 11{,}407\ gallons$$

Fire Flow, sprinklers and hydrants: $1{,}000\ gpm * 120\ minutes = 120{,}000\ gallons$

Total volume of water demanded: $3{,}384 + 11{,}407 + 120{,}000 = \mathbf{134{,}791\ gallons}$

Total volume of water available exceeds total volume of water demanded

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

BY: SS & JL
Date: 2025-05-16

Average Daily Flow	60%
Peak Hour Factor	4

SANITARY SEWER DEMAND						
Unit Type			No. of Units[2]	Max Flow per Bedroom, gpd[1]	Average TOTAL, gpd	Maximum TOTAL, gpd	PEAK HOUR, gpm
Lot 53							
Condo	1	Bedroom	1	150	90	150	0.4
Affordable	1	Bedroom	3	150	270	450	1.3
Condo	2	Bedroom	18	150	3240	5400	15.0
Affordable	2	Bedroom	3	150	540	900	2.5
Condo	3	Bedroom	7	150	1890	3150	8.8
Affordable	3	Bedroom	1	150	270	450	1.3
Condo	4	Bedroom	0	150	0	0	0.0
SUBTOTAL SANITARY SEWER DEMAND					6300	10500	29.2
Lot 58							
Condo	1	Bedroom	0	150	0	0	0.0
Condo	2	Bedroom	7	150	1260	2100	5.8
Condo	3	Bedroom	5	150	1350	2250	6.3
Condo	4	Bedroom	0	150	0	0	0.0
SUBTOTAL SANITARY SEWER DEMAND					2610	4350	12.1
Lot 57 North							
Condo	1	Bedroom	0	150	0	0	0.0
Affordable	1	Bedroom	2	150	180	300	0.8
Condo	2	Bedroom	10	150	1800	3000	8.3
Affordable	2	Bedroom	1	150	180	300	0.8
Condo	3	Bedroom	0	150	0	0	0.0
Affordable	3	Bedroom	1	150	270	450	1.3
Condo	4	Bedroom	0	150	0	0	0.0
SUBTOTAL SANITARY SEWER DEMAND					2430	4050	11.3
Lot 57 South							
Condo	1	Bedroom	0	150	0	0	0.0
Affordable	1	Bedroom	0	150	0	0	0.0
Condo	2	Bedroom	5	150	900	1500	4.2
Affordable	2	Bedroom	1	150	180	300	0.8
Condo	3	Bedroom	5	150	1350	2250	6.3
Affordable	3	Bedroom	0	150	0	0	0.0
Condo	4	Bedroom	2	150	720	1200	3.3
SUBTOTAL SANITARY SEWER DEMAND					3150	5250	14.6
TOTAL SANITARY SEWER DEMAND					14,490	24,150	67.1

Notes:

[1] *Based on daily flow rates from the WYDEQ CH 11, Part B, Table 1*

[2] *Bedroom count shown based on Development Plan Review, 16 May 2025*

NORTHWORKS

Application Documents

PLANNING PERMIT APPLICATION
Planning & Building Department

150 E Pearl Ave.
P.O. Box 1687
Jackson, WY 83001

ph: (307) 733-0440
www.townofjackson.com

For Office Use Only

Fees Paid_____ Date & Time Received _____

Application #s _____ _____ _____

Please note: *Applications received after 3 PM will be processed the next business day.*

PROJECT.

Name/Description: Snow King Lot 57

Physical Address: 510 Upper Snow King Loop

Lot, Subdivision: LOT 57, GRAND VIEW LODGES, THIRD ADDITION PIDN: 22-41-16-34-3-07-001

PROPERTY OWNER.

Name: BREG SK57A, LLC & BREG SK57B,LLC & BREG SK57C, LLC Phone: (262) 308-2656

Mailing Address: 4011 80th Street, Kenosha, Wisconsin ZIP: 53142

E-mail: northmann@beardevelopment.com

APPLICANT/AGENT.

Name: Joe Bongiorno (Northworks Architects) Phone: (307) 201-5324

Mailing Address: 185 East Hansen Ave. Jackson, WY 83001 ZIP: 83001

E-mail: jbongiorno@nwks.com

DESIGNATED PRIMARY CONTACT.

_____Property Owner X_____Applicant/Agent

TYPE OF APPLICATION. *Please check all that apply; review the type of application at www.townofjackson/200/Planning*

Use Permit

_____Basic Use

_____Conditional Use

_____Special Use

Relief from the LDRs

_____Administrative Adjustment

_____Variance

_____Beneficial Use Determination

_____Appeal of an Admin. Decision

Physical Development

_____Sketch Plan

X_____Development Plan

_____Design Review

Subdivision/Development Option

_____ Subdivision Plat

_____Boundary Adjustment (replat)

_____Boundary Adjustment (no plat)

_____Development Option Plan

Interpretations

_____Formal Interpretation

_____Zoning Compliance Verification

Amendments to the LDRs

_____LDR Text Amendment

_____Map Amendment

Miscellaneous

_____**Other:**_____

_____ Environmental Analysis

PRE-SUBMITTAL STEPS. *To see if pre-submittal steps apply to you, go to www.townofjackson.com/200/Planning and select the relevant application type for requirements. Please submit all required pre-submittal steps with application.*

Pre-application Conference #: P23-010 Environmental Analysis #: _____

Original Permit #: _____ Date of Neighborhood Meeting: _____

SUBMITTAL REQUIREMENTS. *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant. Go to www.townofjackson.com/200/Planning and select the relevant application type for submittal requirements.*

Have you attached the following?

X **Application Fee.** Fees are cumulative. Go to www.townofjackson.com/200/Planning and select the relevant application type for the fees.

X **Notarized Letter of Authorization.** A notarized letter of consent from the landowner is required if the applicant is not the owner, or if an agent is applying on behalf of the landowner. Please see the Letter of Authorization template at http://www.townofjackson.com/DocumentCenter/View/845/LetterOfAuthorization-PDF.

X **Response to Submittal Requirements**. The submittal requirements can be found on the TOJ website for the specific application. If a pre-application conference is required, the submittal requirements will be provided to applicant at the conference. The submittal requirements are at www.townofjackson.com/200/Planning under the relevant application type.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Joe. Bongiorno 10/23/2024

Signature of Property Owner or Authorized Applicant/Agent Date

Joe Bongiorno (Northworks Architects) Senior Architect

Name Printed Title

PLANNING PERMIT APPLICATION
Planning & Building Department

150 E Pearl Ave.
P.O. Box 1687
Jackson, WY 83001

ph: (307) 733-0440
www.townofjackson.com

For Office Use Only

Fees Paid_____ Date & Time Received _____

Application #s _____ _____ _____

Please note: *Applications received after 3 PM will be processed the next business day.*

PROJECT.

Name/Description: Snow King Lot 53

Physical Address: 553 Upper Snow King Loop

Lot, Subdivision: LOT 53, GRAND VIEW LODGES 2ND ADDITION PIDN: 22-41-16-34-3-04-001

PROPERTY OWNER.

Name: BREG SK53, LLC Phone: (262) 308-2656

Mailing Address: 4011 80th Street, Kenosha, Wisconsin ZIP: 53142

E-mail: northmann@beardevelopment.com

APPLICANT/AGENT.

Name: Joe Bongiorno (Northworks Architects) Phone: (307) 201-5324

Mailing Address: 185 East Hansen Ave. Jackson, WY 83001 ZIP: 83001

E-mail: jbongiorno@nwks.com

DESIGNATED PRIMARY CONTACT.

_____Property Owner X_____Applicant/Agent

TYPE OF APPLICATION. *Please check all that apply; review the type of application at www.townofjackson/200/Planning*

Use Permit

_____Basic Use

_____Conditional Use

_____Special Use

Relief from the LDRs

_____Administrative Adjustment

_____Variance

_____Beneficial Use Determination

_____Appeal of an Admin. Decision

Physical Development

_____Sketch Plan

X_____Development Plan

_____Design Review

Subdivision/Development Option

_____ Subdivision Plat

_____Boundary Adjustment (replat)

_____Boundary Adjustment (no plat)

_____Development Option Plan

Interpretations

_____Formal Interpretation

_____Zoning Compliance Verification

Amendments to the LDRs

_____LDR Text Amendment

_____Map Amendment

Miscellaneous

_____**Other:**_____

_____ Environmental Analysis

PRE-SUBMITTAL STEPS. *To see if pre-submittal steps apply to you, go to www.townofjackson.com/200/Planning and select the relevant application type for requirements. Please submit all required pre-submittal steps with application.*

Pre-application Conference #: P23-010 Environmental Analysis #: _____

Original Permit #: _____ Date of Neighborhood Meeting: _____

SUBMITTAL REQUIREMENTS. *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant. Go to www.townofjackson.com/200/Planning and select the relevant application type for submittal requirements.*

Have you attached the following?

X **Application Fee.** Fees are cumulative. Go to www.townofjackson.com/200/Planning and select the relevant application type for the fees.

X **Notarized Letter of Authorization.** A notarized letter of consent from the landowner is required if the applicant is not the owner, or if an agent is applying on behalf of the landowner. Please see the Letter of Authorization template at http://www.townofjackson.com/DocumentCenter/View/845/LetterOfAuthorization-PDF.

X **Response to Submittal Requirements**. The submittal requirements can be found on the TOJ website for the specific application. If a pre-application conference is required, the submittal requirements will be provided to applicant at the conference. The submittal requirements are at www.townofjackson.com/200/Planning under the relevant application type.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Joe. Bongiorno 10/23/2024

Signature of Property Owner or Authorized Applicant/Agent Date

Joe Bongiorno (Northworks Architects) Senior Architect

Name Printed Title

PLANNING PERMIT APPLICATION
Planning & Building Department

150 E Pearl Ave.
P.O. Box 1687
Jackson, WY 83001

ph: (307) 733-0440
www.townofjackson.com

For Office Use Only

Fees Paid_____ Date & Time Received _____

Application #s _____ _____ _____

Please note: *Applications received after 3 PM will be processed the next business day.*

PROJECT.

Name/Description: Snow King Lot 58

Physical Address: 725 Upper Snow King Loop

Lot, Subdivision: LOT 58, GRAND VIEW LODGES, THIRD ADDITION PIDN: 22-41-16-34-3-07-002

PROPERTY OWNER.

Name: BREG SK58, LLC Phone: (262) 308-2656

Mailing Address: 4011 80th Street, Kenosha, Wisconsin ZIP: 53142

E-mail: northmann@beardevelopment.com

APPLICANT/AGENT.

Name: Joe Bongiorno (Northworks Architects) Phone: (307) 201-5324

Mailing Address: 185 East Hansen Ave. Jackson, WY 83001 ZIP: 83001

E-mail: jbongiorno@nwks.com

DESIGNATED PRIMARY CONTACT.

_____Property Owner X_____Applicant/Agent

TYPE OF APPLICATION. *Please check all that apply; review the type of application at www.townofjackson/200/Planning*

Use Permit

_____Basic Use

_____Conditional Use

_____Special Use

Relief from the LDRs

_____Administrative Adjustment

_____Variance

_____Beneficial Use Determination

_____Appeal of an Admin. Decision

Physical Development

_____Sketch Plan

X_____Development Plan

_____Design Review

Subdivision/Development Option

_____ Subdivision Plat

_____Boundary Adjustment (replat)

_____Boundary Adjustment (no plat)

_____Development Option Plan

Interpretations

_____Formal Interpretation

_____Zoning Compliance Verification

Amendments to the LDRs

_____LDR Text Amendment

_____Map Amendment

Miscellaneous

_____**Other:**_____

_____ Environmental Analysis

PRE-SUBMITTAL STEPS. *To see if pre-submittal steps apply to you, go to www.townofjackson.com/200/Planning and select the relevant application type for requirements. Please submit all required pre-submittal steps with application.*

Pre-application Conference #: P23-010 Environmental Analysis #: _____

Original Permit #: _____ Date of Neighborhood Meeting: _____

SUBMITTAL REQUIREMENTS. *Please ensure all submittal requirements are included. The Planning Department will not hold or process incomplete applications. Partial or incomplete applications will be returned to the applicant. Go to www.townofjackson.com/200/Planning and select the relevant application type for submittal requirements.*

Have you attached the following?

X **Application Fee.** Fees are cumulative. Go to www.townofjackson.com/200/Planning and select the relevant application type for the fees.

X **Notarized Letter of Authorization.** A notarized letter of consent from the landowner is required if the applicant is not the owner, or if an agent is applying on behalf of the landowner. Please see the Letter of Authorization template at http://www.townofjackson.com/DocumentCenter/View/845/LetterOfAuthorization-PDF.

X **Response to Submittal Requirements**. The submittal requirements can be found on the TOJ website for the specific application. If a pre-application conference is required, the submittal requirements will be provided to applicant at the conference. The submittal requirements are at www.townofjackson.com/200/Planning under the relevant application type.

Note: Information provided by the applicant or other review agencies during the planning process may identify other requirements that were not evident at the time of application submittal or a Pre-Application Conference, if held. Staff may request additional materials during review as needed to determine compliance with the LDRs.

Under penalty of perjury, I hereby certify that I have read this application and associated checklists and state that, to the best of my knowledge, all information submitted in this request is true and correct. I agree to comply with all county and state laws relating to the subject matter of this application, and hereby authorize representatives of Teton County to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.

Joe. Bongiorno 10/23/2024

Signature of Property Owner or Authorized Applicant/Agent Date

Joe Bongiorno (Northworks Architects) Senior Architect

Name Printed Title

Town of Jackson
150 E Pearl Avenue
PO Box 1687, Jackson, WY 83001
P: (307)733-3932 F: (307)739-0919
www.jacksonwy.gov

Date:

LETTER OF AUTHORIZATION

NAMING APPLICANT AS OWNER'S AGENT

PRINT full name of property owner as listed on the deed when it is an individual OR print full name and title of President or Principal Officer when the owner listed on the deed is a corporation or an entity other than an individual

Being duly sworn, deposes and says that BREG SK 53, LLC, BREG SK58, LLC, BREG SK57A, LLC, BREG SK57B, LLC & BREG SK 57C, LLC is the owner in fee of the premises located at:

Name of property owner as listed on deed

Address of Premises: 553 Upper Snow King Loop, 725 Upper Snow King Loop & 510 Upper Snow King Loop

Legal Description: See attached

Please attach additional sheet for additional addresses and legal descriptions

And, that the person named as follows: Name of Applicant/agent: Joe Bongiorno (Northworks Architects)

Mailing address of Applicant/agent: 185 E Hanson Avenue, Jackson, WY 83001

Email address of Applicant/agent: jbongiorno@nwks.com

Phone Number of Applicant/agent: 630-254-9111

Is authorized to act as property owner's agent and be the applicant for the application(s) checked below for a permit to perform the work specified is this(these) application(s) at the premises listed above:

☒ Development/Subdivision Plat Permit Application ☒ Building Permit Application

☒ Public Right of Way Permit ☒ Grading and Erosion Control Permit ☒ Demolition Permit

☒ Other (describe) Design Review Committee Application

Under penalty of perjury, the undersigned swears that the foregoing is true and, if signing on behalf of a corporation, partnership, limited liability company or other entity, the undersigned swears that this authorization is given with the appropriate approval of such entity, if required.

Property Owner Signature

Authorized Member

Title if signed by officer, partner or member of corporation, LLC (secretary or corporate owner) partnership or other non-individual Owner

STATE OF WISCONSIN)
) SS.
COUNTY OF KENOSHA)

The foregoing instrument was acknowledged before me by Stephen R. Mills this 25th day of March. WITNESS my hand and official seal.

Janis E. Hagerty

Notary Public

My commission expires:

JANIS E. HAGERTY
NOTARY PUBLIC - STATE OF WISCONSIN
MY COMMISSION EXPIRES
FEBRUARY 10, 2028

INSERT TITLE REPORTS

Geotechnical Report

REFER TO ADDENDUM

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
P24-168		BUILDING DEPARTMENT COMMENTS	Structures must meet the most current adopted building codes of the Town of Jackson at the time of permitting.		
P24-168		DETERMINATION OF SUFFICIENCY	Please see attached letter.		
P24-168		ENGINEERING DEPARTMENT COMMENTS	See attached PDF.		
P24-168		FIRE DEPARTMENT COMMENTS	Phase 2 (553 Upper Snow King/Lot 53) shall meet the requirements of the current International Fire Code (IFC) including but not limited to the following. 1.) Construction Management Plan shall include an approved, written site safety plan establishing a fire prevention program at the project site throughout all phases of construction per the requirements of the IFC, Section 3303. The plan shall be submitted to this department and approved before a building permit is issued. 2.) Fire apparatus access roads shall be provided and maintained in accordance with the IFC, Sections 503.1.1 - 503.1.3. 3.) A fire permit is required for automatic sprinkler systems. A stamped set of automatic sprinkler plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 4.) A fire permit is required for fire alarm systems. A stamped set of fire alarm plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 5.) Standpipe systems shall be provided in new buildings in accordance with the IFC, Section 905.2 - 905.11. A fire permit is required for standpipe systems. A stamped set of standpipe plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 6.) Provide elevator specifications as it will have an impact on sprinkler and fire alarm requirements. Elevators with Firefighter Emergency Operation are required to have a sump and drain. 7.) Buildings will be subject to requirements for emergency responder communication. Buildings that cannot support the required level of in-building emergency responder communications may require an enhancement system. A signal survey can be scheduled when the project is at a 70-75% build-out. A fire department permit is required for the installation of a radio enhancement system. A plan set shall be submitted for review and approval prior to a permit being issued. 8.) Means of egress illumination per the requirements of the IFC, Section 1008.		
	11/13/2024	LEGAL DEPARTMENT COMMENTS		TVALENTINE@JACKSONWY.GOV	12/06/2024
	12/16/2024	PLANNING DEPARTMENT COMMENTS		LPOTZ@JACKSONWY.GOV	12/16/2024

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
	12/24/2024	PC ROUGH DRAFT		KSLUDER@JACKSONWY.GOV	12/24/2024
	02/03/2025	PARKS AND RECREATION DEPARTMENT COMMENTS		BTLENZ@JACKSONWY.GOV	02/03/2025
		PC PUBLIC NOTICE			
		DETERMINATION OF SUFFICIENCY			
		FINAL REPORT			
		COMPLETE REPORT			
		START DEPARTMENT COMMENTS			
		POLICE DEPARTMENT COMMENTS			
		FINAL LETTER			
		TOWN COUNCIL MEETING			
		COMPLETENESS REVIEW			
		PC FINAL DRAFT			
		TC PUBLIC NOTICE			
		INITIAL REPORT			
		JOINT HOUSING DEPARTMENT COMMENTS			
		PATHWAYS DEPARTMENT COMMENTS			
		PC KEY ISSUES			
		PLANNING COMMISSION REVIEW AND RECOMMENDATION			

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
P24-174		BUILDING DEPARTMENT COMMENTS	Structures must meet the most current adopted building codes of the Town of Jackson at the time of permitting.		
P24-174		DETERMINATION OF SUFFICIENCY	Please see attached letter.		
P24-174		ENGINEERING DEPARTMENT COMMENTS	See attached PDF.		
P24-174		FIRE DEPARTMENT COMMENTS	Phase 1 (510 Upper Snow King/Lot 57 North & South Buildings) shall meet the requirements of the current International Fire Code (IFC) including but not limited to the following. 1.) Construction Management Plan shall include an approved, written site safety plan establishing a fire prevention program at the project site throughout all phases of construction per the requirements of the IFC, Section 3303. The plan shall be submitted to this department and approved before a building permit is issued. 2.) Fire apparatus access roads shall be provided and maintained in accordance with the IFC, Sections 503.1.1 - 503.1.3. 3.) A fire permit is required for automatic sprinkler systems. A stamped set of automatic sprinkler plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 4.) A fire permit is required for fire alarm systems. A stamped set of fire alarm plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 5.) Standpipe systems shall be provided in new buildings in accordance with the IFC, Section 905.2 - 905.11. A fire permit is required for standpipe systems. A stamped set of standpipe plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 6.) Provide elevator specifications as it will have an impact on sprinkler and fire alarm requirements. Elevators with Firefighter Emergency Operation are required to have a sump and drain. 7.) Buildings will be subject to requirements for emergency responder communication. Buildings that cannot support the required level of in-building emergency responder communications may require an enhancement system. A signal survey can be scheduled when the project is at a 70-75% build-out. A fire department permit is required for the installation of a radio enhancement system. A plan set shall be submitted for review and approval prior to a permit being issued. 8.) Means of egress illumination per the requirements of the IFC, Section 1008.		
	11/13/2024	PC PUBLIC NOTICE		TVALENTINE@JACKSONWY.GOV	12/06/2024
	12/16/2024	TC PUBLIC NOTICE		LPOTZ@JACKSONWY.GOV	12/16/2024

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
	12/24/2024	PLANNING DEPARTMENT COMMENTS		KSLUDER@JACKSONWY.GOV	12/24/2024
	02/03/2025	JOINT HOUSING DEPARTMENT COMMENTS		BTLENZ@JACKSONWY.GOV	02/03/2025
		DETERMINATION OF SUFFICIENCY			
		FINAL LETTER			
		PARKS AND RECREATION DEPARTMENT COMMENTS			
		PLANNING COMMISSION REVIEW AND RECOMMENDATION			
		COMPLETENESS REVIEW			
		PC ROUGH DRAFT			
		POLICE DEPARTMENT COMMENTS			
		PC FINAL DRAFT			
		COMPLETE REPORT			
		LEGAL DEPARTMENT COMMENTS			
		INITIAL REPORT			
		TOWN COUNCIL MEETING			
		PC KEY ISSUES			
		START DEPARTMENT COMMENTS			
		FINAL REPORT			

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
		PATHWAYS DEPARTMENT COMMENTS			

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
P24-175		BUILDING DEPARTMENT COMMENTS	Structures must meet the most current adopted building codes of the Town of Jackson at the time of permitting.		
P24-175		DETERMINATION OF SUFFICIENCY	Please see attached letter.		
P24-175		ENGINEERING DEPARTMENT COMMENTS	Please see attached PDF.		
P24-175		FIRE DEPARTMENT COMMENTS	Phase 2 (725 Upper Snow King/Lot 58) shall meet the requirements of the current International Fire Code (IFC) including but not limited to the following. 1.) Construction Management Plan shall include an approved, written site safety plan establishing a fire prevention program at the project site throughout all phases of construction per the requirements of the IFC, Section 3303. The plan shall be submitted to this department and approved before a building permit is issued. 2.) Fire apparatus access roads shall be provided and maintained in accordance with the IFC, Sections 503.1.1 - 503.1.3. 3.) A fire permit is required for automatic sprinkler systems. A stamped set of automatic sprinkler plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 4.) A fire permit is required for fire alarm systems. A stamped set of fire alarm plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 5.) Standpipe systems shall be provided in new buildings in accordance with the IFC, Section 905.2 - 905.11. A fire permit is required for standpipe systems. A stamped set of standpipe plans shall be submitted for review and approval prior to a permit being issued. Inspection and testing shall be scheduled with this office. 6.) Provide elevator specifications as it will have an impact on sprinkler and fire alarm requirements. Elevators with Firefighter Emergency Operation are required to have a sump and drain. 7.) Buildings will be subject to requirements for emergency responder communication. Buildings that cannot support the required level of in-building emergency responder communications may require an enhancement system. A signal survey can be scheduled when the project is at a 70-75% build-out. A fire department permit is required for the installation of a radio enhancement system. A plan set shall be submitted for review and approval prior to a permit being issued. 8.) Means of egress illumination per the requirements of the IFC, Section 1008.		
	11/13/2024	PC FINAL DRAFT		TVALENTINE@JACKSONWY.GOV	12/06/2024
	12/16/2024	PC KEY ISSUES		LPOTZ@JACKSONWY.GOV	12/16/2024
	12/24/2024	FINAL LETTER		KSLUDER@JACKSONWY.GOV	12/24/2024

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
	02/03/2025	PARKS AND RECREATION DEPARTMENT COMMENTS		BTLENZ@JACKSONWY.GOV	02/03/2025
		POLICE DEPARTMENT COMMENTS			
		TOWN COUNCIL MEETING			
		PC PUBLIC NOTICE			
		PC ROUGH DRAFT			
		TC PUBLIC NOTICE			
		PLANNING COMMISSION REVIEW AND RECOMMENDATION			
		PLANNING DEPARTMENT COMMENTS			
		COMPLETE REPORT			
		LEGAL DEPARTMENT COMMENTS			
		FINAL REPORT			
		START DEPARTMENT COMMENTS			
		COMPLETENESS REVIEW			
		JOINT HOUSING DEPARTMENT COMMENTS			
		INITIAL REPORT			
		DETERMINATION OF SUFFICIENCY			

Workflow Notes

Permit Number	Begin Date	Step Type	Text	Created By	End Date
		PATHWAYS DEPARTMENT COMMENTS			

DEVELOPMENT – APPROVED with CONDITIONS

P24-168, 174, 175
ADDRESS: 510-553-725 Upper Snow King Loop
OWNER: BREG SK57A, LLC & BREG SK57B, LLC & BREG SK57C, LLC
APPLICANT: Northworks Architects – Joe Bongiorno

2/3/2025
Jeff Silliman and Brian Lenz, 733-3079

DATE OF SUBMITTAL: 11/8/2024
DATE OF MATERIALS: 10/29/2024 (Civil)

The engineering division has reviewed your application for a **DEVELOPMENT PLAN** submitted on and with application materials as dated above.

Three separate development plans were submitted, our review for all three is consolidated into one review.

The following conditions are being provided for use in preparation of Building Permits. Unless otherwise noted, the items shall be addressed with any resubmittal of the development plan or with the Building Permit. The information for Building Permits should be detailed for final construction documents.

CONDITIONS OF APPROVAL

A. LDR 5.7.1.D.3: Review and revise the geotechnical reports and provide updated plans and reports with the Building Permit Application as necessary. Applicant is responsible for the cost of any third party review of the geotechnical analysis.
B. LDR 5.7.2.A.1: Provide signed and stamped reports from ATLAS. Update Geotechnical Reports for any changes in design or analysis.
C. LDR 5.7.2.A: Prior to presenting to Town Council provide a narrative and exhibits that show how the buildings conform to the general natural form and minimize cuts and fills. In particular, forty-foot-deep-retaining walls on the south side of Lot 58 provide a significant break in the form and require a large cut without offsetting fill.
D. LDR 5.7.2.B.6: Provide detail on the interceptor ditches uphill of the developments that stable and with capacity for the runoff. Clearly define where the runoff is conveyed. For conveyance off site see notes on LDR 5.7.2.B.8.
E. LDR 5.7.2.B.8: In the absence of a mutual grading easement between adjacent landowners, the tops and toes of cut and fill slopes shall be within the property lines of the proposal
    a. Permit drawings must show grading within the property lines or submit proposed easements with the building permit and show them on the plans noting that they need to be executed and recorded prior to permit issuance.
    b. Prior to permit approval the easements need to be executed and recorded.

SUBMITTED

c. Where work is being completed within an existing road and easement, e.g. between Lots 57 and 58, provide a Letter of Authorization from the landowner to do the work. Show the easements clearly on the plans and cite the legal document that creates them.

F. LDR 5.7.2.B.4 / IBC 1807.2: Provide structural calculations and factors of safety for all retaining walls. Stability analyses demonstrating minimum factors of safety of at least 1.50 under static conditions and at least 1.10 under seismic loading conditions. Walls with a separation of at least 2H (H of largest of 2 walls) from face of wall to face of wall should be considered as separate walls. In a terrace of retaining walls, a minimum horizontal separation of H/2 should be maintained as measured from back of lower wall to face of higher wall. Provide notes on the plans and details that require Special Inspections by the design professional in responsible charge, IBC 1704 and 1705.1.1. Provide guards as required by IBC 1807.2.5 or as needed to protect wildlife.

G. LDR 5.7.4.B.1: For connection to the downstream storm system determine the actual path of discharge, certify that the lines and detention are clear and functioning, that the new connections are in accord with the original design, and that capacity exists in the system.

H. LDR 5.7.4.B.2.h: Provide pollution abatement treatment prior to any discharge to a stormwater or infiltration system.

I. LDR 5.7.1.D.4: Grading Pre-Applications required for each building prior to Building Permit submittal. If all of the necessary information is prepared for all sites and building permits will be submitted within 6 months of the meeting then one grading pre-application meeting could be used to cover the projects.

J. LDR 7.2.2.A.1.b: Provide a striping and signage plan for the development.

K. LDR 7.7.2.A/G: Show compliance with ISO, DEQ, and Fire standards for number of hydrants and hydrants served on 6-inch lines.

L. LDR 7.7.2.A: Provide will serve letter from the Snow King [Mountain] Resort that clarifies the entity that owns the improvements and the status of the water tank, e.g. when last cleaned and if the full volume of the tank is in use or if the tank is portioned for half capacity. Ownership should coincide with the easements and parcels where the utilities are located. Unless isolated and master metered the water and sewer need to be owned by Snow King Mountain Resort that owns the system the development is connecting to.

M. LDR 7.7.2.A: Provide hydraulic analysis for the development and its flows. Analysis provided was limited to volume. Provide the source for the assumed water demands.

N. LDR 7.7.2.G: Provide a letter from the Fire Marshall that fire supply, protection, and hydrants proposed are acceptable.

O. LDR 7.7.2: Provide size and location of water meters backflow devices for each building. Adhere to Town Standards for utility connections. Each building to have a single tap at main and branched domestic and fire outside of the building with an individual domestic meter for the building. Provide separate meters for irrigation. Reduced Pressure Backflow required on domestic, irrigation and fire. Locate meters and backflow as close as possible to the point of entry to the building.

P. LDR 7.7.3: Town inspection showed that the sewer line is full of dirt and rocks. Provide a note on the plans to isolate/plug the connection to the active sewer prior to cleaning and inspecting the line. DO NOT DISCHARGE THE DEBRIS INTO THE ACTIVE SEWER. Depending

SUBMITTED

on line condition, the lines may need to be retested, repaired, or replaced. Provide video inspections to Town Engineering. Check status of manholes on access road. Make sure they're open, functioning, and accessible.

Q. LDR 7.7.3: Revise wastewater volumes to correspond with Town of Jackson Capacity Fee Max Day, Code 13.08.020.

R. LDR 8.3.3.C.3: For each building, provide a plan for mail delivery that does not have a significant impact on public facilities and services, e.g. mail and parcel room with USPS Caller service, private mail delivery, etc.

S. IBC CHAPTER 11 / ADA ACCESSIBILITY: Provide an accessibility plan. Final design and compliance is required with the building permit application but the Development plan needs to show that the plan is feasible.

   Show compliance with accessibility regulations including but not limited to:

   a. 1104.1: At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served.
   b. 1104.2: At least one *accessible* route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same *site*.
   c. 1104.5: Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall be interior. Where only one accessible route is provided, the accessible route shall not pass through kitchens, storage rooms, restrooms, closets or similar spaces.
   d. Prioritize pedestrian access through intersections and curb cuts with elevated sidewalks adhering to ADA standards and show how drainage will be achieved.

The following comments are being provided for consideration in preparation of Building Permit documents. They are not compulsory but may add value to the project.

PROJECT SPECIFIC COMMENTS

1. LDR 7.6.3.F.1: Development should provide a reasonable connection to Snow King Drive. The Town of Jackson has an easement in the Snow King Estates development between Lots 10 and 11 that we used during construction in 2018-2019. It would be beneficial to both the Town and the Developer to maintain this alternative access in the event of emergencies or construction. We would like to coordinate with the developer and Snow King Mountain Resort to see if there is a feasible design that could be implemented to preserve this access.
2. The Town standard is no longer for concrete collars on surface features in roadways. Recommend removing concrete collar from manhole and water valve details. Show completion with hot or cold mix pavement.
3. Our records show that the stormwater from this development routes to Vine Drive and then out to Kelly Ave.
4. Is it necessary to replace the entire 8" line uphill of building 57, or can the new line tie in at the crossing of the existing near station 2+30?

SUBMITTED

Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

April 8, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Dept.
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

We understand that the Town is evaluating a modified proposal by Bear Development, LLC, to build a multi-unit condominium complex adjacent to the Grand View Condominiums in the Snow King Resort District.

We own unit 483, on the west-facing, top floor of Grand View Building 548. Lot 57 of the proposed development surrounds the west and south sides of Building 548.

We echo the concerns expressed by the Grand View Homeowners' Association, repeat the concerns we stated in our February 20, 2025 letter, and add points specific to the revised plans for Lot 57.

Lot 57's proposed structures are too large and too close to Grand View 548.

- The revised concept for Lot 57 is still not in compliance with the Snow King Master Plan's requirement that new buildings be compatible in bulk, scale and character with Grand View.
- The new plan maximizes sellable square footage on Lot 57 at the expense of the open, bright and understated current setting. Bear proposes two massive, modern structures that would dwarf the single structure previously approved by SKRMA and the Town by reference to footprint, height and proximity to Grand View.
- Prior to purchasing unit 483, we reviewed the approved plans for Lot 57 and took comfort in the expectation of scale-consistent development next door. (*See our February 20, 2025 submission for further reference.*)

- If the two-building concept is approved with the clearances proposed by Bear, the space between Grand View and the new structures will be a close, pedestrian unfriendly and potentially unsafe corridor.

    - Bear's own depictions underscore the lack of harmony with existing buildings and road clearances. For example, roof-to-roof clearance between Grand View 548 and the Love Ridge building downhill is nearly **53 feet**. This distance preserves space, privacy, light, sight lines, median space and clearance for Snow King Loop Road. (*Revised Plan "RP" p. 85.*)

    - Compared to existing structures separated by Snow King Loop Road, clearance between buildings would shrink by as much as 10 feet under Bear's revised plans. Bear envisions roof-to-roof clearance of just **43 feet** between Grand View 548 and the Lot 57 North building, and just **50 feet** between Grand View 548 and the South building, with Upper Snow King Loop Road passing in between. (*RP pp. 85.*) The combined effect will be a sense of increasing constriction as you turn uphill towards Lots 53 and 58. (*RP p. 72.*) The depictions submitted by Bear of this junction omit Grand View 548 to give an artificial sense of space and brightness in this space. (*RP pp. 73-74.*)

    - Separation between Grand View 548 and Lot 57 South could well be less than 50 feet, as the balconies of the new condos appear to extend beyond the building's roofline towards our patios, again impacting relative scale, privacy, light and sound. (*Compare RP pp. 75, 86.*)

    - Bear chose to eliminate sidewalks rather than compromise on square footage. (*RP p. 6.*) Two large buildings do not fit naturally with Lot 57's unusual shape or meet the Master Plan's requirement for harmony with Grand View. Bear celebrates the loss of sidewalks as win for plantings and visual screening, but it is more accurately a result of designing the largest possible structure to the limits of the property line in a constrained space. The Town should closely scrutinize whether the proximity of Lot 57's structures to Grand View is consistent with the Master Plan's mandates to "encourage pedestrian activity," "reduce mass to better align with neighboring structures," and ensure safe ingress and egress.

    - Despite roof line adjustments in the revised plan, Lot 57's South building will be at least **19 feet taller** than Grand View 548, a spatial misalignment that

will be made more obvious by the inadequate horizontal separation discussed above.

- Some of Bear's depictions of Lot 57 plans are incomplete and misleading.

  - Bear produced many renditions showing Lot 57's structures in relation to Grand View, yet not one shows the west-facing perspective down Upper Snow King Loop Road (i.e., between Grand View 548 and Lot 57 South). The Grand View HOA submitted its own rendering of this corridor to emphasize what Bear wants to downplay: the bottleneck and spatial (horizontal and vertical) mismatch that will result by allowing the proposed construction to the lot lines on the south arm of Lot 57 less than 50 feet away from Grand View neighbors' patios.

  - Even without an honest rendering of this tight east-west corridor, aerial images on pages 8, 14 and 62 of the Revised Plan show the horizontal scale disparity between Lot 57 South and Grand View – a disharmony that runs afoul of the Master Plan.

  - The image on page 73 of the Revised Plan is skewed to ignore Grand View, giving an artificial impression of space, light and access. The actual layout would be much tighter, at just 43-50 feet separation according to Bear's own renditions.

The Town should reject the proposed development on Lot 57 outright, or at a minimum disallow the outsized structure on Lot 57's South arm and require more horizontal clearance between Lot 57's North structure and Grand View 548.

Thank you for considering our position.

Respectfully,

Kyle Levine

Kyle B. Levine
for Blanche Neige LLC

Robert P. Warren
550 Snow King Loop, Apt 504
Jackson, Wy 83001

April 8, 2025

Mr. Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

As a resident of Jackson and an owner of a Grand View Condominium, I want to reiterate my vigorous opposition to the resubmitted application and plans of Bear Development, LLC, a Wisconsin developer (the "Applicant") for Snow King Condominiums, Lots 53, 57 and 58 (the "Plans"). The applicant's newly submitted plans are at sum an obvious transparent attempt to deliberately mislead the Planning and Town Council both by its "revisions" and proffered drawings.

To be specific, as an owner in Grand View Building 550, I again strenuously object to the bulk and scale of Lot 53's proposed building which will tower over my condominium. There is nothing in the Applicant's revised Plans which addresses the fact that as proposed the Lot 53 Building will meaningfully dwarf Grand View building 550. Its "new" Plans simply fail to reduce in any respect the size of the building on Lot 53 – obviously a misguided assessment that it could simply just muscle the Plans through municipal examination by indulging in the misguided presumption that it would not be serious scrutinized.

What brings the Applicant's greed and sleight of hand into clear focus is the way it yet again presents the visible depictions of its Plans. By grossly distorting the size of these buildings in its pictural renditions, the Applicant tacitly acknowledges that it does not want the town to recognize how outsized they are. There is no other reason to misrepresent the size and structure of the

proposed development other than to believe that no one will carefully probe their Plans.

Among other things, the applicant is in direct violation of the Snow King Master Plan in that the Applicant did not provide for any vegetation between their buildings and the sidewalks. To meet the Master Plan's requirement of having room for vegetation next to their building, the Applicant's apparent solution is to now simply eliminate the sidewalks. Pedestrians, therefore, walking up from the hotel or parking to visit one of the 72 condominiums, will need to walk in the road!

Moreover, by its size alone, the Lot 53 building will create a sunless valley between it and my unit. Without a doubt, the Lot 53 building violates the bulk, scale and character of Grand View's master plan upon which I relied when I first purchased my condominium.

Unfortunately, Applicant is an out of state developer with little regard for our community which is evidenced by its total lack of appreciation of how its Plans will impact Jackson and the surrounding Snow King condominium environment. It is abundantly clear from the size and scope of its Plans that the Applicant is merely concerned about how many apartment units, buildings, occupants and vehicles it can pack into Lots 53, 57 and 58.

It is extremely obvious as well that the Applicant's sole objective is simply to make as much money as possible -- to get the largest possible return on its investment -- with utterly no regard for the town of Jackson's surrounding communities, its natural beauty and the substantially increased strain it will place on our municipal services and infrastructure.

Also, the Plans place a huge increasing revenue burden on the citizens of Jackson with an inevitably expanding demand for municipal services like water, sewage, electrical service and traffic control. Also, it is certainly foreseeable that if this proposed project ever caught fire either internally or because of a forest fire, such an out-of-control conflagration would certainly engulf not only the surrounding condominiums, but also the houses and subdivisions below and others close to town – especially if driven by strong winds.

And, if anyone thinks that East and West Snow King Road and US 191 are parking lots between the hours of 3:30 pm and 6:00 pm, then this Plan with all its residents and vehicles, will make these roads at times simply impassable for Jackson residents -- especially those living on either side of these roadways which for many is their only way out.

The Grand View Condominium Association has submitted a letter objection to significant aspects of the Plans and has addressed the Applicant's failure to comply with the requirements of the Snow King Planned Resort District Master Plan. Plainly stated, the Plans are noncompliant with the overall Master Plan and are certainly not in the best interest of the Jackson community.

I again respectfully ask the Town of Jackson to reject the revised proposed Plans outright. We as residents should not aid and abet Applicant's outright greed and allow our town to be despoiled by outsiders who want to forever change the character of our community while lining their own pockets and then simply moving on without looking back! The Snow King Resort District Master Plan must be adhered to and respected.

Thank you for your consideration.

Submitted By,

Robert Warren

Robert P. Warren
550 Snow King Loop, Apt 504
Jackson, Wy 83001

February 19, 2025

Mr. Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

As a resident of Jackson and an owner of a Grand View Condominium, I stand in vigorous opposition to the application and plans of Bear Development, LLC, a Wisconsin developer (the "Applicant") for Snow King Condominiums, Lots 53, 57 and 58 (the "Plans").

To be specific, as an owner in Grand View Building 550, I strenuously object to the bulk and scale of Lot 53's proposed building which will tower over my condominium. As currently proposed, the Lot 53 Building will be more than twice the size of Building 550. Moreover, by its size alone, the Lot 53 building will create a sun less valley between it and my unit as well as seriously impinging upon my pedestrian walkway. Finally, the Lot 53 building violates the bulk, scale and character of Grand View's master plan upon which I relied when I first purchased my condominium.

Unfortunately, Applicant is an out of state developer with little regard for our community which is evidenced by its total lack of appreciation of how its Plans will impact Jackson and the surrounding Snow King condominium environment. It is abundantly clear from the size and scope of its Plans that

the Applicant is merely concerned about how many apartment units, buildings, occupants and vehicles it can pack into Lots 53, 57 and 58.

The Applicant's sole objective is simply to make as much money as possible -- to get the largest possible return on its investment -- with utterly no regard for the town of Jackson's surrounding communities, its natural beauty and the substantially increased strain it will place on our municipal services.

What brings the Applicant's greed and sleight of hand into clear focus is the way it presents the visible depictions of its Plans. By grossly distorting their size in its pictural renditions, the Applicant tacitly acknowledges that it does not want the town to recognize how outsized buildings are. There is no other reason to misrepresent the size and structure of the proposed development other than to believe that no one will carefully probe their Plans.

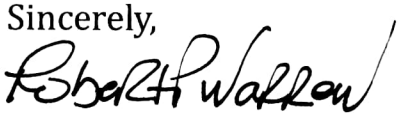
Also, the Plans place a huge increasing revenue burden on the citizens of Jackson with an inevitably expanding demand for municipal services like water, sewage, electrical service and traffic control. Also, it is certainly foreseeable that if this proposed project caught fire either internally or because of a forest fire, such an out-of-control fire would certainly engulf not only the surrounding condominiums, but also the houses and subdivisions below and others close to town – especially if driven by strong winds.

And, if anyone thinks that East and West Snow King Road and US 191 are parking lots between the hours of 3:30 pm and 6:00 pm, then this Plan with all its residents and vehicles, will make these roads at times simply impassable for Jackson residents -- especially those living on either side of these roadways which for many is their only way out.

The Grand View Condominium Association has submitted a letter objection to significant aspects of the Plans and has addressed the Applicant's failure to comply with the requirements of the Snow King Planned Resort District Master Plan. Plainly stated, the Plans are noncompliant with the overall Master Plan and are certainly not in the best interests of the Jackson community.

I respectfully ask the Town of Jackson reject the proposed Plans outright. We as residents should not aid and abet Applicant's outright greed and allow our town to be despoiled by outsiders who want to forever change the character of our community while lining their own pockets and then simply moving on without looking back! Thank you for your consideration.

Sincerely,



Robert P. Warren

From: chris.mandy
To: Tyler Valentine
Subject: New Snow King Development
Date: Thursday, February 20, 2025 1:22:50 AM

Mr. Valentine,

As owner of 549 Snow King Loop, Unit 494, I fully support the issues our HOA board has raised regarding the proposed construction behind our units. This proposed construction on Lot 57 obviously violates the restrictions on page 77 to be compatible with Grand View in bulk, scale, and character. If this is allowed to go through, the result would be a towering monstrosity of buildings that diminish the whole look of the mountain and violate well thought out and purposeful restrictions. Please make the right decision on this proposed construction and do not allow it to go through.

Sincerely,
Chris Palmer

From: Deborah Wente
To: Tyler Valentine
Subject: Proposed Snow King development
Date: Thursday, February 20, 2025 8:45:30 AM
Attachments: SK Master Plan - Page 77 .jpg.msg
Lot 57 South-GV 548 .jpg.msg
Lot 57 North-GV 548 .jpg.msg

John and Deborah Wente
548 Snow King Loop Road
Unit 482
Jackson, WY 83001

February 20, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Department
Tvalentine@jacksonwy.gov

Dear Mr. Valentine,

We understand that the town is evaluating a proposal by Bear Development,LLC to build a multi unit condominium complex adjacent to the Grandview condominiums in the Snow King resort district.

We own Grandview unit 482 which is located on the east side of the building.

Please consider this letter as opposition to the Bear Development plans for lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant, negative impacts to Grandview and the surrounding areas and do not meet the master plans requirements

for bulk, scale, or character as explained more fully in the letter from Richard Lurie, President of the Grandview Condominium Association. We ask that these plans be denied until changes are made to bring the proposed development into compliance with the master plan.

In 2006 when we purchased our unit in building 548 of Snow King, we carefully reviewed all associated documentation. This included the Snow King master plan, please see attached. We understood that there would be eventual development near our unit consistent with what was presented in the master plan and approved by the Town of Jackson. As stated in the master plan, units will be developed to fit in with the bulk, scale, and character of the existing Grandview condominiums and Grandview Lodge.

We strenuously object to the current plan. These buildings are much bigger than the current units and are inconsistent with the Snow King master plan. We will completely lose visibility of Snow King Mountain. One of our favorite things is to sit on the back deck and look up at the mountain, there was never any expectation we would lose this privilege. Please reference the attached renderings to demonstrate how overshadowed our building would be with the lot 57 South building as proposed. Our beautiful view of the mountain would now be a view of a garage.

Again, we understand that these properties were planned for development. However, we had absolutely no expectation they would be so completely oversized compared to the current building.

If this development as proposed is allowed to proceed, the Snow King master plan becomes a useless document that no potential

buyer in the Resort District can rely upon.

We respectfully request that the town of Jackson reject the proposed plan.

John and Deborah Wente

Get Outlook for iOS

From: Dennis Law
To: Tyler Valentine
Subject: Bear Development"s Proposed development at Snow King Resort
Date: Thursday, February 20, 2025 11:47:47 AM

Hello Tyler,

My name is Dennis Law, I am writing this letter as an owner, with interest in a number of the condominiums in the Grand View Condominiums, through my father Creed Law's trust.

We strongly object to Bear Development's application for the development of lots 53 and 57 of the Snow King Resort. The proposed buildings are massive and out of place when compared to the existing condominiums in our neighborhood. The buildings and the large retaining wall associated with them will create significant negative impacts to Grand View and the surrounding areas. Furthermore, the proposed development does not appear to meet the Master Plan's requirements for the size, scale, character and design, as explained in more detail by Rich Laurie, President of the Grand View Condominium Association.

We ask that these plans and the associated development be denied until changes are made which will bring the proposed development into compliance with the Master Plan and the surrounding area.

Thank you very much for your consideration.

Sincerely,

Dennis C. Law

Donald O'Shei

548 Snow King Loop, Unit 484
Jackson, WY 83001
415-572-3699
doshei@hotmail.com

Apr 9, 2025

Tyler Valentine

Senior Planner
Town of Jackson Planning and Building Dept.

tvalentine@jacksonwy.gov

Dear Mr. Valentine,

Attached please find my letter of February 19, 2025 laying out a number of objections to the Bear Development, LLC plans for Snow King development. Unfortunately, the minimally revised current proposals not assuaged any of my objections in any meaningful way.

Looking at the revised artists renderings (which are designed, I believe, to minimize the perceived impact of the proposed structures in a manner not at all consistent with the true eventual actual impact) the vertical and horizontal mass of the structure proposed for Lot 57, the mountain modern style and the offsets are a total violation of the agreed Snow King Resort District Master Plan which states:

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums".

Any contention that this structure follows the master Plan is at best disingenuous and at worst intentionally deceitful. I can only reiterate that the objections I raised in my previous letter remain in full force. I repeat that:

Under no circumstances can these structures be approved or the Master Plan requirements will be rendered meaningless and the existing homeowner's interests will be disregarded and their property values damaged.

Nothing in the revised proposals ameliorates those objections and concerns.

Sincerely yours,



Donald O'Shei

Sincerely yours,



Donald O'Shei

Donald O'Shei

548 Snow King Loop, Unit 484
Jackson, WY 83001
415-572-3699
doshei@hotmail.com

February 19, 2025

Tyler Valentine

Senior Planner
Town of Jackson Planning and Building Dept.

tvalentine@jacksonwy.gov

Dear Mr. Valentine,

I have been following, with great interest the ongoing Bear Development, LLC, fiasco. To say I am deeply concerned is a drastic understatement. I have been the owner of Unit 484 in 548 Snow King Loop for over 15 years. Unit 484 is not a rental property and is my primary residence. During that entire period of 15 years Snow King has used the Lot 57 footprint as an equipment dumping ground and to store leaky diesel fuel tanks, creating an eyesore and negatively impacting our enjoyment, use and value of my property. Whenever I raised these issues, I was reassured that Lots 57 and 58 would be imminently redeveloped from this unsightly use, in accordance with the Snow King Resort District Master Plan and that these negative impacts would be mitigated in a manner "spatially and stylistically consistent with existing condominiums and the Grand View Lodge." We were, in fact, regularly pointed to the approved Master Plan's restrictions and illustrations of approved structures, which, were be relied on to protect our future interests

Imagine my consternation, when I discovered that Bear Development, LLC intended to build facilities that clearly diverge from the past approved renderings and footprints by a egregious amount, in violation of the Snow King Resort District Master Plan and that the improperly constituted Snow King Resort District Board had given its approval of said violation to the detriment of the existing home owners in a back door deal of some kind.

The proposed structure cannot be said to meet the Master Plan requirements in any way. The proposed Lot 57 building towers over the existing units. It's roof is approximately double the height of Unit 548. As seen in the artists rendering it is a four story building facing, across a minimal set back, a two story (from the rear aspect) structure. It is a mountain modern style design facing its western aesthetic "neighbors". It is a total mismatch of character. The non-existent setback places the main "party area" balconies directly across and much too close to the rear residential bedrooms of our unit in a manner guaranteed to raise conflict when ski vacation or summer short term renters decide to entertain themselves or guests. This doesn't even consider traffic impact. Clearly, the developers dealt with this concern for their potential unit owners by having much larger separation on the uphill side of the proposed structures.

I quote the final Snow King Master Plan:

"Specific Considerations Related to Sub-Area 3 (page 70)

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums"

It is clear to me, and I believe to any uninterested observer, that these proposed structures do not in any way or to any degree fit in with the bulk, scale and character of my property and that they grossly violate both the letter and the spirit of the Master Plan that was approved by the parties and relied on by the existing homeowners.

Under no circumstances can these structures be approved or the Master Plan requirements will be rendered meaningless and the existing homeowner's interests will be disregarded and their property values damaged.

Sincerely yours,



Donald O'Shei

Donald O'Shei

548 Snow King Loop, Unit 484
Jackson, WY 83001
415-572-3699
doshei@hotmail.com

February 19, 2025

Tyler Valentine

Senior Planner
Town of Jackson Planning and Building Dept.

tvalentine@jacksonwy.gov

Dear Mr. Valentine,

I have been following, with great interest the ongoing Bear Development, LLC, fiasco. To say I am deeply concerned is a drastic understatement. I have been the owner of Unit 484 in 548 Snow King Loop for over 15 years. Unit 484 is not a rental property and is my primary residence. During that entire period of 15 years Snow King has used the Lot 57 footprint as an equipment dumping ground and to store leaky diesel fuel tanks, creating an eyesore and negatively impacting our enjoyment, use and value of my property. Whenever I raised these issues, I was reassured that Lots 57 and 58 would be imminently redeveloped from this unsightly use, in accordance with the Snow King Resort District Master Plan and that these negative impacts would be mitigated in a manner "spatially and stylistically consistent with existing condominiums and the Grand View Lodge." We were, in fact, regularly pointed to the approved Master Plan's restrictions and illustrations of approved structures, which, were be relied on to protect our future interests

Imagine my consternation, when I discovered that Bear Development, LLC intended to build facilities that clearly diverge from the past approved renderings and footprints by a egregious amount, in violation of the Snow King Resort District Master Plan and that the improperly constituted Snow King Resort District Board had given its approval of said violation to the detriment of the existing home owners in a back door deal of some kind.

The proposed structure cannot be said to meet the Master Plan requirements in any way. The proposed Lot 57 building towers over the existing units. It's roof is approximately double the height of Unit 548. As seen in the artists rendering it is a four story building facing, across a minimal set back, a two story (from the rear aspect) structure. It is a mountain modern style design facing its western aesthetic "neighbors". It is a total mismatch of character. The non-existent setback places the main "party area" balconies directly across and much too close to the rear residential bedrooms of our unit in a manner guaranteed to raise conflict when ski vacation or summer short term renters decide to entertain themselves or guests. This doesn't even consider traffic impact. Clearly, the developers dealt with this concern for their potential unit owners by having much larger separation on the uphill side of the proposed structures.

I quote the final Snow King Master Plan:

"Specific Considerations Related to Sub-Area 3 (page 70)

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums"

It is clear to me, and I believe to any uninterested observer, that these proposed structures do not in any way or to any degree fit in with the bulk, scale and character of my property and that they grossly violate both the letter and the spirit of the Master Plan that was approved by the parties and relied on by the existing homeowners.

Under no circumstances can these structures be approved or the Master Plan requirements will be rendered meaningless and the existing homeowner's interests will be disregarded and their property values damaged.

Sincerely yours,



Donald O'Shei

Grand View Homeowners Association

Jackson, Wyoming

February 18, 2025

Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

The Grand View Condominium Association (the "Association") has reviewed the application and plans for Snow King Condominiums Lots 53, 57 and 58 (the "Plans") submitted by Bear Development, LLC, a Wisconsin developer (the "Applicant"). The Association respectfully submits that certain, significant aspects of the Plans fail to comply with the requirements of the Snow King Planned Resort District Master Plan (the "Snow King Master Plan" or the "Master Plan"). The Association's primary objection is to (i) the incompatible size, bulk and scale of the development proposed for Lots 57 and 53, and (ii) the retaining wall proposed for the south side of Lot 53, (all as described in more detail below.

The Association has been urged to consider that the newly submitted Plans are a significant improvement over plans previously submitted by Bear Development that the Town deemed grossly inadequate. However, this is not a relevant factor for the Town's evaluation. The Plans remain noncompliant with the Master Plan as further detailed below and we request the Town of Jackson reject the proposed Plans.

First, SKRMA's approval of the Applicant's plans was Invalid

- SKRMA sent out the Applicant plans for Lots 53, 58 and 57 to all SKRMA members on the 21st of May, 2024. At the SKRMA Board meeting of May 23rd (2 days later), the plans were approved. This allowed only eighteen (18) hours to review a 70-page design plan.
- This is the largest development project in the history of the Resort District, valued at over $200 million and we requested to see a professional independent review of the plans. Our request was ignored
- Grand View Condominium Association then reviewed the plans on their own and found the plans violate the Snow King Master plan as we have articulated in this letter. We conveyed this to SKRMA in writing and they did not respond.

- SKRMA took another vote and again approved the plans with 6 yes votes (3 from Snow King Mountain and 3 from the Snow King Hotel). One no vote was registered by the Residential Class representative.
- We would like to point out the SKRMA Bylaws are in violation of the Snow King Master Plan which calls for the allocation of Board seats based upon assessed valuation. Please see Section XI of the Master Plan. In direct conflict with this requirement, the SKRMA Board's Bylaws stipulate 3 seats to Snow King Mountain and 3 seats to Snow King Hotel and the Residential Class was given just 1 seat.
    - Currently the Residential Class assessed valuation is approximately $15 million.
    - The Snow King Hotel and Conference Center has an assessed valuation of $3.2 million.
    - Snow King Mountain assessed valuation is estimated at $2.9 million.
    - The total for both the Hotel and Mountain comes to $6.2 million and therefore the Residential Class has an assessed valuation of 2.5 times the valuation of the Hotel and Mountain combined.
    - According to the Master plan the Residential Class should have at least twice the number of board seats that are assigned to the Hotel and the Mountain.
- We therefore believe the approval by the SKRMA board is invalid.

Second, the Plans do not Adhere to the Requirements of the Snow King Master Plan.

Background: Properties within the Snow King Planned Resort District are governed by the Master Plan, and all development in these Sub-Areas must comply with the Master Plan's terms and conditions. Both Grand View Condominiums and Lots 53, 57 and 58 lie within Sub-Area 3. The sections of the Master Plan most applicable to the Bear Development project are as follows:

1. One of the main purposes of the Master Plan is to provide the community limits of development predictability. (p. 2)

2. The Master Plan includes Master Site Plans and maps to illustrate proposed development and the site characteristics for each Sub-Area. In these site plans, square footage for the buildings on each of Lots 53, 67, and 58 are planned as follows. (pp. 3, 15)
    - Lot 53 -- 52,952 sf
    - Lot 57 -- 25,393 sf
    - Lot 58 – 30,000 sf

3. A theme in the Master Plan is balance. Balance includes the scale and character of the development and how well it fits into the fabric of the community and the landscape. (p. 30)

4. The Design Guidelines established by the Master Plan require that projects adhere to all of the following:

- Site planning and architecture shall assemble a built environment that connects buildings, spaces and structures through common scale, design, and materials. (p. 57)
- There shall be a visual continuity among the resort structures and design elements…development shall be compatible with the surrounding built and natural environment in both scale and character. (p. 57)
- The height of buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. (p. 57, 59)
- The bulk and scale of individual buildings within the Resort shall achieve compatibility with other structures within the Planned Resort when resort development is completed (p. 58)
- **Specifically stated in the Master Plan, Lots 53, 57, and 58 shall be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge.** These buildings can be up to three stories in height with a basement and with massing, articulation, openings, and step backs used to reduce bulk and mass. Buildings on these lots may consist of one single building complex or multiple buildings in order to best create a design that fits well with the topography and neighboring condominiums… (p. 70) (emphasis added)
- The Master Plan includes Sketch Plans for Lots 53 and 57 which show buildings that were previously approved by the Town of Jackson as compliant with the Master Plan and represent what was intended/planned for these Lots.

We believe the Applicant is aware his plans do not comply with the Master Plans requirements to be compatible in bulk, scale and character with Grand View and we will provide two examples.

Issue 1. The Lot 53 Building Placement and Spacing does not Comply with the Master Plan

1. In evaluating the Plans for Lot 53, it is critical to note that the renderings as presented in the Bear Development application are inaccurate, insomuch as they fail to show the correct scale of the proposed development. Grand View had asked the Applicant for a rendering showing what the space between the proposed building on Lot 53 and Grand View buildings 550, 551 and 552 will look like. The Applicant provided the attached rendering "Lot 53-GV Rendering." On computing the scale of the rendering, the Grand View buildings are approximately the correct size, but the Applicant's building is actually **TWICE** as high as is depicted in the rendering. This is example 1 of the Applicant's awareness of non-compliance.

2. On page 98 of the Plans, the Applicant provided the only "to scale" drawing with the view of the sidewalk between the proposed building on Lot 53 and the Grand View buildings on the left. (Pages from P24-168, P24-174, P24-175 TransMemo.pdf, attached to this correspondence). From the drawing you can see space between the Lot 53 structure and the Grand View buildings is approximately 24'. In contrast, the space planned between the

proposed Lot 53 building and the Lot 58 building is approximately 75 feet. The minimal, restrictive space between Grand View as compared with the three-times greater space between the buildings on Lot 53 and 58 should not be allowed, as the openings and design do not fit well with the topography or the neighboring condominiums as specifically required under the Master Plan, and create a clear, detrimental impact to Grand View.

Issue 2. The Lot 53 "Retaining Wall" and construction will obstruct access to and from Grand View Condominiums and does not comply with the Master Plan.

1. To maximize the size of their buildings and increase their height, the building plan for Lot 53 has specified a 10' retaining wall on the border between Lots 53 and Grand View (see page 98 of the Plans). This brings the proposed total height of the building on Lot 53 to 64' feet (elevation 6,456 less 6,392), towering 40' over Grand View buildings 550, 551 and 552. The wall is proposed to be built almost touching the sidewalk that runs along the back of the Grand View buildings. A 10-foot-high wall touching the sidewalk where people walk is unacceptable. The wall creates safety issues, access issues, and will interfere with snow removal and ice mitigation, not to mention dwarfing the pedestrian scale emphasized in the Master Plan.

2. The Applicant has specified it plans to close the Grand View sidewalk, which has existed in its current location for close to 20 years, for the duration of the development, and over 90% is on Grand View's property. This closure violates the legal rights of Grand View Owners by cutting off access to the Condominiums along a route that has long been established. Applicant did not discuss placement of the retaining wall along the sidewalk nor obstruction of the sidewalk with the Grand View at any point.

Issue 3: The Plans for Lot 57 are not compatible with the requirements of the Master Plan because the massive buildings planned are approximately two times (2x) what was intended for Lot 57 and are not compatible in bulk, scale and character with the existing Grand View Condominiums or the rest of Sub-Area 3.

1. The proposed buildings on Lot 57 are 57 feet and 4 stories high and contain 27 units. As stated above, the Master Plan provides a depiction of what was previously approved and could be anticipated and approved for Lot 57 – the "development predictability" that is a key component of the Master Plan. SKRMA always recommends prospective buyers in the Resort District to review the Master Plan to understand what has been approved to be built. The depictions and maps show the planned and approved Lot 57 building to be 25,393 square feet (see attachment "Page 77 of Master Plan"). A very reasonable building is depicted and compatible in bulk, scale and character with Grand View. Instead, the Applicant is presenting two massive buildings containing 45,000 square feet – close to double what is included in the Master Plan. See attachment Lot 57 Bear Buildings. To

allow 45,000 sf of development on this Lot would render meaningless the maps and plans in the Master Plan and goal of development predictability.

2. Not only is this bulk, scale and character far beyond what would be considered predicable development under the Master Plan, but the size and massing do not fit with the adjacent Grand View Condominiums, as is required. The five Grand View buildings each contain 4 units, with maximum building heights of approximately 40 feet. Each Grand View Building is approximately 7,200 sf. On a per-acre basis, Lot 57's development is close to 50% more dense than Grand View's. The massive development proposed for Lot 57 is likewise not similar to, or compatible with, the rest of Sub-Area 3 which is comprised of all 3-story, smaller buildings. The new buildings will tower over the older buildings, creating a sharp contrast and a visible break in character.

3. The Lot 57 buildings will tower over the residential buildings to which they are adjacent and will overwhelm people walking beside the buildings and the pedestrian scale, which is specifically disallowed under the Master Plan. The massing, articulation, and step backs do nothing to reduce bulk and mass and fail to consider the pedestrian scale.

4. In light of its concerns about the above size, bulk and scale of the Lot 57 buildings, Grand View asked the Applicant for scaled drawings showing Grand View building 548 with the Applicant buildings on Lot 57. The Applicant refused to provide the requested drawings, (example 2 of Applicant's awareness of non-compliance) and Grand View therefore hired Y2 Consulting and Cratif, at its own expense, to produce renderings requested of Applicant.

    a. The rendering entitled "Lot 57 South-GV 548" is attached to this letter and supports the objections raised in this section. The Lot 57 South building towers 31' over Grand View 548 and is over <u>double the height of Grand View 548 from the ground level.</u> A theme in the Master Plan is balance. Balance includes the scale and character of the development and how well it fits into the fabric of the community and the landscape. This rendering clearly demonstrates the Applicant's total disregard of that requirement.

<u>Summary</u>

The Association understands that the Applicant has a right to build reasonable structures on their three lots. We only request that the buildings comply with the terms, conditions, and intent of the Master Plan. The buildings must be consistent with what was anticipated in the Master Plan (on which owners within the Snow King Resort Area relied) and be compatible with the existing residential construction within Sub Area 3. The bulk, scale, and character of the Lot 57 buildings and the retaining wall on Lot 53 as detailed above are not compatible with existing development, will dwarf the pedestrian scale in Sub-Area, and are squarely at odds with the Master Plan goals of balance and predictability.

We believe compatibility can be obtained by making two changes:

1. The retaining wall as currently specified to raise the property level between Lot 53 and Grand View should not be allowed. The building planned for Lot 53 must be moved south (away from Grand View property) to provide a minimum of 50' between Grand View buildings 550, 551 and 552 and Lot 53 building. This will also allow 50' spacing between the Lot 53 building and Lot 58 building. The current line of trees planted along the stone wall and property line between Grand View and Lot 53 must remain.

2. Only the Lot 57 North building, as proposed and previously approved by the Town of Jackson, may be built as illustrated on Page 77 of the Master Plan. See attached rendering entitled: Lot 57 North – GV 548. Elimination of Lot 57 South building restores balance, scale and character to Lot 57 with Grand View CA and was in clear violation of the Master Plan.

If the Plans are approved in their current form, a precedent is being set in the Snow King Resort District to allow for development of a size and character that is not consistent with the Master Plan Design Guidelines and was never contemplated in the Master Plan. Such an approval will create confusion and ambiguity moving forward, and will ultimately undermine the Master Plan itself.

Respectfully Submitted,

Rich

Richard Lurie
President
Grand View Condominium Association



SIDEWORKS

HDLA

LOT 53
RENDERING

L5.00



LEGEND

- (A) SIDEWALK
- (B) RETAINING WALL PLANTERS
- (C) ASPEN AND NATIVE SHRUB PLANTINGS
- (D) STAIRS

NTS

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwka.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

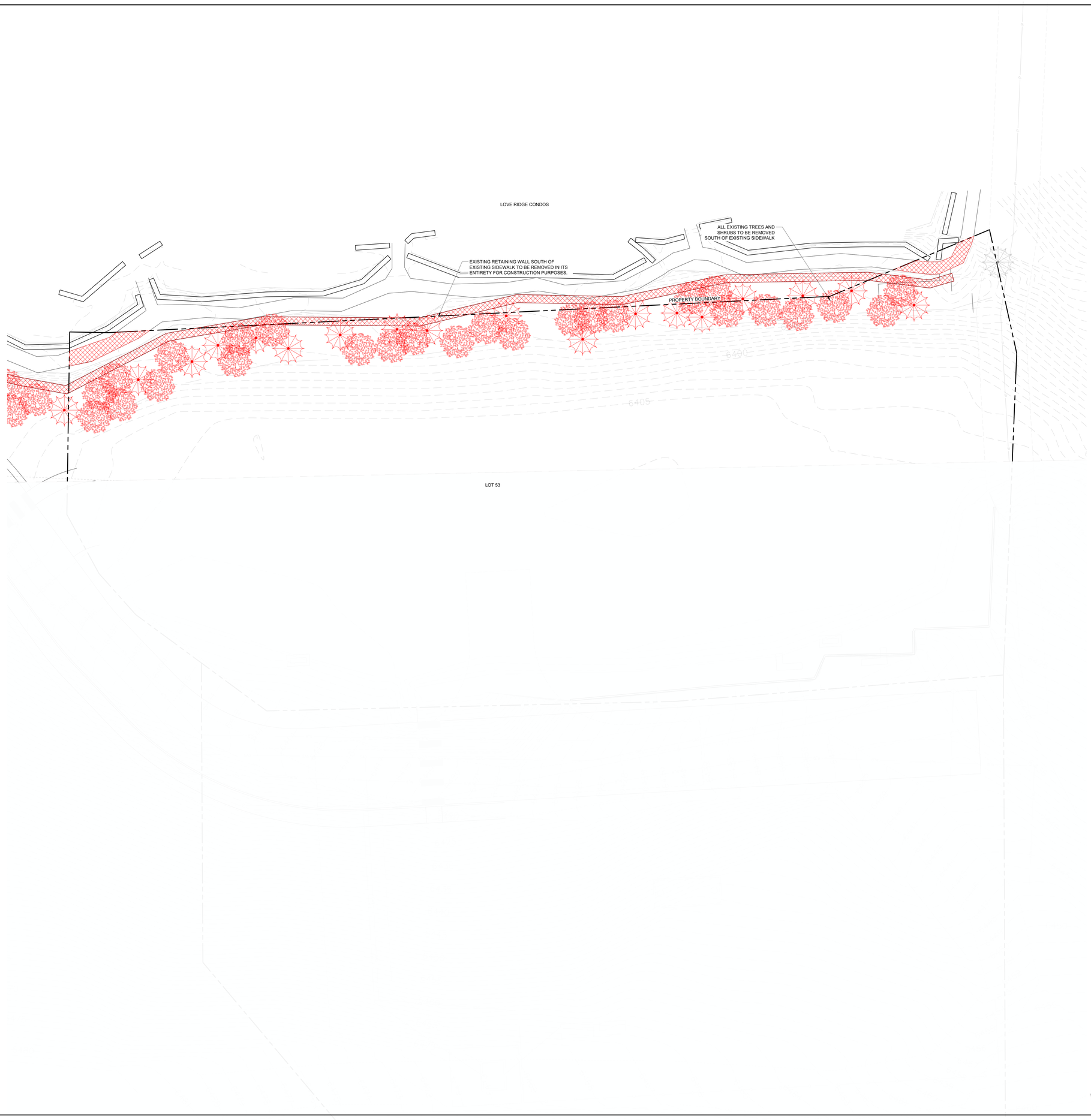
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53 RENDERED PLAN

Drawing Name

L1.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- PAVERS
- PAVERS WITH SNOWMELT
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- RAISED PLANTERS
- EXTERIOR SITE LIGHTING

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

653 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 53
DEMO PLAN

Drawing Name
L2.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- PAVERS
- PAVERS WITH SNOWMELT
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- RAISED PLANTERS
- EXTERIOR SITE LIGHTING

PLANT SCHEDULE- LOT 53

TREES:

NAME	SIZE	CONT.	QTY
Quaking Aspen/ Populous tremuloides	3" Cal.	B&B	26

SHRUBS:

Native Shrubs- species TBD		5-6' H	96

GROUND COVERS:

Native Meadow Sod		SOD	1,650 SF

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkg.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

653 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

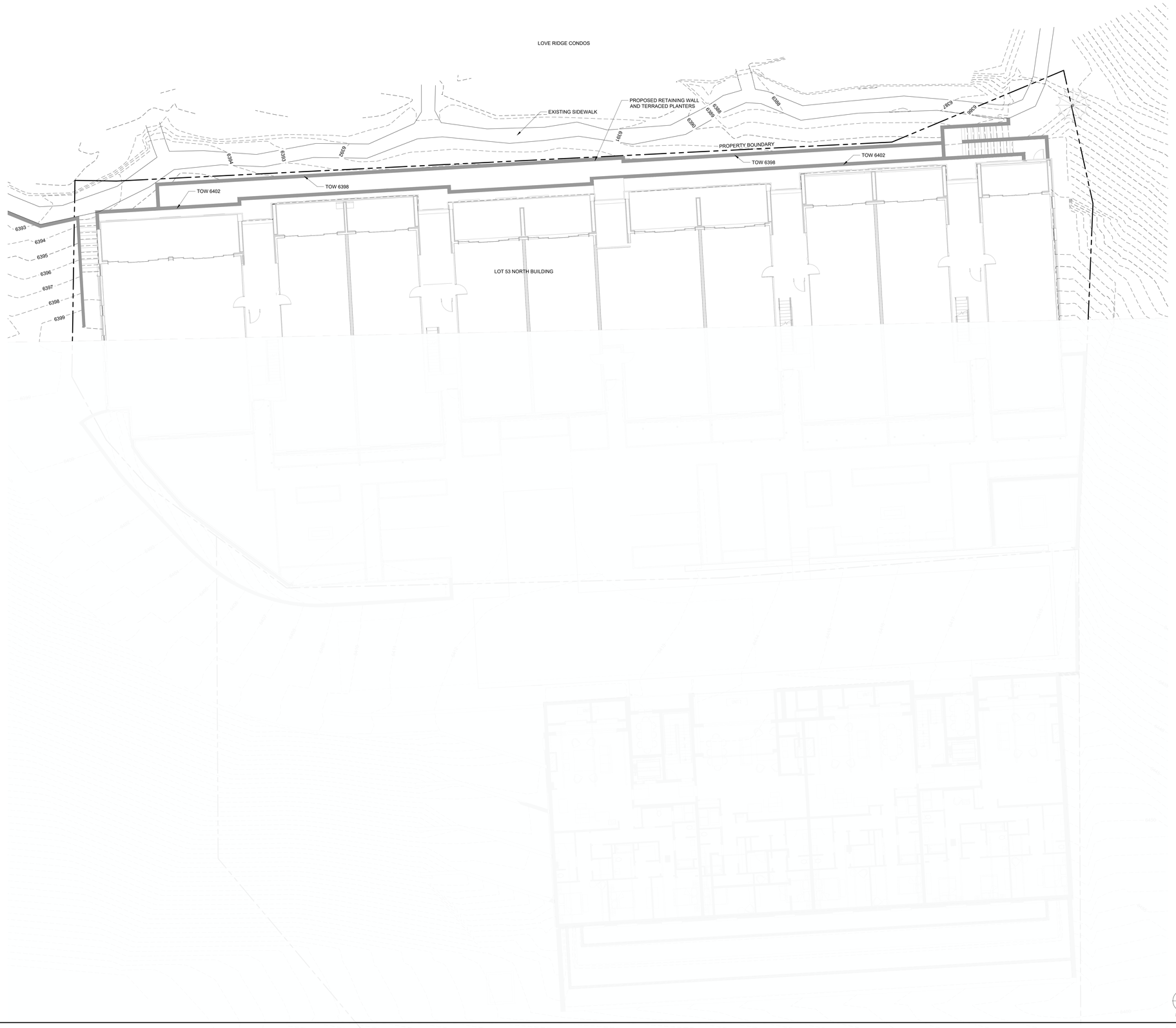
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53
PLANTING PLAN

Drawing Name

L3.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- PAVERS
- PAVERS WITH SNOWMELT
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- RAISED PLANTERS
- EXTERIOR SITE LIGHTING

NORTH

0 5 10 20

ORIGINAL SCALE: 1"=10'

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

653 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53
GRADING PLAN

Drawing Name

L4.00



NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwka.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 53
RENDERING

Drawing Name
L5.00

NORTHWORKS

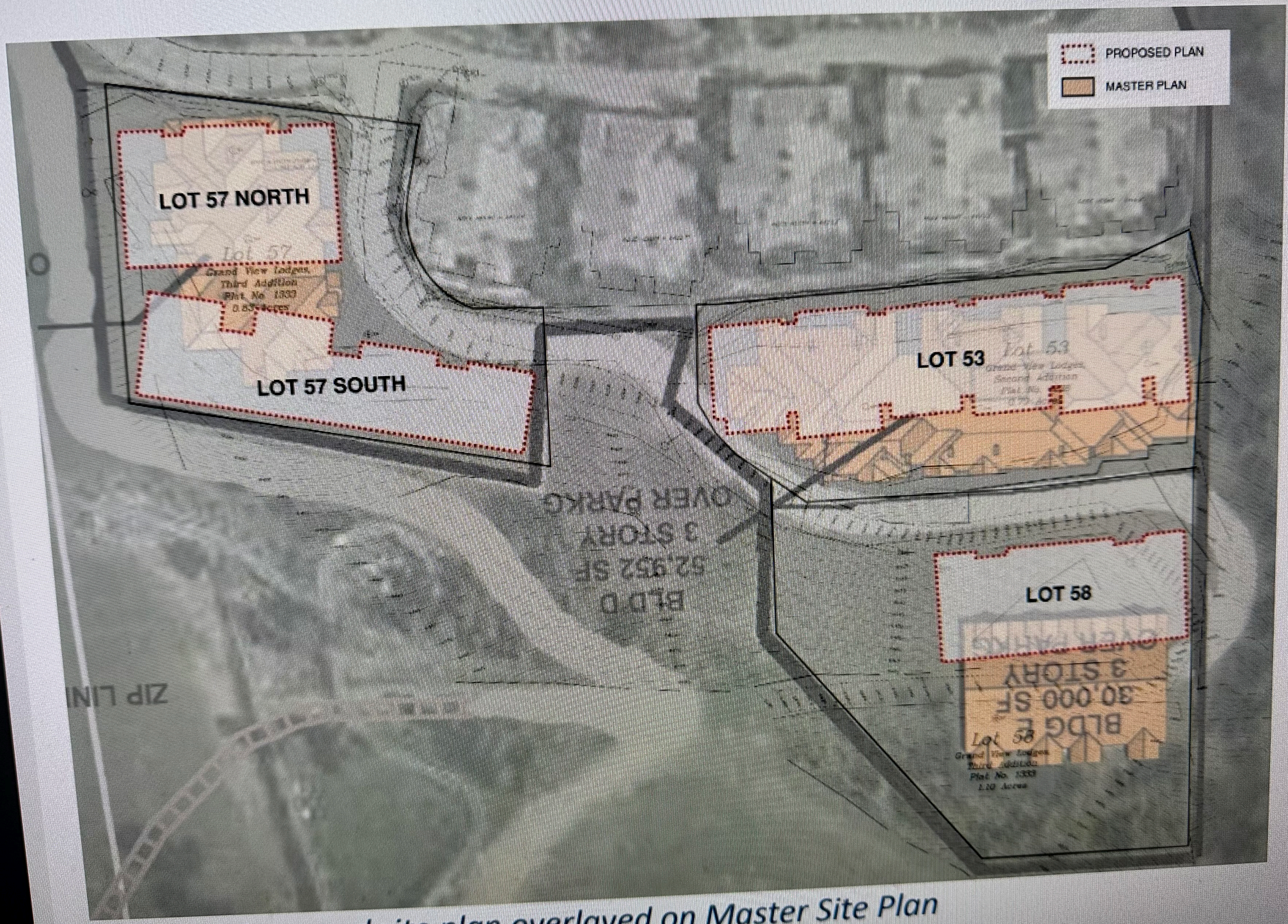
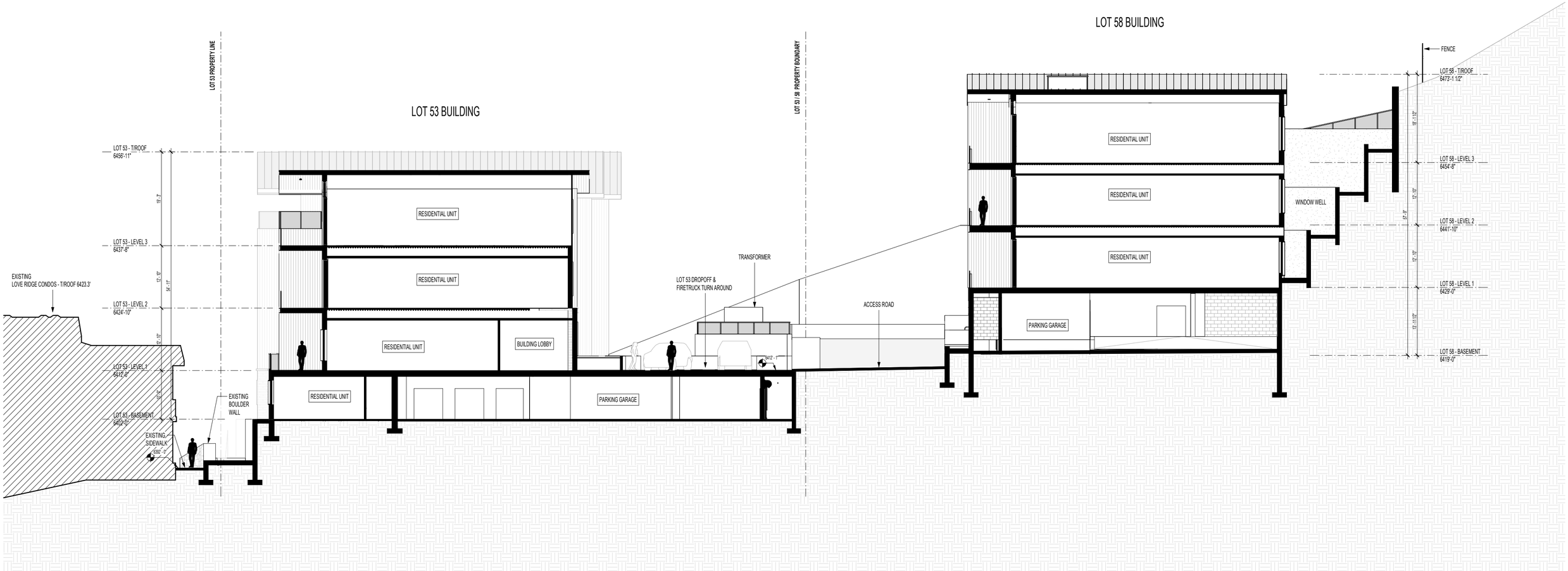


Figure 1 - Proposed site plan overlayed on Master Site Plan

Site Plan also includes a circulation plan that indicates where sidewalks should







SITE SECTION THROUGH LOT 53 & LOT 58, LOOKING EAST



Sub Area #3
Existing and Proposed Condominiums

Sub-Area 3 consists of the Grand View, Love Ridge, and Simpson Patent condominimum developments and the Grand View Lodge. Lots 53, 57, and 58 are the remaining lots platted for condominimum development within this sub-area. The Jackson Town Council approved building plans for a condominimum building on lot 53 and the planning/building departments issued a building parmit for building D on lot 53 which expired in 2009. The architectural drawings for this building are shown in the sketch drawing section of this master plan. The Town Council approved a development plan for a building on lot 57 in 2004, the architechtural plans for this building are included in the sketch drawing section of this master plan. Condominimums on lot 58 are proposed to match buildings on lots 53 and 57 in architectural design.

4 in. of snow Thu

From: harrydannenberg1@gmail.com
To: Tyler Valentine
Cc: Rich LURIE; Jenny Herman
Subject: Bear Development of Snow King Lots 53, 57 and 58
Date: Thursday, February 20, 2025 7:29:49 AM

I am a 10 year property owner and part time resident (summers) in the Love Ridge condominiums located in the Snow King Resort District. I am also a member of the Board of Directors of the Snow King Resort Master Association (SKRMA). I am the residential director of SKRMA representing the interests of the residential homeowners in the resort district.

I am writing to express my strong agreement with the Grand View Condominium Association and the Love Ridge Homes Condominium Association that the proposed development by Bear Development violates the Snow King Planned Resort Master Plan in that it does not fit in with the bulk, scale and character of the existing Grand View Condominiums and Grand View Lodge as required under the Master Plan. Specifically, the Lot 57 South Building , which is proposed to be approximately 60 feet high, will overwhelm the Grand View Condominiums and the entire resort area and this behemoth of a building will overwhelm pedestrians and pedestrian scale in the resort district.

I also agree with Grand View Condominium Association that the retaining wall between Grand View Condominiums and Lot 53 violates the Master Plan and should be moved south as set forth in the letter sent to you by the Grand View Condominium Association. There is no place in the Resort District for such an aggressive form of development with respect to other members of the Snow King Resort community.

I hope that the town takes the correct action and rejects the Bear Development proposal. I believe that the residential community in the Resort Districtto would support reasonable development of lots 53,57 and 58. I do not think there is support from the residential community for the Bear Development proposal.

Harry Dannenberg

Sent from my iPad

From: Jim Maxwell <jim@AGRILANDFARMING.COM>
Sent: Tuesday, February 18, 2025 12:21 PM
To: Tyler Valentine
Subject: Development Plans 553, 510, & 725 Upper Snow King Loop

Dear Mr. Valentine:

I have serious concerns about the proposed ten-foot-high wall immediately south of the buildings 551 and 552 Snow King Loop. I own a condominium in each of these two buildings. Starting in 2007 and continuing through 2015, I served as president of the Grandview Homeowner's Association which includes the twenty condominium units situated immediately to the north of the ten-foot-high wall proposed for construction at the northern most edge of the above referenced projects.

Manuel Lopez, former president of Snow King Resort and the group that formerly owned Lots 53 and 57, and I walked the sidewalk south of our buildings and agreed to the planting of trees south of our sidewalk. This agreement was in response to our **mutual** opinion that a buffer was needed between our existing buildings and whatever would be eventually built on Lot 53. This agreement and mutual expectation were eventually memorialized in the master development plan for the area. The owners of the twenty Grandview Condos would not have supported the master plan had this provision and understanding not been included in such plan. Ignoring the master plan at this point is inappropriate and unacceptable.

The owners of the twenty Grandview Condos have, for many years, had the expectation that our neighbors to the south and the Town of Jackson would continue to recognize the need for a landscaped buffer south of our south sidewalk. Allowing the project to move forward as currently configured would create a very unpleasant area south of our condos and ruin the environment on twenty back decks of these units. It would also violate the master plan on which we have relied.

From: Deborah Wente <dgwente@outlook.com>
Sent: Tuesday, April 8, 2025 10:36 AM
To: Tyler Valentine
Subject: Re: Proposed Snow King development
Attachments: Bear Building Comparisons.png; Grand View - Love Ridge Building Spacing.jpg; Lot 57 South-GV 548.jpg

John and Deborah Wente
548 Snow King Loop Road
Unit 482
Jackson, WY 83001

April 8, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Department
Tvalentine@jacksonwy.gov

Dear Mr. Valentine,

Please find an updated letter regarding the Bear Development proposal in the Snow King resort district. You will find that the primary issue concerning our unit at 548 Snow King Loop Road is unchanged.

We own Grandview unit 482 which is located on the east side of the building.

Please consider this letter as opposition to the Bear Development plans for lot 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our

neighborhood. The buildings create significant, negative impacts to Grandview and the surrounding areas and do not meet the master plans requirements for bulk, scale, or character as explained more fully in the letter from Richard Lurie, President of the Grandview Condominium Association. We ask that the plans for Lot 57 be denied until changes are made to bring the proposed development into compliance with the master plan.

The revised plans submitted by Bear Development have done nothing to address these issues. It is clear their revised plans refuse to reduce by any amount the size of their buildings on Lot 57. To meet the requirement to have room for vegetation next to their building, instead of reducing the size and footprint of their buildings to allow vegetation as required by the Snow King Master Plan, their solution is to eliminate the sidewalks. Pedestrians, therefore, walking up from the hotel or parking to the 72 condominiums have to walk in the road!

In 2006 when we purchased our unit in building 548 of Snow King, we carefully reviewed all associated documentation. This included the Snow King master plan, please see attached. We understood that there would be eventual development near our unit consistent with what was presented in the master plan and approved by the Town of Jackson. As stated in the master plan, units will be developed to fit in with the bulk, scale, and character of the existing Grandview condominiums and Grandview Lodge.

We strenuously object to the current plan. These buildings are much bigger than the current units and are inconsistent with the Snow King master plan. We will completely lose visibility

of Snow King Mountain. One of our favorite things is to sit on the back deck and look up at the mountain, there was never any expectation we would lose this privilege. Please reference the attached renderings to demonstrate how overshadowed our building would be with the lot 57 South building as proposed. Our beautiful view of the mountain would now be a view of a garage.

Again, we understand that these properties were planned for development. However, we had absolutely no expectation they would be so completely oversized compared to the current building.

If this development as proposed is allowed to proceed, the Snow King master plan becomes a useless document that no potential buyer in the Resort District can rely upon.

We respectfully request that the town of Jackson reject the proposed plan.

John and Deborah Wente

Get Outlook for iOS

From: Deborah Wente
To: Tyler Valentine
Subject: Re: Proposed Snow King development
Date: Thursday, February 20, 2025 9:26:01 AM
Attachments: Lot 57 North-GV 548_jpg.msg
Lot 57 South-GV 548_jpg.msg
SK Master Plan - Page 77_jpg.msg

April 7, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning & Building Department
tvalentine@jacksonwy.gov

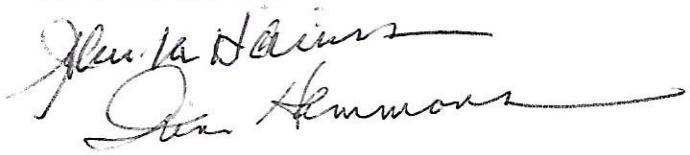
Dear Mr. Valentine:

As Owners of Grandview Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence to you as detailed by Rich Lurie. The Bear Development's resubmissions do not in anyway comply effectively with the Snow King Master Plan in bulk, scale or character.

The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with.

Thank you for your consideration.

John & Irene Hammons



From: John Petrakis
To: Tyler Valentine
Cc: Rich Lurie; dlangen@bojh.com; Nicolle Moyer
Subject: RE: Bear Development plans for Lots 53 and 57 of the Snow King Resort
Date: Thursday, April 3, 2025 8:51:30 AM

From: John Petrakis
To: Tyler Valentine
Cc: Rich Lurie; dlangen@bojh.com; Nicolle Moyer
Subject: Bear Development plans for Lots 53 and 57 of the Snow King Resort
Date: Thursday, February 20, 2025 10:36:00 AM

Dear Mr. Valentine – I am owners of Grand View Condominium No. 5140. Please consider this letter as opposition to the Bear Development plans for Lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant, negative impacts to Grand View and the surrounding areas and do not meet the Master Plan's requirements for bulk, scale or character, as explained more fully in the letter from Rich Lurie, President of the Grand View Condominium Association. We ask that these plans be denied until changes are made to bring the proposed development into compliance with the Master Plan.

I also strongly agree with all the details of Mr. Lurie letter dated February 17, 2025. But I think it's worth repeating one of Mr. Lurie points in his letter pointing out that the residential representation on the SKRMA board it significantly underrepresented. I further believe that the Town of Jackson should reject this proposal because of all the points in Mr. Lurie's letter but should also make the point that until the SKRMA board is correctly represented the Town of Normal will not approve any development plans in the SKRMA designated area.

Thanks for your consideration.

John Petrakis
309-208-0201

Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

February 20, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Dept.
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

We understand that the Town is evaluating a proposal by Bear Development, LLC, to build a multi-unit condominium complex adjacent to the Grand View Condominiums in the Snow King Resort District.

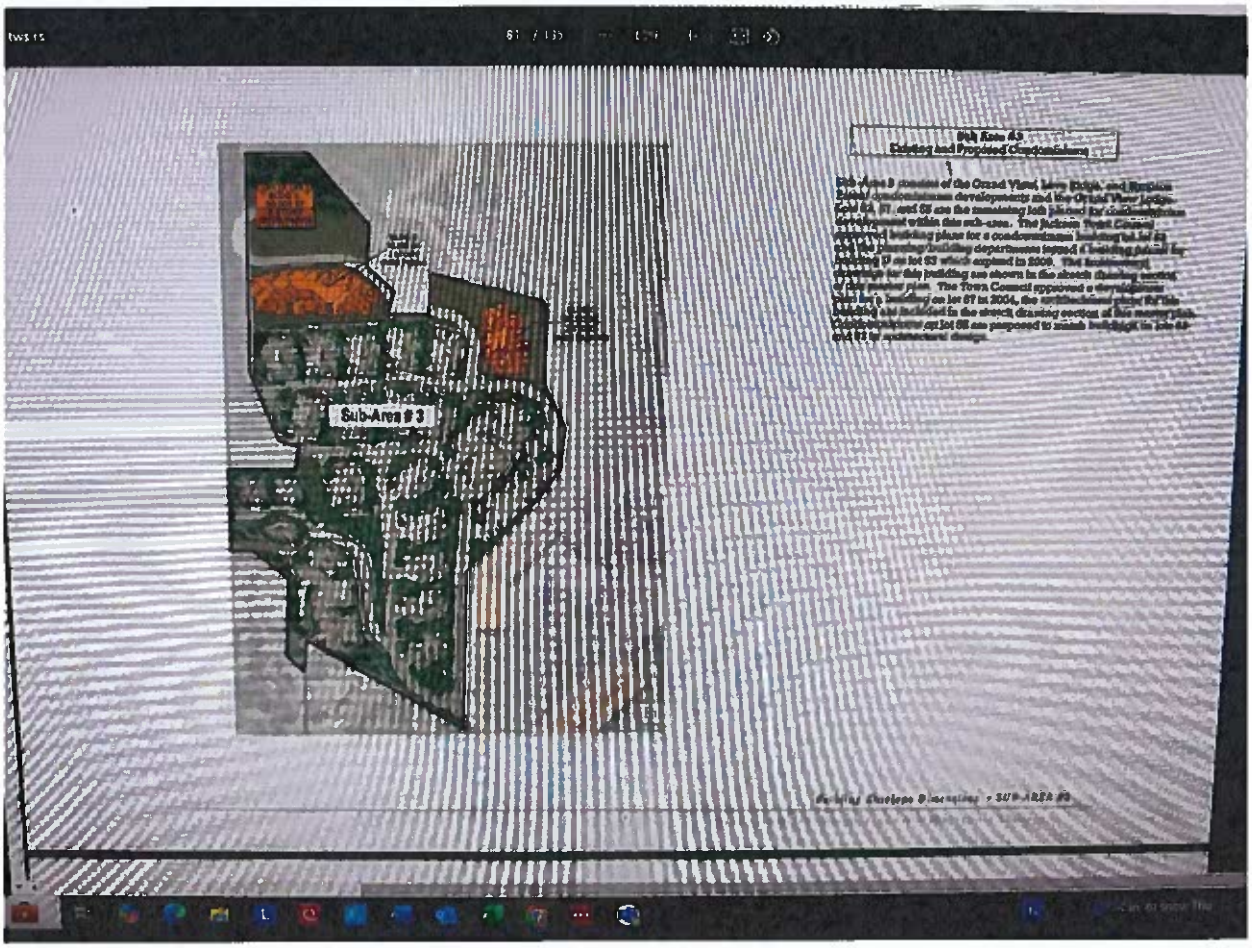
We own Grand View unit 483, which is situated on the west-facing top floor of Building 548 in the southwest corner of our community. Lot 57 of the proposed development encircles the west and south sides of Building 548.

We echo the concerns expressed by the Grand View Homeowners' Association in its February 17, 2025 letter, and want to share several additional concerns particular to Lot 57.

Master Plan terms and Town decisions set public expectations that future development on Lot 57 would be restrained.

We purchased unit 483 in November 2023. During our pre-purchase due diligence, we learned that new development might occur on Lot 57. Accordingly, we reviewed the Snow King Master Plan and minutes of HOA meetings at which SKRMA representatives discussed development prospects, as well as limitations under the Master Plan and Town regulations. As you know, these standards generally require that any new development must be spatially and stylistically consistent with the Grand View community.

We also reviewed the public docket pertaining to Lot 57 and saw renditions of the development concept approved by the Town in 2006 but never built (see image below). Although we were concerned about possible development next door, we were reassured that the Town and SKRMA would apply these standards as a check on developers seeking to change the landscape and density of our mountainside environment, or the neighborhood's appearance from Town.



We were dismayed to learn that SKRMA approved Bear Development's plan – seemingly without regard to the bulk and scale limitations – permitting nearly twice the square footage of that approved in 2006.

The Town should maintain the standards it affirmed in 2021 and 2023.

In our pre-purchase diligence, we found that Bear Development submitted a Zoning Compliance Verification (ZCV) application in May 2023, asking the Planning & Building Department to "clarify development rights and opportunities" on Lots 53, 57 and 58 in light of the Town's 2006 approvals and related determinations in 2021.

In a June 23, 2021 ZCV response (P21-112), the Town had affirmed that future development "must comply" with the requirements to maintain "bulk, scale and character consistency;" "to reduce bulk and mass;" and "to create a design that fits well with the topography and neighboring condominiums." The proposal for Lot 57 meets none of these standards.

The Lot 57 proposal must be rejected or reimagined consistent with the Master Plan and Town precedent.

Bear Development asks to shoehorn two new structures on Lot 57 – one behind Building 548 (and feet away from the Cowboy Coaster) and one beside it. The structures are undoubtedly a high-quality investment in the Snow King resort. However, as seen in the renditions below, the south building would fully occupy the narrow southeast arm of Lot 57 and loom over Building 548. This clear scale mismatch and seemingly inadequate envelope would defeat the requirements of the Master Plan, as reflected in the 2006 approved concept and reaffirmed by the Town's 2021 and 2023 ZCV opinions, and may also raise safety concerns that would be best addressed by other stakeholders.





The Master Plan and Town standards were established in the daylight for prospective buyers and developers to see and rely upon. The Town should maintain these standards and reject Bear Development's proposed 45,000 square feet addition to Lot 57, or at least its towering south structure.

Thank you for considering our position and for maintaining Jackson's and Snow King's unmatched character.

Respectfully,

Kyle B. Levine
for Blanche Neige LLC

Tyler Valentine April 9, 2025
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov
RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

The Love Ridge Lodge Homes Condominium Association (the "Association") reviewed the updated application and plans received on March 25, 2025 for the Snow King Condominiums on Lots 53, 57 and 58 (the "Plans") summited by Bear Development, LLC (the "Applicant").

The Association submits the following:
Lot 53 and Lot 58 – Plans were improved over the prior submissions with the relocation of the building on lot 53 being at least an additional 20' south and the elimination of the retaining wall. However, since there is a tree line barrier we ask why would they plan to cut down mature trees that are currently planted on the applicant's side of the border? These trees and plants are established and thriving. They provide screening that will be advantageous for both Grand View Condominium residents and the residents of the new development. Removing these mature plantings and then subsequently replacing them with new, young plantings and boulders will cause residents to have clear views of each other with minimal privacy screening for many years.

Lot 57 – With regards to the scale of the building on Lot 57. We agree with Grand View Condominiums' findings that the plans remain noncompliant with the Master Plan as detailed in the attached drawings done by Northworks. We request the Town of Jackson reject the proposed Lot 57 South building.

While updating the plans to meet the requirements of the Snow King Master Plan to have vegetation between the buildings and the sidewalks it appears that sidewalks were eliminated to allow for vegetation. This is unacceptable since there are several months of winter where many pedestrians walk to areas within the resort district. While the roads are plowed routinely, they are not clear for pedestrians and will be a hazard for skiers accessing the mountain or the hotel for restaurants and amenities. Where there are sidewalks areas, there is no mention whether these sidewalks will have a snowmelt system to help keep them clear in winter months. Is that part of the plan?

Sewer and water infrastructure has not been a part of the plans that we've received. Who is responsible for this infrastructure? When the Grand View Condominiums were developed it was determined that an additional pump system was required to provide adequate water pressure for the units as well as fire protection. We have not seen any details of a study for the water system. In addition, we have not seen studies to show that the existing sewer and water lines are sufficient to handle the additional 72 condos. Who is responsible for making sure that the existing infrastructure is adequate for these additional buildings. This is a concern for both Grand View and Love Ridge CA's.

We appreciate the time that the Planning Commission is taking to review these plans and the concerns that perimeter neighbors are voicing.

Jenny Herman
President
Love Ridge Lodge Homes CA

Jenny Herman Cell
817.938.4009

From: Peter Wold
To: Tyler Valentine
Subject: Bear Development at Snow King
Date: Thursday, February 20, 2025 3:24:48 PM

Dear Mr. Valentine,
I own several Grandview Condominiums and Unit 5110 in the Loveridge Condos.
I seldom object to development in Wyoming, but I vehemently object to the Bear Development at Snow King on Lots 53 and 57.
Their plans contradict the Master Plan and simply need to be redone to comply with it. As the project is designed, it would devalue the Loveridge/Grandview area.
Thank you in advance for requiring compliance to the Master Plan.
Sincerely, Peter Wold

From: noreply@civicplus.com
Sent: Monday, April 28, 2025 7:00 AM
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department
Subject: Online Form Submittal: Email the Planning Commission

Email the Planning Commission

Email Content:

Dear Commissioners:

I am writing on behalf of the Grand View Homeowners' Association regarding Bear Development's plan for Snow King Lots 53, 58 and 57. While I appreciated having had the chance to comment by phone at the April 16 meeting, I expected to have the same opportunity as the developers to present slides that may have helped your deliberations. We were very disappointed but respect your reasons for not allowing Public Comments to not allow screen sharing. I would like to therefore supplement my comments with this letter and I will try to find a way to attach the slides I had hoped to share.

I appreciate the Planning staff's keen analysis and the Commission's work to balance the competing interests about the key question before you: whether the bulk, scale and character of the proposed development is consistent with its existing neighbors and complies with the Snow King Master Plan that specially requires that they must. We were pleased that the Commission heard staff's concerns about the character of the development, particularly the canyon effect between Grand View and Lot 57, and granted a continuance to May 21 for closer evaluation of revised plans.

At the meeting, several commissioners acknowledged the unique mass and scale of this project, and the unique challenges of the subjective approach the Commission is called upon to apply here. We maintain that Lot 57 plans are largely incompatible in bulk, scale and character with Grand View. I am sharing the slides I wanted to present at the meeting confident that they will vividly show the impacts of over-aggressive development and the canyon effect clearly identified by the Planning team and confirmed by several Commissioners at the meeting.

In addition to the factors that led to condition 5 on Lot 57's development, we noted several other concerns being voiced at the meeting. We expect that the developers' revised plans will address them fully before the Commission advances the project to Town Council:

· Chair Wilson's preference to see structural shifts to mitigate the canyon effect caused by the excessive verticality of both Lot 57 buildings and specifically Lot 57 South Building which was never anticipated or ever illustrated as a possibility in the Snow King Master Plan.

· Recognition that the current plans have inadequate parking spots for visitors, rideshare services, service providers, etc. – meaning that Snow King Loop Road and Grand View's and Love Ridge's parking areas will carry the burden of increased occupancy. The Commission and staff discussed the challenges of forcing people to park in "informal places," and the "more competitive" parking environment that will result with new short-term rental project proposed by Bear.

· Recognition that fluid pedestrian flow envisioned by the Master Plan will be sacrificed between Grand View and Lot 57 because the developers left inadequate room for sidewalks and landscaping, choosing instead to build to the limits of property lines.

· Concerns about overallocation and density with Bear's plans to shift 18,000 square feet of permitted development to Lot 57 from Lots 53 and 58, resulting in a much larger footprint than might be permitted if Lot 57 were being developed individually, and a substantially larger and scale-incompatible development than that envisioned in the Master Plan and relied upon by Grand View owners when they purchased their properties. While allocation across parcels may be allowed under the Master Plan, it cannot be a free pass to ignore overriding bulk, scale and character requirements.

· The Commission recognized the comments by the Grand View and Love Ridge HOA presidents and asked about the level of cooperation between developers and the HOAs to address neighbors' concerns. Mr. Mills stated that there had been "significant" efforts to build consensus with Grand View. That is not accurate. In fact, Bear refused to develop any

renderings showing their Lot 57 South Building with Grand View 548 which was specifically requested numerous times. We also found Bear had put into their plans the removal of a stone wall that majority resided and was owned by Grand View without ever informing and discussing it with us. After much strong resistance, they relented. To be clear, the HOAs are opposed to Bear's plan because it does not meet the Master Plan requirements and far exceeds the development any of our homeowners reasonably expected. We are not opposed to development as a categorical matter.

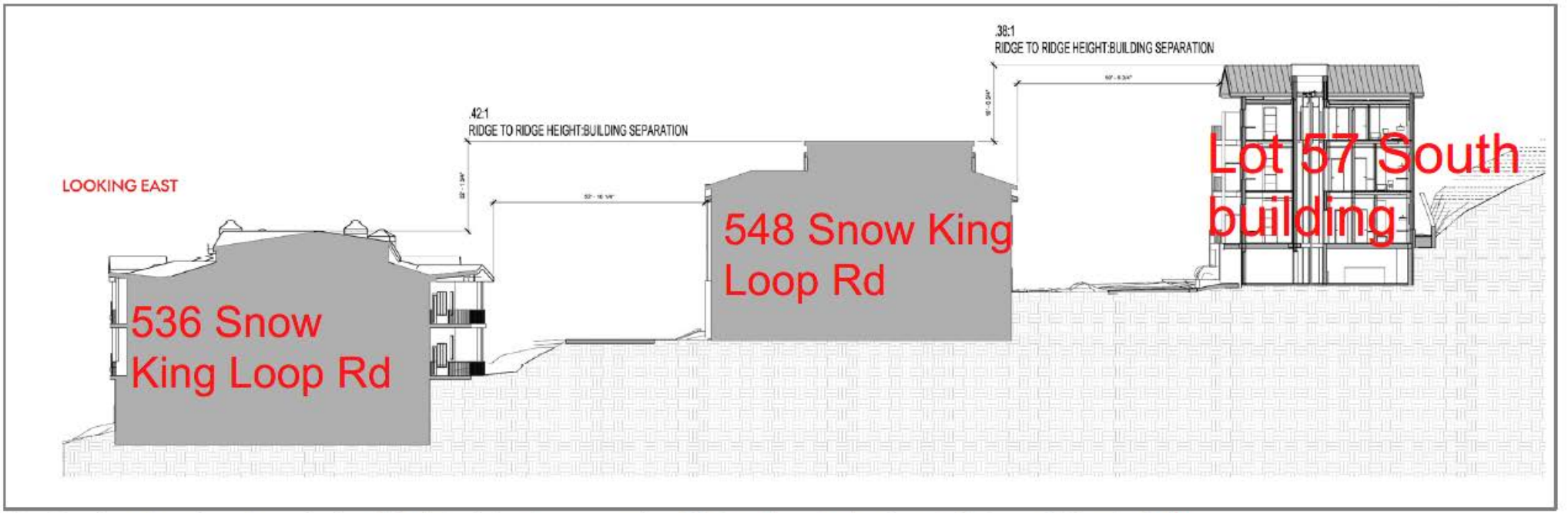
We appreciate your attention and further diligence at the May 21 meeting, understanding that Lot 57 plans cannot and should not advance to Town Council unless the Commission is satisfied that they comply with the Master Plan. In our opinion, the elimination of the never anticipated Sout Building and the redesign of the North Building is the optimum resolution. Plans for Lot 53 and 58 are independent filings and can proceed to Town Council even if Lot 57 plans are delayed for non-compliance with the conditions imposed at the April 16 meeting.

As there is no means to attach the four slides we wished to reference, I will send them to Tyler and have him forward them to the Commission.

Thanks again for the opportunity to share our views and concerns over this important project.

Your Name:	Richard Lurie
Your Company Name:	Grand View Home Owners Association
Your Phone Number:	203-249-0532
Your Email Address:	rlurie@optonline.net
Your City:	Jackson
Your State:	Wyoming
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.



Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings







From: rlurie@optonline.net
Sent: Saturday, March 29, 2025 6:41 AM
To: Tyler Valentine
Subject: RE: Re-Submittal for Lot 53, 57, 58

Hi Tyler the updated application was sent out to all of Grand View Owners. We are still reviewing and will have our response back to you prior to the 10th, however I can give you this feedback.

Lot 53 – we are OK with the changes and only will request the current line of trees remain. As they say they are planning to replace them, it is very curious why they have to remove them if the new building is now around 20 feet away from them.

Lot 57 – we found their response not serious. They are suggesting that by changing the roof lines and the deck walls that the Lot 57 South building will all of a sudden be compliant with the Snow King Master plan that requires it to be compatible with Grand View in bulk, scale and character. If it is not even close! Their page 9 depiction of the buildings is very deceitful. We asked Nick for further explanation and still waiting for his response.

We also found their solution laughable and insightful to their proposal to meet the requirement to have room for vegetation next to their building. Their solution is to eliminate the sidewalks. Therefore, pedestrians and visitors to 72 condominiums that are arriving by foot have to walk in the road! That was their solution and never considered that putting two extremely large buildings are just not compatible with Lot 57.

Rich

Richard Lurie
Grand View HOA
203-249-0532

From: Tyler Valentine <tvalentine@jacksonwy.gov>
Sent: Wednesday, March 26, 2025 10:26 AM
To: Rich LURIE <rlurie@optonline.net>
Subject: RE: Re-Submittal for Lot 53, 57, 58

Thank you Rich.

-Tyler V

From: Rich LURIE <rlurie@optonline.net>
Sent: Tuesday, March 25, 2025 8:43 PM
To: Tyler Valentine <tvalentine@jacksonwy.gov>
Subject: Re: Re-Submittal for Lot 53, 57, 58

Hi Tyler, thanks. I will send it to all Grand View owners. If there are other owners that should get it, please send it to them.

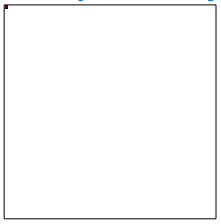
Thanks very much,

Rich

Richard Lurie
R.C. Lurie & Associates
341 Jelliff Mill Road
New Canaan, CT. 06840
203-966-2919
Cell 203-249-0532

> On Mar 26, 2025, at 2:56 AM, Tyler Valentine <tvalentine@jacksonwy.gov> wrote:
>
> I have not yet sent it to others. Are you going to do that or would you like me to?
>
> Comments are due by Thursday, April 10th.
>
> ---
>
> **From:** Rich LURIE <rlurie@optonline.net>
> **Sent:** Tuesday, March 25, 2025 4:50 PM
> **To:** Tyler Valentine <tvalentine@jacksonwy.gov>
> **Subject:** Re: Re-Submittal for Lot 53, 57, 58
>
> Hi Tyler, forgot to ask if the updated submission was sent to all those that submitted comments?
>
> Rich
>
> Richard Lurie
> R.C. Lurie & Associates
> 341 Jelliff Mill Road
> New Canaan, CT. 06840
> 203-966-2919
> Cell 203-249-0532
>
> > On Mar 26, 2025, at 12:55 AM, Tyler Valentine <tvalentine@jacksonwy.gov> wrote:
> >
> > Rich,
> >
> > Attached is the revised submittal for the Snow King Development Plans.

Tyler Valentine
Senior Planner, AICP
Town of Jackson
Phone (307) 733-0440 #1305
tvalentine@jacksonwy.gov
www.jacksonwy.gov



<Snow King Condos - Development Plan Submission - 2025-03-24_pdf>

<~WRD0005.jpg>

From: sagarling rdeinc.biz <sagarling@rdeinc.biz>
Sent: Thursday, March 27, 2025 10:22 AM
To: Tyler Valentine
Cc: ragarling rdeinc.biz
Subject: Town of Jackson Planning and Building Department-Bear Development

Importance: High

Tyler,

We are owners of Grand View Condominium, 551 Snow King Loop Road, Unit No. 5120. Please consider this letter as opposition to the Bear Development plans for Lots 53 and 57 of the Snow King Resort.

We received the Bear Development updated plans for Lots 53, 58 and 57.

It is curious that the updated plans show a reduced height, but the plans do not reflect the height change, that we can identify.

Three stories above an exposed garage equates to 4 stories, which violates the SKRMA Master Plan. The developer identifies the garages are 51% below grade, but is that truly the case? What is the acceptable point of measurement, three stories from grade or above grade (as defined by the developer)? What will the impact be for the downhill residences with the massive earth moving required to obtain subterrain garage structures? We have not located where the developer, or SKRMA, has addressed the current utilities infrastructure that are currently located in the development area. The 110k gallon water storage tank is connected to the private PWS that services the resort district with a 10” pipeline. The storage tank provides additional water and pressure to the Town of Jackson for emergency firefighting when the Town’s waterline pressure is reduced to 30 psi.

The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The three massive structures create significant, negative impacts to Grand View Condos and the surrounding HOA communities and do not meet the Master Plan’s requirements for bulk, scale, or character. The viewscape will be permanently afflicted with massive, towering structures which conflict with the current local mountain luxury cabin architectural design embodied by all the Snow King Resort district development.

Sheryl

Sheryl and Roger Garling
R and D Enterprises, Inc.
www.rdeinc.biz
PO Box 3321

Casper, WY 82602
Cell 307.277.3861
Land 307.237.4188
sagarling@rdeinc.biz
ragarling@rdeinc.biz

From:	sagarling rdeinc.biz
To:	Tyler Valentine
Cc:	ragarling rdeinc.biz
Subject:	Town of Jackson Planning and Building Department-Bear Development
Date:	Wednesday, February 19, 2025 1:28:51 PM

Mr. Valentine,

We are owners of Grand View Condominium, 551 Snow King Loop Road, Unit No. 5120. Please consider this letter as opposition to the Bear Development plans for Lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant, negative impacts to Grand View and the surrounding areas and do not meet the Master Plan's requirements for bulk, scale, or character, as explained more fully in the letter from Rich Lurie, President of the Grand View Condominium Association. We ask that these plans be denied until changes are made to bring the proposed development into compliance with the Snow King Resort Master Plan.

Respectfully submitted,
Sheryl
President
R and D Enterprises, Inc.

Sheryl and Roger Garling
R and D Enterprises, Inc.
www.rdeinc.biz
PO Box 3321
Casper, WY 82602
Cell 307.277.3861
Land 307.237.4188
sagarling@rdeinc.biz
ragarling@rdeinc.biz

From: Susan Houchens
To: Tyler Valentine; Richard Lurie
Subject: Bear Development
Date: Thursday, February 20, 2025 5:59:18 PM

We are the owners of Grand View Condominium No. 522 in building 552. Please consider this letter as opposition to the Bear Development plans for lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant negative impacts to Grand View and the surrounding areas.

When we purchased our Grand View Condominium, we reviewed and relied upon the Snow King Resort Master Plan to understand what could be constructed adjacent to Grand View on Lots 53. 57, and 58. The size, height, and proximity of the proposed Bear Development construction to Grand View far exceeds anything that could have been anticipated under the Master Plan and should not be allowed.

Richard Houchens
Susan Houchens

From: Virginia Wade <gwademd@gmail.com>
Sent: Sunday, February 16, 2025 1:28 PM
To: Tyler Valentine
Subject: Snow King owner 552-521

Dear Tyler Valentine:
As a long-standing homeowner in the valley, I have always taken an interest in project development. Having recently sold a family home on the West Bank, owned from 1998 to April of 2024, I have witnessed many neighborhoods undergo transformation, with tremendous impact to the community. Massive homes,cold beds, they are of no benefit to the community's economy.
We sold our home to be in a Resort
Overlay. We like Snow King, it has the local flavor that has been lost at Teton Village, where parking lots are full and closed, ticket sales are limited, residents are displaced, and as a homeowner not in a resort overlay we were afforded less and less convenience.
When we are not in residence the condo at Snow King can be rented and that contributes to the health and wealth of our community.

In 1998, there was no Snake River Lodge and Spa, no Four Seasons, no Teton Club.
Granite Ridge was just being developed.
There was a time when 2 stories was the limit, and the Four Seasons became the largest building in Wyoming.
I am now the owner of Snow King Loop 552. The 10' retaining wall will do nothing to prevent a slide when a 52,000 sf building is excavated and built to the current proposal on a very steep grade. Drainage in the spring melt doesn't flow through concrete. There are other projects on the sloped terrain in town, they have to be studied. One that comes to mind is Pine Glades.
My row of condos is set apart from those on the lower slope by a road, not a wall.

Increasing the setbacks must be a part of the master plan. Scaling back the height should be considered. It's just too steep.

At the present time there are many projects on the drawing board. They take years to complete. Stop work orders, violations, makes me wonder who approved them in the first place.
The Snake River Bridge project has polarized the community. Tourists who visit Teton Village stay in Teton Village. Going to dinner in town can take upwards of an hour and a half, tee shirt shopping is now an all day commitment. It takes too long to get to the airport.
There is no parking.

Residents don't visit their friends on the other side of the river, skiers stop at Calico and drink booze until the road clears, and there are more massive projects being reviewed that will serve to create gridlock for years.
Talk of widening the Village Road is a nonstarter.
The power lines on the Village Road that snapped a few years ago, causing widespread outages in the valley lasting for days, knocked out the airport power, but the lines were not buried along with the natural gas and fiber optic lines on the Village Road, so where is the widening to occur? Teton Pines? Shooting Star?
What is needed now is serious consideration to every project that comes up for approval.
I read in JH News and Guide a proposal for a north bridge. Money went to build a bike bridge, a treacherous roundabout, a hanger for private planes on the drawing board. Why not a north bridge?

I believe that first and foremost there needs to a a master plan that addresses the congestion. It is a turn off.
Aspen has a moratorium on new builds.
It may be time.

Virginia Wade
Sent from my iPhone

From: Bills GMAIL <william.l.hartmann@gmail.com>
Sent: Wednesday, April 9, 2025 12:54 PM
To: Tyler Valentine
Cc: Debbie Hartmann
Subject: Bear Development Revised Proposed Plans for Snow King Condominium Lots 53, 57 & 58

Tyler Valentine
Senior Planner
Planning & Building Department
Town of Jackson, Wyoming

Dear Mr. Valentine:

We are writing this letter to you as an update to our letter dated February 19, 2025 regarding development plans for Snow King Condominium Lot 57. Lot 57 is directly across from our condominium unit at 548 Snow King Loop.

We have reviewed the modifications to the plans previously submitted by Bear Development.

We do not believe the plans, as modified, and for which Bear Development is now seeking approval, address our objections as previously spelled out in our letter of February 19, 2025.

We continue to object to the **Bulk, Scale and Character** of the Bear Development proposed buildings on Lot 57. We view the changes that Bear Development have proposed to the Buildings on Lot 57 as **minimal** and **not responsive** to the objections that we previously raised. Our objections are very specifically focused on the South Building which we contend is not compliant with the Snow King Master Plan.

We continue to urge you and the Town Council to reject this application and to seek meaningful and responsive modifications, specifically to the Lot 57 buildings, and with particular focus on the non-compliant South Building.

Regards,

William and Deborah Hartmann
548 Snow King Loop, Unit 4810
Sent from my iPad

From:	William Hartmann
To:	Tyler Valentine
Cc:	Debbie
Subject:	Bear Development Proposed Plans for Snow King Condominium Lots 53, 57 & 58
Date:	Wednesday, February 19, 2025 6:19:48 PM
Attachments:	pg 77 Snow King Master Plan.pdf

Tyler Valentine

Senior Planner

Planning & Building Department

Town of Jackson, Wyoming

Dear Mr. Valentine:

We are writing to you regarding a request for approval for three Development Plans for Snow King condominiums which includes Lot 57.

Our unit is directly across from Lot 57 at 548 Snow King Loop.

We strongly oppose the development as proposed by Bear Development and are in full support of the objection filed by the Grand View Condominium Association.

By way of background, we purchased the unit in March 2023. At that time, we reviewed the Snow King Master Plan and were fully aware that at some point, Lot 57 would be developed.

We took comfort in two items contained in the Master Plan.

First, the statement contained in the Master Plan on page 70 that "The remaining developable lots with-in Sub Area 3 consisting of Lots 53, 57 and 58 located to the South of the existing Grand View development to fit in with the **bulk, scale and character** of the existing Grand View Condominiums.

Second, on Page 77 of the Master Plan shows a single, reasonable sized building that was part of the approved Master Plan. The Town Council previously approved a development plan for a building on this lot in 2004. This is directly across from our unit in Grand View 548. The proposed structures, for which approval is being sought, are a significant deviation from what is contained in the Master Plan.

The rendition included in the Grand View Condominium Association shows two buildings, versus one in the Master Plan (please see attached from page 77). It also shows the new buildings, especially the South Building towering over the 548 building. This does not, in our opinion, fit with the bulk, scale and character of Snow King Mountain.

We urge you and the Town Council to seek revisions to the plans for Lot 57, as submitted, to avoid destroying the character of the Grand View Condominiums and to adhere to the Master Plan.

Regards

William and Deborah Hartmann
548 Snow King Loop, Unit 4810

From: chris.mandy@cox.net
To: Tyler Valentine
Subject: Revised Bear Development Proposed Plans Lot 57
Date: Thursday, May 15, 2025 4:29:18 PM

Hello Tyler,

My wife and I put a substantial amount of our net worth at risk when we purchased Grand View Condo 494 in August of 2020. One reason we did this was that the Master Plan for the Snow King Resort had what we thought to be a very solid and well thought out plan that would prevent unreasonable buildings to be built that were not in bulk, scale, and character with Grand View. This protected our investment and maybe just as importantly, the character of what one would expect in a resort in the historic town of Jackson which I have been going to for over 50 years.

When I saw the plan for Lot 57, I was horrified. I thought, "How in the world could this be approved when a reasonable person would not even entertain the thought of having a building that does not meet the specific requirements stated in the Master Plan?" This is a massive building, and in no way, shape or form complies with the Master Plan. I thought one of the reasons that we have a Master Plan was to prevent this very thing from happening. The plan says that any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View. That word "**must**" is very clear. Of course it requires someone's judgement to approve or disapprove. To me, this judgement call is as clear as day. How can we say with a straight face that a building that is twice as high as the back of Grand View 548, has nearly four times the number of units, has a footprint that allows no setbacks from property line and extends three times in length versus Grand View buildings, is not in violation of the very plan which is supposed to protect this kind of thing from happening?

Furthermore, the applicant's response had an attitude of, "Let's see what we can get away with" and thus was very inadequate in addressing the requirement to reduce the bulk and scale of the south building. A 2% reduction???!!!! That is insulting to me as an owner that they would even

present this amendment. How can the applicant claim that the south building is compatible with Grand View in bulk and scale? Their depiction of compatibility is deceptive, inaccurate and has an air of arrogance.

In addition, the applicant has been unwilling to address the pedestrian and vehicle issues. I'm sure you're aware that the Master Plan says that the height of the buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. Well, I for one would be totally overwhelmed by this massive building, not to mention that pedestrians will have to be walking on the road, not in the way that the applicant suggests they will walk. That makes no sense whatsoever, it won't happen, and I think the applicant knows that.

Therefore, I respectfully recommend that the Town of Jackson reject the plans for Lot 57 so we continue to remain true to the Master Plan which was well thought out and done for a reason.

Sincerely,
Chris Palmer

May 15, 2025

To: Town of Jackson Planning Commission
From: K&K on Simpson, LLC
RE: Comment for 180 S. King St. Courthouse Development

To the Members of the Town of Jackson Planning Commission:

The members of K&K on Simpson, LLC ("K&K"), owner of 70/72 E. Simpson Ave., request the following be considered in the application for approval of sketch plan and all future permitting for development of the proposed Courthouse complex to be located at 180 S. King St., Jackson, WY.

Before discussing the details of the proposed Courthouse plan, I would like to point out that the basis for K&K's perspective is largely the result of having been located on East Simpson Ave. for over 43 years. The members of K&K are George and Lea Kuvinka. For 40 years we operated our law office at 70 E. Simpson. Since our retirement, the property has been a mixed-use rental property. We continue to have nearly daily contact with the property as we perform much of the maintenance on the property. From the top of Snow King, you might notice that our property includes the largest and greenest backyard in the area. We have chosen not to develop but, rather, to preserve and renovate. During the same period, there have been several long term major construction projects at the 180 S. King St. location which include the current jail, the Hansen Courthouse and the renovation of the current courthouse.

The comments in this letter are limited to practical matters which I raised at the neighborhood meeting this past winter. Nobody from the Town planning office or commission attended the meeting. We may have opinions regarding the size and necessity for such a large building. However, it appears that there is already a commitment to a single 80,000 square foot building.

1. Construction Noise and Hours. This project is in the fringe between a commercial area and a residential area. 70 E. Simpson is an office and 72 E. Simpson is a residential rental. Many other properties in the area are mixed use or residential. During the previous courthouse remodel, jackhammering was constant for hours each day over lengthy periods of time. Much more noise and disruption will likely occur considering the proposed structure is 80,000 square feet to be constructed over the three years. It would seem appropriate that strict time limits on the days and hours of construction

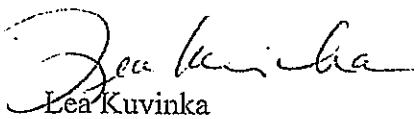
including a maximum number of hours per day during which the noisier activities can occur. For instance, noisier construction activities could be limited to a few hours per day. The contractor should be required to inform those who request notification of a schedule of expected noise and other disruptions on a regular basis before they occur so that businesses can plan their activities and residents know what to expect.

2. Staging. At the neighborhood meeting, there was brief mention of the proposed staging area being in the parking area across from the Hansen Courthouse. This 50'X150' lot seems inadequate for such a large project. My understanding is that some of the parking near the jail and general services building will remain in service further limiting on-site staging. The result of inadequate staging areas will likely be that construction materials will be stored in trailers on the local streets and other areas which interfere with the current use of the streets and sidewalks. A plan for adequate staging should be required which considers the current neighborhood use of these areas.

3. Parking. On any given day, the streets around the current courthouse are solidly parked. Even if the current courthouse offices are moved, the parking problem will not resolve as parking is being pushed into this area. Visitors as well as employees of the commercial area park where limits are more generous. Similar to the current construction area on Pearl Street, street parking will be further limited and pushed in every direction due to closed curb parking. No doubt, the Town staff as well as the neighborhood occupants will find the parking issue an incredible challenge when the construction gets going. One obvious strategy would be to require the contractor to prohibit workers from parking anywhere in the area by providing parking elsewhere with transportation to the construction site. The Town might also consider strategies to redirect visitor and downtown employee parking away from this area. I am sure there are other strategies as well. The point being that this issue needs to be addressed in detail with a specific traffic and parking plan for the area.

We realize there is no way to completely mitigate the effect of an 80,000 square foot building with a three year construction timeline, our request is that the Town do as much as possible to retain the character and quality of our neighborhood, from the design of the project to the disruption the construction process may cause.

Very truly yours,



Lea Kuvinka
On behalf of K&K on Simpson, LLC

Grand View Homeowners Association

Jackson, Wyoming

May 15, 2025

Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Revised Bear Development Proposed Plans Lot 57

Dear Tyler,

The Grand View Condominium Association (the "Association") has reviewed the revised application and plans for Snow King Condominiums Lots 57 submitted by Bear Development, LLC, a Wisconsin developer (the "Applicant"). The Association respectfully submits that the Applicants revised plans continue to fail to comply with the requirements of the Snow King Planned Resort District Master Plan ("Master Plan") and do not address the specific concerns raised by Planning and the Commission on April 16.

The Association's primary objection is to the Lot 57 south building that continues to be incompatible in bulk, scale and character with Grand View Condominiums which is a specifically stated requirement of the Master Plan.

Issue 1: Plans Continue to not Adhere to the Requirements of the Snow King Master Plan

The Master Plan provides a depiction of what was previously approved and could be anticipated and approved for Lot 57 – the "development predictability" that is a key component of the Master Plan. SKRMA always recommends prospective buyers in the Resort District to review the Master Plan to understand what has been approved to be built. The depictions and illustrations show a 25,393 square foot building approved by the Town of Jackson for Lot 57 building (see attachment Exhibit 1). A very reasonable building is depicted and compatible in bulk, scale and character with Grand View. Buyers of Grand View units therefore made their purchase decision based upon what they saw in the Master Plan. Instead, the Applicant has decided to move 18,000 sq ft and added a second massive building – over 70% growth of what is approved in the Master Plan. The approval of this lot needs to be based upon as if it were purchased on a stand alone basis and without the additional unapproved 18,000 sq ft.

We would like to make it clear that our objection to the proposed plans for Lot 57 is totally based upon it not meeting the specific requirements stated in the Master Plan and NOT anything to do with current owners against development or losing their views.

I would also like to make the point that words placed in the Master Plan matter just as much as numbers. When the plan says any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View, this requires a clear judgement call. Fortunately, the call for the Planning Commission is very easy. The Applicants south building being twice as high as the back of Grand View 548, containing almost four times the number of units, foot print allows no setbacks from property line and extends three times in length than Grand View buildings clearly violate these words.

If the revised Lot 57 plans are approved in their current form, a precedent will be set in the Snow King Resort District to allow for development of a size and character that is not consistent with the Master Plan Design Guidelines and was never contemplated in the Master Plan. Such an approval will create confusion and ambiguity moving forward, and will ultimately undermine the Master Plan itself.

Issue 2: Non-Responsive to Requested Reductions in Bulk and Scale

On the 16th of April, the Applicant's proposed plans for Lot 57 were rejected with the specific instructions as follows:

> *In addition, the applicant shall make design changes that further reduce the bulk and scale of the northeast corner of the south building. Suggested changes could include, but are not limited to, removing a section of building on the east side, shifting the building farther south, removing a partial story, shortening the roof overhang above the easternmost third-floor unit, reducing square footage, modifying the floor plans to create larger step-backs on upper units, and/or reducing unit counts.*

The Applicant's response was woefully inadequate and essentially did almost nothing to address the issues identified:

- A removal of a bedroom of 517 square feet on the fourth floor of a portion of the northeast corner of the south building which represents a 2% reduction, in no way addresses the requirement to reduce the bulk and scale of the south building.
- The rendering (Page 7) finally provided by the Applicant in the revised package (which we had continually requested) is so deceptive and dishonest. It is also an admission by the Applicant that it does violate the Master Plan as they are trying to hide the actual bulk and scale of the south building.
- The rendering produced by Grand View HOA (Exhibit 2) is still an accurate depiction of the bulk and scale of the south building, the total footprint of which has not changed. If you remove the upper left-hand corner single bedroom which is all the Applicant is proposing, you would not be able to even see the change from the road below.

- The south building continues to violated the Master Plan requirement to be compatible with Grand View in bulk, scale and character as it clearly does not.

Applicant continues to claim the south building is compatible with Grand View in bulk and scale. See Exhibit 3 produced by the Applicant and which we will show is totally inaccurate. The actual spacing between the Applicant's south building and 548 is shown in Exhibit 2 which was done from actual drawings. The actual spacing between Grand View 548 and Love Ridge 536 is shown in an actual picture in Exhibit 4. Again, the Applicant's depiction of compatibility is deceptive and totally inaccurate.

Issue 3: Non-Responsive to Pedestrian and Vehicle Issues

We continue to point out the Applicant's unwillingness to address the pedestrian and vehicle issues. The Master Plan specifies that the height of buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. (p. 57, 59)

- A total Canyon effect will result between the south and north buildings. At the closest point, it is estimated that the buildings 55' and 35' respectively with less than 10' between them and at the sidewalk level around 6' between them. The same Canyon effect will be present between the south building and Grand View 548. This is totally pedestrian unfriendly which clearly violates a requirement in the Master Plan
- The applicant removed sidewalks on Lot 57 to meet the vegetation requirements along their buildings. The applicant is therefore suggesting pedestrians will use the Grand View sidewalks across the road rather than reduce the building sizes on Lot 57. This is totally unrealistic and actually silly. Does one actually think pedestrians will cross the road, walk up on the Grand View sidewalk and then cross back to Lot 57? Pedestrians will be walking in the road to get to the Applicant's buildings by foot. Totally unsafe and again a total violation of the required pedestrian accommodations in the Master Plan.
- The Applicant's movement of 18,000 sq ft and adding a second building is taking up so much of the .83 acre lot there is absolutely no allowance for visitor or service unit parking. Many of the planned units only have one parking space. Visitor and service unit parking will take place all along the road and at opportunistic spots at not only Bear Dev buildings but Grand View/Love Ridge buildings as well.

Summary

The Applicant's proposed changes in response to the rejection of their original plans for Lot 57 continue to violate the Master Plan and continue to be inconsistent with what was anticipated in the Master Plan and on which owners within the Snow King Resort Area relied. The bulk, scale, and character of the south building is not compatible with existing development, will dwarf the pedestrian scale in Sub-Area, and is squarely at odds with the Master Plan goals of balance and

predictability. Exhibit 5 is provided to depict how compatible the Applicant's north building is to Grand View with the elimination of the south building.

With the requested rejection of the plans for Lot 57, the Applicant still has a very viable plan to move forward. They can immediately start with the plans approved for Lots 53 and 58 while they spend the additional time and energy needed to redesign Lot 57 to meet the requirement of the Snow King Master Plan.

Respectfully Submitted,

Rich

Richard Lurie
President
Grand View Condominium Association

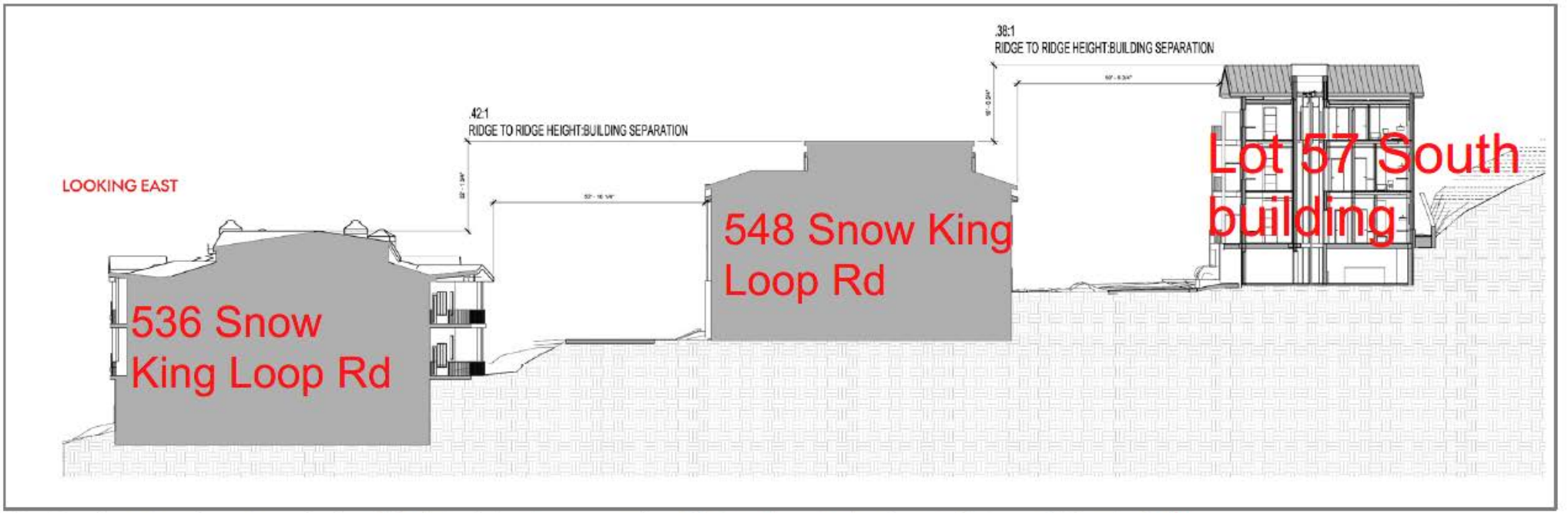


Sub Area #3
Existing and Proposed Condominiums

Sub-Area 3 consists of the Grand View, Love Ridge, and Simpson Patent condominimum developments and the Grand View Lodge. Lots 53, 57, and 58 are the remaining lots platted for condominimum development within this sub-area. The Jackson Town Council approved building plans for a condominimum building on lot 53 and the planning/building departments issued a building parmit for building D on lot 53 which expired in 2009. The architectural drawings for this building are shown in the sketch drawing section of this master plan. The Town Council approved a development plan for a building on lot 57 in 2004, the architechtural plans for this building are included in the sketch drawing section of this master plan. Condominimums on lot 58 are proposed to match buildings on lots 53 and 57 in architectural design.







Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings



From: Harry Dannenberg <harrydannenberg1@icloud.com>
Sent: Thursday, May 15, 2025 8:29 AM
To: Tyler Valentine
Subject: Revised Proposal for Lot 57

I am a 10 year property owner and part time resident (summers) in the Love Ridge Condominiums located in the Snow King Resort District. I am also a member of the Board of Directors of SKRMA. I am the residential director of SKRMA representing the interests of the residential owners in the resort district. As a member of the SKRMA Board I previously voted against approval of the plans by Bear Development with regard to lot 57.

I wrote you on February 20,2025 expressing my agreement with the views of Grand View Condominium Association and Love Ridge Homes Condominium Association that the proposed development by Bear Development violates the Snow King Resort Master Plan because Bear's plans were not compatible with the bulk,scale and character of the existing Grand View Condominiums and Grand View Lodge as required under the Master Plan. I have reviewed the revised submission and plans of Bear Development and I continue to oppose the plan for Lot 57 because it is incompatible in bulk, scale and character of the Grand View Condominiums and Grand View Lodge as required under the Master Plan.

I express my strong agreement with the excellent letters submitted by Rich Lurie, President of Grand View Condominium Association and Kyle Levine, an owner of a unit in Grand View.

I hope the town takes the correct action and rejects the revised proposal for the Lot 57 South Building. This behemoth of a building does not belong in the resort district. Any development of Lot 57 should be along the lines that are described in the Master Plan and approved by the Town Council in 2006. Two large buildings on Lot 57 are not allowed by the Master Plan.

Sincerely, Harry Dannenberg
Sent from my iPad

From: Jenny Herman
To: Tyler Valentine
Subject: Revised Proposal for SKRMA Lot 57
Date: Thursday, May 15, 2025 10:27:27 AM

Mr. Valentine and The Members of the Planning Commission:

My husband and I have owned a Love Ridge condo for 20 years. I am retired and spend a significant amount of time in Jackson throughout the year. Over the past 5 years I have served in some capacity on the HOA Board and for the past 3 years as the HOA board's President. All this to say I am very involved with day-to-day operations and ongoing resolutions that happen when you have 10 buildings with 40 condo units.

Parking: One of our ongoing issues is parking. Each condo is deeded 2 specific parking places in our garage. Each space is marked with the condo unit number. We also have a large sign on the entry doors that states unauthorized vehicles will be towed by Jackson police. None of these are tandem spaces. During busy seasons these spaces are always full. When you have dinner guests, service trucks etc, they have nowhere to park but the roadway. I bring this up because the parking included in the BEAR proposal is not sufficient. Our roadways are much wider and allow for a vehicle to be temporarily parked without impeding traffic. The BEAR proposals have no space for oversized vehicles. We have limited outdoor spaces that can be reserved for oversized vehicles, they have none! This is a huge concern and I have not seen evidence that this was addressed in the original plans or any of the revised plans.

Sidewalks: The revised plan did not address the lack of sidewalks along each building. Yet, they preprot that they are walking distance to town and do not give walkways to traverse on. In the winter, these walkways are needed for a safe way to get across the resort area. In both Love Ridge and Grandview Condos we have heated sidewalk systems and also utilize shovelling to make sure owners and guests have the sidewalks to get around the area. Due to the snow depth and ice build up the roadway is often not safe to walk on. Please mandate that BEAR Development address this issue!

I express a strong agreement with the detailed letters submitted by Rich Lurie, President of Grand View Condominium Association and Kyle Levine, an owner of a unit in Grand View. They provided the technical letters and the negative impact that allowing the current BEAR plan on Lot 57 will create.

It is my hope that the town will take the correct action and **reject the revised BEAR Dev plans for Lot 57**. Please refer back to the 2006 approved plans for Lot 57, those plans were in line with the SKRMA Master Plan.

I regret that I have a personal conflict and thus cannot participate in the Zoom meeting on May 21st. However, I do plan to attend the scheduled Town Council meeting on June 2nd to voice my concerns that have not been addressed with regards to traffic, walkways and parking.

Sincerely,
Jenny Herman
Love Ridge Unit 536

February 14, 2025

Tyler Valentine
Senior Planner, Town of Jackson

RE: Bear Development Proposed Plans for Lots 53, 57, 58
Items P24-168, P24-174 & P24-175

Mr. Valentine,
The Love Ridge Lodge Homes Condominium Association's Board reviewed Bear Development's plans for Lot 57, 53 and 58. After review of the documents and drawings we believe they do not comply with the Snow King Resort District Master Plan. A blatant violation to this Master Plan is shown in the excerpt below. Therefore, we request that the Town of Jackson reject the proposed Bear Development plan.

From page 70 of the Snow King Master Plan:

> The remaining developable lots within Sub-Area 3 consisting of Lots 53,57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge.

Thank you for your time in carefully reviewing the Bear Development plan in connection to the Snow King Resort District Master Plan. We have 40 individual owners in our HOA and strive to work in the interest of our association for all our owners.

Respectfully,

Jenny A. Herman, President
Love Ridge Lodge Homes Condominium Association

From: Jenny Herman
To: Tyler Valentine
Subject: Revised Proposal for BEAR Development SKRMA Lot 57
Date: Thursday, May 15, 2025 5:11:37 PM

Mr. Valentine and The Planning Commission,

I submitted a letter on behalf of the Love Ridge Lodge Homes HOA on February 20, 2025. Our position has not changed. The proposed development by Bear Development violates the Snow King Resort Master Plan because Bear's plans were not compatible with the bulk,scale and character of the existing Grand View Condominiums and Grand View Lodge as required under the Master Plan.
We have reviewed the revised submission and plans of Bear Development and we continue to oppose the plan for Lot 57 because it is incompatible in bulk, scale and character of the Grand View Condominiums and Grand View Lodge as required under the Master Plan.

In packets that have been previously submitted we encourage all members of the committee to review the submissions by Rich Lurie, President of Grand View Condominium Association and Kyle Levine, an owner of a unit in Grand View.

I hope the town takes the correct action and rejects the revised proposal for the Lot 57 South Building. This behemoth of a building does not belong in the resort district. Any development of Lot 57 should be along the lines that are described in the Master Plan and approved by the Town Council in 2006 and again in 2021.

Sincerely,
Jenny Herman
President, Love Ridge Lodge Homes CA
Mobile: 817.938.4009

From: noreply@civicplus.com
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department; georgiews4@gmail.com
Subject: Online Form Submittal: Email the Planning Commission
Date: Sunday, May 18, 2025 12:55:20 PM

Email the Planning Commission

Email Content:	As Owners of Grand View Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence and communications to you as detailed by our HOA President Richard Lurie and the Grand View Board. The Bear Development's Plan and corrective submissions as requested by the Planning Department are still in violation and do not in anyway comply effectively with the Snow King Master Plan in bulk, size or character. We purchased this property with the premised that the development would be in accordance with the Snow King Master Plan. Even details of the future development plan were personally communicated to us by the Owner/Developer at the time of purchase negotiations and definitely has a bearing on our decision. Safety issues also concern us regarding accessibility for emergency and utility service vehicles and guest parking without a proper ingress/egress solution. The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with. Thank you for your consideration.
Your Name:	John & Irene Hammons
Your Company Name:	Windmill Canyon Ranch
Your Phone Number:	6614356459
Your Email Address:	windmilljh@gmail.com
Your City:	Leona Valley
Your State:	California
Your Zip Code:	93551

Email not displaying correctly? View it in your browser.

From: Deborah Wente <dgwente@outlook.com>
Sent: Sunday, May 11, 2025 9:20 AM
To: Tyler Valentine
Subject: Re: Proposed Snow King development
Attachments: View 3 50% Tree Opacity.jpg; Screenshot 2025-05-11 at 10.17.20 AM.png

John and Deborah Wente
548 Snow King Loop Road
Unit 482
Jackson, WY 83001

May 11, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Department
Tvalentine@jacksonwy.gov

Dear Mr. Valentine,

Please find an updated letter regarding the Bear Development proposal in the Snow King resort district. You will find that the primary issue concerning our unit at 548 Snow King Loop Road remains unchanged.

We own Grandview unit 482 which is located on the east side of the building.

Please consider this letter as opposition to the Bear Development plans for lot 57 of the Snow King Resort. The proposed buildings remain massive in comparison to the existing condominiums in our neighborhood. The buildings create significant, negative

impacts to Grandview and the surrounding areas and do not meet the master plans requirements for bulk, scale, or character as explained more fully in the letter from Richard Lurie, President of the Grandview Condominium Association. We ask that the plans for Lot 57 be denied until changes are made to bring the proposed development into compliance with the master plan.

The newly revised plans submitted by Bear Development have done little to address these issues. It is clear their revised plans refuse to reduce by any but the most negligible amount the size of their buildings on Lot 57. To meet the requirement to have room for vegetation next to their building, instead of reducing the size and footprint of their buildings to allow vegetation as required by the Snow King Master Plan, their solution is to eliminate the sidewalks. Pedestrians, therefore, walking up from the hotel or parking to the 72 condominiums have to walk in the road. Additionally, there is no accommodation for parking which will also create a negative impact for our unit.

In 2006 when we purchased our unit in building 548 of Snow King, we carefully reviewed all associated documentation. This included the Snow King master plan. We understood that there would be eventual development near our unit consistent with what was presented in the master plan and approved by the Town of Jackson. As stated in the master plan, units will be developed to fit in with the bulk, scale, and character of the existing Grandview condominiums and Grandview Lodge.

We strenuously object to the current plan. These buildings are much bigger than the current units and are inconsistent with the Snow King master plan. We will completely lose visibility

of Snow King Mountain. One of our favorite things is to sit on the back deck and look up at the mountain, there was never any expectation we would lose this privilege. Please reference the attached renderings to demonstrate how overshadowed our building would be with the lot 57 South building as proposed. Our beautiful view of the mountain would now be a view of a garage. We would be surrounded by buildings that are much bigger and bulkier in scale than those currently in place.

Again, we understand that these properties were planned for development. However, we had absolutely no expectation they would be so completely oversized compared to the current building.

If this development as proposed is allowed to proceed, the Snow King master plan becomes a useless document that no potential buyer in the Resort District can rely upon.

We respectfully request that the town of Jackson reject the proposed plan.

John and Deborah Wente

Get Outlook for iOS

April 13, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning & Building Department
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

As Owners of Grandview Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence and communications to you as detailed by Rich Lurie and the Grand View Board.. The Bear Development's resubmissions are still in violation and do not in anyway comply effectively with the Snow King Master Plan in bulk, scale or character.

We purchased the property with the premise that the development would be in accordance with the Snow King Master Plan. Even details of this future development plan was personally communicated to us by the Owner/Developer at the time of purchase negotiations and had a bearing on our decision.

Safety issues also concern us regarding accessibility for emergency and utility service vehicles and guest parking without a proper ingress/egress solution.

The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with.

Thank you for your consideration.

John & Irene Hammons



From: noreply@civicplus.com
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department; georgiews4@gmail.com
Subject: Online Form Submittal: Email the Planning Commission
Date: Monday, May 19, 2025 10:17:50 AM

Email the Planning Commission

Email Content:

Kyle Levine
Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

May 19, 2025

Planning Commission
Town of Jackson, WY
Via online portal

Dear Commissioners:

I'm writing as a property owner in Grand View building 548, which is adjacent to Lot 57 of Bear Development's pending project. I understand that revised plans will reviewed at your May 21 meeting. I respectfully urge you to reject the revised plans or to approve conditionally (as you were poised to do on April 16) so that Lot 57 plans show meaningful bulk and scale changes before Town Council review.

I attended the April 16 meeting by Zoom and appreciated the Commission's well informed and inquisitive approach, agreeing with Planning's recommendation to condition development on changes "geared at reducing the bulk and scale and improving the character" of the south building consistent with the Master Plan. I am surprised and concerned at the apparent lack of effort by Bear to respond to the Commission's clearly stated concerns about bulk, scale and character compatibility. I am also concerned about what appear to be the unmitigated violation of the Master Plan mandates "not overwhelm the pedestrian scale" and "require the structures to step back away from the street or plaza."

The revised plans include the minimal changes to address Condition 5 of your April 16 Resolution, but do not solve the fundamental design flaws under the Master Plan that fueled the

April 16 deliberations and Resolution. The Commission has the authority and responsibility to current property owners to reject the plans or to condition approval on meaningful changes.

1. Canyon Effect / Excessive Verticality and Density

Planning voiced “character-related concerns over the northeast portion of the south building because it is located close to the road and creates a canyon effect, which is more urban and not in character with surrounding developments that include adequate landscaping and space between the road and the buildings.”

Several Commissioners remarked on the large scale of Bear’s two-building, 43,000 sq. ft. plan and the discrepancy with the 28,000 sq. ft. concept shown in the Master Plan and approved by the Town Council in 2006. Bear’s superficial, minimal changes did nothing to fix the real problem you and our neighbors see here – the planned development is too big, to high and too close to Grand View 548

The canyon effect – a result of the verticality noted by Chair Wilson and inadequate spacing or setbacks – remains a serious defect that has not been seriously addressed by Bear. The footprint of Lot 57’s buildings is exactly the same as presented on April 16. Roofline pullbacks four stories above do nothing to mitigate the closeness that will be felt at street level.

I recognize that the Commission needs to reconcile the Master Plan’s desire for design flexibility with the obligation to preserve bulk, scale and character consistency. But what’s technically allowed isn’t necessarily character-consistent. Planning’s April 16 report explains the canyon effect as an instance of this tension. “The cause of this canyon effect is because 1) the south building is proposed in a location that the Master Plan did not anticipate, but otherwise allows, and 2) the applicant is proposing more overall floor area and basement square footage on Lot 57 than shown on the conceptual site plan even though they are compliant with overall square footage, APOs, parking, FARs LSR, etc.” (emphasis added.)

As you discussed, the dense layout proposed by Bear is an unfortunate function of Bear’s ability to mix-and-match allowable square feet among its three parcels and thus exceed the Master Plan concept by 15,000+ sq. ft. while building to the very edge of the northeast property line. The Commission cannot endorse a plan of this density, even if cross-allocation itself is allowed under the Master Plan, because it does not fit with the neighborhood bulk, scale or character. Would this massive development be permitted if Lot 57 were an independent project without the benefit of bonus footprint allocation?

The canyon effect is a function of vertical and horizontal volume. Condition 5 offered solutions for both factors, but Bear did too little to fix the entire problem. Bear removed just 2% of the overall square footage from a portion of the top floor, helping slightly with vertical bulk and scale, but did nothing to change horizontal density driven by the structural footprint. If you don't have time to visit the site to see for yourself how little room there is for the proposed development (especially on the south arm, where the Master Plan anticipated no development), consider these measurements:

o Roof-to-roof clearance is still just 43 feet between Grand View 548 and Lot 57 North, with Upper Snow King Loop running in between.

o Horizontal separation between Grand View 548 and the balconies of Lot 57 South is likely 45-50 feet. The south structure will be built to the very lot lines, so someone at street level or on the patio of a Grand View condominium will perceive three layers of balconies rising steeply above the road. This naturally has light, sound and privacy implications on our neighborhood character.

o The roofline setbacks on the top edge of the south building are a nice concession but have limited practical impact on the canyon effect since Lot 57 South's roof line is 19 feet higher than Grand View's and out of view at street level from most vantage points.

The depiction below illustrates how crowded this passage will feel from the street level.
Bear claims that these tight horizontal clearances are consistent with the separation between Grand View buildings. The critical difference: there is no road running between the Grand View buildings. The better comparison is the separation between Grand View 548 and the Love Ridge building downhill, which is nearly 53 feet and divided by Snow King Loop Road. This is 10 feet more separation than the revised plans would put between Grand View 548 and Lot 57 North.

2. Negative Parking and Walking Experience

Pedestrians and drivers will experience the canyon effect as an unwelcoming sense of constriction as they proceed uphill from Grand View Lodge and turn on Upper Snow King towards Lots 53 and 58. With inadequate parking, pedestrians will inevitably use Upper Snow King to walk uphill from the alley between the Lot 57's two building and Lots 53 and 58. There's no sidewalk because Lot 57 South is so close to the road and has no meaningful setback. This crowded arrangement violates at least two Master Plan principles: ". . . do not overwhelm the pedestrian

scale" and "require the structures to step back away from the street or plaza."

Planning has advised that the Master Plan does not dictate parking capacity, which is an important input to the pedestrian experience. This is unfortunate since Bear has sacrificed parking and walkability for maximum square footage. As you heard on April 16, residents, guests, caretakers, maintenance staff and rideshare drivers without dedicated parking will fend for themselves and compete for parking in Grand View and Love Ridge. Then they will have to walk uphill alongside a four-story building and through a 43-foot wide canyon to their destinations, but not on a sidewalk that should take them along Lot 57 South's entire length. This is a far cry from the welcoming and cohesive pedestrian experience anticipated by the Master Plan.

The depictions included with my May 14 submission illustrate this experience. Note the verticality and density of both Lot 57 buildings and the shadows cast across Upper Snow King Loop.

The street-level perspective looking west between Lot 57 South and Grand View 548 is a striking illustration of the canyon effect . . . even without showing the Lot 57 North building that would loom to the right in the distance. Note that Bear removed the sidewalk in front of the south building so there is even less buffer between structures. I acknowledge that Bear made some bulk reductions on the walls around the balconies.

3. Reliance on Master Plan Terms and Precedent / Expectation of Restraint

I purchased Grand View 548 in 2023. During pre-purchase diligence, I read the relevant Master Plan language. I also found Bear's Zoning Compliance Verification (ZCV) application, asking Planning to clarify development rights and opportunities on Lots 53, 57 and 58 in relation to the approved 2006 concept. Bear's ZCV referenced a 2021 ZCV response in which the Town affirmed that future development "must comply" with the requirements to maintain "bulk, scale and character consistency;" "to reduce bulk and mass;" and "to create a design that fits well with the topography and neighboring condominiums." I appreciate Planning's thoughtful work to enforce these standards in this proceeding.
I relied on these public records and took comfort that the Master Plan would be enforced with any eventual development being generally consistent with the 2006 concept.

Instead, we are faced with the prospect of a behemoth surrounding and towering over two sides of our building with less than 50 feet separation.

This is not an outcome that “we should have seen coming” just because we bought in a resort district. The Master Plan terms, the approved 2006 concepts, Planning’s ZCV interpretations, responsible due diligence, and this Commission’s sound judgment are the public checks on excessive development. We are not opposed to and not surprised by development categorically.

The Master Plan exists so that buyers and developers alike have predictability before investing in the Snow King community. The massive structures proposed by Bear were not predictable because they are clearly at odds with the 2006 concept that is a matter of Jackson’s public record. To quote Planning’s report, the south building is being placed “in a location that the Master Plan did not anticipate” and, even less predictably, would occupy virtually every available foot of the narrow property between the Cowboy Coaster and the road.

I fear that the Master Plan’s goals and prior interpretations will be loosely applied to Lot 57 because the Master Plan is less prescriptive than Town standards, and the Commission feels that they have no choice on May 21 except to advance the plans to Town Council. The Commission has the challenging responsibility to interpret Master Plan standards and precedent subjectively and then decide whether Bear’s plans are not just technically allowable, but also aesthetically suitable based on the bulk, scale and character of the neighborhood. This is not the case for the revised Lot 57 plans. They should be reject or approved conditionally.

4. Conclusion

The Master Plan must have force for those who purchased in Grand View or Love Ridge expecting restrained development and those who are considering buying or developing in Snow King in the future. The Master Plan gives certainly developers flexibility to build new properties, but not at the expense of neighborhood character, pedestrian experience and the other environmental factors set out in the Master Plan. The Commission should reject the current plans, or approve conditionally, requiring Bear to reimagine Lot 57 with compliant structure(s) before advancing to Town Council review.

Thank you for considering these comments.

Respectfully,

Kyle Levine

Your Name:	Kyle Levine
Your Company Name:	Blanche Neige LLC
Your Phone Number:	2063040170
Your Email Address:	kblsf@yahoo.com
Your City:	Jackson
Your State:	WY
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

Kyle Levine
Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

May 14, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Dept.
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

I'm writing once again as a property owner in Grand View building 548, which is adjacent to Lot 57 of Bear Development's pending project.

I attended the April 16 meeting by Zoom and was pleased that the Commission was engaged and inquisitive, agreeing with Planning's good recommendation to condition development on changes "geared at reducing the bulk and scale and improving the character" of the south building consistent with the Master Plan. I understand that the revised plans will be subject to further review on May 21 and have these additional comments.

The revised plans barely respond to Commission and Planning concerns and do not solve fundamental design flaws under the Master Plan.

1. Canyon Effect / Excessive Verticality and Density

Planning has "character-related concerns over the northeast portion of the south building because it is located close to the road and creates a canyon effect, which is more urban and not in character with surrounding developments that include adequate landscaping and space between the road and the buildings."

Several commissioners remarked on the large scale of Bear's two-building, 43,000 sq. ft. plan and the discrepancy with the 28,000 sq. ft. concept shown in the Master Plan and approved by the Town Council in 2006.

The canyon effect – effectively a result of the verticality noted by Chair Wilson and inadequate spacing or setbacks – remains a serious defect that has not been seriously addressed by Bear. **The footprint of Lot 57's buildings is exactly the same as presented on April 16.** Roofline pullbacks four stories above do nothing to mitigate the closeness that will be felt at street level.

I recognize that the Commission needs to reconcile the Master Plan's desire for design flexibility with the obligation to preserve bulk, scale and character consistency. But what's technically *allowed* isn't necessarily *character-consistent*. Planning's April 16 report explains the canyon effect as an instance of this tension.

> *"The cause of this canyon effect is because 1) the south building is proposed in a location that the Master Plan did not anticipate, but otherwise allows, and 2) the applicant is proposing more overall floor area and basement square footage on Lot 57 than shown on the conceptual site plan even though they are compliant with overall square footage, APOs, parking, FARs LSR, etc." (emphasis added.)*

As you noted, the dense layout proposed by Bear is an unfortunate function of Bear's ability to mix-and-match allowable square feet among its three parcels and thus exceed the Master Plan concept by 15,000+ sq. ft. while building to the very edge of the northeast property line. The Commission cannot endorse a plan of this density, even if cross-allocation itself is allowed under the Master Plan, because it does not fit with the neighborhood bulk, scale or character. Would this massive development be permitted if Lot 57 were an independent project without the benefit of bonus footprint allocation?

The canyon effect is a function of vertical and horizontal volume. Condition 5 offered solutions for both factors. Bear removed just 2% of the overall square footage from a portion of the top floor, helping slightly with vertical bulk and scale, but did nothing to change horizontal density driven by the structural footprint. If you don't have time to visit the site to see for yourself how little room there is for the proposed development (especially on the south arm, where the Master Plan anticipated no development), consider these measurements:

- Roof-to-roof clearance is still just **43 feet** between Grand View 548 and Lot 57 North, with Upper Snow King Loop running in between.

- Horizontal separation between Grand View 548 and the balconies of Lot 57 South is likely **45-50 feet**. Because the south structure will be built to the very lot lines, someone at street level or on the patio of a Grand View

condominium will perceive three layers of balconies rising steeply above the road. This naturally has light, sound and privacy implications on our neighborhood character.

- The roofline setbacks on the top edge of the south building are a nice concession but have limited practical impact on the canyon effect since Lot 57 South's roof line is **19 feet higher** than Grand View's and out of view at street level from most vantage points.

This depiction below illustrates how crowded this passage will feel from the street level.

Bear claims that these tight horizontal clearances are consistent with the separation between Grand View buildings. They ignore a critical difference: there is no road running between the Grand View buildings. The correct comparison is the separation between Grand View 548 and the Love Ridge building downhill, which is nearly **53 feet** and divided by Snow King Loop Road. This is 10 feet more separation than the revised plans would put between Grand View 548 and Lot 57 North.

2. Negative Parking and Walking Experience

Pedestrians and drivers will experience the canyon effect as an unwelcoming sense of constriction as they proceed uphill from Grand View Lodge and turn on Upper Snow King towards Lots 53 and 58. With inadequate parking, pedestrians will inevitably use Upper Snow King to walk uphill from the alley between the Lot 57's two building and Lots 53 and 58. There's no sidewalk because Lot 57 South is so close to the road and has no meaningful setback. This crowded arrangement violates at least two Master Plan principles: "***. . . do not overwhelm the pedestrian scale***" and "***require the structures to step back away from the street or plaza."***

Planning has advised that the Master Plan does not dictate parking capacity, which is an important input to the pedestrian experience. This is fortunate since Bear has sacrificed parking and walkability for maximum square footage. As you heard on April 16, residents, guests, caretakers, maintenance staff and rideshare drivers without dedicated parking will fend for themselves and compete for parking in Grand View and Love Ridge. Then they will have to walk uphill alongside a four-story building and through a 43-foot wide canyon to their destinations, but not via the sidewalk that *should* take them along Lot 57 South's entire length. This is a far cry from the welcoming and cohesive pedestrian experience anticipated by the Master Plan.

The depictions below illustrate this experience. Note the verticality and density of both Lot 57 buildings and the shadows cast across Upper Snow King Loop.



The street-level perspective looking west between Lot 57 South and Grand View 548 is a striking illustration of the canyon effect . . . even without showing the Lot 57 North building that would loom to the right in the distance. Note that Bear removed the sidewalk in front of the south building so there is even less buffer between structures. See page 7 of Bear's revised submission for a view of this corridor based on the current building design.



3. Reliance on Master Plan Terms and Precedent / Expectation of Restraint

I purchased Grand View 548 in 2023. During pre-purchase diligence, I read the relevant Master Plan language. I also found Bear's Zoning Compliance Verification (ZCV) application, asking Planning to clarify development rights and opportunities on Lots 53, 57 and 58 in relation to the approved 2006 concept. Bear's ZCV referenced a 2021 ZCV response in which the Town affirmed that future development "must comply" with the requirements to maintain "bulk, scale and character consistency;" "to reduce bulk and mass;" and "to create a design that fits well with the topography and neighboring condominiums." I appreciate Planning's thoughtful work to enforce these standards in this proceeding.

I relied on these public records and took comfort that the Master Plan would be enforced with any eventual development being generally consistent with the 2006 concept shown below in the upper right.



Instead, we are faced with the prospect of a behemoth surrounding and towering over two sides of our building with less than 50 feet separation.



This is not the outcome that we should have seen coming because we bought in a resort district. The Master Plan terms, the approved 2006 concepts, Planning's ZCV interpretations, responsible due diligence, and this Commission's sound judgment are the public checks on excessive development.

The Master Plan exists so that buyers and developers alike have predictability before investing in the Snow King community. The massive structures proposed by Bear were not predictable because they are clearly at odds with the 2006 concept that is a matter of Jackson's public record. To quote Planning's report, the south building is being placed "in a location that the Master Plan *did not anticipate*" and, even less predictably, would occupy virtually every available foot of the narrow property between the Cowboy Coaster and the road.

I fear that the Master Plan's goals and prior interpretations will be loosely applied to Lot 57 because the Master Plan is less prescriptive than Town standards. The Commission has the challenging responsibility to interpret Master Plan standards and precedent subjectively and then decide whether Bear's plans are not just technically allowable, but also aesthetically suitable based on the bulk, scale and character of the neighborhood. This is not the case for the revised Lot 57 plans.

Conclusion

The Master Plan must have force for those who purchased in Grand View or Love Ridge expecting restrained development and those who are considering buying or developing in Snow King in the future. The Master Plan gives certainly developers flexibility to build new properties, but not at the expense of neighborhood character, pedestrian experience and the other environmental factors set out in the Master Plan. **The Commission should reject the current plans and require Bear to reimagine Lot 57 with compliant structure(s) while development proceeds on Lots 53 and 58.**

Thank you for considering these comments in anticipation of the May 21 meeting.

Respectfully,

Kyle Levine

From: noreply@civicplus.com
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department; georgiews4@gmail.com
Subject: Online Form Submittal: Email the Planning Commission
Date: Tuesday, May 20, 2025 5:50:48 AM

Email the Planning Commission

Email Content:	I am writing to object to the Bear Development Plans for Snow King Loop, Lot 57. We are the owners of 548 Snow King Loop Unit 481, which is directly impacted by plans on Lot 57. When we purchased our unit we relied upon the Snow King Master Plan which we assumed would be enforced and govern the future development t of Lot 57. The revised plans, as submitted by Bear Development, do not comply with e Bulk, Scale and Character language which is contained in the Master Plan. We have objected to each of the Lot 57 plans as submitted. This latest proposal from Bear Development is NOT RESPONSIVE TO THE CONCERNS RAISED BY THE COMMISSION. The footprint of the buildings have not changed. The inclusion of the South Building is inconsistent with the Master Plan which contained only one building. The Lot 57 development plans are too much building on too little property that is inconsistent with the Bulk, Character and Scale of the rest of Snow King. We encourage the Planning Commission to reject the plans for Lot 57 and require a more thoughtful and responsive plan from Bear Development.
Your Name:	William and Deborah Hartmann
Your Company Name:	*Field not completed.*
Your Phone Number:	216-470-2101
Your Email Address:	WILLIAM.L.HARTMANN@gmail.com
Your City:	Jackson
Your State:	WY
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

From: Bills GMAIL
To: Tyler Valentine
Cc: Rich Lurie
Subject: Beast Development Plans for Lot 57
Date: Thursday, May 15, 2025 5:35:35 PM

Dear Mr Valentine

As you now know, I am a property owner in Grand View building 548 which is directly across from Lot 57. We own unit 481 which is impacted by the Bear Development plans for Lot 57.

When we purchased our unit, we were aware of and relying on the Snow King Master Plan which we assumed would be enforced on future development of Lot 57. We assumed we could rely on the **Bulk, Scale and Character** language which was contained in the Master Plan.

We have objected to the Bear Development plans at each of the previous proposals. This latest proposal from Bear Development is in our opinion Not Responsive to the Concerns Raised by the Commission and Do Not Follow the Master Plan.

Unless and Until Bear Development revises its plans for Lot 57 to reduce the Bulk, Scale and Character of the Buildings (including adhering to the plans for a single building on Lot 57) we will continue to object.

Our objections to the new plans can be highlighted as follows:

The footprint of the Lot 57 buildings is unchanged from the previous proposals

The inclusion of the South Building is inconsistent with the Master Plan

The canyon effect that is created by Lot 57 development is caused by the height and scale (square footage) of the Lot 57 buildings.

Further issues arise as a result of the lack of sidewalk that will force pedestrians in to the roadway. Unlike the rest of Snow King development, this project is jammed in to too small of a space.

In conclusion, the Lot 57 development plans are too much building on too little property that is inconsistent with the Bulk, Scale and Character of the rest of Snow King.

The revised plans do nothing to address our previous objections. We encourage the Planning and Building Commission to reject the plans for Lot 57 and require a more thoughtful and responsive plan from Bear Development.

Thank you for considering our views.

William Hartmann and Deborah Hartmann
548 Snoiw King Loop Unit 481
Sent from my iPad

From: Jeremie Dufault
To: Tyler Valentine
Subject: Lot 57
Date: Sunday, May 25, 2025 7:24:28 PM

Dear Mr. Valentine, I am the owner of Unit 5030 at 550 Snow King Loop. I have reviewed the plans for Lot 57. The proposed building is not compatible in bulk, scale and character with Grand View Condominiums as required by the approved Master Plan. I reviewed the Master Plan prior to my purchase and determined that any developer of Lot 57 would be legally obligated to build consistent in bulk, scale, and character, and not be allowed to violate the terms of the Master Plan. I respectfully request that you reject the current proposal in support of the reliance and expectations owners like me had when we purchased our units. Thank you, Jeremie

Grand View Homeowners Association

Jackson, Wyoming

May 23, 2025

RE: Revised Bear Development Proposed Plans Lot 57

Town of Jackson - Town Council

The Grand View Condominium Association has reviewed the revised application and plans for Snow King Condominiums Lots 57 submitted by Bear Development, LLC, a Wisconsin developer (the "Applicant"). The Association respectfully submits that the Applicants revised plans continue to fail to comply with the requirements of the Snow King Planned Resort District Master Plan. We take strong opposition to the Planning Commission's approval of the revised Lot 57 plans and plan to present our objections during the Public Comment section of the Town Council Meeting on June 2nd.

The Association's primary objection is to the Lot 57 south building that continues to be incompatible in bulk, scale and character with Grand View Condominiums which is a specifically stated requirement of the Master Plan. See page 70 of Master Plan (page 74 in PDF)

Issue 1: Plans Continue to not Adhere to the Requirements of the Snow King Master Plan

The Master Plan provides a depiction of what was previously approved and could be anticipated and approved for Lot 57 – the "development predictability" that is a key component of the Master Plan. SKRMA always recommends prospective buyers in the Resort District to review the Master Plan to understand what has been approved to be built. The depictions and illustrations show a 25,393 square foot building approved by the Town of Jackson for Lot 57 building (Exhibit 1 below). A very reasonable building is depicted and compatible in bulk, scale and character with Grand View. Buyers of Grand View units therefore made their purchase decision based upon what they saw in the Master Plan.

Instead, the Applicant has decided to move 18,000 sq ft and added a second massive building – over 70% growth of what is approved in the Master Plan. The approval of this lot needs to be based upon as if it were purchased on a standalone basis and without the additional unapproved 18,000 sq ft. Lot 57 was never meant or illustrated to have two buildings on it.

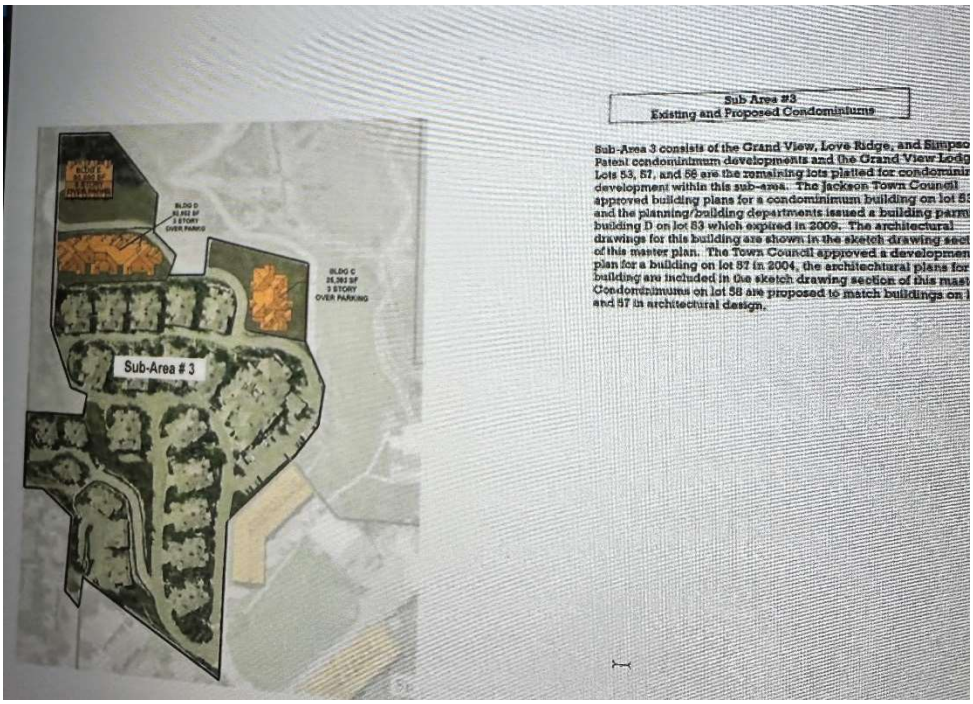


Exhibit 1 Snow King Master Plan illustration for Lot 57 – Single Building

I would also like to make the point that words placed in the Master Plan matter just as much as numbers. When the plan says any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View (Page 70 of the Master Plan), these words matter and it requires a clear judgement call. Fortunately, the call for the Town Council is very easy. The Applicants south building being twice as high as the back of Grand View 548, containing almost four times the number of units, foot print allows no setbacks from property line, no room for sidewalks and extends three times in length than Grand View buildings clearly violate these words.

If the revised Lot 57 plans are approved in their current form, a precedent will be set in the Snow King Resort District to allow for development of a size and character that is not consistent with the Master Plan Design Guidelines and was never contemplated in the Master Plan. Such an approval will create confusion and ambiguity moving forward, and will ultimately undermine the Master Plan itself.

Issue 2: Non-Responsive to Requested Reductions in Bulk and Scale

On the 16th of April, the Applicant's proposed plans for Lot 57 were rejected by the Planning Commission with the specific instructions as follows:

> *In addition, the applicant shall make design changes that further reduce the bulk and scale of the northeast corner of the south building. Suggested changes could include, but are not limited to, removing a section of building on the east side, shifting the building farther south, removing a partial story, shortening the roof overhang above the easternmost third-*

floor unit, reducing square footage, modifying the floor plans to create larger step-backs on upper units, and/or reducing unit counts.

The Applicant's response was woefully inadequate and essentially did almost nothing to address the issues identified:

- A removal of a bedroom of 517 square feet on the fourth floor of a portion of the northeast corner of the south building which represents a 2% reduction, in no way addresses the requirement to reduce the bulk and scale of the south building.

    - **How can a 2% reduction in the size of a building change the decision from it violates the <u>bulk, scale and character</u> requirement in the Master Plan to now it complies with the Master Plan? This is exactly the decision made by Town Planning. It defies logic.**

- The rendering (Page 7) finally provided by the Applicant in the revised package is so deceptive it is essentially dishonest. They created the rendering from a position a considerable distance from the south building to hide its massiveness. It is also an admission, in our opinion, by the Applicant that it <u>does violate the Master Plan</u> as they are trying to hide the actual bulk and scale of the south building with this deceptive rendering.

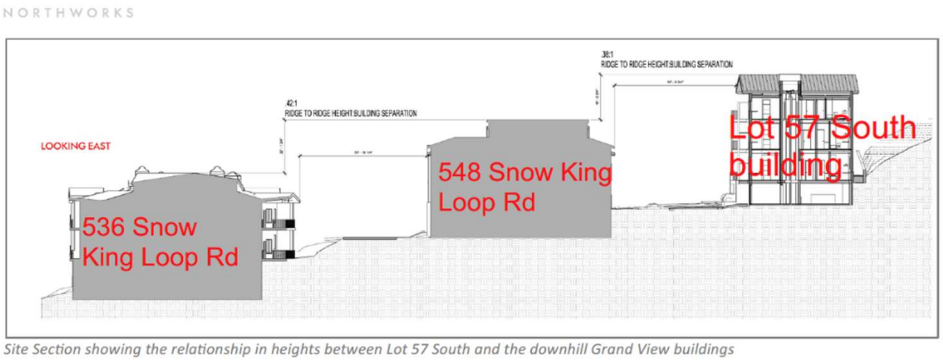
- The rendering produced by Grand View HOA (Exhibit 2) is still an accurate depiction of the bulk and scale of the south building, the total footprint of which has not changed. If you remove the upper left-hand corner single bedroom which is all the Applicant proposed to do in their latest revision, you would not be able to even see the change from the road below.

- The rendering below done to scale shows the south building continues to violated the Master Plan requirement to be compatible with Grand View in bulk, scale and character. Just look at the rendering below. That is Grand View 548 on the right and the extremely large Bear Dev south building on the left. It is 4 stories vs. 2 stories, almost twice as high, totally different scale (15 units vs. 4 units) and a totally different character of building vs. Grand View and the entire residential area of the resort district!



Exhibit 2 Bear Dev south building on left. Grand View 548 on right

Applicant continues to claim the south building is compatible with Grand View in bulk and scale. See Exhibit 3 below produced by the Applicant and which we will show is totally inaccurate. The actual spacing between the Applicant's south building and 548 is shown in Exhibit 2 above which was done from actual drawings. The actual spacing between Grand View 548 and Love Ridge 536 is shown in an actual picture in Exhibit 4 below. Again, the Applicant's depiction of compatibility is deceptive and totally inaccurate.



Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings

Exhibit 3 Applicant's Claim spacing and heights are the same.



Exhibit 4 – Actual view between Love Ridge on left and Grand View on right

Issue 3: Non-Responsive to Pedestrian and Vehicle Issues

We continue to point out the Applicant's unwillingness to address the pedestrian and vehicle issues. The Master Plan specifies that the height of buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. (p. 57, 59)

- A total Canyon effect will result between the south and north buildings. At the closest point, it is estimated that the buildings 55' and 35' respectively with less than 10' between them and at the sidewalk level around 6' between them. The same Canyon effect will be present between the south building and Grand View 548. This is totally pedestrian unfriendly which clearly violates a requirement in the Master Plan

- The Applicant's initial plan was rejected as they had not met the Master Plan requirement to have vegetation next to their buildings. Rather than reduce the size of their buildings, they removed the sidewalks on Lot 57 to meet this requirement. See Exhibit 5 below. Does one actually think pedestrians will cross the road, walk up on the Grand View sidewalk for 50' and then cross back to Lot 57? This is totally unrealistic and actually silly. Foot traffic for 60 condominiums will be walking in the road to get to the Applicant's buildings. Totally unsafe and again a total violation of the required pedestrian accommodations in the Master Plan.

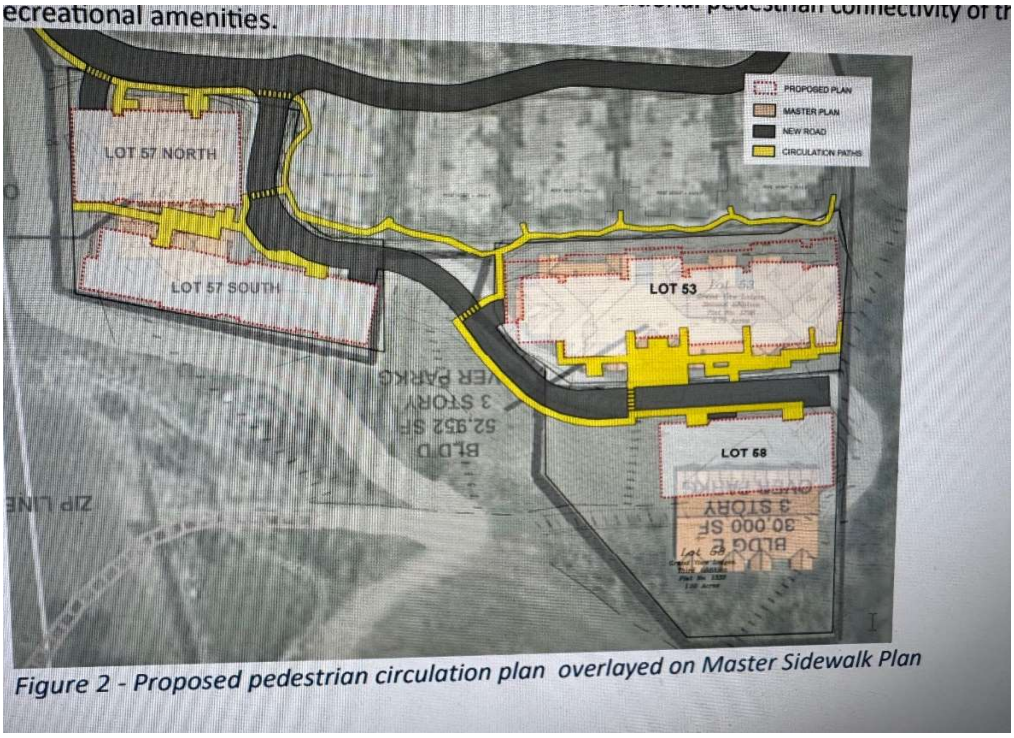


Figure 2 - Proposed pedestrian circulation plan overlayed on Master Sidewalk Plan

Exhibit 5

- The Applicant's movement of 18,000 sq ft and adding a second building is taking up so much of the .83-acre lot there is absolutely no allowance for visitor or service unit parking. Many of the planned units only have one parking space. Visitor and service unit parking will take place all along the road and at opportunistic spots at not only Bear Dev buildings but Grand View/Love Ridge buildings as well.

<u>Summary</u>

The owners in Grand View had relied upon the Master Plan to be followed when they made their purchase decision. It is absolutely unfair to these owners to allow Bear Dev. plans for an unanticipated south building on Lot 57 that towers over their buildings. The bulk, scale, and character of the south building is not compatible with existing development, will dwarf the pedestrian scale in Sub-Area, and is squarely at odds with the Master Plan goals of balance and predictability.

Exhibit 6 is provided to depict how compatible the Applicant's north building is to Grand View with the elimination of the south building. This is how the Master Plan had envisioned Lot 57.



Exhibit 6

With the requested rejection of the plans for Lot 57, the Applicant still has a very viable plan to move forward. They can immediately start with the plans approved for Lots 53 and 58 while they spend the additional time and energy needed to redesign Lot 57 to meet the requirement of the Snow King Master Plan.

Respectfully Submitted,

Rich

Richard Lurie
President
Grand View Condominium Association

April 7, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning & Building Department
tvalentine@jacksonwy.gov

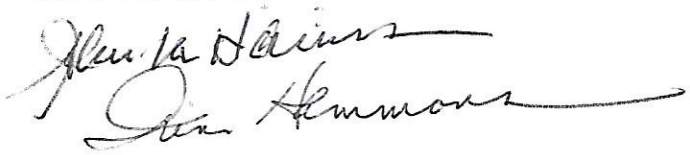
Dear Mr. Valentine:

As Owners of Grandview Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence to you as detailed by Rich Lurie. The Bear Development's resubmissions do not in anyway comply effectively with the Snow King Master Plan in bulk, scale or character.

The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with.

Thank you for your consideration.

John & Irene Hammons



From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: Palmers Email the Town Council
Date: Monday, May 26, 2025 6:06:50 AM

Email the Town Council

Email Content:	My wife and I put a substantial amount of our net worth at risk when we purchased Grand View Condo 494 in August of 2020. We decided on that condo because we did our due diligence and reviewed the plans for Lot 57 at Snow King Resort which would prevent unreasonable buildings to be built that were not in bulk, scale, and character with Grand View. This protected our investment and maybe just as importantly, the character of what one would expect in a resort in the historic town of Jackson which I have spent much time in for over 50 years. Now we are seeing that everything that is being requested to be approved for Lot 57 violates everything we read and saw in the Master Plan. When I saw the plan for Lot 57, I was horrified. I thought, “How in the world could this be approved when a reasonable person would not even entertain the thought of having a building that does not meet the specific requirements stated in the Master Plan?” This is a massive building, and in no way, shape or form complies with the Master Plan. I thought one of the reasons that we have a Master Plan was to prevent this very thing from happening. The plan says that any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View. That word “must” is very clear. Of course it requires someone’s judgement to approve or disapprove. To me, this judgement call is as clear as day. How can we say with a straight face that a building that is twice as high as the back of Grand View 548, has nearly four times the number of units, has a footprint that allows no setbacks from property line and extends three times in length versus Grand View buildings, is not in violation of the very plan which is supposed to protect this kind of thing from happening? Therefore, these plans for Lot 57 MUST be rejected so we continue to remain true to the Master Plan which was well thought out and done for a reason.
Your Name:	Chris & Mandy Palmer
Your Company Name:	*Field not completed.*
Your Phone Number:	703-928-3470
Your Email Address:	chris.mandy@cox.net

Your City:	Jackson
Your State:	WY
Your Zip Code:	83002

Email not displaying correctly? View it in your browser.

From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: Hartmanns Email the Town Council
Date: Monday, May 26, 2025 8:23:02 AM

Email the Town Council

Email Content:	I am writing to object to the Bear Development Plans for Snow King Loop, Lot 57. We are the owners of 548 Snow King Loop Unit 481, which is directly impacted by plans on Lot 57. When we purchased our unit we relied upon the Snow King Master Plan which we assumed would be enforced and govern the future development of Lot 57. The revised plans, as submitted by Bear Development, do not comply with the Bulk, Scale and Character language which is contained in the Master Plan. We have objected to each of Bear Development's Lot 57 plans as submitted. This latest proposal from Bear Development is NOT RESPONSIVE TO THE CONCERNS RAISED PREVIOUSLY BY THE COMMISSION. The footprint of the buildings has not changed. The inclusion of the South Building is inconsistent with the Master Plan which included only one building on Lot 57. The Lot 57 development plans are too much building on too little property which is inconsistent with the Bulk, Scale and Character of the rest of Snow King Mountain. We encourage the Town Council to reject the plans for Lot 57 and require a more thoughtful and responsive plan from Bear Developoment.
Your Name:	William and Deborah Hartmann
Your Company Name:	*Field not completed.*
Your Phone Number:	216-470-2101
Your Email Address:	WILLIAM.L.HARTMANN@gmail.com
Your City:	Jackson
Your State:	WY
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: Richard Lurie Email the Town Council
Date: Monday, May 26, 2025 1:51:14 PM

Email the Town Council

Email Content:

Dear Jackson Town Council,
I am the owner of unit 4910 in the Grand View 549 building and I would like to submit my personal strong opinion that the Lot 57 south building being proposed by Bear Dev NOT be approved as proposed.

When I purchased my unit, I reviewed the Master Plan and saw a reasonable size building of a little over 25,000 sq ft approved by the Town Council for Lot 57. I was therefore very comfortable in my purchase. No where in the Master Plan was it every illustrated another building could be built where Bear Dev is now proposing the south building. It is totally unreasonable to expect a potential owner to be able to dig through the Master Plan to realize multiple buildings could be built and if the owner of Lot 57 happened to own other lots in the Resort District, they could move additional square footage to this Lot 57 which is exactly what Bear did. One would have to hire an architect or professional planner to figure that out. That is totally unreasonable.

Why would Bear move an additional 18,000 sq ft to Lot 57? The only explanation is he found it cheaper to cram all that extra square footage on the relatively flat Lot 57 than where the plan originally allocated that square footage. He could care less the impact on the existing Grand View owners in the adjacent lot. There is no rational to accommodate this out of town developer at the expense of his neighbors.

Fortunately, the planners who put together the Snow King Master Plan foresaw what could be proposed and put in the Plan very meaningful words to prevent over development. They specifically stated on Page 70 that any buildings on Lot 57 had to be compatible in bulk, scale and character with Grand View condominiums. The words in the Master Plan are just as important as the numbers and these words are clearly being violated by Bear Dev. Their south building is twice as high as the south side of Grand View, contain 4 times the number of units per building and is three times longer than the width of a Grand View building. The building towers over my unit. In my due diligence, no way could I have foreseen what this out of state developer is proposing.

	In addition, the developer as used up so much of the Lot 57 space, he provided no sidewalks or visitor parking. Cramming that south building onto Lot 57 totally changes the entire character of the residential area of the Resort District and we ask the Town Council to reject the developers plans. Rich Richard Lurie Grand View 4910
Your Name:	Richard Lurie
Your Company Name:	Grand View Condominium Association
Your Phone Number:	203-249-0532
Your Email Address:	rlurie@optonline.net
Your City:	Jackson
Your State:	W
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

From: Susan Houchens
To: Tyler Valentine; Richard Lurie
Subject: Bear Plans for Lot 57
Date: Tuesday, May 27, 2025 5:11:50 PM

We are the owners of Grand View Condominium #522 in building 552. Please consider this letter as opposition to the Bear Development plans for Lot 57 of the Snow King Resort, This proposed building is massive in comparison to the existing buildings in our neighborhood.

When we purchased our Grand View Condominium, we reviewed and relied on Snow King Resort Master Plan to understand what could be built on Lot 57. What we are now being asked to approve for Lot 57 violates everything we read and saw in the Master Plan. This is totally unfair to all the Grand View owners, and these plans must be rejected.

Richard Houchens
Sussan Houchens

Snow King

Planned Resort District

Master Plan

SNOW KING RESORT MASTER DEVELOPMENT PLAN
TABLE OF CONTENTS

Page

INTRODUCTION

I. STATEMENT OF PURPOSE AND EXISTING CONDITIONS

A. Statement of Purpose 8
B. Introduction to Existing Conditions and Vicinity Maps 14
C. Extent of Planned Resort District Map 15
D. Neighborhood Zoning Map 17
E. Existing Conditions Plan 18
F. Existing Conditions Plus Approved Plan 19

G. Statement Regarding Existing Condominiums 20
H. Land Ownership Plan 22
I. Community Issues Map 23
J. USFS Special Use Permit Area. Ortho Photo 24
K. Winter Sports Map. Ortho Photo 25
L. Aerial Photo-Masterplan Boundaries 27

II. CONSISTENT WITH THE COMPREHENSIVE PLAN 28

III. COMPLIANCE WITH THE LAND DEVELOPMENT REGULATIONS 32

IV. MASTER SITE PLANS

A. Introduction to Site Plans 39
B. Site Plan-Proposed Master Plan 40
C. Sub-Area Plan 41
D. Transit Routes, Trails, Pathways and Sidewalks 42

V. LAND USE PLAN

A. Introduction to Land Use Plan 44
B. Overview of Permitted Uses 44
C. Uses Permitted within Building Envelopes 45
D. Uses Permitted within the Recreation Land Use Zone 49
E. Land Use Schedule 52
F. Example Development 53

VI. DESIGN GUIDELINES

A. Introduction 54
B. Design Guidelines. Character and Design Objectives 54
C. Design Guidelines. General Purposes 56
D. Architectural Design Guidelines 57
E. Site Design Guidelines 58
F. Pathways and Circulation Elements 64

G. Signage 65
H. Schematic Concepts and Architectural Sketches 84
I. Composite Photographs-Visual Impact Analysis 98

VIL DIMENSIONAL LIMITATIONS PLAN 66

A. Introduction, Definitions and Maximum Scale of Development 66
B. Sub-Area Site Plan 74

C.- G. Plan of Sub-areas #1- 6 Summary of Building Envelope Dimensions 75
H. Circulation Overlay Zone 81
I.-J. Plaza/Entry Sketches 82
L. Three-Dimensional Building Envelope Study 83
M-R. Building Envelope Sections and Examples 84

VIII. HOUSING ELEMENT

A. Housing Mitigation Plan 101

IX. TRANSPORTATION ELEMENTS

A. Traffic Analysis and Transportation Plan 105
B. Maps and Graphs 106
C. Parking Elements 121

X. CAPITAL IMPROVEMENTS PLAN

A. Introduction and Summary 149
B. Water Supply System Plan 151
C. Sanitary Sewer Plan 154
D. Storm Water Management Plan 159
E. Other Utilities 162
F. Existing Utility Plan 165
G. Proposed Utility Plan 166
H-L. Enlarged Plan Index and Enlarged Plan Sheets 167

XI. PHASING AND THE SNOW KING RESORT MASTER ASSOCIATION 172

XII. COMMUNITY SERVICES ELEMENT 177

XIII. XIII. ADDENDUM

A. Conceptual Example Building Plans 180

AFFIDAVIT AFFECTING TITLE

Re: Snow King Planned Resort District Master Plan

COMES NOW JEANNE JACKSON, MAYOR OF THE TOWN OF JACKSON, WHO, BEING SWORN ON HER OATH, DEPOSES AND SAYS:

That the Town of Jackson Town Council on December 18, 2000 did approve the Snow King Planned Resort District Master Plan and Conditions, attached. The Snow King Master Plan includes background information and explanations and is intended to specifically govern development at Snow King Resort.

Further your Affiant sayeth naught.

Jeanne Jackson

STATE OF Wyoming

COUNTY OF Teton

The foregoing Affidavit Affecting Title was subscribed, sworn to acknowledged before me by JEANNE JACKSON this 16th day of July, 2001

WITNESS my hand and official seal.

[Seal] CYNTHIA A. NICHOLSON - NOTARY PUBLIC County of Teton State of Wyoming My Commission Expires Feb. 23, 2002

Cynthia A. Nicholson
Notary Public

My commission expires: 2/2002

RELEASED	
INDEXED	
ABSTRACTED	
SCANNED	

Grantor: TOWN OF JACKSON
Grantee: THE PUBLIC
Doc 0547519 bk 429 pg 1-211 Filed at 07:55 on 0
Sherry L Daigle, Teton County Clerk fees: 444.5(
By KIMBERLEE JANSEN Deputy

INTRODUCTION

Background

In August of 2018, the Town of Jackson and Teton County adopted specific regulations to allow for the review and approval of Planned Resort districts within each jurisdiction. The regulations, included as Division 4.3 of the Town's Land Development Regulations (LDRs), outline the Purpose and Intent, Applicability, Procedure, Standing, Amendments, Expiration, Extension and Reconsideration, Standards Applying to all Planned Resorts, and Findings of Approval applicable in the Planned Resort District. In the Town of Jackson, the only Planned Resort District is the Snow King Ski and Summer Resort. Division 4.3.2 of the Town's LDRs specifically pertains to the review of the Snow King Ski and Summer Resort located within the Town of Jackson. Thus, this Snow King Resort Master Plan ("Master Plan") has been reviewed and approved according to the procedures outlined in Division 4.3 and is not be subject to the other requirements of the Town's LDRs.

This Master Plan has gone through a series of Joint Town and County Planning and Zoning Commission, Town Council and Board of County Commissioners meetings and workshops prior to the submission and approval of this final document. The original approval of the Snow King Resort Master Plan took place on December 18, 2000 ("Original Master Plan"). Since the approval of the Original Master Plan, the Town of Jackson and Teton County LDRs have been updated.

The review process of this Master Plan included a thorough review of each Chapter of the plan by the Town and County Planning and Zoning Commissions. Subsequent to the comments and suggestions raised by the Commissions, the document was revised to address the identified issues. Staff made all the required findings for approval and recommended approval with conditions that have been incorporated into this final document.

This Master Plan applies to all properties located within the Snow King Planned Resort District. Previously, there was language in the Original Master Plan that stated that Sub-Area #7 (now Sub-Area #6 in this Master Plan) played a limited role in this Master Plan. To be clear, Sub-Area #6 is part of this Master Plan and shall be subject to all benefits and obligations contained in this Master Plan.

This approved Master Plan acts as a Sketch Plan as per Division 8.3 Physical Development Permits of the Town's LDRs. Prior to commencement of construction or operation of a new land use within the Planned Resort District, each individual application will be required to obtain a development permit, grading permit and/or building permit from the Town per the regulations set forth in Division 8.3 of the LDRs for Physical Development Permits.

This Master Plan addresses all the specific submittal components outlined in Section 4.3.1.D of the LDRs, which includes the following:

1. Statement of Purpose
2. Master Site Plan
3. Dimensional Limitation Plan
4. Design Guidelines
5. Transportation Demand Management Plan
6. Housing Mitigation Plan
7. Capital Improvements Plan
8. Land Use Plan
9. Phasing Plan

Chapter 1: Statement of Purpose and Existing Conditions

The LDRs state that the intent of this Chapter is to describe the rationale for the proposed resort expansion and describe the design theme for the resort. In addition, the Chapter should also describe how the Master Plan fulfills the intent of this Division 4.3, as specified in Section 4.3.1.A, Purpose and Intent.

This document clearly articulates the overall intent of the Master Plan and the rationale for the expansion of the resort in statements such as the following:

> "A primary purpose of this Master Plan is to create a vibrant mixed-use resort complex including a multi-faceted conference/convention center and community facility for Jackson, a facility that contributes to the economy of downtown and also serves as a permeable border between the town and the mountain."
>
> "As a community partner Snow King offers the community, through this Master Plan, limits of development predictability, preserved open space, access to forest lands, and many other positive attributes discussed in this document."

The purpose and intent as described in Division 4.3.1.A is further defined and clarified by this Master Plan on pages I.A.5 and 6 with an additional twenty-four bullet points describing the purpose and intent to be achieved by the Master Plan in terms of the built environment, impacts on the community and the role the resort will play in the greater Jackson Hole area.

The second purpose of this chapter is to provide a background for the Master Plan by describing the existing conditions, extent of the Master Plan, and land ownership within the subject area. This purpose has been additionally addressed through the inclusion of both written and visual descriptions of the subject property and explanation of both existing and Planned Resort District development.

Chapter 2: Consistent with the Comprehensive Plan

The purpose of this chapter is to ensure that the Master Plan is consistent with the goals and objectives of the Jackson/Teton County Comprehensive Plan. This document provides a clear documentation as to how the proposed plan meets the goals and objectives of the Comprehensive

Plan. Staff concurred with this document's statement that a balance between what the resort brings to the community in terms of jobs, tax revenue, meeting space and recreational opportunities must be balanced with the associated impacts of these benefits on public infrastructure (roads, sewer and water systems, transit, etc.), and demand for employee housing. It is important to recognize that the Comprehensive Plan anticipated the growth and expansion of all resort areas in Teton County while at the same time maintaining the community character of Jackson Hole as shown in the following statements from the 2012 Comprehensive Plan:

> "Nonresidential development not associated with agriculture should be clustered in Complete Neighborhoods and Planned Resorts where nonresidential character already exists."
>
> "In the future, the (Snow King Resort) subarea will complement Downtown (Subarea 2.3) lodging and tourist amenities. Lodging will be provided in a variety of types and forms from hotel rooms to condominiums, in order to support the local tourism-based economy. The size and scale of structures will often be larger than those typically allowed in other subareas of Town, as resorts typically require a larger critical mass necessary to support visitor functions. Though buildings will tend to be larger than in other districts, the subarea will maintain an abundance of open space in relation to the build environment as a key to a successful resort experience."
>
> "Consistent with the master plan, Snow King Avenue will be developed into a mixed use corridor that includes a variety of commercial uses while still serving as a major transportation corridor in the community. Along with this it will be important to create a more visible and attractive base area along Snow King Avenue to attract residents and visitors to the many amenities and recreational opportunities found there."

Staff found that the proposed Master Plan is consistent with the Comprehensive Plan by providing a well-designed and thought out plan that will be a benefit to local residents and visitors while at the same time addressing the associated impacts of the proposed expansion on the local community.

Chapter 3: Compliance with the Land Development Regulations

The LDRs in Division 4.3 Planned Resort District state that an applicant for a Planned Resort Master Plan may propose, and the Town Council may approve, alternative standards for development that are consistent with the purpose and intent of Division 4.3. In addition, Division 4.3 states that it is fully consistent with the Division that Planned Resorts may have dimensional, design, and other development standards different from those described in other sections of these LDRs due to the unique circumstances of, and community objective for, resort development. Staff determined that this Master Plan meets the requirements for a sufficient application per Division 4.3 LDRs and is thus in compliance with the LDRs. Furthermore, as described in Chapter 1: Statement of Purpose and further described in this chapter the proposed Master Plan is consistent with Section 4.3.1.A which defines a Planned Resort District. Finally, the chapter addresses the required findings as per Section 4.3.1.D LDRs.

Chapter 4: Master Site Plans

The master site plans depicted in this Chapter are conceptual and illustrate the proposed development and the site characteristics. This Chapter stresses that the backbone of the Master Plan is the pedestrian circulation routes that run through the resort connecting the various outdoor and indoor facilities and activities. These routes are clearly shown by the Snow King Resort Circulation, Pathways and Sidewalks Map and the Snow King Resort Vicinity Trail Network Map included in this Chapter. The summer/winter conceptual master site plan clearly illustrates the location of development, vehicular and pedestrian circulation and interaction between the built and natural environment making up the resort. The inclusion of a sub-area plan shows the resort in more focused and centralized areas for more detailed discussion throughout the remainder of the Master Plan.

Chapter 5: Land Use Plan

The intent of the land use plan is twofold. First, to identify the allowable land uses within the Master Plan. Second, to describe the amount and type of development that is to be expected as a result of the proposed Master Plan.

The land use designations are consistent with both the Master Plan's design theme and the character objectives for the resort, as specified in Chapter VI Design Guidelines of this Master Plan.

Various conditions for approval have been incorporated into the body of this Chapter.

This Chapter also includes a chart depicting the amount and type of development proposed in the Master Plan in an "Example Development Chart". The Example Development Chart is only to be used as an example of what may be developed on site, not as a mandate for what must be built. The Example Development Chart is necessary in order to determine the possible impacts and required facilities and services as a result of the proposal. The Example Development Chart is consistent with the need for resort expansion as well as with the primary purpose of the Master Plan to: *" create a vibrant mixed-use resort complex including a multi: faceted conference/convention center and community facility for Jackson, a facility that contributes to the economy of downtown and also serves as a permeable border between the town and the mountain.*"

Chapter 6: Design Guidelines

The intent of this Chapter is to provide design guidelines to establish standards for buildings, spaces signs and lighting within the Master Plan along with a mechanism for the implementation. The LDRs state that the design theme of the resort shall be defined by the applicant and be consistent with the standards of Division 4.3.

Division 4.3.1.F.7 establishes seven individual criteria upon which the proposed Design Standards are to be evaluated.

The first criteria described as General in the LDRs establishes whether the proposed Guidelines will create a sense of place. The master site plan satisfies this requirement with three defined primary outdoor spaces. Each one of these locations (Entry Court, Pedestrian Plaza, Pool Courtyard) is designed for a specific function, provide connectivity between the various elements of the resort and take advantage of the natural features found in the area.

The second criteria: Architecture, is satisfied by the proposed Guidelines including sections on Building Form, Massing and Character, Roofs, Exterior Materials, Windows, Commercial Frontage, Entryway, Decks and Balconies, color and Sub-Area 2 Specific Guidelines. The description and criteria provided in these sections will provide base standards upon which individual Final Development Plans can be evaluated for consistency with the Master Plan.

The third criteria: Bulk and Scale, has been addressed in the Building Form, Massing and Character section of this Chapter. In addition, the Chapter VII Dimensional Limitations graphically shows the three-dimensional building envelope dimensions, Circulation Overlay Zone and Building Envelope Sections designed to control the bulk and scale of the proposed development.

The fourth and fifth criteria: signage and lighting, is addressed in the Master Plan.

The sixth criteria: Site Planning, has been adequately addressed in the Master Plan in various chapters including Chapter II Master Site Plans, Chapter VJ Design Guidelines, Chapter VII Dimensional Limitations Plan and Chapter IX Transportation Elements.

The seventh criteria: Character element, as per Section the LDRs, has been incorporated successfully into the proposed Design Guidelines. The resort will have a definable architectural character and site design that meets the standards identified in the LDRs for the Snow King Resort.

Chapter 7: Dimensional Limitation Plan

The intent of the proposed Dimensional Limitation Plan is to specify dimensional limitations necessary to achieve the design theme identified for the Master Plan. The plan includes floor areas and floor area ratios, densities, landscape ratios, height, setbacks, building envelopes, etcetera, or other lines delineating areas on which restrictions of development are to be imposed and areas in square feet for each lot or building. Any dimensional limitations unspecified by the Master Plan shall follow the design theme identified in the Master Plan.

This Master Plan accomplishes this through a method of three-dimensional building envelopes presented primarily in graphic format. The proposed three-dimensional building envelopes provide the ability to review proposed Final Development Plans against the proposed envelopes for consistency with the Master Plan. The building envelopes provide both height and setback requirements.. In addition, standards for setbacks, open space, landscape surface area, landscape surface ratio, building floor area, lodging capacity and floor area ratio are also included as part of the Master Plan. The various dimensional limitation standards provided in this Chapter ensure that the proposed resort character is maintained.

Chapter 8: Housing Element

The intent of the housing element is to ensure a supply of affordable and workforce housing that is commensurate to the demand for housing created by development within the Planned Resort.

The Housing Element adequately addresses the estimated demand and proposed location of employee housing required as a result of the proposed Master Plan.

Chapter 9: Transportation Element

The intent of the proposed transportation element is to ensure that the resort development does not produce an amount of vehicular traffic that undermines the community's character, and endangers the public health, safety and welfare (i.e. noise, air quality and traffic impacts). The Master Plan provides an optimum mix of automobile, transit and pathway facilities within the resort, encourage coordination of all resort transportation facilities with the County-wide transportation system, promotes design and management which encourages shifts from single - occupancy vehicle trips to multi-occupancy trips, or other transportation modes, and provides equitable cost sharing for facilities and services.

The traffic impact analysis adequately addresses the requirements described in Section 4.3.1.F.8 of the LDRs. The proposed plan demonstrates how the travel behavior of resort visitors and employees will be managed to minimize the number of vehicle trips on the roadway network resulting from the resort development. Thirteen strategies are proposed that may be used to influence mode choice and reduce automobile trips as required by the Transportation Demand Management Plan.

The proposed shared parking analysis in combination with the proposed onsite parking will more than adequately meet the anticipated supply and demand for parking at the resort based on the example development plan. In addition, the proposed Entry Plaza planned as the vehicular hub for the resort will adequately handle the volume and wide range of vehicle types that will be utilizing the facility.

Chapter 10: Capital Improvement Plan

The intent of the capital improvements element is to ensure that infrastructure and essential services will be provided in an efficient and timely manner to accommodate projected district demands. The capital improvements element identifies service providers, analyzes impacts and proposes a capital improvements plan for facilities and services needed by the district.

This Master Plan accurately identified and acknowledged the necessary service providers required for the development of the Master Plan. The impact analysis adequately meets the requirements outlined in Section 4.3.1.F.9.

The provided capital improvements program is consistent with the required impact analysis and clearly specifies how the deficiencies in infrastructure will be remedied or mitigated, including descriptions of the infrastructure improvements, the responsibility and sources of funding for the improvements, and the timing for completion of improvements. Concept plans for required improvements are also provided.

Chapter 11: Phasing and the Snow King Resort Master Association

The intent of the phasing element is to ensure that development within the district occurs in a logical sequence, including amenities and necessary public service expansions. The resort is required to not only provide the necessary improvements and services as a result of the resort expansion, they are also responsible for the monitoring and long-term maintenance and replacement of all facilities, both on and off site.

Among other things, the Snow King Resort Master Association (SKRMA) shall be responsible for ensuring that the phasing plan and phasing conditions are satisfied. SKRMA has specific duties and commitments with regard to this Master Plan and its implementation, all of which are outlined and described in this Chapter.

Chapter 12: Community Services Element

The Snow King Resort has long played an important role in the community, providing facilities and recreational opportunities to both out of town visitors and the local community. Snow King is utilized as the primary conference/meeting room facility in the Town of Jackson. The Snow King

area provides an abundant array of recreational opportunities both summer and winter from hiking, mountain biking, and the alpine slide ride to skiing, tubing and ice skating.

Conditions of Approval

Conditions of approval included in the original approval and subsequent amendments of the Master Plan have been largely incorporated in the Master Plan or are on file in the Town Planning Office.

I. STATEMENT OF PURPOSE

Snow King has been a community resource and a community partner for over 60 years. This Master Plan presents a well-balanced next-generation vision of this partnership.

As stated in Section 4.3.1.A, the purpose of this Master Plan is to *establish the development standards and serve as a guide to all future development within the Planned Resort. The Master Plan is intended to be of sufficient detail to describe the amount, type, size, location and impact of the proposed resort, but technical specifications of the proposed development, such as engineered plans or fully engineered plans or fully detailed architectural drawings are not required.* The Master Plan is to provide for a mix of recreational, retail, and service-oriented activities which have a high degree of self-containment and provides economic and other benefits to the community. The Master Plan is intended to guide the creation or continuation of a planned development configured around a major recreational activity.

Although sometimes repetitive, this Master Plan is consistent with the Comprehensive Plan, complies with the Land Development Regulations and adheres to all the procedures and standards of Division 4.3 of the Land Development Regulations. The Goals, Objectives and Criteria listed in this Statement of Purpose are the guiding principles of this Master Plan.

Prologue

From a bird's eye view, the Town of Jackson is nestled into a narrow space between the Elk Refuge and the mountains, built at the fork of Cache Creek and Flat Creek and extending along the creeks at the foot of the mountains. The Town Square is at the center of this unique topography. The quality that makes the Town of Jackson attractive is the way in which it fits into this topography so that human habitation is seen as a natural part of the much larger landscape.

Snow King Resort, now and when developed as proposed in this Master Plan, aims to be an extension of this defining quality of the town of Jackson. As the border between the town and the mountains, Snow King "fits into the country" and it completes and compliments the downtown core.

As a blend between a visitor-serving resort and a community-serving facility, Snow King is a place where local residents and visitors share space comfortably. This proposed development is consistent with the traditional style of Jackson Hole hospitality: Snow King Resort invites visitors to join right in, relax and take part in the life of a unique community.

A primary purpose of this Master Plan is to create a vibrant mixed-use resort complex including a multi-faceted conference/convention center and community facility for Jackson, a facility that contributes to the economy of downtown and also serves as a permeable border between the town and the mountain.

Access to public lands (US Forest Service) from town through our private land in a seamless transition has always been a priority at Snow King. In fact, so unnoticeable is this transition that most people do not realize that they are entering private property. This tradition is intended to continue.

Among the stated purposes and intent of the Planned Resort District, as stated in the Land Development Regulations and the Comprehensive Plan, is to provide recreational opportunities that rely on indigenous natural attributes of the area. These opportunities are provided to both the community and the visitor through the development of Snow King's resort facilities. Snow King has provided the Town of Jackson, and the community at large, with in-town recreational facilities since 1939.

The ski area provides a venue for the junior ski racing programs, adult ski racing as well as recreational skiing and snowboarding, both day and night. During the summer the area provides a trail system, which has become a staple hiking, running, biking and riding area for residents and visitors alike. In turn other resort facilities and on mountain activities provide the financial and operational platform, which support and provide the ability to maintain and expand these recreational opportunities to both valley residents and visitors.

This Master Plan establishes the development standards and serves as a guide to all future development within the Snow King Planned Resort District. This Master Plan document represents a carefully balanced and well thought out development plans for the properties, it is organized in a clear manner responding to each Section of Division 4.3.1 of the Land Development Regulations and is intended to expand on prior foundations through a collaborative plan, design and approval process between Snow King, the Town of Jackson and Teton County. This foundation is defined in the Land Development Regulations and is consistent with prior approvals dating back to 1972 and with prior presentations approved under the Complete Neighborhood provisions of the old Town of Jackson Development Guidelines.

Since the first chair lift was built in 1939, Snow King has been a community resource and a community partner. When the hotel opened in 1976, Snow King Resort opened its doors to a great variety of community meetings and events. Snow King has pioneered innovative relationships with the U.S. Forest Service, with the Town of Jackson and with many community organizations such as the Teton County Parks and Recreation Department, the Jackson Hole Ski Club, the Jaycees and many other community organizations. Virtually every non-profit organization in Teton County uses Snow King facilities to bring people together. Many local people regularly use Snow King's hiking and skiing trails as well.

Snow King Resort has, for years, been one of the largest employers in the Town and County. Among the large employers, we pride ourselves in maintaining a very stable level of employment throughout the year.

A very important consideration in this Master Plan is to develop the property with porous edges and inviting corridors that allow circulation to the National Forest lands from the Town. It also considers the property as a bridge connecting the East and West ends of the Town via trails and pathways. Rather than stand out at the base, Snow King Resort melts into the mountain.

As owners of the largest contiguous land parcels within the Town of Jackson, we have planned and given a great deal of thought to the future development of these lands. We have also proven our slow and careful approach to development. As a community partner Snow King offers the community, through this Master Plan, limits of development, predictability, preserved open space, access to forestlands, and many other positive attributes discussed in this document. Additionally, Snow King is operationally integrated in the community. As resort operators we differ from the standard subdivision developer since we continue to operate the product of our construction/development phase providing assurances of ongoing responsibility to the community.

In addition to the recreational facilities, the Snow King Resort Hotel has provided the largest year round meeting and conference facilities in the county since 1976. The Grand View Lodge Conference facility has expanded the conference space at Snow King and allowed the resort to remain competitive in attracting small to medium sized conferences. As the resort expands in the future there is the potential to increase conference space further with a new facility in the heart of the Resort District. Depending on conference demand and the desire for more diverse uses at the resort, this space may also be designated for indoor recreational activities to complement the array of outdoor activities on the mountain.

Within the resort core all buildings are interconnected by indoor and outdoor circulation corridors alleviating the need for guest and visitors to drive to services. Pedestrian and shuttle connections exist and are planned to connect the Town Square and Snow King. This Master Plan also encourages East/West and North/South pedestrian connections that complement the fabric of the Town and connect it to its mountain roots.

Functionally, visitors will be able to step out of our meeting rooms directly into the mountain environment. The pedestrian circulation system links the Resort to the mountain on both the north/south and the east/west ax is so that Resort use is an integrated part of the mountain trail system. Outdoor recreation is the defining characteristic and largest land use of Snow King Resort summer and winter.

On the Town side, the entire downtown core is viewed as part of the resort in the sense that downtown amenities complement the convention facilities and lodging located on our site. Downtown shops and restaurants will be part of the immediate visitor experience, with both transit and pedestrian pathways linking Snow King to the Town Square conveniently. In the past, Jackson desired a full-service, year-round convention center to complete its array of visitor services; however, today, Jackson has a wide range of convention space that serves the community well. This proposed Master Plan offers the community the opportunity to shift from a focus on convention space to a greater focus on recreation in a manner that will benefit the entire downtown area.

The proposed development also blends sensitively with the adjacent residential neighborhood, as lodging facilities are bordered by condominiums and employee housing as a buffer for the residential neighborhood to the north and east. In addition, the Resort intends to provide an attractive Cache Street terminus that marks the end of the commercial development of the downtown core and the beginning of the residential neighborhood to the west.

Scale and Type of Development

An objective of this Master Plan is to develop a high-intensity resort node of development, which is compatible with its location and with its crucial relationship with downtown Jackson. The size and character of the proposed development is appropriate to its position as the center for year-round recreational, conference and resort activities within the Town of Jackson for both residents and visitors.

On the mountainside of the Town/Forest border defined by Snow King Resort, the proposed development blends into the contours of the mountain both physically and functionally. The buildings take advantage of the complex contours at the base of the mountain. The scale and shape of the mountain will make these structures appear modest. The Design Guidelines Chapter addresses how large structures such as the existing hotel and the Snow King Center and future additions fit into the topography.

The regulations set forth four basic considerations for establishing the amount and type of development: (1) rationale and character objectives for the resort area; (2) overall development which can be permitted while preserving community character; (3) infrastructure capacity; and (4) resort self-sufficiency to minimize vehicle trips.

The first two issues are discussed in the context of consistency with the Comprehensive Plan, the Land Development Regulations and the Design Guidelines. The issue of infrastructure capacity is discussed as part of the Capital Facilities Element. The issue of resort self-sufficiency is generally

not applicable since the intention of this Master Plan is to be integrated with the down town area. However, the proposed uses do provide basic conveniences and amenities needed by on-site guests and conference center users. Land uses and intensity are consistent with the Land Development Regulations.

The proposed maximum scale of development is in keeping with Division 4.3.1. Three-dimensional building envelopes and design guidelines are used to provide a level of predictability. These physical parameters, in concert with the intensity of use thresholds, allow this document to provide long range planning for infrastructure, capital facilities and community land use patterns. These predictions should enable the Town and the resort to equitably share responsibility for future infrastructure and capital facility improvements.

Goals and Objectives

Section 4.3.1.A of the Town of Jackson Land Development Regulations state that *the purpose of the Planned Resort District Standards is to provide and guide the creation or continuation of a planned development around a major recreational facility. The intent of this District is to:*

- *A. Encourage recreational activities that rely on indigenous natural attributes of the area, contribute to the community's character and economy and have had a long-standing, beneficial role in the community; and*
- *B. Provide flexibility for planning and developing recreational resort facilities in a creative, efficient and coordinated manner in order to provide quality visitor experiences; and*
- *C. Create a process in which applicants, Teton County and the Town of Jackson collaborate with landowners in planning and designing resort master plans that meet community goals and respond to the unique circumstances of the resort area; and*
- *D. Permit resort development that contributes to expanding the winter and shoulder economic seasons: and*
- *E. Ensure that resort plans incorporate a mix of land uses, promote alternative modes of transportation, and provide a pedestrian-oriented community in order to alleviate traffic related impacts; and*
- *F. Ensure resort plans are consistent with the Comprehensive Plan, and therefore, are beneficial to the community; and*
- *G. Enable long-range planning for infrastructure, capital facilities, and community land use patterns by establishing a level of predictability in the maximum potential size and character of each resort area; and*
- *H. Ensure a balance is maintained between tourism and community that promotes social diversity but does not cause undesired shifts away from rural, western community character; and*
- *I. Produce resort plans that make significant contributions toward protecting attributes of the community that are considered critical to the community's long-term health, welfare, and wellbeing.*

The Town of Jackson LDR 's also state that the Objectives of the Planned Resort District is:

To be a mixed-use district configured around a resort complex. Resorts are to be well balanced they are to provide tourist accommodations as well as seasonal and year-round housing. The design of resorts is to be compatible with adjoining areas and is to be connected to the community at large by roads, transit and pathways. A portion of the resort workforce, particularly seasonal employees of hotels and restaurants are to be able to find housing within the resort district. Commercial development is to provide both tourist and local convenience shopping opportunities as appropriate.

Division 4.3.2.B includes the following factors and resort characteristics that are important in Snow King's future development:

Capitalization on the location at the terminus of Snow King Avenue.

Creation of a sense of arrival.

Creation of an active, attractive, pedestrian streetscape along the eastern end of Snow King Avenue.

An attractive, safe and direct pedestrian streetscape connection to the Town Square.

A layout that blends the edges of the resort into neighboring developments, creating a porous edge to the resort that encourages pedestrian travel into and through the area.

Structure sizes and layout that draw people into the resort area.

A continuity of architecture and activities within the resort, creating a multi-use sense of place.

Pathways throughout the resort and connections to the Jackson Hole pathways system.

Continued provision of the amenities of "town hill" skiing.

All of these factors and characteristics are discussed and considered in detail throughout this Master Plan.

This Master Plan endorses and complies with all the above Goals and Objectives and adds this additional criterion:

- Create a vibrant year-round district in a unique resort-oriented urban commercial environment, serving both visitors and residents.
- Maintain and enhance access to public lands through private lands in a seamless transition. Preserve open space, ski runs and extend existing Town parks into the mountain.
- One dominant central hotel oriented towards conferences and meetings without lying accommodations of various types.
- Create meaningful outdoor activity areas that relate to both buildings and open space considering long vistas, and within a comfortable urban pedestrian framework.
- Solidify Snow King's role as the main convention and conference facility in the community.
- Create East/West trail networks that interconnect with other trails leading from Town up the mountain.
- Frame the access to the mountain West of the Snow King Center with a companion building, One Town Hill.
- Locate services and parking underground, wherever feasible, within a comfortable walking distance of destination, while creating building facades that conceal these uses.
- Separate service/delivery areas from the guest areas of the resort.
- Careful use of density to reduce the need for transportation within the district and from Snow King to the Town Square area.

- Create a Sense of Arrival at the Resort convenient for both visitors and local guests and with sufficient space for various concurrent functions and with clearly visible key destination points.
- Balancing activities to create an efficient distribution of usage throughout the day and the year.
- Create a festive resort-like atmosphere, with a variety of eating and recreational experiences. Lively all seasons.
- Integration into the town's fabric in a non-competitive symbiotic commercial relationship to downtown. Commercial areas should act as adjuncts to recreation, lodging and conference facilities.
- Community oriented Resort and Conference Center with a variety of year-round recreational activities and amenities for visitors and residents, achieving sufficient volumes of pedestrian circulation to create vibrant public spaces.
- Within the resort, pedestrian, bicycle and skier circulation shall be encouraged through the use of a pathways system. Pathways will be integrated into the resort and the Town's fabric and segregated, as much as possible from automobile circulation. The overall plan will be pedestrian friendly.
- Planning with landscape scenic values in mind.
- Design guidelines that enhance the natural attributes of the site and encourage architectural by distinctive design.
- Encourage design diversity with common themes.
- Create a Pedestrian Plaza from the hotel to the Snow King Center with porous building edges.
- Maintain the appearance of a resort set at the edge of town with public access through it to the National Forest Service land. Keeping a sense of connection to the mountains.
- Intercept as much vehicular traffic as possible at or near the Resort's entrance.

Submittal Components

This Master Plan document considers, addresses and ultimately assists in achieving these Goals and Objectives, while taking advantage of the unique characteristics of the site.

When considered as whole, the Master Site Plans, Land Use Plan, Design Guidelines and Dimensional Limitation Plan provide a clear vision of the visual and physical character of the resort.

Other components such as the Housing, Transportation, Capital Improvements, Phasing and Community Service Elements address the impacts and remedies associated with the development of the Resort.

Various Chapters of this Master Plan identify, address and respond to all the requirements of Division 4.3.1 in a clear, complete and comprehensive manner.

Introduction to Existing Conditions and Vicinity Maps

This chapter of the Master Plan defines the existing conditions within the Snow King Planned Resort District (PRD) and its immediate neighborhood. The maps are designed to provide distinct information and to assist in the familiarization process as well as providing reference information with respect to the later chapters. These maps provide information about the current zoning in the Snow King Planned Resort District (PRD) vicinity, and the current status of the built environment at Snow King Resort.

The Master Plan includes all areas within the Planned Resort District. The Master Plan has been divided into 6 sub-areas, Subareas #1-6.

The next map in this chapter is the Land Ownership Map that indicates the mosaic of private owners, as well as US Forest Service and Town of Jackson parcels, which comprise the base of the resort.

Extent of this Master Plan



Proposed Mountain Maintenance

The Ice Rink

Proposed Mountain Sports Training Center

Proposed Gondola

Lift Clearance Zone

Ski Club Expansion

Circulation & Milling Area

Tubing Carpet

Town Hill Lofts

Event Lawn / Open Space

Proposed Collector Trail, All Uses

Proposed Resort Map/Trailhead Kiosk

Proposed Entry/Gateway Feature

Potential Art Installation

Proposed Ticketing

Existing Parking and Drop Off

Existing Parking

Bus / Shuttle Stop

Climbing/Bouldering Park

Playground

Cache Street

Contour Interval = 2 Feet

North

0 40 80 160 Feet

Prepared by:

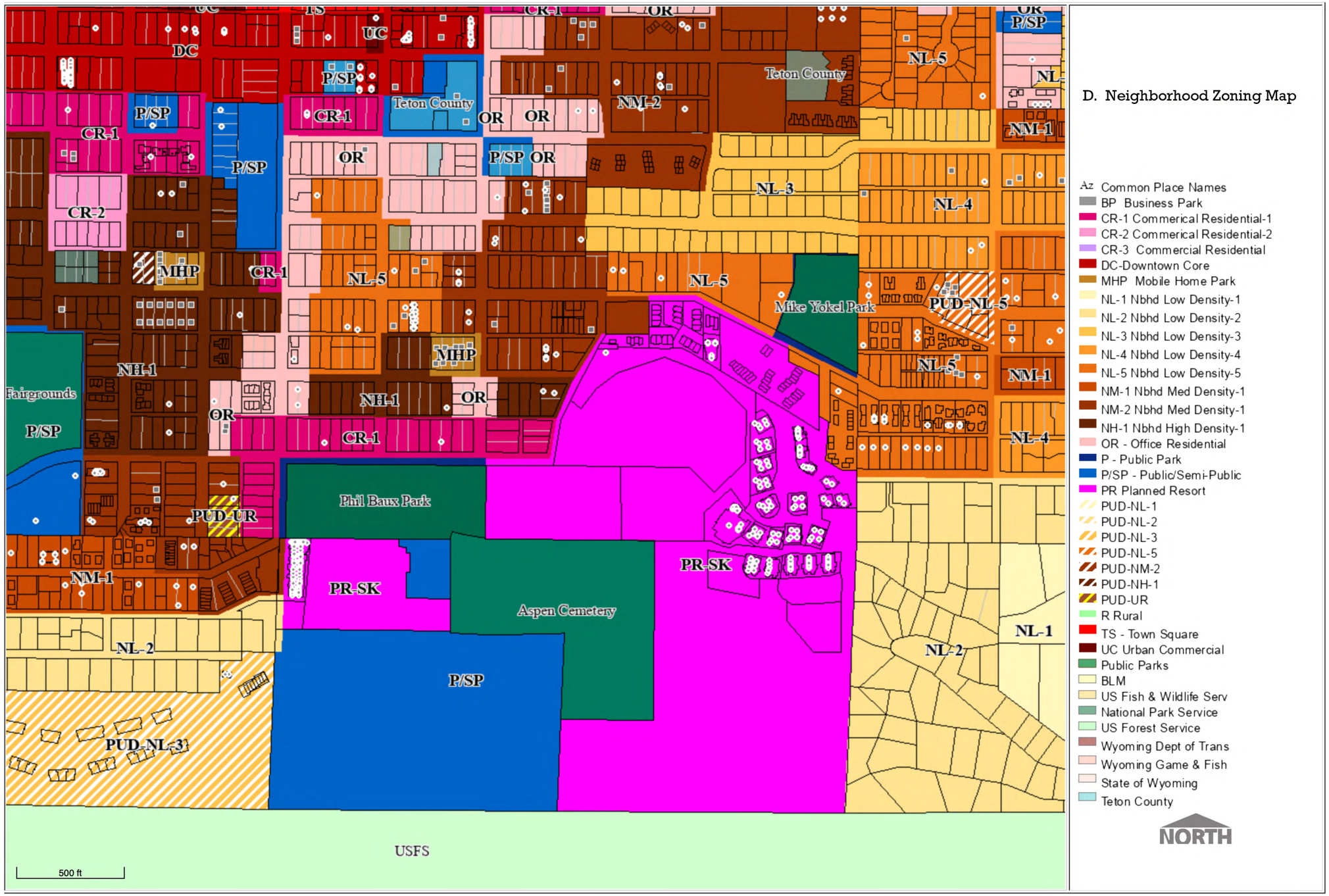
SE GROUP

Existing Hiking Trail

Existing Mountain Bike Trail

West Portal and Phil Baux Park Concept Plan

JULY 2019


DC
UC
TS
P/SP
Teton County
CR-1
OR
NM-2
NL-5
NL
NM-1
CR-2
NL-3
NL-4
MHP
Mike Yokel Park
PUD-NL-5
NH-1
Fairgrounds
PUD-UR
Phil Baux Park
PR-SK
Aspen Cemetery
NL-2
NL-1
PUD-NL-3
USFS
500 ft
D. Neighborhood Zoning Map
Common Place Names
BP Business Park
CR-1 Commerical Residential-1
CR-2 Commerical Residential-2
CR-3 Commercial Residential
DC-Downtown Core
MHP Mobile Home Park
NL-1 Nbhd Low Density-1
NL-2 Nbhd Low Density-2
NL-3 Nbhd Low Density-3
NL-4 Nbhd Low Density-4
NL-5 Nbhd Low Density-5
NM-1 Nbhd Med Density-1
NM-2 Nbhd Med Density-1
NH-1 Nbhd High Density-1
OR - Office Residential
P - Public Park
P/SP - Public/Semi-Public
PR Planned Resort
PUD-NL-1
PUD-NL-2
PUD-NL-3
PUD-NL-5
PUD-NM-2
PUD-NH-1
PUD-UR
R Rural
TS - Town Square
UC Urban Commercial
Public Parks
BLM
US Fish & Wildlife Serv
National Park Service
US Forest Service
Wyoming Dept of Trans
Wyoming Game & Fish
State of Wyoming
Teton County
NORTH



E. Existing Conditions Map

This Plan reflects the Snow King Resort Area as it is in its present state. Structures Include:

- The Snow King Resort Hotel
- The Grand View Lodge Conference Center
- The Snow King Sports and Event Center
- Grand View and Love Ridge Condos
- Rafferty Center

Major Site Features include:

- Snow King Ball Park
- Phil Baux Park
- Rafferty, Cougar, and Summit Ski Lifts
- Alpine Slide, Mountain Coaster
- Miniature Golf, and Maze



E. Existing Conditions Plus Approved Plan

This Plan reflects the existing Snow King Resort Area with the addition of the approved KM6 and Snow King Hotel Development. Included in the approved development are:

- Proposed buildings A-E of the Snow King Hotel.

- Proposed conference center, commercial development, and housing on the KM6 parcel.

- Pine Lodge development now known as One Town Hill condominimums.

- Storage facility behind ice rink.

- Mid-mountain lodge, accesory buildings, and pavillion.

- Condominimum building 27 located on lot 58 above Grand View Condominimums.

- Mountain maintenance facility located on Vine Street.

- Cabins located on lots 53 and 57 above Grand View condominimums.

I. H. 2. Statement Regarding Sub-Area #6

The following projects, all located in Sub-Area 6, had a limited part in the Original Master Plan:

- Pitchfork Townhomes
- Vine St. Townhomes
- Clark's Knoll Townhouses
- Grand Vista Townhouses
- King Ridge

To be clear, Sub-Area #6 is located within and is governed by this Master Plan. Sub-Area #6 is approximately 4.85 acres and can accommodate a maximum of 252 guests. These 252 guests reduce the maximum lodging capacity (i.e. APOs) remaining in Sub-Areas #1-5 to 2,208 (2,460 APOs – 252 = 2,208 APOs). Owners of property within Sub-Area #6 are permitted to short-term rent their units. The ability to short-term rent comes from this Master Plan. Any owner that chooses to short-term rent their property within Sub-Area #6 shall be required to pay to SKRMA 1% on the gross revenue generated from all short-term rentals. This 1% fee (the SKRMA Fee, as defined and described in Chapter 11) is explained in more detail in Chapter 11. This 1% fee applies to all short-term rentals in the Master Plan. Prior to submission to the town, properties within Sub-area #6 shall be required to submit development applications to SKRMA for review only (not approval or denial of the right to submit the application to the Town.)

The Pitchfork, Clark's Knoll and Grand Vista projects were constructed from 1990 through 1996 and are expected to remain as they are regarding dimensional limitations, parking and impervious surfaces.

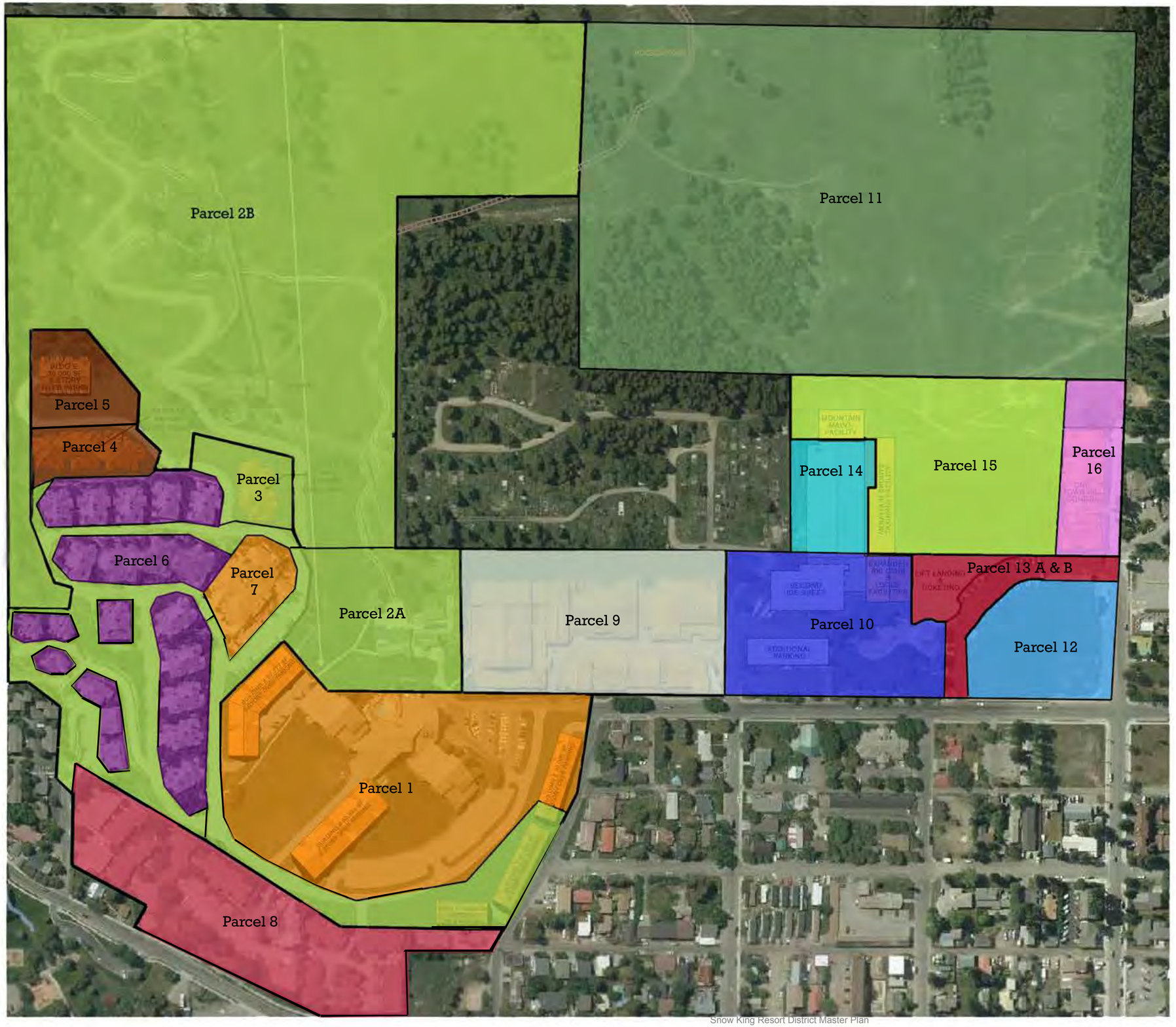
The King Ridge and Vine St. properties have been assigned 20 and 24 guests respectively.

- The Vine St. project is allowed a maximum 20 guests (APOs) and therefore is allowed to build an additional unit sized similarly to the 4 existing units.
- The King Ridge lot is allowed a maximum of 24 guests (APOs) and 9600 SF of livable space.
- The Vine St. lot has been built with one employee unit and will remain so.
- The King Ridge lot will need to provide its own employee unit or make an arrangement for compliance with the Housing Mitigation Plan for the Snow King Planned Resort District.
- Any redevelopment may not exceed these maximum Floor Areas

-Pitchfork	95,200 SF	-Grand Vista	6,800 SF
-Clark's Knoll	44,000 SF	-King Ridge	9,600 SF
-Vine St.	9,400 SF		

and cannot exceed the # of guests assigned in the table *below*.

	Pitchfork	Clark's Knoll	Grand Vista	King Ridge	Vine St. Townhomes	TOTALS
Condominium Units #	30	19	3	6	5	63
Doors#	48	19	3	12	10	92
Guests#	120	76	12	24	20	252
Site Area - Acres	2.8	1.3	0.2	0.28	0.27	4.85 Acres
Site Area - SF	122,000	56,400	8,700	12,300	12,000	211, 400 SF
Parking Spaces - #	60	38	6	16	10	130
Employee Units - #				As needed	I (2Bdnn)	



I. Land Ownership

This map indicates the private and public land ownership in the Snow King Area. The Parcels owned by Snow King Mountain Resort LLC, KDG LLC Snow King LLC, KM6 LLC, CCC's Town Hill Lofts LLC, ABSK LLC, and privately owned condominimums pertain to this Master Plan. These parcels are:

KDG Capital LLC:
- Parcel 1 8.29 Acres
- Parcel 7 (Grand View Lodge Commercial)

Snow King Mountain Resort LLC:
- Parcel 2A & 2B 35.2 Acres
- Parcel 3 .83 Acres
- Parcel 15 5.2 Acres

KM6 LLC:
- Parcel 9 4.92 Acres

ABSK LLC:
- Parcels 4 &5 1.89 Acres

CCC's Town Hill Lofts LLC:
-Parcel 16 1.3 Acres

Privately owned condos at Grand View, Love Ridge, and Simpson Patent:
- Parcel 6 4.73 Acres

Total Extent of this Master Plan 62.364 Acres

Legal description of these parcels can be found on the Teton County Map Server.

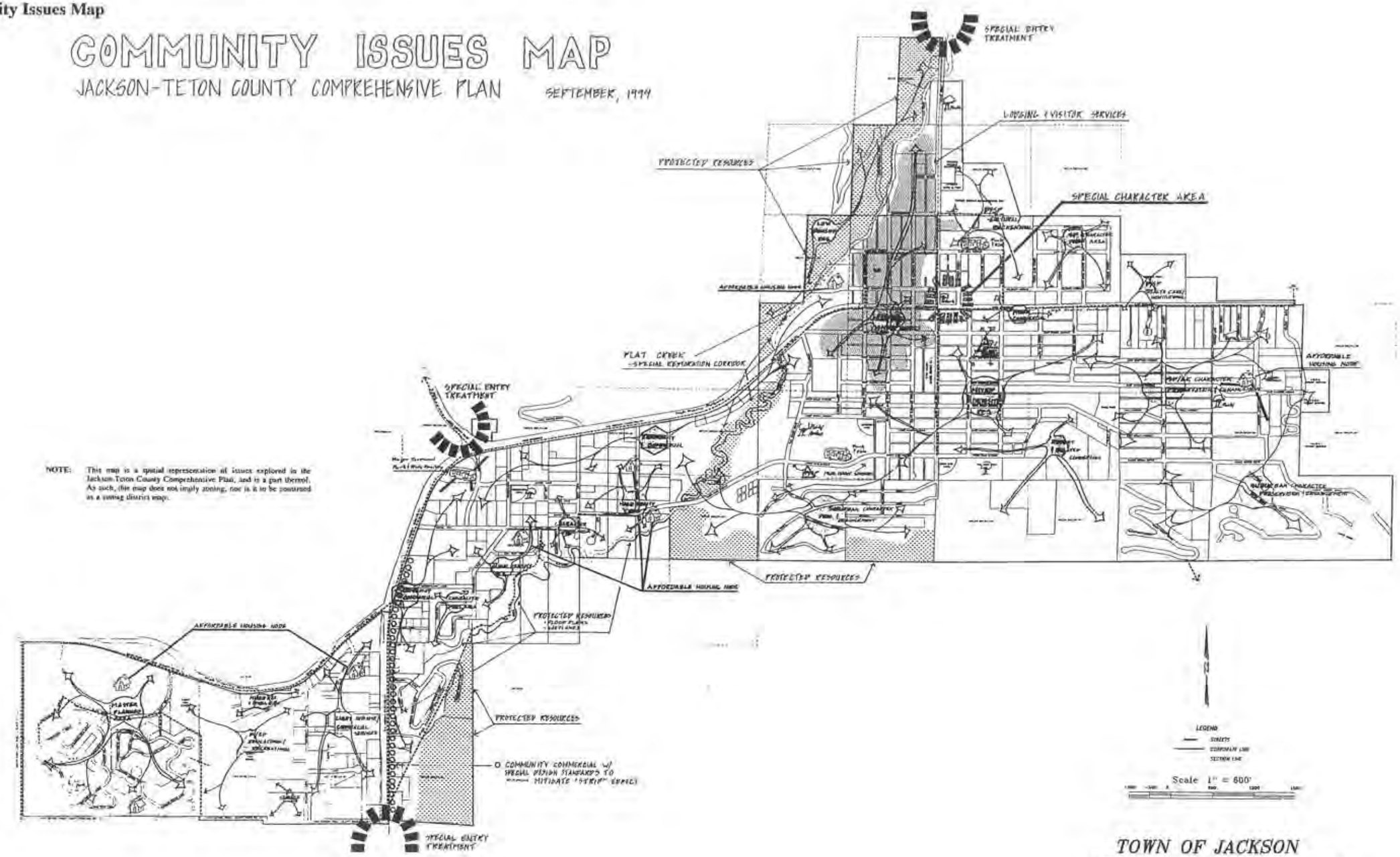
Other Parcels within the PRD:
Existing Condominium Areas:
- Parcel 8 4.85 Acres

See: Statement Regarding Exsiting Condominiums

Other Parcels presented here, although not part of this Master Plan:

Parcels owned by Town of Jackson under lease to Snow King Mountain Resort LLC
- Parcels 11, 13 A & B, and Parcel 12 in winter only
- Approximately 32 Acres.

USDA Forest Service Special Use Parmit
Issued to Snow King Mountain Resort LLC - 369.51 Acres


COMMUNITY ISSUES MAP
JACKSON-TETON COUNTY COMPREHENSIVE PLAN
SEPTEMBER, 1999
NOTE: This map is a spatial representation of issues explored in the Jackson-Teton County Comprehensive Plan, and is a part thereof. As such, this map does not imply zoning, nor is it to be construed as a zoning district map.
SPECIAL ENTRY TREATMENT
LODGING & VISITOR SERVICES
PROTECTED RESOURCES
SPECIAL CHARACTER AREA
FLAT CREEK
AFFORDABLE HOUSING NODE
PROTECTED RESOURCES
COMMUNITY COMMERCIAL W/
SPECIAL DESIGN STANDARDS TO
SPECIAL ENTRY TREATMENT
LEGEND
Scale 1" = 600'
TOWN OF JACKSON
TETON COUNTY, WYOMING
COMMUNITY ISSUES MAP

Trail Improvement Program
Snowking/ Cache Creek
(see Scoping Document of May 12, 1999 by Jackson Ranger District, Bridger-Teton NF)

98 Designation Boundary

1623 ac.
Study Boundary to 6400' Alt.

W-Fk Game Creek

Current Special Use Boundary

Leeks Canyon

369.5 ac.
Permit to 7100' Alt.

Tr.2
Hiking Trail

Josie's Ridge

Panorama House

Tiny Hagen Trail

Tr.1

Old Man's Flat Trail

6950

3

2

1

500'

1320'

104

Alpine Slide

6830

10

Ski School

6850

See Base Site Plan

1"=1200'

ORTHOPHOTO
USGS-1976

TOPOGRAPHY
NELSON
ENGINEERING
HORIZONS FILE
4-1853

Prepared:
August 18, 1998

ALPEN TECH

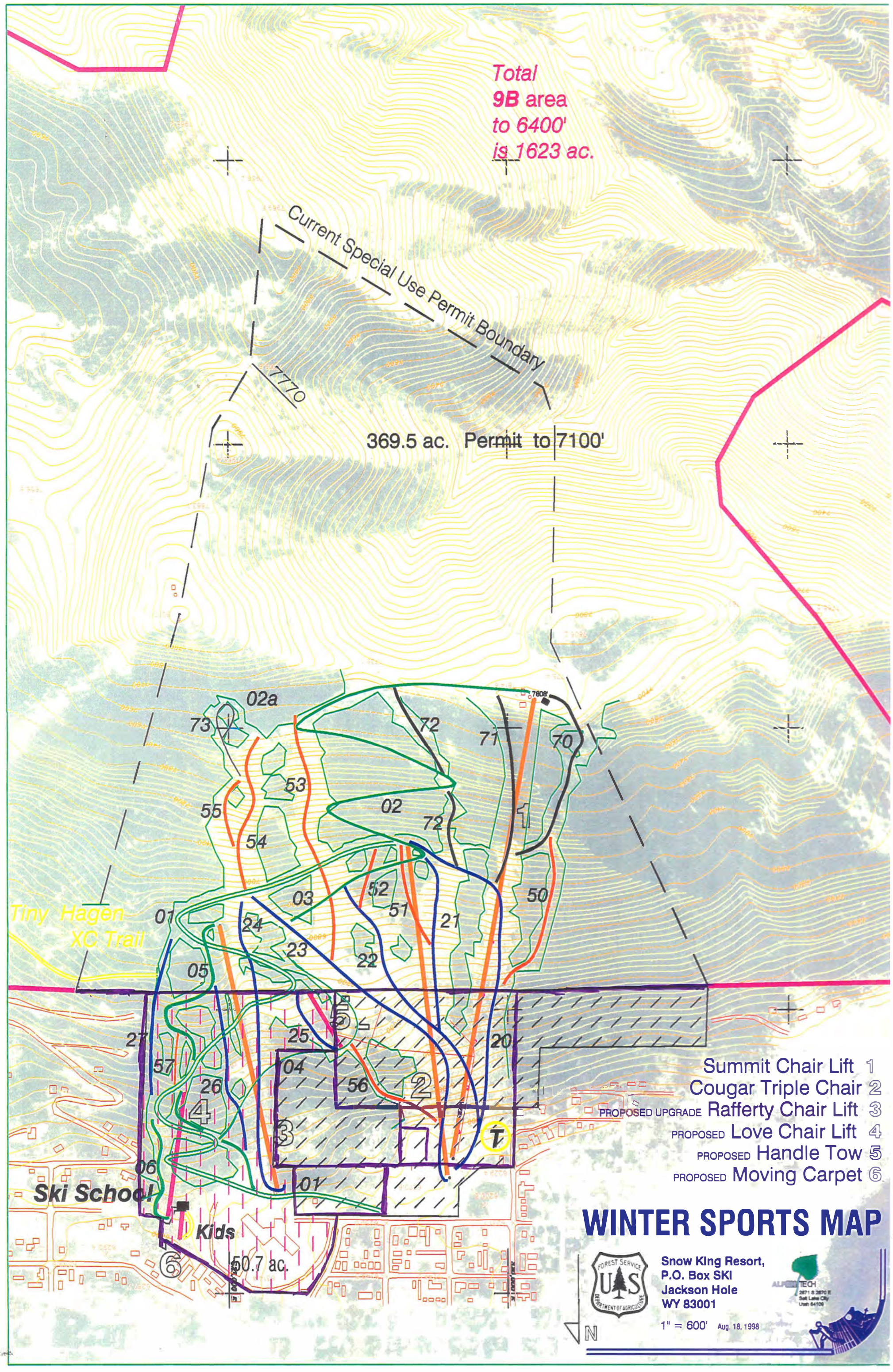
Salt Lake City, Utah

SUMMER USE, MOUNTAIN

Snow King Resort

Box SKI
Jackson Hole
WY. 83001

USFS Special Use Permit Area
Ortho Photo


Total
9B area
to 6400'
is 1623 ac.
Current Special Use Permit Boundary
7770
369.5 ac. Permit to 7100'
7808'
02a
73
72
71
70
53
55
02
72
54
52
03
51
50
01
21
24
23
22
Tiny Hagen
XC Trail
05
27
25
20
57
04
56
26
2
4
3
T
06
01
Ski School
Kids
50.7 ac.
Summit Chair Lift 1
Cougar Triple Chair 2
PROPOSED UPGRADE Rafferty Chair Lift 3
PROPOSED Love Chair Lift 4
PROPOSED Handle Tow 5
PROPOSED Moving Carpet 6
WINTER SPORTS MAP
FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE
Snow King Resort,
P.O. Box SKI
Jackson Hole
WY 83001
1" = 600'
Aug. 18, 1998
N

LEGEND

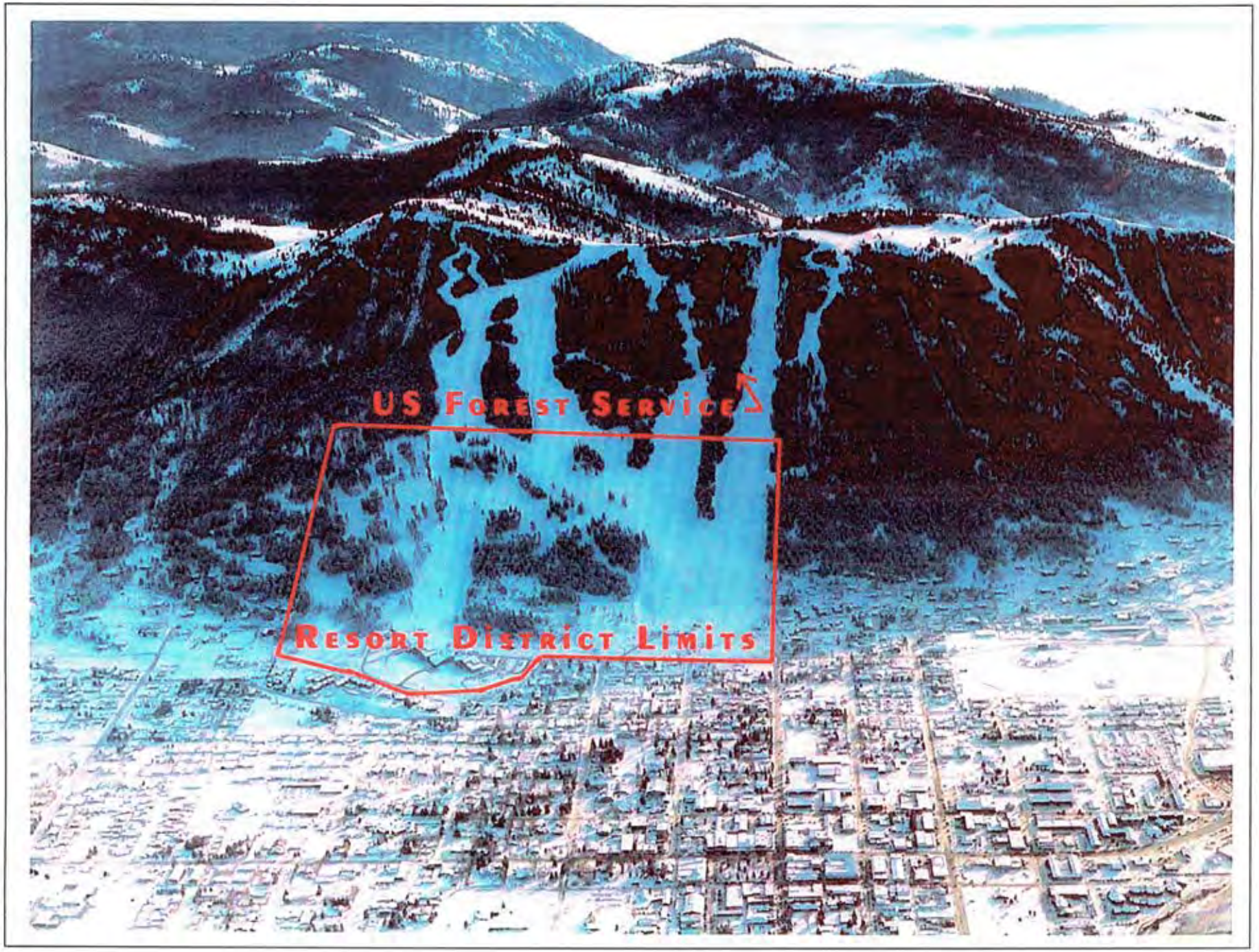
- SUP Boundary
- SUP Boundary Adjustment
- Parcel Boundary
- Existing Building
- Proposed Lift
- Proposed Building
- Existing Run
- Ski Patrol
- Parking Lot
- Mountain Coaster
- Proposed Zip Line
- Proposed Trail Grading
- Proposed Tree Skiing Terrain
- Proposed Runs
- Proposed Mountain Access Road
- Upgraded Ski Patrol Facility
- Proposed Maintenance Facility
- Proposed Wedding Venue

SNOW KING MOUNTAIN

2014 MASTER DEVELOPMENT PLAN
SUPPLEMENTAL INFORMATION
SEPTEMBER 2017

UPGRADE PLAN
Fig. 5


SUP Boundary Adjustment
SUP Boundary Adjustment
SUP Boundary
SUP Boundary
SUP Boundary
LIFT-A
LIFT-B
LIFT-C
LIFT-D
SNOW KING
(7,815')
SUMMIT GONDOLA
ALTERNATE EDMONT GONDOLA ALIGNMENT
CUCARA LIFT
DASHER LIFT
CONVEYOR
WEST
BASE AREA
(6,260')
EAST
BASE AREA
(6,825')
Run 1
Run 2
Run 3
Run 4
Run 5
Run 6
Run 7
Run 8
Run 9
Run 10
Run 11
Run 12
Run 13
Run 14
Run 15
Run 16
Run 17
Run 18
Run 19
Run 20
Run 21
Run 22
Run 23
Run 24
Run 25
Run 26
Run 27
Run 28
Run 29
Run 30
Run 31
Run 32
Run 33
Run 34
Run 35
Run 36
Run 37
Run 38
Run 39
Run 40
Run 41
Run 42
Run 43
Run 44
Run 45
Run 46
Run 47
Run 48
Run 49
Run 50
Run 51
Run 52
Run 53
Run 54
Run 55
Run 56
Run 57
Run 58
Run 59
Run 60
Run 61
Run 62
Run 63
Run 64
Run 65
Run 66
Run 67
Run 68
Run 69
Run 70
Run 71
Run 72
Run 73
Run 74
Run 75
Run 76
Run 77
Run 78
Run 79
Run 80
Run 81
Run 82
Run 83
Run 84
Run 85
Run 86
Run 87
Run 88
Run 89
Run 90
Run 91
Run 92
Run 93
Run 94
Run 95
Run 96
Run 97
Run 98
Run 99
Run 100
Run 101
Run 102
Run 103
Run 104
Run 105
Run 106
Run 107
Run 108
Run 109
Run 110
Run 111
Run 112
Run 113
Run 114
Run 115
Run 116
Run 117
Run 118
Run 119
Run 120
Run 121
Run 122
Run 123
Run 124
Run 125
Run 126
Run 127
Run 128
Run 129
Run 130
Run 131
Run 132
Run 133
Run 134
Run 135
Run 136
Run 137
Run 138
Run 139
Run 140
Run 141
Run 142
Run 143
Run 144
Run 145
Run 146
Run 147
Run 148
Run 149
Run 150
Run 151
Run 152
Run 153
Run 154
Run 155
Run 156
Run 157
Run 158
Run 159
Run 160
Run 161
Run 162
Run 163
Run 164
Run 165
Run 166
Run 167
Run 168
Run 169
Run 170
Run 171
Run 172
Run 173
Run 174
Run 175
Run 176
Run 177
Run 178
Run 179
Run 180
Run 181
Run 182
Run 183
Run 184
Run 185
Run 186
Run 187
Run 188
Run 189
Run 190
Run 191
Run 192
Run 193
Run 194
Run 195
Run 196
Run 197
Run 198
Run 199
Run 200
Run 201
Run 202
Run 203
Run 204
Run 205
Run 206
Run 207
Run 208
Run 209
Run 210
Run 211
Run 212
Run 213
Run 214
Run 215
Run 216
Run 217
Run 218
Run 219
Run 220
Run 221
Run 222
Run 223
Run 224
Run 225
Run 226
Run 227
Run 228
Run 229
Run 230
Run 231
Run 232
Run 233
Run 234
Run 235
Run 236
Run 237
Run 238
Run 239
Run 240
Run 241
Run 242
Run 243
Run 244
Run 245
Run 246
Run 247
Run 248
Run 249
Run 250
Run 251
Run 252
Run 253
Run 254
Run 255
Run 256
Run 257
Run 258
Run 259
Run 260
Run 261
Run 262
Run 263
Run 264
Run 265
Run 266
Run 267
Run 268
Run 269
Run 270
Run 271
Run 272
Run 273
Run 274
Run 275
Run 276
Run 277
Run 278
Run 279
Run 280
Run 281
Run 282
Run 283
Run 284
Run 285
Run 286
Run 287
Run 288
Run 289
Run 290
Run 291
Run 292
Run 293
Run 294
Run 295
Run 296
Run 297
Run 298
Run 299
Run 300
Run 301
Run 302
Run 303
Run 304
Run 305
Run 306
Run 307
Run 308
Run 309
Run 310
Run 311
Run 312
Run 313
Run 314
Run 315
Run 316
Run 317
Run 318
Run 319
Run 320
Run 321
Run 322
Run 323
Run 324
Run 325
Run 326
Run 327
Run 328
Run 329
Run 330
Run 331
Run 332
Run 333
Run 334
Run 335
Run 336
Run 337
Run 338
Run 339
Run 340
Run 341
Run 342
Run 343
Run 344
Run 345
Run 346
Run 347
Run 348
Run 349
Run 350
Run 351
Run 352
Run 353
Run 354
Run 355
Run 356
Run 357
Run 358
Run 359
Run 360
Run 361
Run 362
Run 363
Run 364
Run 365
Run 366
Run 367
Run 368
Run 369
Run 370
Run 371
Run 372
Run 373
Run 374
Run 375
Run 376
Run 377
Run 378
Run 379
Run 380
Run 381
Run 382
Run 383
Run 384
Run 385
Run 386
Run 387
Run 388
Run 389
Run 390
Run 391
Run 392
Run 393
Run 394
Run 395
Run 396
Run 397
Run 398
Run 399
Run 400
Run 401
Run 402
Run 403
Run 404
Run 405
Run 406
Run 407
Run 408
Run 409
Run 410
Run 411
Run 412
Run 413
Run 414
Run 415
Run 416
Run 417
Run 418
Run 419
Run 420
Run 421
Run 422
Run 423
Run 424
Run 425
Run 426
Run 427
Run 428
Run 429
Run 430
Run 431
Run 432
Run 433
Run 434
Run 435
Run 436
Run 437
Run 438
Run 439
Run 440
Run 441
Run 442
Run 443
Run 444
Run 445
Run 446
Run 447
Run 448
Run 449
Run 450
Run 451
Run 452
Run 453
Run 454
Run 455
Run 456
Run 457
Run 458
Run 459
Run 460
Run 461
Run 462
Run 463
Run 464
Run 465
Run 466
Run 467
Run 468
Run 469
Run 470
Run 471
Run 472
Run 473
Run 474
Run 475
Run 476
Run 477
Run 478
Run 479
Run 480
Run 481
Run 482
Run 483
Run 484
Run 485
Run 486
Run 487
Run 488
Run 489
Run 490
Run 491
Run 492
Run 493
Run 494
Run 495
Run 496
Run 497
Run 498
Run 499
Run 500
Run 501
Run 502
Run 503
Run 504
Run 505
Run 506
Run 507
Run 508
Run 509
Run 510
Run 511
Run 512
Run 513
Run 514
Run 515
Run 516
Run 517
Run 518
Run 519
Run 520
Run 521
Run 522
Run 523
Run 524
Run 525
Run 526
Run 527
Run 528
Run 529
Run 530
Run 531
Run 532
Run 533
Run 534
Run 535
Run 536
Run 537
Run 538
Run 539
Run 540
Run 541
Run 542
Run 543
Run 544
Run 545
Run 546
Run 547
Run 548
Run 549
Run 550
Run 551
Run 552
Run 553
Run 554
Run 555
Run 556
Run 557
Run 558
Run 559
Run 560
Run 561
Run 562
Run 563
Run 564
Run 565
Run 566
Run 567
Run 568
Run 569
Run 570
Run 571
Run 572
Run 573
Run 574
Run 575
Run 576
Run 577
Run 578
Run 579
Run 580
Run 581
Run 582
Run 583
Run 584
Run 585
Run 586
Run 587
Run 588
Run 589
Run 590
Run 591
Run 592
Run 593
Run 594
Run 595
Run 596
Run 597
Run 598
Run 599
Run 600
Run 601
Run 602
Run 603
Run 604
Run 605
Run 606
Run 607
Run 608
Run 609
Run 610
Run 611
Run 612
Run 613
Run 614
Run 615
Run 616
Run 617
Run 618
Run 619
Run 620
Run 621
Run 622
Run 623
Run 624
Run 625
Run 626
Run 627
Run 628
Run 629
Run 630
Run 631
Run 632
Run 633
Run 634
Run 635
Run 636
Run 637
Run 638
Run 639
Run 640
Run 641
Run 642
Run 643
Run 644
Run 645
Run 646
Run 647
Run 648
Run 649
Run 650
Run 651
Run 652
Run 653
Run 654
Run 655
Run 656
Run 657
Run 658
Run 659
Run 660
Run 661
Run 662
Run 663
Run 664
Run 665
Run 666
Run 667
Run 668
Run 669
Run 670
Run 671
Run 672
Run 673
Run 674
Run 675
Run 676
Run 677
Run 678
Run 679
Run 680
Run 681
Run 682
Run 683
Run 684
Run 685
Run 686
Run 687
Run 688
Run 689
Run 690
Run 691
Run 692
Run 693
Run 694
Run 695
Run 696
Run 697
Run 698
Run 699
Run 700
Run 701
Run 702
Run 703
Run 704
Run 705
Run 706
Run 707
Run 708
Run 709
Run 710
Run 711
Run 712
Run 713
Run 714
Run 715
Run 716
Run 717
Run 718
Run 719
Run 720
Run 721
Run 722
Run 723
Run 724
Run 725
Run 726
Run 727
Run 728
Run 729
Run 730
Run 731
Run 732
Run 733
Run 734
Run 735
Run 736
Run 737
Run 738
Run 739
Run 740
Run 741
Run 742
Run 743
Run 744
Run 745
Run 746
Run 747
Run 748
Run 749
Run 750
Run 751
Run 752
Run 753
Run 754
Run 755
Run 756
Run 757
Run 758
Run 759
Run 760
Run 761
Run 762
Run 763
Run 764
Run 765
Run 766
Run 767
Run 768
Run 769
Run 770
Run 771
Run 772
Run 773
Run 774
Run 775
Run 776
Run 777
Run 778
Run 779
Run 780
Run 781
Run 782
Run 783
Run 784
Run 785
Run 786
Run 787
Run 788
Run 789
Run 790
Run 791
Run 792
Run 793
Run 794
Run 795
Run 796
Run 797
Run 798
Run 799
Run 800
Run 801
Run 802
Run 803
Run 804
Run 805
Run 806
Run 807
Run 808
Run 809
Run 810
Run 811
Run 812
Run 813
Run 814
Run 815
Run 816
Run 817
Run 818
Run 819
Run 820
Run 821
Run 822
Run 823
Run 824
Run 825
Run 826
Run 827
Run 828
Run 829
Run 830
Run 831
Run 832
Run 833
Run 834
Run 835
Run 836
Run 837
Run 838
Run 839
Run 840
Run 841
Run 842
Run 843
Run 844
Run 845
Run 846
Run 847
Run 848
Run 849
Run 850
Run 851
Run 852
Run 853
Run 854
Run 855
Run 856
Run 857
Run 858
Run 859
Run 860
Run 861
Run 862
Run 863
Run 864
Run 865
Run 866
Run 867
Run 868
Run 869
Run 870
Run 871
Run 872
Run 873
Run 874
Run 875
Run 876
Run 877
Run 878
Run 879
Run 880
Run 881
Run 882
Run 883
Run 884
Run 885
Run 886
Run 887
Run 888
Run 889
Run 890
Run 891
Run 892
Run 893
Run 894
Run 895
Run 896
Run 897
Run 898
Run 899
Run 900
Run 901
Run 902
Run 903
Run 904
Run 905
Run 906
Run 907
Run 908
Run 909
Run 910
Run 911
Run 912
Run 913
Run 914
Run 915
Run 916
Run 917
Run 918
Run 919
Run 920
Run 921
Run 922
Run 923
Run 924
Run 925
Run 926
Run 927
Run 928
Run 929
Run 930
Run 931
Run 932
Run 933
Run 934
Run 935
Run 936
Run 937
Run 938
Run 939
Run 940
Run 941
Run 942
Run 943
Run 944
Run 945
Run 946
Run 947
Run 948
Run 949
Run 950
Run 951
Run 952
Run 953
Run 954
Run 955
Run 956
Run 957
Run 958
Run 959
Run 960
Run 961
Run 962
Run 963
Run 964
Run 965
Run 966
Run 967
Run 968
Run 969
Run 970
Run 971
Run 972
Run 973
Run 974
Run 975
Run 976
Run 977
Run 978
Run 979
Run 980
Run 981
Run 982
Run 983
Run 984
Run 985
Run 986
Run 987
Run 988
Run 989
Run 990
Run 991
Run 992
Run 993
Run 994
Run 995
Run 996
Run 997
Run 998
Run 999
Run 1000
Run 1001
Run 1002
Run 1003
Run 1004
Run 1005
Run 1006
Run 1007
Run 1008
Run 1009
Run 1010
Run 1011
Run 1012
Run 1013
Run 1014
Run 1015
Run 1016
Run 1017
Run 1018
Run 1019
Run 1020
Run 1021
Run 1022
Run 1023
Run 1024
Run 1025
Run 1026
Run 1027
Run 1028
Run 1029
Run 1030
Run 1031
Run 1032
Run 1033
Run 1034
Run 1035
Run 1036
Run 1037
Run 1038
Run 1039
Run 1040
Run 1041
Run 1042
Run 1043
Run 1044
Run 1045
Run 1046
Run 1047
Run 1048
Run 1049
Run 1050
Run 1051
Run 1052
Run 1053
Run 1054
Run 1055
Run 1056
Run 1057
Run 1058
Run 1059
Run 1060
Run 1061
Run 1062
Run 1063
Run 1064
Run 1065
Run 1066
Run 1067
Run 1068
Run 1069
Run 1070
Run 1071
Run 1072
Run 1073
Run 1074
Run 1075
Run 1076
Run 1077
Run 1078
Run 1079
Run 1080
Run 1081
Run 1082
Run 1083
Run 1084
Run 1085
Run 1086
Run 1087
Run 1088
Run 1089
Run 1090
Run 1091
Run 1092
Run 1093
Run 1094
Run 1095
Run 1096
Run 1097
Run 1098
Run 1099
Run 1100
Run 1101
Run 1102
Run 1103
Run 1104
Run 1105
Run 1106
Run 1107
Run 1108
Run 1109
Run 1110
Run 1111
Run 1112
Run 1113
Run 1114
Run 1115
Run 1116
Run 1117
Run 1118
Run 1119
Run 1120
Run 1121
Run 1122
Run 1123
Run 1124
Run 1125
Run 1126
Run 1127
Run 1128
Run 1129
Run 1130
Run 1131
Run 1132
Run 1133
Run 1134
Run 1135
Run 1136
Run 1137
Run 1138
Run 1139
Run 1140
Run 1141
Run 1142
Run 1143
Run 1144
Run 1145
Run 1146
Run 1147
Run 1148
Run 1149
Run 1150
Run 1151
Run 1152
Run 1153
Run 1154
Run 1155
Run 1156
Run 1157
Run 1158
Run 1159
Run 1160
Run 1161
Run 1162
Run 1163
Run 1164
Run 1165
Run 1166
Run 1167
Run 1168
Run 1169
Run 1170
Run 1171
Run 1172
Run 1173
Run 1174
Run 1175
Run 1176
Run 1177
Run 1178
Run 1179
Run 1180
Run 1181
Run 1182
Run 1183
Run 1184
Run 1185
Run 1186
Run 1187
Run 1188
Run 1189
Run 1190
Run 1191
Run 1192
Run 1193
Run 1194
Run 1195
Run 1196
Run 1197
Run 1198
Run 1199
Run 1200
Run 1201
Run 1202
Run 1203
Run 1204
Run 1205
Run 1206
Run 1207
Run 1208
Run 1209
Run 1210
Run 1211
Run 1212
Run 1213
Run 1214
Run 1215
Run 1216
Run 1217
Run 1218
Run 1219
Run 1220
Run 1221
Run 1222
Run 1223
Run 1224
Run 1225
Run 1226
Run 1227
Run 1228
Run 1229
Run 1230
Run 1231
Run 1232
Run 1233
Run 1234
Run 1235
Run 1236
Run 1237
Run 1238
Run 1239
Run 1240
Run 1241
Run 1242
Run 1243
Run 1244
Run 1245
Run 1246
Run 1247
Run 1248
Run 1249
Run 1250
Run 1251
Run 1252
Run 1253
Run 1254
Run 1255
Run 1256
Run 1257
Run 1258
Run 1259
Run 1260
Run 1261
Run 1262
Run 1263
Run 1264
Run 1265
Run 1266
Run 1267
Run 1268
Run 1269
Run 1270
Run 1271
Run 1272
Run 1273
Run 1274
Run 1275
Run 1276
Run 1277
Run 1278
Run 1279
Run 1280
Run 1281
Run 1282
Run 1283
Run 1284
Run 1285
Run 1286
Run 1287
Run 1288
Run 1289
Run 1290
Run 1291
Run 1292
Run 1293
Run 1294
Run 1295
Run 1296
Run 1297
Run 1298
Run 1299
Run 1300
Run 1301
Run 1302
Run 1303
Run 1304
Run 1305
Run 1306
Run 1307
Run 1308
Run 1309
Run 1310
Run 1311
Run 1312
Run 1313
Run 1314
Run 1315
Run 1316
Run 1317
Run 1318
Run 1319
Run 1320
Run 1321
Run 1322
Run 1323
Run 1324
Run 1325
Run 1326
Run 1327
Run 1328
Run 1329
Run 1330
Run 1331
Run 1332
Run 1333
Run 1334
Run 1335
Run 1336
Run 1337
Run 1338
Run 1339
Run 1340
Run 1341
Run 1342
Run 1343
Run 1344
Run 1345
Run 1346
Run 1347
Run 1348
Run 1349
Run 1350
Run 1351
Run 1352
Run 1353
Run 1354
Run 1355
Run 1356
Run 1357
Run 1358
Run 1359
Run 1360
Run 1361
Run 1362
Run 1363
Run 1364
Run 1365
Run 1366
Run 1367
Run 1368
Run 1369
Run 1370
Run 1371
Run 1372
Run 1373
Run 1374
Run 1375
Run 1376
Run 1377
Run 1378
Run 1379
Run 1380
Run 1381
Run 1382
Run 1383
Run 1384
Run 1385
Run 1386
Run 1387
Run 1388
Run 1389
Run 1390
Run 1391
Run 1392
Run 1393
Run 1394
Run 1395
Run 1396
Run 1397
Run 1398
Run 1399
Run 1400
Run 1401
Run 1402
Run 1403
Run 1404
Run 1405
Run 1406
Run 1407
Run 1408
Run 1409
Run 1410
Run 1411
Run 1412
Run 1413
Run 1414
Run 1415
Run 1416
Run 1417
Run 1418
Run 1419
Run 1420
Run 1421
Run 1422
Run 1423
Run 1424
Run 1425
Run 1426
Run 1427
Run 1428
Run 1429
Run 1430
Run 1431
Run 1432
Run 1433
Run 1434
Run 1435
Run 1436
Run 1437
Run 1438
Run 1439
Run 1440
Run 1441
Run 1442
Run 1443
Run 1444
Run 1445
Run 1446
Run 1447
Run 1448
Run 1449
Run 1450
Run 1451
Run 1452
Run 1453
Run 1454
Run 1455
Run 1456
Run 1457
Run 1458
Run 1459
Run 1460
Run 1461
Run 1462
Run 1463
Run 1464
Run 1465
Run 1466
Run 1467
Run 1468
Run 1469
Run 1470
Run 1471
Run 1472
Run 1473
Run 1474
Run 1475
Run 1476
Run 1477
Run 1478
Run 1479
Run 1480
Run 1481
Run 1482
Run 1483
Run 1484
Run 1485
Run 1486
Run 1487
Run 1488
Run 1489
Run 1490
Run 1491
Run 1492
Run 1493
Run 1494
Run 1495
Run 1496
Run 1497
Run 1498
Run 1499
Run 1500
Run 1501
Run 1502
Run 1503
Run 1504
Run 1505
Run 1506
Run 1507
Run 1508
Run 1509
Run 1510
Run 1511
Run 1512
Run 1513
Run 1514
Run 1515
Run 1516
Run 1517
Run 1518
Run 1519
Run 1520
Run 1521
Run 1522
Run 1523
Run 1524
Run 1525
Run 1526
Run 1527
Run 1528
Run 1529
Run 1530
Run 1531
Run 1532
Run 1533
Run 1534
Run 1535
Run 1536
Run 1537
Run 1538
Run 1539
Run 1540
Run 1541
Run 1542
Run 1543
Run 1544
Run 1545
Run 1546
Run 1547
Run 1548
Run 1549
Run 1550
Run 1551
Run 1552
Run 1553
Run 1554
Run 1555
Run 1556
Run 1557
Run 1558
Run 1559
Run 1560
Run 1561
Run 1562
Run 1563
Run 1564
Run 1565
Run 1566
Run 1567
Run 1568
Run 1569
Run 1570
Run 1571
Run 1572
Run 1573
Run 1574
Run 1575
Run 1576
Run 1577
Run 1578
Run 1579
Run 1580
Run 1581
Run 1582
Run 1583
Run 1584
Run 1585
Run 1586
Run 1587
Run 1588
Run 1589
Run 1590
Run 1591
Run 1592
Run 1593
Run 1594
Run 1595
Run 1596
Run 1597
Run 1598
Run 1599
Run 1600
Run 1601
Run 1602
Run 1603
Run 1604
Run 1605
Run 1606
Run 1607
Run 1608
Run 1609
Run 1610
Run 1611
Run 1612
Run 1613
Run 1614
Run 1615
Run 1616
Run 1617
Run 1618
Run 1619
Run 1620
Run 1621
Run 1622
Run 1623
Run 1624
Run 1625
Run 1626
Run 1627
Run 1628
Run 1629
Run 1630
Run 1631
Run 1632
Run 1633
Run 1634
Run 1635
Run 1636
Run 1637
Run 1638
Run 1639
Run 1640
Run 1641
Run 1642
Run 1643
Run 1644
Run 1645
Run 1646
Run 1647
Run 1648
Run 1649
Run 1650
Run 1651
Run 1652
Run 1653
Run 1654
Run 1655
Run 1656
Run 1657
Run 1658
Run 1659
Run 1660
Run 1661
Run 1662
Run 1663
Run 1664
Run 1665
Run 1666
Run 1667
Run 1668
Run 1669
Run 1670
Run 1671
Run 1672
Run 1673
Run 1674
Run 1675
Run 1676
Run 1677
Run 1678
Run 1679
Run 1680
Run 1681
Run 1682
Run 1683
Run 1684
Run 1685
Run 1686
Run 1687
Run 1688
Run 1689
Run 1690
Run 1691
Run 1692
Run 1693
Run 1694
Run 1695
Run 1696
Run 1697
Run 1698
Run 1699
Run 1700
Run 1701
Run 1702
Run 1703
Run 1704
Run 1705
Run 1706
Run 1707
Run 1708
Run 1709
Run 1710
Run 1711
Run 1712
Run 1713
Run 1714
Run 1715
Run 1716
Run 1717
Run 1718
Run 1719
Run 1720
Run 1721
Run 1722
Run 1723
Run 1724
Run 1725
Run 1726
Run 1727
Run 1728
Run 1729
Run 1730
Run 1731
Run 1732
Run 1733
Run 1734
Run 1735
Run 1736
Run 1737
Run 1738
Run 1739
Run 1740
Run 1741
Run 1742
Run 1743
Run 1744
Run 1745
Run 1746
Run 1747
Run 1748
Run 1749
Run 1750
Run 1751
Run 1752
Run 1753
Run 1754
Run 1755
Run 1756
Run 1757
Run 1758
Run 1759
Run 1760
Run 1761
Run 1762
Run 1763
Run 1764
Run 1765
Run 1766
Run 1767
Run 1768
Run 1769
Run 1770
Run 1771
Run 1772
Run 1773
Run 1774
Run 1775
Run 1776
Run 1777
Run 1778
Run 1779
Run 1780
Run 1781
Run 1782
Run 1783
Run 1784
Run 1785
Run 1786
Run 1787
Run 1788
Run 1789
Run 1790
Run 1791
Run 1792
Run 1793
Run 1794
Run 1795
Run 1796
Run 1797
Run 1798
Run 1799
Run 1800
Run 1801
Run 1802
Run 1803
Run 1804
Run 1805
Run 1806
Run 1807
Run 1808
Run 1809
Run 1810
Run 1811
Run 1812
Run 1813
Run 1814
Run 1815
Run 1816
Run 1817
Run 1818
Run 1819
Run 1820
Run 1821
Run 1822
Run 1823
Run 1824
Run 1825
Run 1826
Run 1827
Run 1828
Run 1829
Run 1830
Run 1831
Run 1832
Run 1833
Run 1834
Run 1835
Run 1836
Run 1837
Run 1838
Run 1839
Run 1840
Run 1841
Run 1842
Run 1843
Run 1844
Run 1845
Run 1846
Run 1847
Run 1848
Run 1849
Run 1850
Run 1851
Run 1852
Run 1853
Run 1854
Run 1855
Run 1856
Run 1857
Run 1858
Run 1859
Run 1860
Run 1861
Run 1862
Run 1863
Run 1864
Run 1865
Run 1866
Run 1867
Run 1868
Run 1869
Run 1870
Run 1871
Run 1872
Run 1873
Run 1874
Run 1875
Run 1876
Run 1877
Run 1878
Run 1879
Run 1880
Run 1881
Run 1882
Run 1883
Run 1884
Run 1885
Run 1886
Run 1887
Run 1888
Run 1889
Run 1890
Run 1891
Run 1892
Run 1893
Run 1894
Run 1895
Run 1896
Run 1897
Run 1898
Run 1899
Run 1900
Run 1901
Run 1902
Run 1903
Run 1904
Run 1905
Run 1906
Run 1907
Run 1908
Run 1909
Run 1910
Run 1911
Run 1912
Run 1913
Run 1914
Run 1915
Run 1916
Run 1917
Run 1918
Run 1919
Run 1920
Run 1921
Run 1922
Run 1923
Run 1924
Run 1925
Run 1926
Run 1927
Run 1928
Run 1929
Run 1930
Run 1931
Run 1932
Run 1933
Run 1934
Run 1935
Run 1936
Run 1937
Run 1938
Run 1939
Run 1940
Run 1941
Run 1942
Run 1943
Run 1944
Run 1945
Run 1946
Run 1947
Run 1948
Run 1949
Run 1950
Run 1951
Run 1952
Run 1953
Run 1954
Run 1955
Run 1956
Run 1957
Run 1958
Run 1959
Run 1960
Run 1961
Run 1962
Run 1963
Run 1964
Run 1965
Run 1966
Run 1967
Run 1968
Run 1969
Run 1970
Run 1971
Run 1972
Run 1973
Run 1974
Run 1975
Run 1976
Run 1977
Run 1978
Run 1979
Run 1980
Run 1981
Run 1982
Run 1983
Run 1984
Run 1985
Run 1986
Run 1987
Run 1988
Run 1989
Run 1990
Run 1991
Run 1992
Run 1993
Run 1994
Run 1995
Run 1996
Run 1997
Run 1998
Run 1999
Run 2000
Run 2001
Run 2002
Run 2003
Run 2004
Run 2005
Run 2006
Run 2007
Run 2008
Run 2009
Run 2010
Run 2011
Run 2012
Run 2013
Run 2014
Run 2015
Run 2016
Run 2017
Run 2018
Run 2019
Run 2020
Run 2021
Run 2022
Run 2023
Run 2024
Run 2025
Run 2026
Run 2027
Run 2028
Run 2029
Run 2030
Run 2031
Run 2032
Run 2033
Run 2034
Run 2035
Run 2036
Run 2037
Run 2038
Run 2039
Run 2040
Run 2041
Run 2042
Run 2043
Run 2044
Run 2045
Run 2046
Run 2047
Run 2048
Run 2049
Run 2050
Run 2051
Run 2052
Run 2053
Run 2054
Run 2055
Run 2056
Run 2057
Run 2058
Run 2059
Run 2060
Run 2061
Run 2062
Run 2063
Run 2064
Run 2065
Run 2066
Run 2067
Run 2068
Run 2069
Run 2070
Run 2071
Run 2072
Run 2073
Run 2074
Run 2075
Run 2076
Run 2077
Run 2078
Run 2079
Run 2080
Run 2081
Run 2082
Run 2083
Run 2084
Run 2085
Run 2086
Run 2087
Run 2088
Run 2089
Run 2090
Run 2091
Run 2092
Run 2093
Run 2094
Run 2095
Run 2096
Run 2097
Run 2098
Run 2099
Run 2100
Run 2101
Run 2102
Run 2103
Run 2104
Run 2105
Run 2106
Run 2107
Run 2108
Run 2109
Run 2110
Run 2111
Run 2112
Run 2113
Run 2114
Run 2115
Run 2116
Run 2117
Run 2118
Run 2119
Run 2120
Run 2121
Run 2122
Run 2123
Run 2124
Run 2125
Run 2126
Run 2127
Run 2128
Run 2129
Run 2130
Run 2131
Run 2132
Run 2133
Run 2134
Run 2135
Run 2136
Run 2137
Run 2138
Run 2139
Run 2140
Run 2141
Run 2142
Run 2143
Run 2144
Run 2145
Run 2146
Run 2147
Run 2148
Run 2149
Run 2150
Run 2151
Run 2152
Run 2153
Run 2154
Run 2155
Run 2156
Run 2157
Run 2158
Run 2159
Run 2160
Run 2161
Run 2162
Run 2163
Run 2164
Run 2165
Run 2166
Run 2167
Run 2168
Run 2169
Run 2170
Run 2171
Run 2172
Run 2173
Run 2174
Run 2175
Run 2176
Run 2177
Run 2178
Run 2179
Run 2180
Run 2181
Run 2182
Run 2183
Run 2184
Run 2185
Run 2186
Run 2187
Run 2188
Run 2189
Run 2190
Run 2191
Run 2192
Run 2193
Run 2194
Run 2195
Run 2196
Run 2197
Run 2198
Run 2199
Run 2200
Run 2201
Run 2202
Run 2203
Run 2204
Run 2205
Run 2206
Run 2207
Run 2208
Run 2209
Run 2210
Run 2211
Run 2212
Run 2213
Run 2214
Run 2215
Run 2216
Run 2217
Run 2218
Run 2219
Run 2220
Run 2221
Run 2222
Run 2223
Run 2224
Run 2225
Run 2226
Run 2227
Run 2228
Run 2229
Run 2230
Run 2231
Run 2232
Run 2233
Run 2234
Run 2235
Run 2236
Run 2237
Run 2238
Run 2239
Run 2240
Run 2241
Run 2242
Run 2243
Run 2244
Run 2245
Run 2246
Run 2247
Run 2248
Run 2249
Run 2250
Run 2251
Run 2252
Run 2253
Run 2254
Run 2255
Run 2256
Run 2257
Run 2258
Run 2259
Run 2260
Run 2261
Run 2262
Run 2263
Run 2264
Run 2265
Run 2266
Run 2267
Run 2268
Run 2269
Run 2270
Run 2271
Run 2272
Run 2273
Run 2274
Run 2275
Run 2276
Run 2277
Run 2278
Run 2279
Run 2280
Run 2281
Run 2282
Run 2283
Run 2284
Run 2285
Run 2286
Run 2287
Run 2288
Run 2289
Run 2290
Run 2291
Run 2292
Run 2293
Run 2294
Run 2295
Run 2296
Run 2297
Run 2298
Run 2299
Run 2300
Run 2301
Run 2302
Run 2303
Run 2304
Run 2305
Run 2306
Run 2307
Run 2308
Run 2309
Run 2310
Run 2311
Run 2312
Run 2313
Run 2314
Run 2315
Run 2316
Run 2317
Run 2318
Run 2319
Run 2320
Run 2321
Run 2322
Run 2323
Run 2324
Run 2325
Run 2326
Run 2327
Run 2328
Run 2329
Run 2330
Run 2331
Run 2332
Run 2333
Run 2334
Run 2335
Run 2336
Run 2337
Run 2338
Run 2339
Run 2340
Run 2341
Run 2342
Run 2343
Run 2344
Run 2345
Run 2346
Run 2347
Run 2348
Run 2349
Run 2350
Run 2351
Run 2352
Run 2353
Run 2354
Run 2355
Run 2356
Run 2357
Run 2358
Run 2359
Run 2360
Run 2361
Run 2362
Run 2363
Run 2364
Run 2365
Run 2366
Run 2367
Run 2368
Run 2369
Run 2370
Run 2371
Run 2372
Run 2373
Run 2374
Run 2375
Run 2376
Run 2377
Run 2378
Run 2379
Run 2380
Run 2381
Run 2382
Run 2383
Run 2384
Run 2385
Run 2386
Run 2387
Run 2388
Run 2389
Run 2390
Run 2391
Run 2392
Run 2393
Run 2394
Run 2395
Run 2396
Run 2397
Run 2398
Run 2399
Run 2400
Run 2401
Run 2402
Run 2403
Run 2404
Run 2405
Run 2406
Run 2407
Run 2408
Run 2409
Run 2410
Run 2411
Run 2412
Run 2413
Run 2414
Run 2415
Run 2416
Run 2417
Run 2418
Run 2419
Run 2420
Run 2421
Run 2422
Run 2423
Run 2424
Run 2425
Run 2426
Run 2427
Run 2428
Run 2429
Run 2430
Run 2431
Run 2432
Run 2433
Run 2434
Run 2435
Run 2436
Run 2437
Run 2438
Run 2439
Run 2440
Run 2441
Run 2442
Run 2443
Run 2444
Run 2445
Run 2446
Run 2447
Run 2448
Run 2449
Run 2450
Run 2451
Run 2452
Run 2453
Run 2454
Run 2455
Run 2456
Run 2457
Run 2458
Run 2459
Run 2460
Run 2461
Run 2462
Run 2463
Run 2464
Run 2465
Run 2466
Run 2467
Run 2468
Run 2469
Run 2470
Run 2471
Run 2472
Run 2473
Run 2474
Run 2475
Run 2476
Run 2477
Run 2478
Run 2479
Run 2480
Run 2481
Run 2482
Run 2483
Run 2484
Run 2485
Run 2486
Run 2487
Run 2488
Run 2489
Run 2490
Run 2491
Run 2492
Run 2493
Run 2494
Run 2495
Run 2496
Run 2497
Run 2498
Run 2499
Run 2500
Run 2501
Run 2502
Run 2503
Run 2504
Run 2505
Run 2506
Run 2507
Run 2508
Run 2509
Run 2510
Run 2511
Run 2512
Run 2513
Run 2514
Run 2515
Run 2516
Run 2517
Run 2518
Run 2519
Run 2520
Run 2521
Run 2522
Run 2523
Run 2524
Run 2525
Run 2526
Run 2527
Run 2528
Run 2529
Run 2530
Run 2531
Run 2532
Run 2533
Run 2534
Run 2535
Run 2536
Run 2537
Run 2538
Run 2539
Run 2540
Run 2541
Run 2542
Run 2543
Run 2544
Run 2545
Run 2546
Run 2547
Run 2548
Run 2549
Run 2550
Run 2551
Run 2552
Run 2553
Run 2554
Run 2555
Run 2556
Run 2557
Run 2558
Run 2559
Run 2560
Run 2561
Run 2562
Run 2563
Run 2564
Run 2565
Run 2566
Run 2567
Run 2568
Run 2569
Run 2570
Run 2571
Run 2572
Run 2573
Run 2574
Run 2575
Run 2576
Run 2577
Run 2578
Run 2579
Run 2580
Run 2581
Run 2582
Run 2583
Run 2584
Run 2585
Run 2586
Run 2587
Run 2588
Run 2589
Run 2590
Run 2591
Run 2592
Run 2593
Run 2594
Run 2595
Run 2596
Run 2597
Run 2598
Run 2599
Run 2600
Run 2601
Run 2602
Run 2603
Run 2604
Run 2605
Run 2606
Run 2607
Run 2608
Run 2609
Run 2610
Run 2611
Run 2612
Run 2613
Run 2614
Run 2615
Run 2616
Run 2617
Run 2618
Run 2619
Run 2620
Run 2621
Run 2622
Run 2623
Run 2624
Run 2625
Run 2626
Run 2627
Run 2628
Run 2629
Run 2630
Run 2631
Run 2632
Run 2633
Run 2634
Run 2635
Run 2636
Run 2637
Run 2638
Run 2639
Run 2640
Run 2641
Run 2642
Run 2643
Run 2644
Run 2645
Run 2646
Run 2647
Run 2648
Run 2649
Run 2650
Run 2651
Run 2652
Run 2653
Run 2654
Run 2655
Run 2656
Run 2657
Run 2658
Run 2659
Run 2660
Run 2661
Run 2662
Run 2663
Run 2664
Run 2665
Run 2666
Run 2667
Run 2668
Run 2669
Run 2670
Run 2671
Run 2672
Run 2673
Run 2674
Run 2675
Run 2676
Run 2677
Run 2678
Run 2679
Run 2680
Run 2681
Run 2682
Run 2683
Run 2684
Run 2685
Run 2686
Run 2687
Run 2688
Run 2689
Run 2690
Run 2691
Run 2692
Run 2693
Run 2694
Run 2695
Run 2696
Run 2697
Run 2698
Run 2699
Run 2700
Run 2701
Run 2702
Run 2703
Run 2704
Run 2705
Run 2706
Run 2707
Run 2708
Run 2709
Run 2710
Run 2711
Run 2712
Run 2713
Run 2714
Run 2715
Run 2716
Run 2717
Run 2718
Run 2719
Run 2720
Run 2721
Run 2722
Run 2723
Run 2724
Run 2725
Run 2726
Run 2727
Run 2728
Run 2729
Run 2730
Run 2731
Run 2732
Run 2733
Run 2734
Run 2735
Run 2736
Run 2737
Run 2738
Run 2739
Run 2740
Run 2741
Run 2742


US Forest Service
Resort District Limits

II. CONSISTENT WITH COMPREHENSIVE PLAN

This Master Plan is designed to help realize the vision statement and to reflect the guiding principles adopted by Teton County and the Town of Jackson as part of the Comprehensive Plan, and is consistent with both the 1994 and 2012 Comprehensive Plans as a whole and specifically addresses goals and objectives in every Chapter of the Plan. These two Comprehensive Plans are interrelated and language within both of these plans support the Master Plan. In addition to the statements in this Chapter, other submittal components further articulate the relationships between the Master Plan and various community goals.

The Snow King Resort is indicated on the Community Issues Map (of the 1994 Comprehensive Plan) as having a unique role serving both the residents of the community and the visitor-based economy of the valley. The Resort is intended to be a "Community Resort" with unique access to residents. This access is exemplified by the pathway and trail system, which is the integral fabric of the Resort.

It should also be noted that the 1994 Comprehensive Plan preceded the adoption of Division 2500 of the Land Development Regulations referring to Snow King. Therefore, Division 2500 already incorporates, within its body, most pertinent issues concerning the Comprehensive Plan. Various impacts were addressed in economic, planning and other studies that were part of the process of adopting the Snow King Planned Resort District Ordinance.

Three important community character goals specially relate to Snow King: maintaining social and economic diversity, maintaining a balance between visitation and the community and to enhance this economic center through redevelopment. The Master Plan will maintain and enhance the social and economic diversity by offering a variety of potential uses internally within the resort. New commercial, office and retail space in addition to improvements in guest facilities such as rooms, condominiums and conference areas will provide a balance of services for both guests and residents.

This proposed development is intended to help the Town of Jackson realize the vision statement in the 1994 Comprehensive Plan (pages 1-6 and 1-7), as follows:

"It is the vision of the citizens, planners and elected officials, who have all contributed to this plan, to guide and manage change and development to:

- ***Support and promote a diverse social and economic population that includes a resident work force:***

Snow King Resort currently employs over 260 persons in a variety of professional levels most of them on a year-round basis and expects to continue this pattern in its expansion. Snow King is among the top five year-round employers in Teton County. The proposed housing plan will assist us in housing more of our employees in Town. The conference facilities assist in attaining a stable year-round work force.

- ***Preserve the traditions and character of the Rocky Mountain West and Wyoming, including ranching and through architectural design;***

The design of the proposed development will help to preserve the traditional character of the region, both architecturally and functionally. The traditional character of Jackson Hole is the outcome of blending outdoor recreation, visitor services and community life and is expressed not only through architecture and appearance, but also through its functions. Snow King has proven for over 60 years our commitment to the community.

- ***Promote economic sustenance that does not depend on population growth;***

Sustainable, sensitive tourism, concentrated in already-developed areas, designed with the landscape and outdoors in mind, benefits this community economically and functionally. This proposed development aims to continue and enhance this kind of low-impact tourism.

- ***Set aside, for generations to come, scenic vistas and wildlife habitat;***

Unlike other resort development in Teton County, Snow King takes advantage of all the infrastructure and commercial development in the downtown core. It concentrates visitor impacts in the downtown core and invites them to "step outside" and enjoy our natural resources. Snow King has a proven track record of harmonious relationship with the U.S. Forest Service. This Master Plan provides generous areas of meaningful open space.

- ***Maintain and enhance environmental quality, including air and water quality;***

All new buildings will make use of technologies that help enhance environmental quality, and be connected to the existing Town of Jackson utility network. SKRMA will assist in controlling air and water quality. The resort already has a strong recycling program that will continue and be expanded.

- ***Maintain outdoor recreation and adventure opportunities;***

This proposed development provides varied outdoor recreational opportunities as part of the downtown experience. Enabling both locals and visitors to ski, skate and hike right in town, minutes from the Town Square, is one of Snow King's primary contributions to the community. Outdoor recreation at Snow King will be enhanced by this proposed development and access to the mountain through private lands preserved.

- ***Offer a spectrum of housing types, especially for resident workers.***

This proposed development meets the Town 's employee housing requirement, with the overwhelming majority being provided within the limits of the Town, as an integral part of the Town and the town's housing stock.

The guiding principles adopted in the Comprehensive Plan (pages 1 - 7 and 1-8), state that "*Teton County is a community first and a resort second"* and *"it is the intent of this Plan to create conditions for a sustainable visitor-based economy...that reflects the unique, small-town, Western commercial character of Jackson, and the outdoor recreational opportunities of Teton County as key components of the visitor experience.*" Snow King Resort is shown on the Community Issues Map as having a unique role serving both residents and visitors because of its location and history. This proposed development would make a crucial contribution to the long-term sustainability of the downtown, visitor-based economy.

In reference to Chapter 2 of the Comprehensive Plan (Population, Economy and Growth), this proposed project directly serves two goals stated on page 2-1. It will *"enhance visitor services that emphasize the area's unique outdoor attributes"* by providing a conference center that opens to the mountains as well as through its use of outdoor recreational spaces and pedestrian circulation and plazas. The Master Plan also *"defines the future boundaries of growth necessary to preserve community character.* "

This project contributes directly to maintaining community character in three ways.

- It will help to maintain social and economic diversity both by providing a range of employment opportunities and through an exceptionally strong employee-housing program. The project also enhances the social and economic diversity within the resort itself by greatly expanding the mix of uses for both visitors and residents.
- It will help to maintain a balance between visitation and community life by serving these two functions within a single facility. The conference facilities are intended to be used by visitors and residents alike, as they are now.
- This project will also help to maintain community character through redevelopment and improvements of the existing economic center at Snow King. Snow King is the largest lodging facility and resort in the Town of Jackson and currently plays a key role in the area's economy.

In Chapter 3 (Community Character), it is noted that part of the process of maintaining community

character is through providing for a style of tourism that highlights regional differences and unique characteristics. *A recent study stated that "it is a joy to encounter places that preserve, enhance and celebrate those things that set them apart and give them a meaning and personality all their own.*" (Page 3-1) Snow King's role is an interface between the town center and the mountain and combines the use of its facilities by residents and visitors alike. This integration sets Snow King apart and gives it its own personality. The seamless transition from Town to Resort is emphasized in this Master Plan.

In Chapter 4 (Natural and Scenic Resources), this project addresses three objectives (pages 4-7 and 4-8).

- It will *"improve the visual quality of existing development"*. Visual quality is addressed throughout this Mater Plan and buildings are carefully placed to minimize visual impacts. A visual impact study is part of this Master Plan.
- It will help to *"preserve open space"* by providing for ample open space as part of the site plan design.
- It will help to *"provide and manage access to natural resource areas in a manner consistent with natural resource protection goals"* through a network of trails which improve access as well as concentrate other uses in specific, already-impacted areas.

Regarding Chapter 5 (Housing), this project will *provide a variety of affordable workforce housing as the resort continues to develop,* as called for in the Town's housing goals shown on pages 5-6 and 5-7. Because of stable year-round employment, this development also helps the resort's workforce afford available housing. The Housing element proposes housing both within the PRD and in other locations in the Town of Jackson. It also proposes a variety of housing types to meet the needs of different levels of employees. Snow King is proud of the broad spectrum of employment opportunities it offers and intends to support this spectrum with appropriate housing.

In Chapter 6 (Commercial and Resort Development), tourism and related services are recognized as the economic base of the community. The conference center is a key component of this sector. The Comprehensive Plan also calls for *avoiding strip development and encouraging outdoor-oriented tourism.* With the ski hill, hiking and biking trails, skating and other outdoor amenities located near the center of town, this proposed development addresses both of these goals. An additional plus is the ready accessibility to the community of our resort facilities. The proposed development also fulfills the goal of creating a full-service conference /convention center and provides a stabilizing year-round foundation to our seasonal economy.

In Chapter 7 (Community Facilities), this Master Plan will enable us to *collaboratively anticipate community facility needs,* a primary goal (page 7-19). It also helps locate demand for community infrastructure in an appropriate location.

In regards to Chapter 8 (Transportation), the Comprehensive Plan calls for *transportation planning, which helps to preserve and enhance community character.* The location of a conference center within walking distance of downtown, helps to minimize traffic demands. The transportation element of this Master Plan takes into consideration transit, pathways, traffic impacts, parking and airport capacities.

The recurring theme of this chapter is balance: seeking a balance between what the resort gives to the community in terms of jobs, tax revenue, meeting space, and recreation and, in turn, what the resort requires in terms of water, sewer, mass transit and employee housing. The theme of balance also relates to the scale and character of the development and how well it fits into the fabric of the community and the landscape. As mentioned in the Statement of Purpose, this proposed development is an excellent example of balance.

In all of these ways, and many others, the proposed Master Plan is consistent with the 1994 Comprehensive Plan and helps to meet its community goals. The Master Plan is also consistent with the 2012 Comprehensive Plan which was built upon the foundation of the 1994 Comprehensive Plan.

The Snow King Resort is part of the Town Commercial Core district as indicated in the 2012 Comprehensive Plan, which serves as the economic hub of Teton County. The 2012 Comprehensive Plan highlights the following character defining features for Snow King Resort:

"This district is anchored by two primary economic and community centers, each with their own identity and role – Snow King Resort and Downtown. A key goal of the district will be to better connect these subareas in order for each to benefit from the other's vitality, complementary uses, and activities while supporting the overall success of the district as the center for our tourist-based economy."

"This transitional Subarea is currently subject to the Snow King Resort Master Plan. The plan seeks to create a vibrant mixed-use resort complex, including a multi-faceted conference/convention center and community facility that contributes to the economy of Downtown and also serves as a permeable border between the Town and Snow King Mountain. The resort has long been an integral part of the community, playing the role of the 'Town Hill,' providing a host of winter and summer recreational amenities. In the future, Snow King Resort will complement Downtown lodging and tourist amenities."

"In the future, the subarea will complement Downtown lodging and tourist amenities. Lodging will be provided in a variety of types and forms from hotel rooms to condominiums, in order to support the local tourism-based economy. The size and scale of structures will often be larger than those typically allowed in other subareas of Town, as resorts typically require a larger critical mass necessary to support visitor functions. Though buildings will tend to be larger than in other districts, the subarea will maintain an abundance of open space in relation to the built environment as a key to a successful resort experience."

"Consistent with the master plan, Snow King Avenue will be developed into a mixed-use corridor that includes a variety of commercial uses while still serving as a major transportation corridor in the community. Along with this it will be important to create a more visible and attractive base area along Snow King Avenue to attract residents and visitors to the many amenities and recreational opportunities found there."

III. COMPLIANCE WITH LAND DEVELOPMENT REGULATIONS

All the lands within this Master Plan are zoned “Planned Resort District” in the Official Zoning District Map, and all development is governed by Division 4.3.1, Planned Resort District, of the Town of Jackson's Land Development Regulations. This Division specifies the purpose, intent procedures and standards applying to such developments and guides all aspects for this Master Plan. This Master Plan is fully consistent with the regulations in Division 4.3.1.

The Master Plan utilizes and complies with the intensity of use and performance- b a s e d thresholds established in Section 4.3.2 of the regulations. The land under this Master Plan will be used as a mixed-use district designed in such a manner as to preserve open space by concentrating development only in specific portions of the district, and allocating access routes to the national Forest and to pathways that connect the East and West sides of the Town.

This document, as a whole, responds and complies with all the sections of the zoning and development regulations relevant to Snow King. Even when compared with other zoning Districts, the proposed Landscape Surface Ratio (.50 for the total of Sub-Areas 1, 2, 4, 5 and 6 and .30 for the area within Sub-Areas 1, 2, 3 and 4) and Floor Area Ratio (.40 for the total of Sub-Areas 1, 2, 4, 5 and 6 and .60 for the area within Sub-Areas 1, 2, 3, and 4 compare favorably even with those for residential areas and with the requirements of Division 4.3.1.

As specifically stated in Section 4.3.1.F.2, *"it is fully consistent with the Division that Planned Resorts may have dimensional, design and other development standards different from those described in other Sections of these LDR's due to the unique circumstances of, and community objectives for, resort development.* " This Master Plan presents its own Dimensional Limitation Plan in accordance with Section 4.3.1.F, that takes into account the specific topography and location of the lands encompassed in this Master Plan.

The Dimensional Limitation Plan explains its rationale and establishes vertical and horizontal dimensional limitations that are a product of the existing built environment and the topographical context of this site. Floor areas are necessarily large to insure Snow King's position as the largest conference facility in the valley. These aspects of the built environment are tempered by a three-dimensional building envelope system specific to all the high use areas. The types of allowable uses are many and varied to ensure community needs, diversity, synergy and increased economic viability. These uses are consistent with a high-intensity resort development node tucked against the base of Snow King Mountain.

The following is a summary of how this Master Plan meets the requirements of each section of Division 4.3.1 and the required findings for approval.

SECTION 4.3.1.A PURPOSE AND INTENT

Division 4.3 of the Town of Jackson Land Development Regulations defines the Planned Resort District Zoning District as follows:

> *"Planned resort (PR) District. The purpose of the Planned Resort Zone is to provide for a mix of recreational, retail, and service-oriented activities which have a high degree of self-containment and provides economic and other benefits to the community. The Planned Resort Zone is intended to guide the creation or continuation of a planned development configured round a major recreational activity.*"

The Master Plan is responsive to every objective of Division 4.3. As the largest convention facility and resort in the Town of Jackson, and encompassing a large contiguous undeveloped land located between Town and forest, the proposed development represents perhaps the only opportunity available to the Town to meet these objectives. The goals of this Master Plan and the purposes of these regulations are closely matched. The purposes of these regulations are stated as to:

A. *Encourage recreational activities that rely on indigenous natural attributes of the area. contribute to the community's character and economy and have had a long-standing beneficial role in the community;*

Snow King Resort blends conference facilities and other visitor services with varied year-round recreation on the mountain, including skiing, skating, tubing, hiking, biking, horseback riding, activities for children and a summer chairlift and alpine slide. Snow King has evolved as an important part of Jackson's community character because of the way it functions, as a gathering place for both residents and visitors. The existing conference and hotel facilities have benefited Jackson Hole residents and visitors since 1976, while the ski hill and other mountain recreation uses represent a tradition going back to 1939.

B. *Provide flexibility for planning and developing recreational resort facilities in a creative, efficient and coordinated manner in order to provide quality visitor experiences;*

The proposed development has been planned within the context of the entire downtown area and is coordinated with plans for the Multi-Agency Campus and the Community Center for the Arts to contribute to an animated, viable and vibrant downtown. Snow King's development encourages a concentration of services in the downtown area, leading to more pedestrian activity and efficient corridor use that will bring people to the Town Square. Snow King is an integral part of a holistic downtown vision, and the proposed convention facilities will be the mainstay of a year-round downtown economy.

C. Create a process in which applicants, Teton County and the Town of Jackson collaborate with landowners in planning and designing resort master plans that meet community goals and respond to the unique circumstances of the resort area;

This Master Plan is another step in a long-standing pattern of collaboration and partnership between Snow King and the Town of Jackson, which includes the joint development of Snow King Center and many aspects of the ski operation including snowmaking water and land leases. All the landowners within the Master Plan are acting in unison.

D. *Permit resort development that contributes to the winter and shoulder economic seasons;*
Convention facilities are key because they attract year-round use. Currently our meetings and convention business provide us with a better off-season occupancy than the Teton County average. With the proposed development, we will be able to accommodate a much broader variety of meetings, and as a result, expect a better spring and fall occupancy rate.

E. Ensure that resort plans incorporate a mix of land uses, promote alternative modes of transportation, and provide a pedestrian-oriented community in order to alleviate traffic-related impacts;

As expressed in various Chapters of this Master Plan, non-motorized pathways are the backbone of this mixed -use resort. In addition to the obvious benefits of providing convention facilities in the immediate downtown area with pedestrian and shuttle access to all the Town Square Businesses Snow King also provides pedestrian access to the mountain. Many people take advantage of Snow King's trails and recreational facilities to enjoy the outdoors without leaving town. Snow King's unique mix of land uses helps ease transportation demands in various ways. This Master Plan includes all the required components of a transportation element and proposes a transportation plan that will serve the goals adopted in the Town's Transportation Plan. Snow King will be an integral part of a multi-modal downtown transportation system. In addition, Snow King's trails and pathways will add a valuable amenity above and beyond what is required by the regulations.

F. Ensure resort plans are consistent with the Comprehensive Plan, and therefore, are beneficial to the community;

Consistency with the Comprehensive Plan is discussed in detail in another Chapter.

G. Enable long-range planning for infrastructure,capital facilities, and community land use patterns by establishing a level of predictability in the maximum potential size and character of each resort area,

This Master Plan establishes maximum development potential in keeping with the maximum established in Division 4.3, and provides the framework for collaboration in the provision of infrastructure needed for a successful development.

H. Ensure a balance is maintained between tourism and community that promotes social diversity but does not cause undesired shifts away from rural, western community character;

Snow King's development is a continuation of a pattern of use, which is already well established for the property. This development will maintain the existing balance between visitor and resident use of the facilities and bring much-enhanced benefits to the community as a whole. We cannot claim that it will not contribute to the shift away from rural character, but this shift is a consequence of other factors as well. No doubt each discreet development small or large, contributes to this change. Although some portions of the site will be developed in an urban manner, over half of the land is dedicated to open recreational space.

I. Produce resort plans that make significant contributions toward protecting attributes of the community that are considered critical to the community's long-term health, welfare and well- being;

The proposed convention facilities will make a significant contribution toward a sustainable economy for the Town of Jackson, as documented in prior studies. The Resort as a whole will make a large contribution to the economic health of the downtown area. The proposed workforce-housing element will make a significant contribution to the housing stock for working people in the downtown area. The proposed recreational development will benefit the entire community and existing recreational uses will be maintained. The design will be a visual enhancement of the mountain base area.

SECTION 4.3.1.B APPLICABILITY

Snow King Resort is specifically named.

SECTION 4.3.1.E PROCEDURE

This Master Plan is in compliance with the procedures outlined in Section 4.3.1.E.

Section 4.3.1.D. Require the following submittal components:

(a) Statement of Purpose
(b) Master Site Plan
(c) Dimensional Limitation Plan
(d) Design Guidelines
(e) Transportation Demand Management Plan
(f) Housing Mitigation Plan
(g) Capital Improvements Plan
(h) Land Use Plan
(i) Phasing Plan
(j) Community Services Element

The Chapters of this Master Plan are organized, as much as possible, in response to this requirement.

SECTJON 4.3 STANDARDS APPLYING TO ALL PLANNED RESORTS

This Master Plan application is complete as per Section 4.3 requirements. Each section of this Master Plan explains how it intends to meet the standards for various components and elements set forth in Section 4.3.

SECTION 4.3.2 STANDARDS SPECIFIC TO SNOW KING RESORT

These standards fall into six categories:

a. Character and design
b. Capacity
c. Land use
d. Landscape surface area
e. Environmental analysis
f. Relationship to Town Square

Regarding (a) character and design, this is discussed in detail under "Design Guidelines", Chapter VI of this Master Plan. The proposed development meets and exceeds every one of the specific design standards for Snow King. Although some of the buildings are necessarily large, the scale needs to be considered in the whole context of the goals and objectives of this Planned Resort District.

Regarding (e) environmental analysis, the site does not contain any wetlands and does not interfere in wildlife migration routes. Environmental and hazardous materials assessments have been conducted and no underground storage tanks are located in any of the parcels under consideration. Soils analysis has included studies of the maps prepared by Dr. Love and Harry Covington pertaining to steepness of slopes, ground stability, geologic maps, loam y soils and snow slides possibilities. In addition, visual inspections have been conducted with Dr. Love and results of soi1 test borings, pits and actual foundation excavations have been analyzed.

All structures in this Master Plan are located in appropriate and stable soil areas. Some of the small

structures located within the steeper slopes of Sub- Area 4 are located on soils that will require engineered foundations. Visual impacts are discussed in detail in various chapters of this Master Plan.

As an operating business, consideration has also been given to operational efficiency and the wise use of resources. Snow King presently follows, and will continue to adhere to, OSHA, DEQ, EPA, ADA and BATF regulations regarding the storage, handling and disposal of dangerous materials as well as other employee and guest related requirements. Impacts are also minimized through the use of management guidelines, such as the National Ski Area Association's Environmental Principles for Ski Areas.

Regarding (f) relationship to Town Square, the transportation element of this Plan describes components, which encourage non-motorized access and public transit access to the Town Square.

Other various aspects are presented in written or graphic form throughout this Master Plan.

SECTION 4.3.1.D FINDINGS FOR APPROVAL

This Master Plan positively responds to and meets or exceeds all the findings for approval described in Section 4.3.1.D:

A. Consistency with Comprehensive Plan. The Master Plan is consistent with the goals and objectives of the Jackson/Teton county Comprehensive Plan.

B. Consistency with purpose and intent. The Master Plan is substantially consistent with the purpose and intent of this Division, as set forth in Section 4.3.1.A, Purpose and Intent.

C. Affordable and employee housing. The Master Plan ensures a supply of affordable and employee housing that is in accordance with the requirements for housing created by development within the Planned Resort.

D. Design guidelines. The Master Plan contains design guidelines that

1. *Establish standards for buildings, spaces, signs and lighting within the Planned Resort*
2. *Promote the design concepts set forth in Section 4.3.1.F.7, Design element; and*
3. *Establish a method for consistent implementation of the guidelines.*

E. Transportation element. The Master Plan contains a traffic impact analysis and transportation demand management plan that:

1. *Promote multimodal forms of transportation that are consistent with the transportation goals of Jackson /Teton County Comprehensive Plan;*
2. *Manage the generation of resort related traffic to avoid undermining community character and endangering the public health, safety and welfare; and,*
3. *Identify an equitable cost sharing plan for transportation facilities and services*

F. Capital improvements plan. The Master Plan contains a capital improvements plan that ensures infrastructure and essential services will be provided in an efficient and timely manner to accommodate projected resort demands.

G. *Land use element. The Master Plan promotes land uses that support and maintain the character of the resort as specified in Section 4.3.1.F.7, Character Element.*

H. *Phasing plan. The Master Plan contains a phasing plan.*

I. *Character element. The Master Plan ensures the resort 's development will be in keeping with the community's goals.*

This Master Plan is consistent with the Comprehensive Plan and the purpose and intent of all these regulations. In the following chapters, the introduction for each chapter specifies how this Master Plan meets the requirements for affordable and employee housing, design, transportation capital improvements, land use and phasing. We believe that this Master Plan meets and exceeds the standards for each of these elements.

The final finding required for approval is that the Master Plan "ensures the resort's development will be in keeping with the community's character and the planned character for the vicinity of the resort." This issue is addressed in the Statement of Purpose.

Among the many features of this Master Plan is that it meets the present and future needs of the Town of Jackson by enhancing an already-existing pattern of use. By expanding Snow King's capacity, the Town of Jackson can attain several desired goals with minimum impact. The impacts that are anticipated are generally compatible with the resort' s vicinity NH-1 zoning.

A particular and unique strength of this Master Plan is its conformance to the Community Services standards (Section 4.3.1.F.12, which call for the Resort to function as *"integral parts of the community by participating in civic initiatives and by implementing the goals of the community."* These standards encourage *"programs designed to retain access to the resort's main recreational activity and facilities, ... help to maintain a balance between out-of-town visitors and the community, and contribute to the quality of life of the community.*" As a community partner for over 60 years, Snow King is proud of its close relationship with the community. The various Chapters of this Master Plan clearly address all of the impacts and the rationale o f the proposed development in a cooperative spirit with the community.

Issues of building height are considered in the Dimensional Limitations Chapter.
It must be noted that goals such as creating a sense of arrival, a dense development oriented towards pedestrian circulation, creating meaningful open spaces and activity areas, proximity to parking, incorporating employee housing and in general creating a vibrant mixed-use district necessitates higher buildings than in other zoning districts. The topography of the site clearly helps in blending larger buildings into the mountains. The Dimensional Limitations and Design Guidelines Chapters expand on this topic and also compare future buildings with the existing hotel and Snow King Center. When taken together, a balance is reached that achieves the stated goals and objectives of this Master Plan.

Regarding (b) capacity, the maximum lodging capacity of sub areas 1-5 is 2,208 guests and the maximum building square footage of 915,000 SF are to remain in adherence to the intensity of use established in Section 4.3.2.C as amended.

This appropriate capacity and size of the resort was discussed in detail during the process of adoption of Division 4.3. Independent studies conducted by the Town and County took into consideration

not only the site characteristics of each resort, but the inter-relationship between Snow King and other resorts, mainly Teton Village. The size of private land parcels, floor area ratios, landscape surface ratios and other specific site factors were also considered in the process.The size of the resort was also determined to be appropriate in relation to the conference/convention facilities desired by the community and the need to make this conference center financially feasible.

These and other aspects were factors determining the optimum size of the Snow King District Planned Resort and these results were incorporated into Division 4.3 of the Land Development Regulations.

When fully developed, Snow King Resort's goal is to have the best-equipped conference facility in the State of Wyoming. As proposed these facilities will be highly flexible, much more pleasant than most urban conference centers and will be visually and functionally connected to the surrounding landscape with ready access to the outdoors. When enhanced by Jackson's allure as an exciting destination, this facility will have the potential to attract meetings from all around the region as well as from the highly competitive national market. The objective will be to accommodate conferences for 100 to 300 participants with sufficient space for breakout rooms and to accommodate concurrent groups and functions. This scale is compatible with our community's transportation systems and other commercial infrastructure.

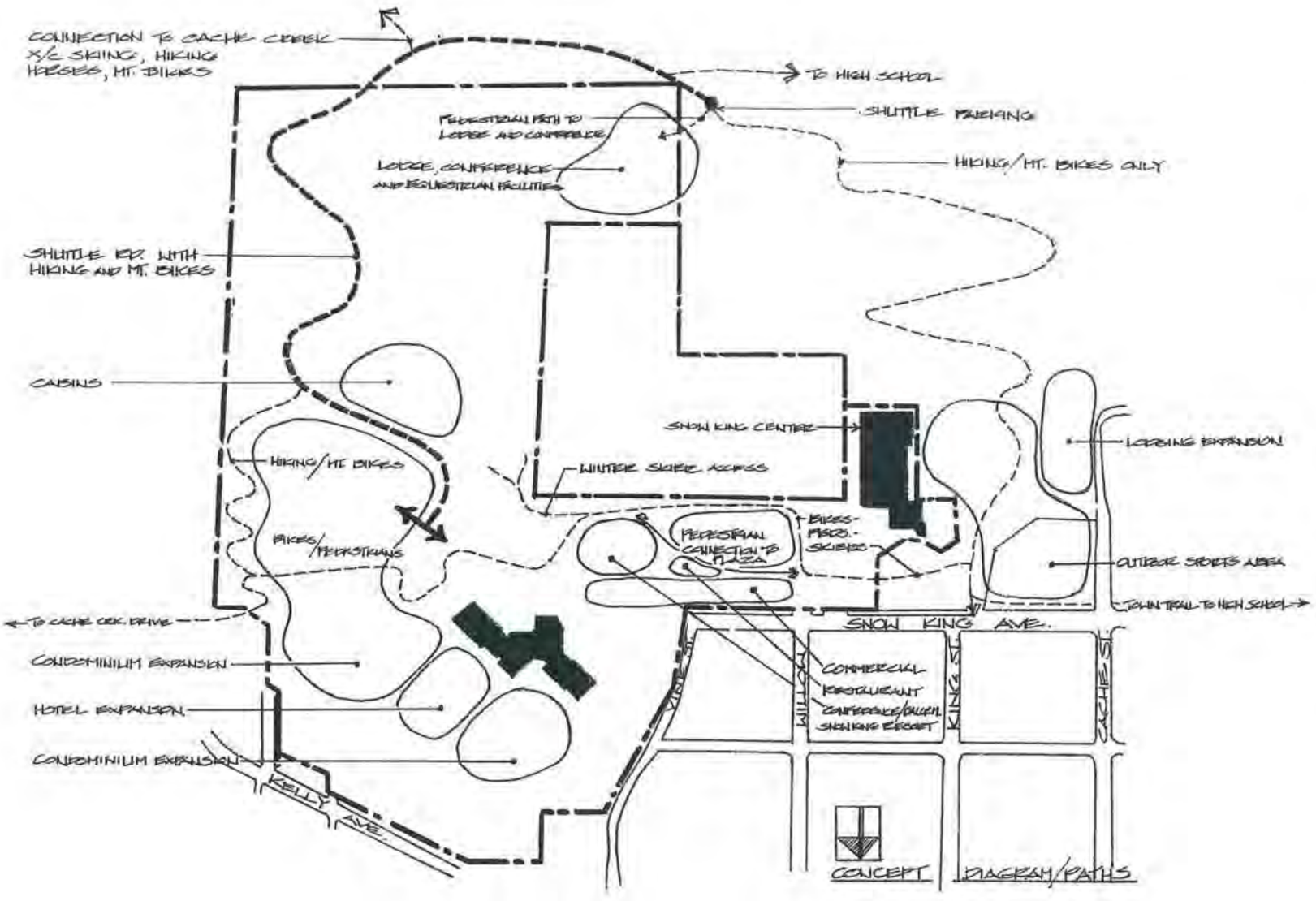
Additionally, Snow King hosts many conferences that use other lodging facilities in town. As their enrollment and programming needs expand, more conference and exhibit space are required to accommodate these town-wide meetings. These meetings provide a stable, low-impact base for the visitor services sector of our economy and, as envisioned in these regulations, contribute to other long-term community goals.

In this context, it is important to note the purpose of this Master Plan is to define maximum build-out for Snow King Resort. This proposal represents the complete facility that will be available to Jackson and these facilities will be developed in phases, over a period of time. As time passes space requirements for individual uses change, while the overall caps remain in place.

Regarding (c) land use, the standard calls for convention facilities capable of competing successfully in the *"year-round convention market."*

Regarding proposed commercial development, the health club, daycare and ski school are all integral parts of a full-service facility and will benefit the lodging guests and other community needs. New food and beverage facilities are proposed in addition to the existing restaurant and kitchens, as well as unassigned commercial space for neighborhood convenience business and for on-site guest services. The proposed movie theatres will be able to be used for conferences during the day and attract visitors to invigorate the pedestrian plaza at other times.

Regarding (d) landscape surface area, the standard calls for a minimum LSR of .25 within developed areas of the Resort. This Master Plan provides a higher minimum LSR of .30 within these developed Sub-Areas. As called for in this standard, the Master Plan also provides an attractive streetscape along Snow King Avenue, a porous edge and high quality outdoor public space for events and interaction. The goal is to achieve a festival marketplace atmosphere for the plaza area by combining the multiple functions of conference center, commercial space, food and beverage service and open space. The creative mix of businesses and functions will be the key to success.



IV. A. Introduction to Site Plans

The Master Site Plan on the following pages is a refined product of the Conceptual Master Plan submitted in 1995 during the Planned Resort District presentations that were the basis of the PRD ordinance. While slight variations occur, the foundations of the proposed Master Plan are based on the attached Concept Plan and is consistent with prior presentations and masterplans dating back to 1973.

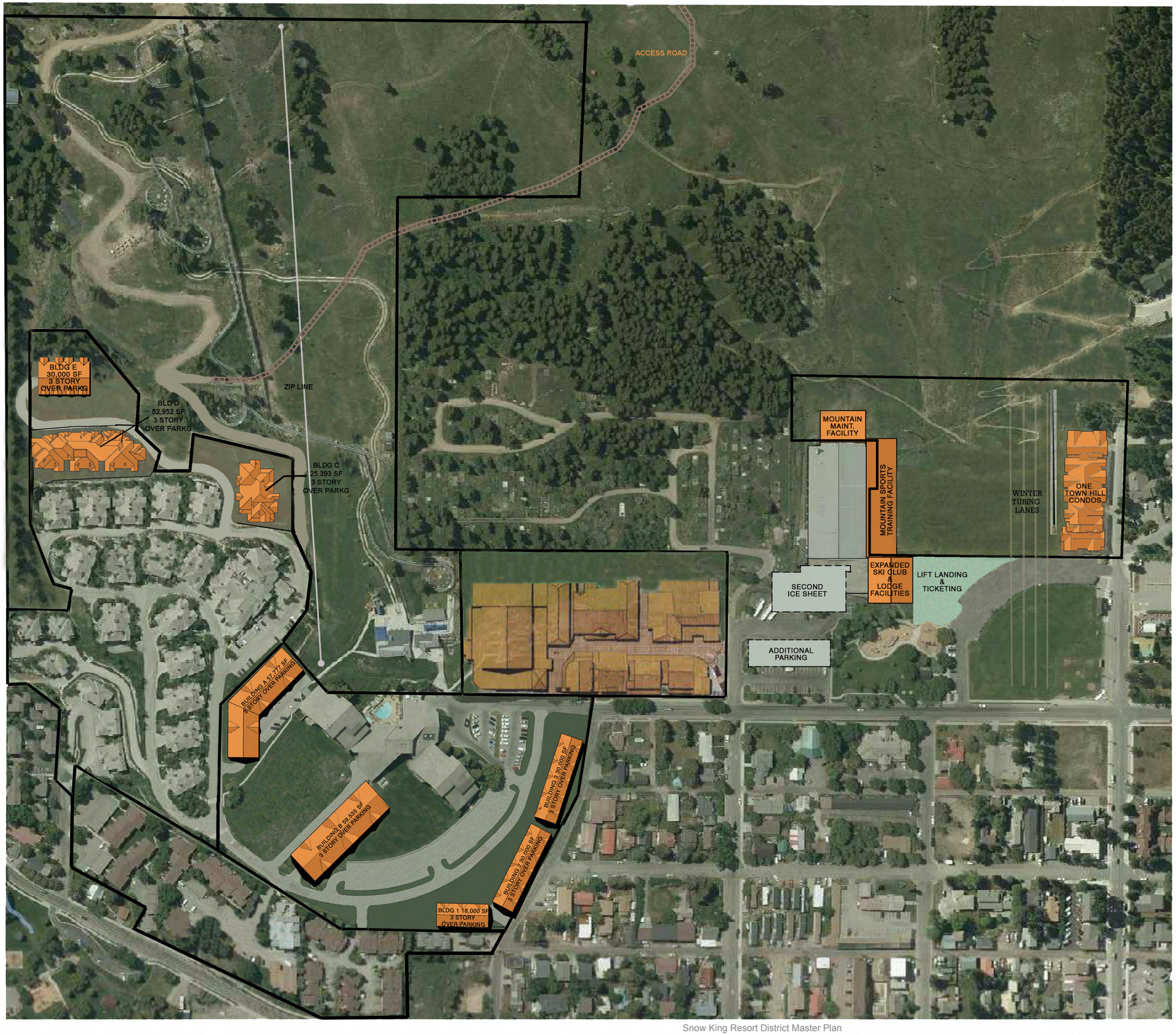
The large contiguous undeveloped land holdings being considered in this Master Plan afford a great opportunity in designing a successful project. Careful consideration has been given to its topography, vegetation, and location. Hiking trails, wind, soils, vehicular, pedestrian and services access, orientation, light and other aspects of the site have been inventoried and considered. This plan is the result of many years of careful thought and studies.

The backbone of This Master Plan is the pedestrian circulation routes connecting Town to Forest lands and the various functions of the Resort. Pedestrian and vehicular circulation is separated as much as possible and East/West and North/South pedestrian/bike connectors are of primary importance. Two primary hiking, riding and bike trails cut across the face of Snow King providing summer shuttle access to the mid-mountain area and additional opportunities for hikers and mountain bikers. The KM6 area (Sub-Area 2) fully develops the pedestrian plaza with connections to Willow Street and the downtown area of Jackson, as well being the nexus of the East/West pedestrian/bike trail network.

This Master Plan places various functions in the most appropriate location and within reasonable walking distances of one another. Dense lodging and conference facilities are located in close proximity to allow conference participants mostly interior circulation. At the same time, priority is given to convenient access to the outdoors from lodging and conference areas, as well as to the availability of natural light to most meeting rooms. The Conference Center is centrally located in close proximity to parking, porte cochere, lodging, underground services and within walking distance to the existing hotel meeting rooms and the Snow King Center.

Building envelopes are a result of their relationship to many aspects, but most importantly indoor and outdoor pedestrian circulation, proximity and access to recreation/assembly areas and intended to create meaningful outdoor spaces. Other Chapters of this Master Plan discuss the rationale for the many aspects of the proposed development. The resulting design accomplishes the goals and objectives of this master plan in a manner complimentary to its location and site characteristics.

This Chapter presents graphic information about the proposed development after build-out. Two separate maps present the proposed Site Plan. The Summer Master Plan depicts the proposed development with both existing and approved features, as they would appear during the summer season. The Winter Master Plan does the same for the winter season. The importance of pedestrian circulation is better portrayed in these two separate maps and in the Transit Routes, Trails, Pathways and Sidewalks plans. The Snow King trail map puts the Master Plan into the larger context of the Snow King massif. The Sub-Area plan sub-divides the total area of this Master Plan into smaller sections for purposes of clarity and ease of analysis.



C. Proposed Master Plan

The proposed Summer / Winter Master Plan depicts the proposed development along with existing and approved features. Proposed site development features include:

Love Ridge / Grand View Vicinity

- Grand View Lodge & Conference Center
- Grand View & Love Ridge Condos
- Proposed development on lots 53, 57, & 58

Hotel Additions

- Buildings A & B
- Paved Parking Areas, Roads and Walks

KM6 Area

- Conference Center / Indoor Recreation
- Buildings K, L, M
- Walks and Stairs
- Heated Plaza, Walks and Stairs
- Existing Miniature Golf and Maze

East Base Area

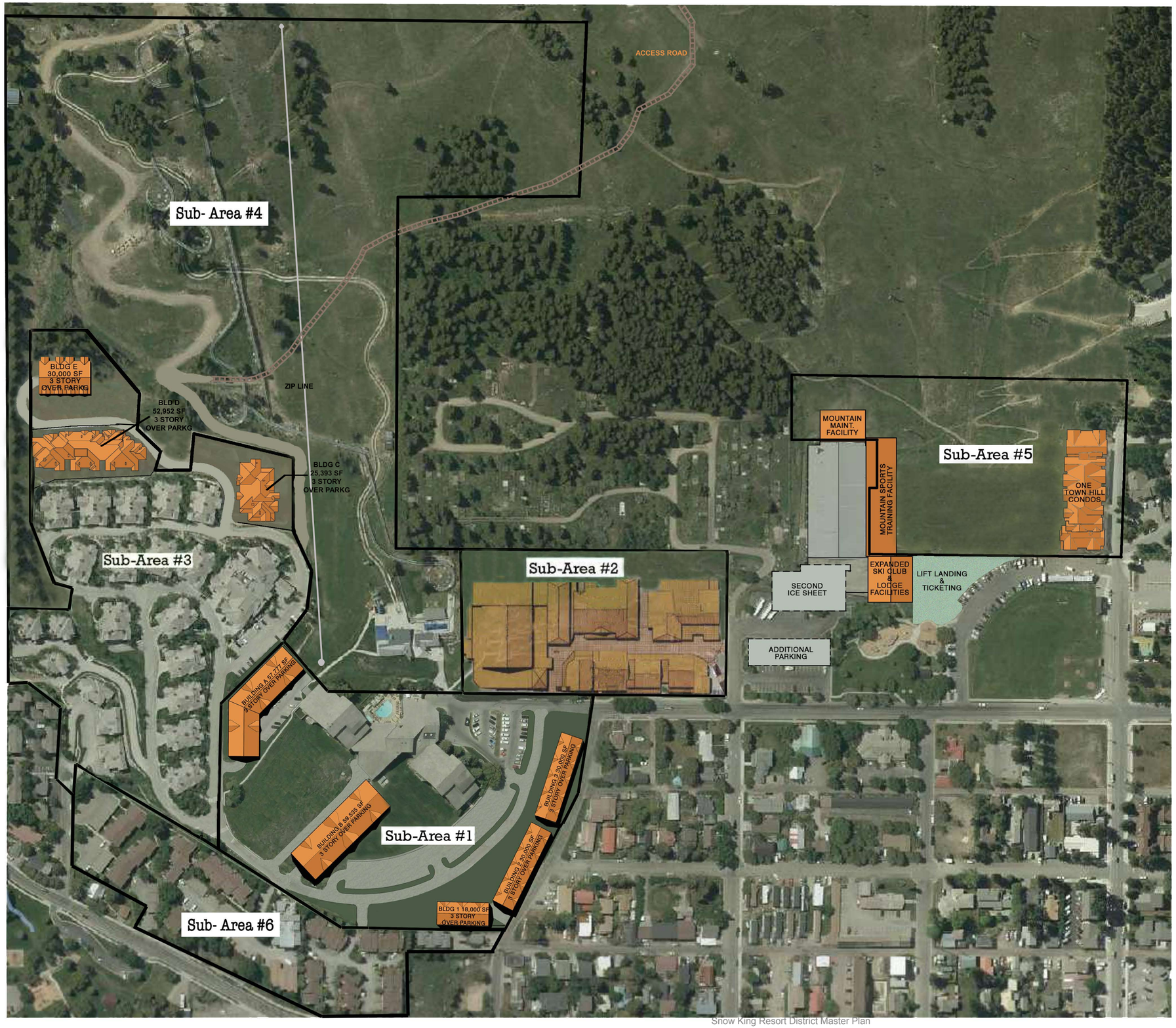
- Rafferty Center & Mountain Coaster
- Alpine Slide & Rafferty Lift
- Zip-line

West Base Area

- One Town Hill Condos
- Proposed Mountain Sports Training Facility
- Proposed Mountain Maintenance Facility
- Snow King Sports and Event Center
- Proposed Expanded Lodge Building
- Proposed Gondola

Vine Street Area

- Employee Housing / Apartments



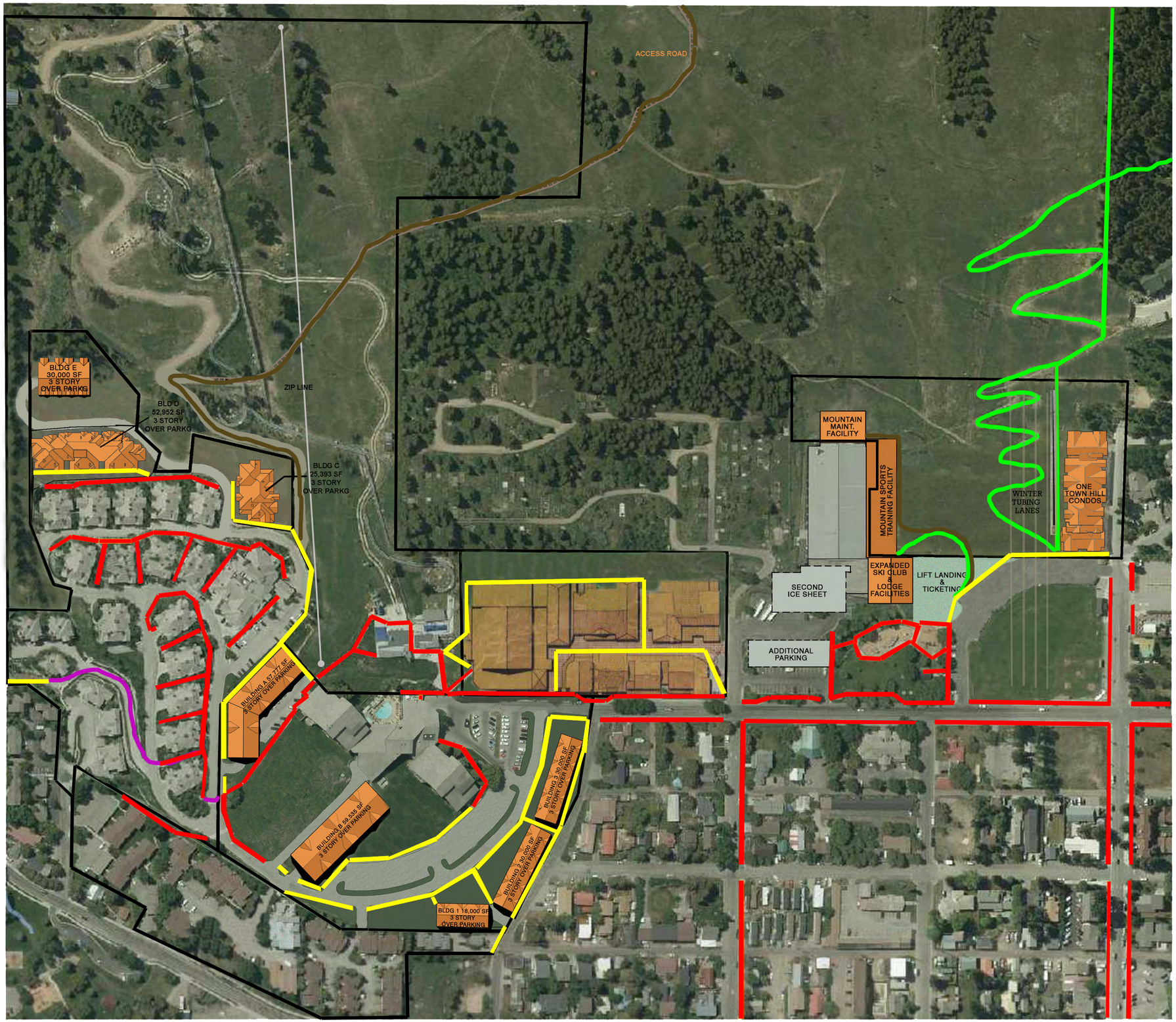
B./D. Sub-Area Plan

For planning purposes the land in the Snow King Planned Resort District has been reconfigured as follows:

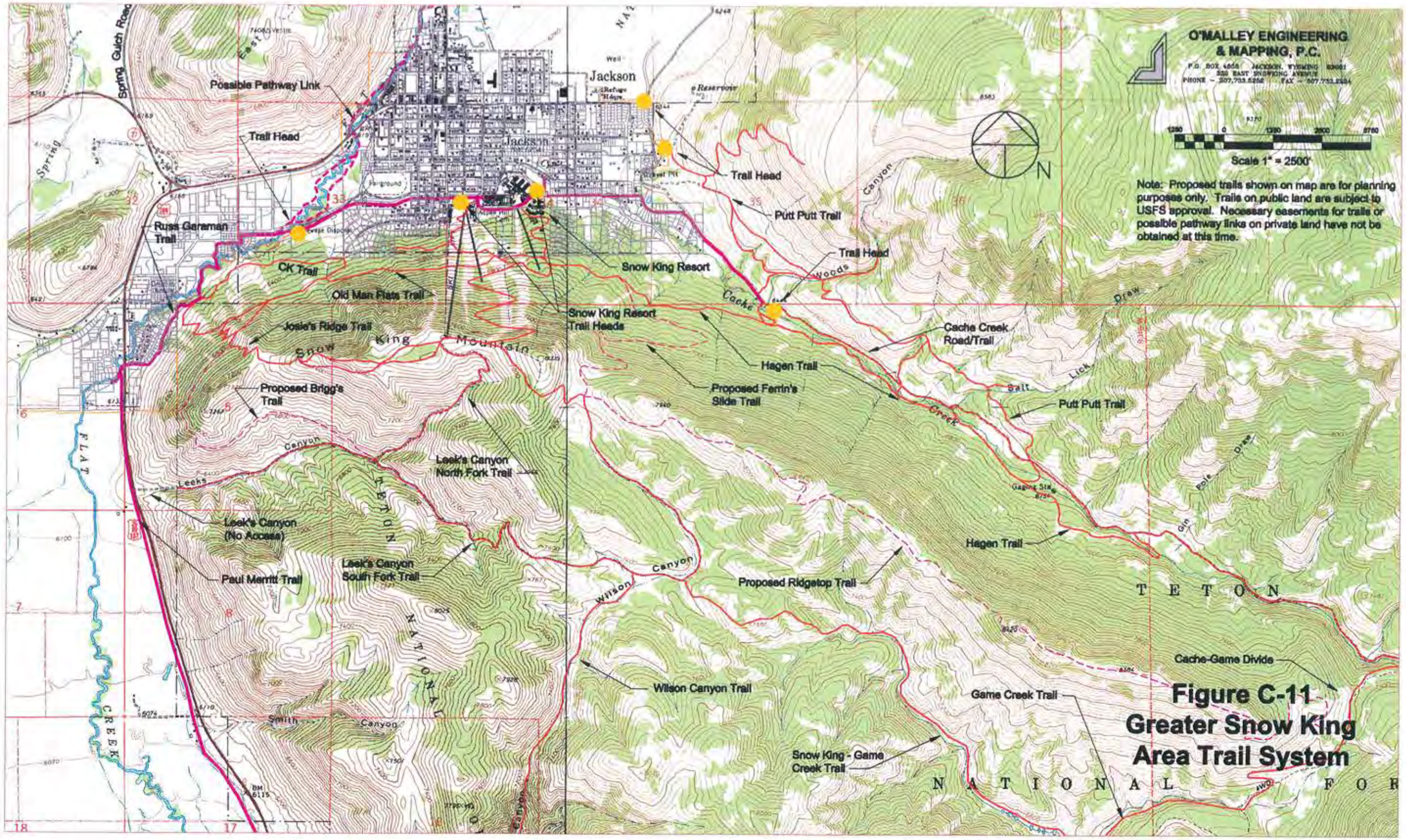
Sub-Area #1: Existing Hotels, Hotel Additions and employee housing.
Sub-Area #2: KM6 Area between Hotel and Snow King Center
Sub-Area #3: Existing and proposed condominiums
Sub-Area #4: Snow King Mountain Recreation area
Sub-Area #5: Snow King Mountain West Base area and One Town Hill
Sub-Area #6: Existing Condominium Area *

*Sub-Area #6 - See statement regarding existing condominiums

Snow King Resort Circulation Trails, Pathways & Sidewalks



- Existing Sidewalk
- Circulation Connection
- Access Road/Summer Trail
- Hiking/Biking Trails/Paths
- Future Sidewalk


O'MALLEY ENGINEERING
& MAPPING, P.C.
P.O. BOX 4656 JACKSON, WYOMING 83001
520 EAST SNOWKING AVENUE
PHONE - 307.733.5252 FAX - 307.733.2584
1250 0 1250 2500 3750
Scale 1" = 2500'
N
Note: Proposed trails shown on map are for planning purposes only. Trails on public land are subject to USFS approval. Necessary easements for trails or possible pathway links on private land have not be obtained at this time.
Possible Pathway Link
Trail Head
Russ Garaman Trail
CK Trail
Old Man Flats Trail
Josie's Ridge Trail
Proposed Brigg's Trail
Leek's Canyon (No Access)
Paul Merritt Trail
Leek's Canyon North Fork Trail
Leek's Canyon South Fork Trail
Snow King Resort
Snow King Resort Trail Heads
Proposed Ferrin's Slide Trail
Trail Head
Putt Putt Trail
Trail Head
Cache Creek Road/Trail
Hagen Trail
Putt Putt Trail
Hagen Trail
Proposed Ridgetop Trail
Wilson Canyon Trail
Game Creek Trail
Snow King - Game Creek Trail
Cache-Game Divide
Figure C-11
Greater Snow King Area Trail System

V. THE LAND USE PLAN

Introduction to Land Use Plan

Section 4.3.1.F.10 of the PRD regulations requires a Land Use Element that supports and maintains the character of the resort. The regulations set forth permitted uses and guidelines for the amount and type of development.

As stated in other Chapters of this Master Plan, a major goal is to create a vibrant mixed-use resort. To attain this goal, many varied uses are allowed and the whole site is considered as an integral unit in order to maximize efficiency and create the desired results. The objective of this Master Plan is to develop a high-intensity resort node of development, which is compatible with its location in the neighborhood, and with its crucial relationship with downtown Jackson.

Permitted uses are listed in Section 4.3.1.F.10. Permitted uses include residential uses, uses necessary to support the resort's primary recreational activities and uses necessary to support the resort's lodging, day visitors, employees and use by local residents. In the case of Snow King, conference center uses are emphasized and commercial uses serving on-site guests and the adjacent neighborhood are permitted. Special events are also permitted. Prohibited uses include regional serving commercial uses and commercial amusement activities, which are deemed detrimental to community goals and character.

The regulations set forth basic considerations for establishing the amount and type of development: (I) Rationale and character objectives for the resort area; (2) overall development which can be permitted while preserving community character; (3) infrastructure capacity; and (4) resort self--sufficiency to minimize vehicle trips.

The first two issues are discussed in Chapters II, III, VI and VII, in the context of Consistency with the Comprehensive Plan, Compliance with the Land Development Regulations, Design Guidelines and Dimensional Limitations Plan. The issue of infrastructure capacity is discussed as part of Chapter X, Capital Improvements Plan. The issue of resort self-sufficiency is generally not applicable since the intention of this Master Plan is to be integrated with the downtown area. However, the proposed uses do provide basic conveniences and amenities needed by on-site guests and conference center users and assists in decreasing vehicle trips.

Overview of Permitted Uses

The uses allowed in this Master Plan provide a balanced mix that will enliven the resort and support its dual purpose as a center for both visitors and residents. All the allowed uses fall within the scope of permitted uses, listed in Section 4.3.1.F.10 of the Town of Jackson Land Development Regulations.

Although future uses cannot be completely anticipated, the intent is to comply with the overall goals and objectives of this Master Plan. The Resort District can be characterized as having similarities either in part or in whole, to all zoning districts. These similarities are mixed together into a constantly evolving balance. In order to maintain a healthy balance for the future, flexibility in the type and intensity of use is essential.

The Land Use Plan and its associated land uses are divided into two broad categories; those uses allowed within the building envelopes and those uses allowed outside the building envelopes (Recreation Land Use Zone).

Uses within the building envelopes are generally characterized as residential, commercial institutional, amusement /recreation and home uses. Recreation Land Uses are allowed to spill into the building envelopes.

Uses outside the building envelopes can generally be classified as non-residential, amusement/recreation and temporary uses. While these uses may require the need for structures or other physical improvements, they are usually small in scale and quite specific in use. To attempt to confine development, which is related to the recreational activities such as skiing, biking, horseback riding, alpine slide etc. seems an impractical, if not impossible task. Hence the rationale for allowing recreational use flexibility outside the building envelopes.

Other various recreational uses such as (but not limited to) swimming pools, hot tubs, playgrounds, picnic areas and shelters, pathways, trails, tennis and volleyball courts, alpine slide, miniature golf, outdoor function areas, sign structures, bridges, ticket windows, barns, tents, performing stages and platforms, dance floors, band stands, BBQ areas, ski lifts, decks, loading areas, nurseries, equestrian operations, ski school and day care facilities are allowed both within and outside the Building Envelope areas.

The following descriptions are intended to familiarize the reader with the uses particular to this Master Plan, as well as other uses which the resort feels are appropriate consequently establishing the nexus between this multiple use district and the LDR's. See section 4.3.1.F.13.C of the current Land Development Regulations unless otherwise noted. Thresholds for size and number of permitted uses is discussed in the Dimensional Limitations Plan.

Uses Permitted Within Building Envelopes.

Residential Uses – Snow King anticipates the following residential uses: Conventional Single-Family Units, Accessory Residential and Institutional Residential. Employee housing is also to be located throughout the site and integrated within the Resort in various nodes.

While it appears that residential use within the Snow King PRD will be limited, Snow King believes that residential uses may still have a place in the resort. Consequently, the previously stated uses as listed in Section 2220 4.3.1.F.10 are allowed.

Accessory Residential Unit. -While these types of residential uses are highly unlikely within the resort area, Snow King does not want to preclude their use.

Institutional Residential-Employee Housing. Units of this type are permitted. Institutional-Residential Employee Housing is meant to comply with this Master Plan 's Employee Housing requirements. Unit types may vary and may include, but not limited to, dormitories and multiple occupancy units.

Institutional Residential. Other. Like accessory units this type of use is currently not being considered by the resort. However, it is not out of the realm of possibility that a private school dormitory housing or some type of group living facility or dormitory might be a future possibility.

Non-Residential Uses - Snow King has the following commercial uses included in this Master Plan: Commercial Lodging (including hotel, condominiums, condominium-hotel, interval ownership units and support facilities associated with residential and non-residential short-term rentals), Commercial Retail, Office uses, Restaurant /Bars and Service uses. Although not currently in the group of contemplated commercials uses the resort believes that Bed and Breakfast operations could increase the Resort's ability to provide a viable center for both visitor and residents. These uses are all defined by Article 6 of the LDRs.

Commercial Lodging - Commercial Lodging (or simply lodging) can take the form of hotel rooms, cabins, lodges, townhouses, condominiums, condominium-hotels or interval ownership units. Condominiums or other units can be sub-divided into separate sub-units called "lock-offs". A lock - off is a portion of a larger residential unit that can be used, or rented, separately from the rest of the unit. A unit can have more than one-lock off portion; for instance, a 3-bedroom condominium unit can be subdivided into 3 separate rental units, each with a separate entrance door.

This Master Plan indicates four hotel areas within the resort that are intended for lodging: the existing hotel and additions, Sub-Areas 2 and 3, and the One Town Hill condominiums. The vast majority of new lodging is proposed in the area of the existing hotel and additions. Uses are interchangeable and only limited by the capacity limits in the Schedule of Dimensional Limitations. Although for purposes of the Example Development Chart a larger ratio of hotel rooms than condominiums have been used in the breakdown of the total guests allowed, it is not believed that this will be the ultimate lodging breakdown. Since hotel rooms have a greater per square foot and per guest impact on traffic, parking and housing the "worst case scenario" was chosen in order to calculate impacts.

Conference and Assembly Facilities. - Conference space is defined as the actual square footage of the meeting rooms whereas assembly space is defined as foyer or gathering space outside of the conference rooms. Assembly space accommodates registration tables, displays, receptions and other activities associated with a meeting event. The majority of the new conference and assembly space is anticipated for the Sub-Area 2 and 3.

Restaurant and Bar. -Expanded Food and Beverage facilities are contemplated throughout the Resort, but mostly concentrated in the core areas. Smaller Food and Beverage outlets are envisioned within the ropes course and miniature golf areas. Outdoor food and beverage facilities are also contemplated throughout.

Commercial Retail. These types of retail sales operations are contemplated for the street level shops along Snow King Avenue as well as within and surrounding the pedestrian plaza. The locations provide efficient access for neighborhood local convenience as well as access to lodging and parking and assists in creating vibrant pedestrian spaces. The close proximity to dense neighborhoods and the numbers of guests staying at the resort should increase the diversity and viability of retail operations. Any single commercial retail space exceeding 15,000 SF shall require a Conditional Use Permit, all other commercial retail is permitted by right.

Office. Commercial office space is planned for the spaces above the commercial retail and is envisioned as including professional services and other activities, which are conducted in an office environment. Similar to the Commercial Retail these types of use are appropriate throughout the resort and will provide a consistent level of local traffic to diversify the mix of activity and commercial viability of the area. Resort uses, such as the Resort management itself, will also require office space.

Service Use. The successful balance of local convenience and visit or services is intended by allowing this use type as listed in Section 4.3.1.F.10. These diverse types of uses will be allowed and encouraged within the building envelope system.

Bed and Breakfast. This type of use shall require a Conditional Use Permit.

Residential Short-Term Rental. This use is allowed throughout the extent of the PR District.

Institutional Uses. As defined in Section 6.1.8 non-residential institutional uses are permitted. Snow King Resort considers all to be valid and appropriate uses within the building envelope areas. Additionally, utility uses outside the envelopes are also allowed particularly in consideration of Snow King Mountain's expanding role in providing a base for valley wide telecommunications. Although the current plan does not contemplate most of the types of institutional uses named in Section 6.1.8, these uses are allowed since in almost every instance large segments of the community would utilize the resort and its many activities and services.

Day Care Center Group. This operation complies with the Group Day Care definition under the institutional designation in Section 6.1.8. Day care can also take the form of a "Discovery Center" and can be operated in conjunction with the Ski School. Snow King Mountain currently offers a summer day camp program to local school age children from ages 6 to 14. Day Care/Education is allowed as a Basic use in all Building Envelopes. In winter, the Snow King Mountain Sports School serves as a de-facto after school day care program for school age children who are interested in learning to ski after school.

Amusement and Recreation Uses. Within the building envelope area, the following uses are appropriate; Commercial Amusement and, Indoor Recreation. In addition, the uses of Outdoor Recreation, Tour Operators / Outfitters and Ski Area may in whole or in part of their operation occur within the building envelope area.

Commercial Amusement. Commercial Amusement uses are permitted as follows:

- Permitted by Right: noncommercial theatres and music halls, video arcades, and indoor skating rinks.
- A Conditional Use Permit shall be required for all permanent Outdoor Amusement/recreation and Commercial Amusement uses
- Other uses shall require a Conditional Use Permit unless determined to be unnecessary by the Town Community Development Director.

A zip-line in sub-area 4 as indicated in the included Master Plan maps and requires a conditional use permit. The CUP application shall include an operational plan and associated impacts for all outdoor recreational uses in this area including but not limited to the Mountain Coaster, Alpine Slide, Mini-golf and Maze to determine the overall cumulative effect including but not limited to hours and days of operation, noise, lighting, and other associated impacts to the area. This zip-line will not be permitted to open until construction on a gondola has commenced. Notwithstanding the foregoing, if SKRMA proceeds with its application and construction of a gondola in good faith, this condition shall not take effect if a regulatory or judicial circumstance prevents SKRMA from building the gondola. Further, this condition shall be void if the Town and SKRMA fail to come to agreement on a lease for the landing of the gondola by August 1, 2020.

Indoor Recreation. Planned Indoor Recreational uses include a health club and spa, intended for use by both residents and guests. A large indoor/outdoor pool is also planned. In addition, similar types of operations may be feasible and are appropriate from the standpoint of providing diverse opportunities to visitors and residents.

Home and Temporary Uses. While none of the uses defined under the Home Uses and Temporary Uses designations are currently contemplated, the Resort believes that they are compatible, appropriate and may have a place in the future of the resort. The presence of home businesses, small day care operations and cottage industry would help to diversify the social fabric within the Resort. Temporary Uses such as Special Events are perfectly adapted to the plaza in Sub Area #2.

Uses Permitted within the Recreation Land Use Zone

Outdoor Amusement/recreation.

All permanent outdoor amusement/recreation within the Recreation land Use Zone requires a conditional use permit from the Town of Jackson.

One of the greatest assets provided by Snow King to the community is the continuing existence of both summer and winter recreational opportunities. Summer outdoor recreation uses considered in the Master Plan include, but are not limited to, indoor and outdoor climbing walls, miniature golf, and an expanded trail system for hiking, biking and riding including both cross country and downhill bike trails. Phil Baux Park, and its seamless expansion into Snow King's private lands is also an integral part of this Master Plan.

Winter outdoor recreation includes tubing, skating (both indoors and outdoors) and of course skiing and snowboarding. Skiing and snowboarding activities comprise the bulk of these activities from the perspective of land and support facilities. In addition to the existing base facilities and lifts near term improvements include a new gondola to the summit and continuing improvements to the snowmaking operations. A proposal for a modest expansion of the ski area on USFS managed land to include a safe access road to the summit has been presented to the USFS and is included for informational purposes only in this Master Plan. While the Teton County Comprehensive Plan states in 3.1.d that existing, planned resorts should be limited to their footprint, this reference specifically applies to areas of the county zoned Planned Resort (PR) where lodging and commercial activity can occur. This reference specifically excludes public lands under administration of the United States Forest Service as noted in the Town LDRs (4.3.2.A). Snow King supports the definitions for Outdoor Recreation and Ski Slopes provided in Section 6.1.3.C since it allows the flexibility to construct and operate all the ancillary facilities associated with both summer and winter activities. Snow King Mountain has agreed to notify the Town of Jackson prior to any irregular avalanche control and discuss this irregular control work in the SKRMA annual report should it occur.

Other uses such as Day Care Center, summer day camp, ski school, utilities and nursery, allowed within the Building envelope area, will also be allowed in the Recreational Land Use Zone.

Ski slopes are obviously allowed, as well as all the facilities required to operate the ski area such as maintenance and storage spaces, snowmaking facilities, explosive storage, lifts and ski slopes lighting.

Snow King Mountain Resort, LLC ("Snow King Mountain") is the current owner of all recreational improvements. Snow King Mountain shall not sell off individual recreational improvements to different owners. This condition shall not prevent Snow King Mountain from selling all of Snow King Mountain's recreational improvements to a different owner.

Agricultural Uses. Snow King does not have any plans to rear livestock or grow crops nor does the applicant believe that this is an appropriate use within a resort setting.

Tour Operators/Outfitters. Seasonal facilities such as warming buildings or restaurants are intended to be used, as much as feasible, year-round and may be used for these purposes.

Temporary Uses. As stated in the section on Uses Within the Building Envelopes the resort acknowledges Temporary Uses as one of the most important uses to be allowed within the Resort District. Particularly important is the Special Event definition listed in Section 4.3.1.F.10. Winter ski races, the Hill Climb, mountain bike races and summer Hill Climb are a few of the important events held on the mountain each year. The Annual 4th of July fireworks has been considered in allocating open space. Over the years, other outdoor uses will come up. Snow King assumes that the desire for more of these types of events will grow in number and diversity. With the exception of Gravel Extraction all the Temporary Uses listed in Section 6.1.12 may have a place at the resort and are allowed. Temporary uses such as events, recreational equipment demonstrations or wedding and event tents are a critical feature of the resort district that allow it to cater to guests on short notice. These uses are common and approved for all of the resorts in Teton County including Grand Targhee and the Teton Village. As such, the ability to host an event at short notice for the Snow King Hotel or Mountain Operations are an important aspect of Resort district operations. As part of the SKRMA annual report, SKRMA shall provide to the Town a list of all temporary special events over 200 attendees including but not limited to number of patrons, hours, and any associated off-site impacts. Should staff or Council determine in their reasonable discretion that there have been compatibility issues with said events a Conditional Use or Special Use permit may be required going forward at the Town's discretion.

Special Events. Special events such as music and dance festivals, snowmobile events, art and craft show, concerts, live theater, and similar events, which are compatible with the resort and its facilities, shall be permitted.

The attached Land Use Schedule is intended to summarize the above descriptions. Where the Limited note is used in the Schedule, reference the above text for details.

Although Final Development Plans will determine the precise areas dedicated to each use, an Example Development Chart has been created in order to calculate impacts such as traffic, parking, employee housing and utilities needed at the site. As discussed in Chapter VII, this is only an example and relative sizes and locations of various uses will change over years. This Example Development Chart only represents Snow King's best estimate of uses within Building Envelopes at this point in time.

Light Industrial Uses. All light industrial uses must be reviewed and approved through the Conditional Use Permit Process. In general, these uses pertain to ski area operations and maintenance facilities which are designated in sub-areas 4 and 5. Sufficient space exists within these sub-areas for all required light industrial uses associated with mountain operations.

Uses not governed by this Master Plan

This Master Development Plan does not directly pertain to land owned by the Town of Jackson (TOJ) or the United States government and managed by the United States Forest Service (USFS). However, included with the 2019 amendment to this Master Plan are maps that show future proposed plans on USFS lands and TOJ property. Among the proposed uses indicated on TOJ land are an additional sheet of ice added to the North of the existing Snow King Sports and Event Center that is not associated with this Master Plan, an enlarged ski shelter/Jackson Hole Ski and Snowboard Club facility, and an aerial tramway landing on land currently leased from the Town of Jackson for the operation of the ski area. The accepted 2017 USFS Master Development Plan covers all uses proposed on USFS managed lands which can be seen in the included 2017 USFS Master Plan Map.

SNOW KING RESORT LAND USE SCHEDULE

	Building Envelope Zone	Recreation Land Use Zone
Gravel Processing Extraction		
Disposal		
Temporary Uses		
Christmas Tree Sales		
Contractor's Office	Y	Y
Special Event	Y	Y
Real Estate Sales Office Shelter	Y	Y
Farm Stand	Y	Y
Gravel Extraction & Processing	Y	Y
Amusement/Resort		
Commercial Amusement	C	C
Campgrounds		
Outdoor Recreational	L	C
Indoor Recreational	Y	Y
Tour Operators/Outfitters	Y	Y
Ski Slopes	Y	Y
Home Uses	Y	
Home Occupation Home Businesses		
Day Care Home, Family Day Care	Y	
Home, Group	Y	Y
Cottage Industry		
Aeronautical		
Airports Landing		
Strips		
Heliports		
Balloon Operations		
Industrial		
Institutional		
Light Industry	C	C
Heavy Industry		
Institutional		
Institutional	C	C
Utilities	C	C
Day Care Center Group	Y	

	Building Envelope Zone	Recreation Land Use Zone
Commercial		
Office	Y	
Planned Commercial	Y	
Commercial Retail	L	
Heavy Retail/Service		
Services	Y	Y
Restaurant/Bar	Y	L
Drive-in Facility Commercial Lodging	Y	
Bed and Breakfast	C	
Dude/Guest Ranch		
Residential short-term Rental	Y	
Agricultural Support/Service	L	L
Institutional Residential-Other	C	
Residential		
Agricultural Employee Housing Conventional	Y	
Single-Family Unit		
Conventional Single-Family Subdivision Planned Residential	Y	
Planned Unit Development	Y	
	Y	
Mobile Home Mobile Home Park		
Working Ranch Subdivision		
Guest House/Guest Unit Accessory	L	
Residential Units	Y	
Institutional Residential/Employee Housing	Y	
Nonresidential		
Agricultural		
Agriculture	L	L
Nurseries	L	L

Y:::Permitted by Right, C:::Conditional Use , S:::Special Use

L= Limited -See Text for details

EXAMPLE DEVELOPMENT

Land Use by Sub-Area	Sub-Area 1 SK Hotel Vine St	Sub-Area 2 KM6	Sub-Area 3 Grand View Love Ridge	Sub-Area 4 Mountain Recreation	Sub-Area 5 One Town Hill	TOTAL For All Sub-Areas
Condominium Units (Number)	139	50	150		36	**375**
Hotel Room (Number)	204	100	50			**354**
Total Units	343	150	200		36	**729**
Statistics: Lodging SF/Guest	255	250	334		319	**284**
Total Guests (Number)	964	400	700		144	**2,208**
Above-Ground Uses (Square Feet)						
Lodging	246,000	100,000	234,000		46,000	**626,000**
Lobby / Reception	12,000	6,000	2,000			**20,000**
Conference / Meeting	9,000		6,000			**15,000**
Assembly	1,000	15,000				**16,000**
Commercial: F&A	20,000	11,000				**31,000**
Commercial: Unassigned		36,000	4,000		4,000	**44,000**
Commercial: Theaters		9,000				**9,000**
Health Club. Daycare, Ski School, Etc.	5,000		3,000	5,000		**13,000**
Back of House & Storage	10,000	17,000	3,000			**30,000**
Services and Circulation	10,000			1,000	6,000	**17,000**
Supply & Mech	5,000			1,000		**6,000**
Services - Offices	3,000					**3,000**
Supply - Public		6,000				**6,000**
Office	10,000	4,000				**14,000**
Recreational Uses		40,000		10,000	15,000	**65,000**
Total Above-Ground Building Area	**331,000**	**244,000**	**252,000**	**17,000**	**71,000**	**915,000**
Underground Uses (Square Feet)						
Back of House		18,000				**18,000**
Supply, Mechanical, Maintenance	25,000	28,000	10,000			**63,000**
Services Loading / Circulation	84,000					**84,000**
Loading Dock Area	6,000	22,000				**28,000**
Kitchen Storage Services					4,000	**4,000**
Maintenance / Services	20,000		10,000			**30,000**
Storage and Misc.	10,000		5,000	5,000		**20,000**
Supply Services – Public		2,000				**2,000**
Underground Conference		22,000				**22,000**
Underground Assembly		9,000				**9,000**
Lockers - Health Club	20,000					**20,000**
Total Underground Building Area	**165,000**	**101,000**	**25,000**	**5,000**	**4,000**	**300,000**
Ground Surface Area (SF)						**2,716,500**
Floor Area Ratio (FAR)						**0.34**

VI. DESIGN GUIDELINES

A. Introduction:

Division 4.3 requires Design Guidelines, which establish standards for buildings, spaces, signs and lighting within the PRD. These Design Guidelines respond to and specifically address the standards set forth in Section 4.3.1.F.7 of the Town of Jackson Land Development Regulations that state:

- ***Character and design.*** *As indicated in the Comprehensive Plan, Snow King Resort will continue its role as a unique, resort-oriented urban commercial node serving both visitors and residents. Improvements and expansions at Snow King will solidify its role as the main convention and conference facility in the community. Factors and resort characteristics important in Snow King's future development include:*
    - *(I) Capitalization on the location at the terminus of Snow King Avenue.*
    - *(2) Creation of a sense of arrival.*
    - *(3) Creation of an active, attractive, pedestrian streetscape along the eastern end of Snow King Avenue.*
    - *(4) An attractive, safe and direct pedestrian streetscape connection to the Town Square.*
    - *(5) A layout that blends the edges of the resort into neighboring developments, creating a porous edge to the resort that encourages pedestrian travel into and through the area.*
    - *(6) Structure sizes and layout that draw people into the resort area.*
    - *(7) A continuity of architecture and activities within the resort, creating a multi-use sense of place.*
    - *(8) Pathways throughout the resort and connections to the Jackson Hole pathways system.*
    - *(9) Continued provision of the amenities of "town hill" skiing.*

The following Design Guidelines address the specific characteristics and issues excerpted above. These Design Guidelines will be administered by SKRMA. Final Development Plans will be reviewed and approved by SKRMA prior to presentation to the Town for approval as per Section 4.3.1.F.7. All buildings will be reviewed for compliance with the Master Plan Design Guidelines by the Town Design Review Committee.

The visual presentations accompanying this Master Plan show the character and quality of the buildings that these guidelines will produce. New development is intended to visually enhance the existing resort, add a new and exciting dimension to the Town of Jackson, and blend with the built and natural landscape. The plaza, storefronts and entry tower are intended to provide a pleasant and attractive Snow King Ave. streetscape, inviting to the visitor or resident approaching from the West.

B. Design Guidelines. Character and Design Objectives

I. Capitalization on Location at Terminus of Snow King Avenue

The current main entrance to Snow King Resort is at the East end of Snow King Avenue. This entrance will remain and be strengthened in a number of ways. The entryway will be re-graded to a slightly gentler slope and equipped with snow-melting surfaces. The street frontage will be lined with three-and four-story buildings with retail uses at street level and other uses above. These buildings will create an important street edge designed to provide visual interest to pedestrians and motorists. The East/West axis will be improved with the addition of landscaped islands that will screen the paving surfaces and soften the approach. The entrance to the hotel will be brought further West by means of a large Porte Cochere, which will serve as a drop-off for the hotel and conventions users, as well as for buses, cars, shuttles, limousines and taxis.

2. Creation of a Sense of Arrival

By expanding the Porte Cochere and creating a courtyard, the sense of arrival is enhanced and circulation, both pedestrian and auto, clarified for the arriving guest. Consideration is given to loading and unloading requirements for both guest and residents attending functions at the Resort. The large vehicular plaza is designed with large vehicles (buses, outfitter vans, and trailers) in mind. The row of buildings along the south side of Snow King Avenue, starting with the entry Tower and plaza at the west, will help draw people visually into the resort and is an important feature necessary to create a sense of arrival. Pedestrians will be able to walk along an outdoor arcade lined with retail windows, providing visual interest and shelter from the weather.

3 & 4. Creation of Pedestrian Streetscape Along East Snow King Avenue and a Connection to the Town Square

The addition of buildings fronting the street with retail and commercial uses will enhance the pedestrian experience by adding visual interest, sidewalks and lighting. Snow King Resort will work in concert with the Town of Jackson to direct pedestrians between Snow King Resort and the Town Square. Willow, King and Cache Streets are all options for pedestrian connections to downtown.

5. Porous Edge Encouraging Pedestrian Travel

The building edge along Snow King Avenue is articulated to reduce the apparent bulk and scale of the two-, three-, and four-story structures. Small retail and commercial spaces connected by a covered arcade will disguise the parking structure behind and give an active and inviting facade. By using different building heights and varying the roof forms, the street edge is given scale and visual interest. The facade facing Snow King Ave. East of Willow is designed to integrate with potential future development along the north side of the street. The open areas to the East and West will encourage hiking and biking up the mountain. On the West, behind the ballpark, the One Town Hill building will define the western edge of the resort and be visible when approaching the Resort from the North. The large open space area between the Snow King Center and the One Town Hill will continue to act as a magnet for mountain access and be enhanced with additional outdoor activity areas.

6. *Size and Layout that Attracts People*

The new Master Plan is built around three primary outdoor spaces, each of a very distinct character and purpose. The centrally located Entry Court, with re-graded drive and expanded pick-up and drop-off areas, is the vehicular centerpiece of the new plan. Arriving visitors will be able to pull in under the cover of the Porte Cochere and will be directed to check-in areas or to the convention center. Access to the parking structure will be clearly marked and easily accessed. The second major public space is the plaza above the parking structure, which is affronted by lodging/commercial buildings. This entirely pedestrian space connects the main hotel, the convention center and other condominium and hotel wings through a pedestrian bridge, to the Snow King Center, the Ski hill, and Phil Baux Park. This pedestrian plaza is to be lined with food and beverage outlets, shops, kiosks and outdoor activities and is intended as the center of pedestrian activity for the Resort. The third major public space is the Pool Courtyard, which will be enhanced under the new Master Plan with terraced gardens, water features, and hot tubs stepping up the hill from the hotel lobby. This space commands south sun, exceptional views up to Snow King Mountain and is well protected from prevailing winds. This will be the recreational centerpiece of the hotel and condominium complex and will also be visible from the main hotel lobby attracting guests to the outdoors. The new Health and Fitness Club will overlook and connect to this Pool Courtyard. The effect of these three spaces will be to give the visitors distinct spatial and programmatic experiences and will serve to attract and amuse people in many different ways.

7. Continuity of Architecture and Activities/Multi-Use Spatial Sense

The spatial experience outlined above is enhanced by the fact that it incorporates mixed uses and by the variety of activities that will take place at the Resort. The mixture of retail, office, restaurants recreation, and lodging mimic the uses typically found in active urban areas, and the proposed density is necessary to activate these outdoor spaces.

8. Pathways Connecting to Pathways System

The Pathways and Trail system is the backbone of the Master Plan. The proposed system will provide a nexus for the regional trail system. The special location of the Snow King properties allows for East/West and North/South Trail and Pathways connections. Special emphasis is placed on the separation of pedestrian and vehicular circulation and the creation of meaningful interior and exterior spaces for pedestrians to congregate. The pathway system within Snow King Resort expands, and connects to the off-site pathways (See Summer Circulation and Pathways and Winter Circulation and Pathways).

9. Continuation of the Amenities of "Town Hill" Skiing

The Snow King Ski Hill is intended continue in operation as an amenity for both residents and guests alike. Skiing, sledding and other activities figure prominently in the Master Plan. The increased intensity of the resort is hoped to lead to an expansion of the amenities as the need arises.

C. Design Guidelines. General Purposes

The purpose of these conceptual design guidelines is to give some idea of the physical character that is being envisioned in this Master Plan and will be used to assist Snow King Resort in the planning, design and construction of projects build under this Master Plan. They reflect the goals of the Master Plan in attempting to create a true resort experience with visual variety, pedestrian activities, and a unique character which will make the resident and visit or experience more memorable. It is the intent of these guidelines to strike a balance between control and creativity, to allow enough flexibility in the choice of materials and style to give life to the resort, while at the same time maintaining a sense of cohesiveness. The world's great cities were not designed by one architect at one time, but rather grew and developed over time with the creative input of many. Snow King Resort is attempting to create a broad enough palette of possible materials and design elements to encourage a unique blend of architecture, which will give it variety and visual interest.

Snow King Resort has an important role as anchor for the Town, a counterbalance to the Town Square and the proposed Visitor and Multi-Agency Campus at the North end of Cache Street. As such, it must act as a terminus, a destination for both residents and tourists. This Master Plan, by adding significant intensity to the Resort, makes it a much more varied and desirable destination than it currently is. The combination of Convention Facilities, the Snow King Center/ice Rink, an array of lodging facilities, retail, commercial functions and a Health Club/Spa, all reinforce Snow King's role as a multi-use center for the community.

As the Master Plan builds on the existing Snow King Resort, so do the architectural guidelines, which build on the existing character that has developed during the life of the resort. The new architecture of the Snow King Resort will build on the community character of Jackson with well-designed buildings, clean rooflines, taper-sawn shake roofs and a clearly expressed structure. The materials palette, while encouraging a preponderance of wood and stone, will also include stained concrete, painted or oxidized steel, stucco, and high quality cultured stones.

Indigenous architecture has long had a powerful association for people who visit the West, from the log cabin in the woods, to the burl wood columns in the Cowboy Bar. Snow King has established a

character that is clean and somewhat modern. Its new character must tie to the old and yet be firmly rooted in today's world. While rustic character has been adopted for other resorts, a more direct simple architecture that capitalizes on large areas of glass, simple roof forms and tautly detailed elegant materials, will distinguish Snow King from other Jackson experiences. Tying the new buildings with the old will create a powerful and unique style for Snow King as it develops in the new millennium.

The resort and convention business has changed over the years and the new Master Plan incorporates changes intended to keep it apace in this intensely competitive business. By more effectively attracting today's conferences and tourists, Snow King will continue to provide a strong economic infusion for the community.

Section 2550. G requires Design Guidelines that establish parameters for buildings and spaces in the Planned Resort following this outline.

1. ***General.*** *The design theme of the Planned Resort shall have an emphasis on outdoor recreational activities and create a sense of place. A sense of place is created when site planning and architecture:*

    a. Concentrate activities and human interaction into identifiable spaces, such as a plaza or mall;

    b. Assemble a built environment that connects buildings, spaces and structures through common scale, design and materials;

    c. Incorporate into the built environment the natural features and cultural heritage of the area; and

    d. Produce an identifiable image that is associated with the planned resort and with Jackson Hole.

There shall be visual continuity among the resort structures and design elements without unduly limiting variety in design. Development shall be compatible with the surrounding built and natural environment in both scale and character.

2. ***Architecture.*** *Building design guidelines shall reflect:*

    a. The community's architectural character and themes

    b. A human scale, pedestrian-orientation, which are created when:

        (I) The height of buildings does not overwhelm people walking beside the buildings; and

        (2) The ground level doors, windows and design features of buildings create an interesting diversity for people walking past the buildings.

    c. A built environment in keeping with the cultural and aesthetic values of the community

    d. Natural attributes of the immediate vicinity

    e. Building materials and colors compatible with the surrounding natural and built environment.

3. ***Bulk and scale.*** *The design guidelines shall ensure the bulk and scale of individual buildings within the Planned Resort achieve compatibility with:*

   a. Other structures within the Planned Resort, when the resort development is completed, and

   b. Neighboring structures that are not a part of the resort, and

   c. The natural environment.

4. ***Signs.*** *The design guidelines shall include a sign component that sets forth the sign theme for the Planned Resort and specifies criteria for determining permitted sign sizes types and locations. The guidelines shall contain prototypical examples of all types of signs, including wall, canopy, freestanding, directions, and informational signs. The flexibility extended to Planned Resorts via this Division, to propose standards for signs different from those specified in the LDRs is encouraged with the purpose of having sign guidelines in keeping with the unique character and needs of the resort.*

5. ***Lighting.*** *The design guidelines shall include an analysis of proposed project lighting. Areas to be illuminated (parking areas, walkways, entries, etc.) shall be identified and general standards should be set forth. Identification of models and types of standards and fixtures is encouraged, but specific illumination plans and photometric footprints are not required. Generally, lighting shall be low-intensity, low-profile, and shielded to avoid "light pollution" and glare to offsite areas. General illumination standards are set forth in the LDRs.*

6. ***Site planning.***

   A. ***Orientation and aspect.*** *Structures and public spaces within the Planned Resort, general1y shall be arranged with views of, and access to, the principal resort recreational amenity.*

   b. ***Entrance features.*** *Entrances to the Planned Resort shall create a sense of arrival. A sense of arrival is created when the entrance into the Planned Resort is easily identifiable and is consistent with the design theme of the resort.*

   c. ***Natural Resources.*** *The site design shall highlight the natural resources within the Planned Resort and integrate them into the layout of the resort in order to promote a connection to the natural environment. Consequently, natural features of the site, such as significant vegetation, rock outcroppings, water bodies, etc., shall be preserved and incorporated into the project design to the extent practicable.*

   d. ***Pathways and pedestrian facilities.*** *Pathways and pedestrian facilities, including access for the disabled, shall be integral components of the site design. The site shall provide an attractive, outdoor atmosphere that encourages use and reliance upon pathways and walkways.*

      (1) Safe, convenient and direct access*. Pathway and pedestrian systems shall provide safe, convenient, and direct access throughout the resort, to public lands, transit facilities and the existing or planned community pathway system, when adjacent to the resort.*

(2) Pathways. *Pathways shall be provided for non-motorized transportation, except motorized wheelchairs for the disabled shall be permitted. Bicycle racks, ski racks, etc., shall be provided at various destination points within the resort.*

e. ***Transportation facilities.*** *Site design shall integrate safe, convenient, and direct access to transportation services and facilities (i.e., bus shelters, information kiosks,) and shall incorporate the facilities necessary for the proper functioning of the Transportation Demand Management Plan (see subsection H.2, below).*

f. ***Circulation.*** *The layout of local street, alleyways, and parking lots shall be sensitive to the natural terrain and landscape. Cut and fill areas shall be minimized and natural features of the site such as wooded areas, rock outcroppings and water bodies, shall be preserved to the maximum extent practical.*

g. ***Access.*** *Safe vehicular access appropriate for refuse removal, recycling, emergency sen1ices, and delivery shall be provided. Service access shall not create unsafe conflicts with automobile and pedestrian access to primary destinations within the resort.*

h. ***Landscaping.*** *Project landscaping including hardscape areas shall be consistent with the overall design theme of the resort. Use of indigenous plant materials is encouraged. Existing vegetation shall be preserved and incorporated into the design of the project to the extent practical, especially wooded areas and other significant vegetation which provides shelter or habitat for wildlife.*

The Guidelines and the plans and sketches incorporated in this Master Plan, when considered as a whole, address the above section 4.3.1(F)(7).

D. Architectural Design Guidelines

1. Building Form, Massing and Character: Buildings must feel as if they fit in the context of the Town of Jackson. They should not seem “imported" from someplace else. They must not overwhelm the pedestrian scale. Building masses will be broken down through the use of covered arcades at pedestrian levels and thru the use of building envelopes that require the structures to step back away from the street or plaza.

Architectural forms will be simple and practical, not elaborate. They must reflect an ability to deal with the severe climate and have honesty and directness similar to the best indigenous structures such as barns and sheds, or some of the structures in Yellowstone and Grand Teton National Parks.

In general, building forms should be used to create definable public spaces between buildings. Buildings affronting plazas should create an edge that defines the space. Buildings on the south side of a plaza step back above the second story to allow light into the plaza. Where building facades face the mountains or non-pedestrian spaces, buildings will be allowed to rise without necessarily stepping back.

Buildings should be sited to help shape the spaces around them and to create a sense of "street space" by lining up with adjacent buildings where possible.

Buildings should employ various architectural devices to help bring the masses to a more friendly, pedestrian scale. Changing materials, breaking the wall line, using different roof forms and adding balconies or projecting bays are some of these devices.

Larger buildings may be broken into smaller elements that appear to be an aggregation of smaller buildings. Overly differentiated facades on a single building are to be avoided however.

2. **Roofs:** in order to be sympathetic to the existing Snow King Resort, new buildings must relate to existing architecture by using similar roof forms, generous roof overhangs, and some similar materials such as heavy timber beams holding up roofs overhangs.

   Primary roofs must be sloped and in keeping with existing roofs, their slopes should predominantly be in the range of 4:12 to 7:12. Flat roofs and parapet roofs will be allowed where they act as connectors from one gabled roof to another and at larger spaces where necessary and not visible from street or plaza levels or where practical for best incorporating structures into the surrounding built environment. Special consideration is to be given to designing roofs in reference with nearby pedestrian uses. Roof materials should be as consistent as possible throughout the Resort.

   Large roof overhangs should be held up by heavy timber beams or knee braces. Eave lines should be kept thin to avoid the heavy look of typical cold roof structures with 20" fascia's.

3. **Exterior Materials:** Buildings shall sit on masonry bases, and feel as if they are firmly rooted in the ground. Stone, cultured stone, stucco, synthetic stucco and concrete will withstand the extreme weather conditions and pilling up of snow along the foundations.

   Appropriate materials above the ground level will predominantly be stone, cultured stone, wood siding, wood shingles, heavy timber, logs and glass. Other materials such as brick, stucco, synthetic stucco, oxidized steel, and board-formed concrete will also be allowed to a lesser extent. Buildings should have texture and visible structural purpose.

4. **Windows:** Windows at the pedestrian level should be as large as possible given the function behind them. For retail and/or hotel frontage windows should represent approximately 75% of the linear frontage.

   Above the ground floor, there is no minimum requirement of window to wall. In keeping with the existing Snow King Hotel and its available views in all directions, large windows are encouraged. When in heavy walls of stone or concrete, windows should appear to be "punched", and they should have lintels of timber or stone. Metal clad windows, wood windows, and non-reflective aluminum storefront windows are all permitted. Darker colors of the windows are encouraged.

Divided light windows, if used, must have real divisions, either true divided light or simulated divided light with metal spacers between the double panes of glass. Snap-in false mountings will not be permitted. Generally larger expanses of glass are preferred to small divisions.

5. **Commercial Frontage, Entryways:** At the pedestrian level, Retail and Hotel storefronts should appear light, glassy and as transparent as possible. As a goal, approximately 75% of the linear frontage of walls opening onto the public plazas and arcades should be glass.

   Stone, stained concrete, and painted steel are recommended materials for the pedestrian level walls between the glass.

6. **Decks and Balconies:** Decks and balconies add functional amenity to the resort but also become part of the design palette used to add character and create variety on the building exterior. Where possible balconies and decks should be located to take advantage of solar exposure and/or views. Long, linear balconies are not permitted.

7. **Walkways:** To promote the sense of a unified resort with pedestrian accessibility, buildings should have covered walkways on facades along which connections can be made to other buildings in the village. Wherever possible these walkways should have retail stores and restaurants and other visually interesting spaces along them. All buildings must take into account pedestrian access to all adjacent buildings and the rest of the Snow King Resort.

8. **Color:** The use of color should support and reinforce the overall design theme for Snow King Resort. As a year-round resort, colors chosen must work well in all seasons and help the resort blend with its town context as well as with the natural landscape. Color schemes should be built around natural materials, such as stone and wood. Earth hues, natural colors of foliage, deadfall timber and dried grasses are all appropriate. Primary or bright colors should be used sparingly, as accents to highlight the more muted color schemes. Use of "day glow" colors is not allowed. On wood, stains are preferred over paint.

9. **Lighting:** The lighting systems will serve functional and aesthetic roles that include:
   - Providing security and visual safety
   - Serving as directional indicators for vehicular and pedestrian traffic
   - Providing extended outdoor use time, particularly in pedestrian areas,
   - Reinforcing the identity and character through form, color, and materials of fixtures, visual light quality and placement

Lighting must be designed and configured in conformance to Town of Jackson standards. Light sources must be shielded so as not to reflect direct light upon adjacent buildings or properties.

Pedestrian scale lighting: The use of low level light sources at the pedestrian scale to accent or illuminate the ground plane provides a special opportunity to reinforce Snow King's unique identity and character. This is achieved by the use of proper fixtures at lower mounting

heights to produce a more intimate effect. At night, the fixtures provide light necessary for safety and visual effect. By day, the fixtures should lend animation and scale to the pedestrian environment. Fixtures at a maximum height of 16 feet will be used for these pedestrian areas. Painted steel will only be used for accent.

Additional pedestrian scale lights may be used including bollard lights at approximately 42' in height, and canister type lights on overhead structures. Lighting for pedestrian areas should be incorporated into the buildings whenever possible.

9. **Disabled Accessibility:** Consideration for the disabled must be a part of the design process for any project. Every structure shall be accessible by the disabled through the use of ramps (not to exceed 8%) and/or elevators. All outdoor pedestrian areas must be accessible.

10. **Sub Area 2. Specific Guidelines.**

One of the key design elements is the pedestrian connection between the existing hotel area and the Snow King Center. This connection is intended to be made through a pedestrian mall located above underground parking. It is intended that this route be lined with covered arcades as defined below, and given ample visual and special variety to create a lively streetscape.

Key components of this pedestrian mall are:

> Properly scaled buildings lining a properly scaled "street", storefront spaces with a predominance of glass, interesting shop windows and doors inviting to the pedestrian, indoor and outdoor food and beverage outlets, visual variety and not just a straight line of facades. Public spaces, lobbies, restaurants and similar extroverted uses should be placed along the mall to help enliven the spaces and make them inviting to passersby.

As a means to allow, and in fact require, this kind of streetscape in a future design whose exact programmatic needs are to be left flexible, a number of rules need to be followed:

- A 65' wide "overlay" zone has been created and called the "Pedestrian Mall Overlay." This overlay defines an area of Primary and Secondary pedestrian connectors that must fall within this overlay. See Pedestrian Overlay Drawings in the Dimensional Limitations Chapter of this Master Plan.
- Two types of Pedestrian Connections are established: Primary and Secondary.
- The width of the connections is flexible but is governed by the following parameters:

  -Primary Connection: The open width of this connection shall be between 25' and 65' and should be able to structurally support fire equipment loads. Building height along this Primary Connection is governed by a 1 to 1 proportion of height of building to width of Pedestrian Connection, so where the Connection is say 35' wide, the height of buildings on either side shall not exceed 35'. In the event that there is room left in the maximum height plane of the building envelope grid, buildings can set back a minimum of 8' and extend up to the limit set by the building envelope grid. The 3-dimensional building envelope grid, as defined in the Schedule of Dimensional Limitations Sub-Area 2, shall take precedence. Areas designated T-1 and T-2 in the building envelope grid has special parameters as described in the Dimensional Limitations Plan.

  Primary Connections must be lined, on at least one side, with a covered arcade ranging in width from 10' to 16' and at least 12' in height. Structural elements such as beams, trusses and knee braces may drop below the 12' height to a minimum of 9'.

-Secondary Connections *are not subject to the above height to width limitation. However.* these secondary connections must measure a minimum of 16' in width and 12’ in height and are to occur approximately within these Secondary Connection overlays. These secondary connections can be bridged by buildings above, as long as the covered area does not exceed 40' in length.

- Building facades must be articulated, and are not permitted to run straight for more than 200 ' in length. Jogs or setbacks breaking a straight run must be at least 8' in depth. Curved facades will be allowed and considered breaks.
- Building facades must be organized into a base, middle and top, with appropriate changes of material, varying of the massing and the use of balconies to help break down the massing of the buildings.
- Town staff will review the final design of Sub- Area 2's public thoroughfare frontage at the Final Development Plan stage to ensure that this street level frontage is treated architecturally to achieve the appropriate scale.

As the Snow King Resort develops, these guidelines will ensure that it does so in ways that will greatly enhance its character and make it a more exciting place to visit.

Within this Chapter, as well as in the Schedule of Dimensional Limitations Chapter, drawings and sketches have been included. These are intended to clarify and define the intent of the written guidelines.

E. Site Design Guidelines. Plant Palette.

Site design at the Snow King Resort focuses on plant palette and design, pedestrian circulation, site architectural features and the colors and materials that comprise the build environment. Snow King's setting is both urban and rural. On the one hand the in- town location provides a diverse urban design context. This context generally implies that the site design will be dominated by landscape with formal plantings. Conversely, the resort is built into the base of a forested mountain and is bounded by the Bridger-Teton National Forest. This context usually implies a more random or natural site design. The objective will be to intertwine these two design goals, in a transitional manner, without creating confusion.

Just as the resort straddles a seam between the urban and rural environments it is located at the interface of three different plant communities. The lower portions of the site are dominated by the sage/grassland and the Aspen/Chokecherry communities; remnants of these communities still exist along the eastern boundary of the PRD. The higher, moister portions of the site exhibit a Douglas Fir and Spruce plant community.

Plantings around the resort should mimic these existing communities. Replication of the endemic plants also provides an excellent opportunity to provide visitors with information about the local flora. These plants will also provide an adaptable palette necessary to flourish in the wide variety of moisture, light and temperature conditions, which large buildings create and will also help to weave the rural with the urban environments.

Other planting materials of sufficient caliper will be used to screen and enhance the buildings. In general, the plant material will be in accordance with the Land Development Regulations, except for areas designated as Ski Trails and Outdoor Recreation.

.

Within Sub-Area 4, only evergreens will be used to minimize visual impacts.

Detailed Landscape Plans will be part of each Final Development Permit Application.

F. Pathways and Circulation Elements

As described in Section 2550. G.6.d., the Planned Resort District is designed to *'provide an attractive, outdoor atmosphere that encourages use and reliance upon pathways and walkways.'*
The proposed pathway and circulation system of the Snow King Resort is comprised of a network of diverse pedestrian passageways that collectively provide a full range of use and circulation functions throughout the resort and adjacent properties. The system is intended to extend and enhance the existing pedestrian/recreations fabric of the town as well as to accommodate the functional demands of the proposed Snow King Resort expansion. In order to facilitate future pedestrian traffic growth, both within and without the PRD, direct and convenient linkages to trans it facilities, parking and community pathways are incorporated in the system.

The proposed pathway system consists of the following physical components:
- 10' wide paved bike /pedestrian pathways
- Concrete sidewalks and stairs
- Heated concrete sidewalks and stairs
- Paved pedestrian pathways and plazas
- Gravel surfaced trails (pedestrian only)
- Gravel surfaced hiking /mountain bike /horse trails

The primary objectives of the proposed pathway system can be described as follows:

To provide links to existing paths the planned trail system connects to the Sink or Swim Trail up the mountain and to the East-West and Hagen Trail leading to Cache Creek.

To encourage pedestrian use. The pathways system is integrated into the proposed and existing buildings to create an open, convenient, non-hierarchical system of movement. By not directing or restricting pedestrian traffic the user is encouraged to wander and explore. The buildings and paths are situated in such a way that the pathways can be perceived as extensions of the internal building passageways, thereby, further encouraging pedestrian use.

The pathways system also promotes utilization by providing facilities for recreational activities including walking, hiking, running, biking and riding.

To provide safe pedestrian movement Much of the KM6 and Hotel Sub-Area pedestrian spaces located outside the Extent of Winter Skiing boundary are proposed to be heated for winter use. Pedestrian pathways are to comply, where feasible due to topographic conditions, with ADA requirements.

To provide an aesthetically pleasing and enjoyable experience. The pathways system takes full advantage of the natural attributes of the site and the various exposures to long vistas.

G. Signage

Signage within the resort can be divided into two categories: resort signage and commercial signage. Resort signage provides direction to basic resort services. It is to be homogenous in style, color and material. Commercial signage advertises services or products for individual businesses. Consequently, great latitude of style, color and material must be anticipated.

Sign Face Materials: The primary goal is to employ materials, which are non-reflective and have a soft or smooth textured appearance. Some acceptable material examples are: wood which has a natural oil or flat paint finish, unfinished metals which oxidize to a flat finish, or metals painted with a flat finish and other materials which can be shown to have flat, non-reflective surfaces.

Sign Standard Materials: Generally, the preferred standard material will be stone, stained concrete and wood. Standard materials should relate to the context of the site, particularly to the building with which they are associated. Signs should be incorporated into the structure of the building rather than being stuck on the outside as an afterthought. Metals, plastics and other material may be acceptable if it can be shown that they relate to and integrate the sign into the site and/or building. Large structures could be introduced at the Resort' s entrance to enhance the sense of arrival, but must be composed of wood or stone.

Sign Face and Standard Color: Colors should generally be muted earth tones similar to the endemic Jackson Hole soils. The use of earth tones in non-reflective media is another subtle method of unifying the built environment with its rural surroundings. This color theme is not intended to prohibit bright colors entirely; however, it is intended to define the predominant surface area of the sign face and all of the base and/or standards.

Signage Lighting: Fixtures for lighting sign faces should be incorporated into the structure of the sign. The fixture should be a 90-degree cutoff type, which is adjusted to prevent the lamp from being visible.

VI. DIMENSIONAL LIMITATION PLAN

A. Introduction, Definitions and Maximum Scale of Development

This Dimensional Limitation Plan has been prepared in accordance with the requirements of Section 4.3.1.F:

> ***Dimensional Limitation Plan.*** *The Planned Resort Master Plan shall have a Dimensional Limitation Plan, which specifies dimensional limitations necessary to achieve the design theme identified by the applicant. The plan shall include floor areas and floor area ratios, densities, landscape ratios, height, setbacks, building envelopes, etcetera, or other lines delineating areas on which restrictions of development are to be imposed and areas in square feet for each lot or building.*

This Master Plan presents a Dimensional Limitations Plan that takes into account the topography of the site and the unique role of the project. As specifically permitted in Section 4.3.1.F, these dimensional standards differ in several respects from standards described in other sections of the Town's Land Development Regulations.

A great deal of care has been given in the performance-based Design Guidelines and this Dimensional Limitation Plan to balancing the various goals of this Master Plan with the visual impacts of the development. The site's topography helps achieve this balance.

It should be noted that two existing buildings on the site are rather large, but fit into the mountain landscape. The existing hotel has over 130,000 square feet and is over 70 feet in height at places, while the Snow King Center has over 53,000 square feet. However, these building relate well to their location and are designed in such a manner as to disguise their size. The site's topography is appropriately used in this Master Plan in order to attain the major goals stated in the Statement of Purpose while minimizing impacts.

Many goals and objectives listed in Division 4.3.1 and discussed in the Statement of Purpose necessarily lead towards larger buildings than those all owed in other sections of the LDR 's. Division 4.3.1 recognizes that fact and encourages a different approach to dimensional limitations as necessary to achieve these goals. Creating a sense of arrival, vibrant pedestrian spaces, structure sizes that draw people to the area, concentrating development in order to create meaningful open spaces, reducing walking distances, having a central arrival point, proximity to parking and creating a lively urban environment necessitate a dense development pattern for some areas of the resort. Some buildings are necessarily large in order to accommodate the desired size of the conference center as well as to have lodging within a reasonable, and preferably indoors, walking distance to the conference facilities.

Other goals, such as creating porous edges and blending into existing neighborhoods are also taken into account. The topography of the site assists in achieving the stated goals of this Master Plan in a successful mixed-use development. When combined and taken as a whole, the performance guidelines of this Dimensional Limitation Plan, the Design Guidelines, Land Use Plan and Site Plans are balanced to achieve the stated goals.

The Snow King Dimensional Limitation Plan is based on a method of three-dimensional building envelopes and is presented in a mostly graphic format. This method, when combined with the

performance based Design Guidelines, the Land Use Plan and the Site Plans, achieve the goals and objectives of this Master Plan while allowing flexibility and controlling bulk and scale within the integral pedestrian fabric of the Resort. This Plan adapts, and is well suited, to the site's topography as well as other site-specific considerations such as soils, vegetation coverage, solar and wind factors and proximity to common amenities.

This Chapter also includes photographs of a model used to demonstrate the 3-dimensional building envelope concept used throughout this Master Plan.

Since the lands comprising this Master Plan are unplanned and are not yet subdivided, setbacks are drawn and based only on the perimeter property lines. Setbacks at specific perimeter locations vary according to the relationship to adjacent areas.

Building envelopes defined in this Master Plan are conceptual and intended to suggest approximate locations only and shall be allowed to be adjusted while keeping within the overall theme and rationale of this Dimensional Limitation Plan and the Design Guidelines. Final Development Plan applications and the approval process defined in Section 4.3.1 will finalize the details of each phase of development. Minor deviations on the locations and sizes of building envelopes can be approved by the Town's staff.

All development within this Master Plan must meet Land Development Regulation Hillside Development Requirements in place at the time of the Final Development Plan.

As previously mentioned, development within Sub-Area 6 will be controlled in accordance with Section I.H.2 Statement Regarding Sub-Area #6” "".

Building Envelopes.

The conceptual three-dimensional Building Envelopes for Sub-Areas 1,2, 3, 4, and 5 are shown in the attached Sub-Area maps. The location and dimensions of Building Envelopes are a result of their relationship to the natural topography and landscape, the vicinity areas, pedestrian circulation, visual impacts, proximity to open spaces, desired vistas from interior spaces (both public and private), accessibility to common parking and underground services and other design considerations. The best locations have been chosen to create meaningful open spaces and interior/exterior circulation areas. Higher

levels of intensity are allocated near these areas. A computerized three- dimensional model was also used in preparing this Dimensional Limitations Plan.

Special consideration has been given to blend the development into existing neighborhoods. At the East end of Snow King Avenue, the buildings facing the street have been kept at a lower level than those behind the pedestrian plaza. Only some higher points are interjected to assist in creating a sense of arrival. A transitional space is created at the Willow Street corner. The One Town Hill defines the western edge of the resort and frames the access point to the mountain.

The mountain's presence and dense vegetation act as a background to Sub-Areas 1 and 2. Consideration is given to the location of higher buildings in relation to this background and the appearance of these buildings from different angles, especially the approach to the resort and the views from adjacent neighborhoods.

Building envelopes describe and define the approximate three-dimensional parameters for building height and building ground coverage as well as the buildable scale of non-recreational development including building height within specific areas. These envelopes provide predictability regarding the scale of maximum potential development. Modifications of building envelopes are allowed, provided that the overall theme of the Resort as defined in this Master Plans remain in place.

The envelopes are defined in the Sub-Area plans in a plan view with the maximum top elevation of the roofs within the envelopes specified in the elevation number for each envelope. This elevation number refers to the Town of Jackson elevation datum. Chimneys, vents and roof top mechanical equipment shall be allowed to penetrate the top plane by no more than 4 feet. Decks, awnings, roof overhangs, exterior stairs, railings, parapets and other outdoor spaces will be allowed to penetrate building envelopes. Location of roads, walks, patios and other impervious surfaces is not restricted to building envelopes.

The height of Building envelopes located within Sub-Areas 4 and 5 are not indicated in the graphic format. Buildings within Sub-Area 4 envelopes will be limited to buildings in a scale similar to those already approved for at Grand View and Love Ridge.

Recreational buildings, and buildings/structures directly related or ancillary to recreational activities and functions are included in calculations of buildable square footage but are not restricted or defined by the building envelopes and coverage system. Buildings such as ski lifts, recreational improvements such as climbing walls, alpine slides, snowmaking, etc., require more flexibility in their location and site design. These structures are to comply with the Recreational Land Use Zone parameters.

Example Development.

The Example Development Chart has been used to calculate requirements for parking, employee housing, storm water run-off, traffic generation, employment, impervious surfaces, building coverage and utilities. This Example Development Chart also responds to the estimated present day needs to support the conference center's size and other recreational and commercial infrastructure necessary to invigorate the resort and make it economically viable. As years pass the relative allocation of various land uses will adjust and vary according to market conditions while keeping within the specific Limits of Development stated herein.

The Example Development Chart has generally been weighted towards land uses producing larger impacts than others. However, as part of the 2020 Master Plan Amendment, the number of hotel rooms indicated in the Example Development Chart has been substantially reduced. In the revised Example Development Chart most of the Lodging Capacity of 2,048 guests has been allocated to condominiums as opposed to hotel rooms. Since hotel rooms have greater impacts per square foot, and per guest, on traffic, parking and housing than condominiums, this amendment reduces impacts of resort development on the community.

Areas shown in the Sub-Area tables for Roads and Parking, OSR/LSR and total Impervious Surfaces are provided for informational purposes only and are not to be construed as maximum levels of development within Sub-Areas. References to Building Coverage equate to building footprints and have been used for calculations of storm water run-off. Final determination of actual development within each Sub-Area will be ascertained at the Final Development Plan stage. However, overall maximum development must comply with the Setbacks, Open Space Ratios, Maximum Building Floor Area, Floor Area Ratio (FAR) and Lodging Capacity limits set in the Sections that follow.

Recreational Land Use Zone.

The areas located outside the graphically defined building envelopes are designated as Recreational Land Use Zone.

Specific Considerations Related to Sub-Area 1

The 2019 proposed Master Plan amendment for Sub-Area 1 envisions a substantial decrease in hotel rooms on this sub-area and an increase in condominiums and employee housing. In place of 5 additional wings of approximately 50,000 sq ft each, the 2019 proposal includes 2 condominium buildings of approximately 60,000 sq ft each. The maximum elevation for the eastern building is 6,400 feet and the maximum elevation of the western building is 6,370 feet. This is a reduction of approximately 130,000 sq ft of hotel rooms. This design leaves sufficient open green space for temporary events that are critical to the operation of the Snow King Hotel. In addition, Sub Area 1 has been redrawn to include all of the resort property on Vine St. Three new buildings are proposed on Vine St that would serve as some combination of employee housing and market rate apartments that are intended to be used for workers in the Town regardless of deed restriction. The design of these buildings on Vine St. will include a 10-20 foot setback to allow for a sidewalk and Complete Street cross section connecting the facilities to the resort with a maximum building height of 39 feet. The setback along Vine Street will allow for adequate landscaping and screening adjacent to the proposed structures and to be able to accommodate all features of a complete street along Vine Street including all modes of transportation including START buses, pedestrians and bikes in a safe and inviting manner. The elevation of Vine St. is approximately 6,260 feet and the elevation of the Snow King Loop Road in the area of the existing maintenance facility is 6,283 feet. Therefore, the building at this location would be approximately 8 feet higher than the Snow King Loop Rd at this point. Changes to this Sub-Area site plan enhance the focus of this Master Plan on housing local employees as opposed to increasing tourist capacity, and is consistent with current LDRs.

Specific Considerations Related to Sub-Area 2

Certain specific parameters are part of Sub-Area 2's Limitations. The Pedestrian Mall Overlay Zone is graphically depicted in this Chapter (page VII. H) and further discussed in the Design Guidelines Chapter 4 of this Master Plan. This Overlay Zone restricts the height of buildings bordering the Primary Pedestrian Circulation Connection and establishes parameters for Primary and Secondary pedestrian connections.

Two areas (designated T-1 and T-2 in page VII. D) have special parameters. Within Building Envelopes T-1 a tower feature not exceeding 25% of its surface area can penetrate beyond the envelope ceiling (6310 feet and 6290 feet) to a maximum height of 6330 feet. The remaining 75% of these envelopes are restricted to the 6310 feet and 6290 foot limits. The Building Envelope designated as T-2 is excluded from the "Pedestrian Mall Overlay Zone" height guidelines, but restricted to the 6350 foot-maximum height of the envelope as depicted in VII.D.

At the corner of Willow and Snow King a Plaza/Entry feature is intended. Pages VII. I and VII. J depict a conceptual image of the intended use of the corner envelope. This Master Plan considers an optional change in use for the conference center within this sub-area. Since substantial conference space has been built in Sub-Area 3 at the Grand View Lodge, Snow King Resort is proposing the option for this conference center to be used for either conference space or indoor recreation depending on future demand at the time of construction. Unless otherwise agreed, building permits within Sub-Area #2 shall not be issued until construction has commenced on an aerial tramway (i.e. gondola). This condition shall not take effect until the USFS and Town of Jackson have issued final non-appealable approvals for the proposed improvements.

Specific Considerations Related to Sub-Area 3

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge. These buildings can be up to three stories in height with a basement and with massing, articulation, openings, and step backs used to reduce bulk and mass. Buildings on these lots may consist of one single building complex or multiple buildings in order to best create a design that fits well with the topography and neighboring condominiums. Parking is to be primarily provided on-site and generally consistent with neighboring development. Active uses, such as retail and services, are permitted on the lower two levels, with lodging, residential or office on upper floors. The minimum landscape surface ratio for these lots is 10%. Sketch plans for buildings on lots 53 and 57 are included with this Master Plan. Both of these buildings were previously approved for construction by the Jackson Town Council. Additional landscape screening around these buildings will be included at the time of development plan submittal for these buildings. At the time of development on any additional lots within this sub-area the developer will be required to provide alternative transportation mode improvements to connect the Master Plan to Cache Creek Drive including paving, bollards, signage and other best practices associated with this connection. Plans for lot 58 must ensure compatibility with the neighborhood to the east at the time of development plan including but not limited to additional landscape screening and architectural design that best incorporates the building into the hillside.

Specific Considerations Related to Sub-Area 4

Sub-Area 4 includes property owned and operated by Snow King Mountain for the purposes of summer and winter recreational facilities. A zip-line is proposed to land in this sub-area and will require a conditional use permit. The conditional use permit (CUP) for the zip-line will include an operational plan and associated impacts for all outdoor recreational uses in this area including but not limited to the Mountain Coaster, Alpine Slide, Mini-golf and Maze to determine the overall cumulative effect including but not limited to hours and days of operation, noise, lighting, and other associated impacts to the area. Elevations of the zip-landing platform are included in this document for review as part of the CUP. This sub-area is eligible for light industrial uses associated with mountain operations and maintenance through a conditional use permit.

Specific Considerations Related to Sub-Area 5

Sub Area-5 primarily serves as the West Base area for Snow King Mountain ski area operations and contains the One Town Hill development. Proposed future development in this sub-area consists of an on-mountain maintenance facility for Snow King Mountain that could sit to the South of the ice rink and service grooming and snowmaking equipment as well as house a pump house for snowmaking. The building would be a maximum of two stories with the second level providing office space for mountain operations. Roof design for this building may be either flat or pitched to accommodate the usage and best integrate with the existing building and hillside. In addition, a mountain sports training facility may be located within this Sub-Area. At the discretion of the developer the zone designated for the mountain sports training facility could also be designated for use as a second sheet of ice. The maximum height of this building, or addition to the ice rink structure would be the same height as the existing peak of the ice rink roof. The roof of this structure may be flat or pitched to best accommodate the recreational use and design of the building. This sub-area is eligible for light industrial uses associated with mountain operations and maintenance through a conditional use permit.

A new gondola is proposed to land adjacent to Sub-Area 5 on land currently leased from the Town of Jackson for ski area operations in the area outside of what is commonly known as Phil Baux Park. A conditional use permit will be required for the construction of this gondola with plans to include site circulation for all modes of transportation and the clustering of buildings to preserve as much open space as possible. These improvements should be located generally at the street level to address accessibility and ease of access during all seasons. Considerations will be given to queuing and waiting areas for users accessing the gondola so as not to impact other users of the par.

Specific Limits of Development.
The following Setbacks, Open Space Ratios (OSR), Building Floor Area, Floor Area Ratio (FAR) and Lodging Capacity will be the specific limits of development within the area of this Master Plan.

Setbacks.
Setbacks are graphically shown in the attached maps for Sub-areas 1,2, and 5.

Open Space Ratio (OSR).
Open Space Area is defined as land surface not covered by buildings, structures or impervious surfaces. Ski trails and other open space recreational spaces as well as hardscape surfaces comprising pedestrian plazas, patios and outdoor function areas are also considered Open Space Areas.
Open Space Ratio (OSR) means the proportion of a development that is provided and maintained as Open Space Area.

Hillside Development.
All development within the Master Plan shall meet the LDR hillside development requirements in place at the time a development plan is submitted.

Landscape Surface Area and Landscape Surface Ratio (LSR)

Landscape surface area means a land surface not covered by buildings, structure s or impervious surface, except facilities and/or impervious surfaces specifically permitted in Section 4150, Standard Plant Unit. Once landscaped, according to division 4100, Landscaping Standards, the landscape surface area shall be left undisturbed and maintained to support plant life. Hardscape surfaces composing pedestrian plazas, patios and outdoor function areas are also considered Landscape surfaces.

Section 4.3.2.E specifies that:

Landscape surface area. Within areas of' the Planned Resort to be developed as lodging, conference, commercial and related facilities, the minimum landscape surface ratio shall be .25. exclusive of the already permitted residential development that exists upon the enactment of this Division (Clark's Knoll, Pitchfork Townhomes, Love Ridge, and Love Ridge Addition.) Notwithstanding, the Town Council may reduce the minimum landscape surface area to no less than twenty (20) percent upon demonstration by the applicant that the following objectives are achieved with a reduced landscape surface area. The primary purposes of the landscaped areas within Snow King are to:

(I) Create visually strong and attractive streetscapes.

(2) Create a porous edge to the Planned Resort such that residents and visitors in the surrounding areas are invited to enter the resort through attractive pedestrian ways.

(3) Support high quality urban design, including integral public spaces for interaction and public events.

This Master Plan complies with 1, 2 and 3 above.

The following minimum Landscape Surface Ratios (LSR) are established for this Master Plan:

- For the total area of Sub-Areas 1, 2, 4, 5 and 6, the minimum LSR shall be .50
- Within the total area of Sub-Areas 1, 2, and 4 the minimum LSR shall be .25
- Within Sub-Area 5, the minimum LSR shall be .75
- Within Sub-Area 6 the minimum LSR shall be .90

Building Floor Area.

Building Floor Area is defined as:

Floor Area. Floor area means the sum of the gross habitable floor area for each of a building's stories as measured from the exterior limits of the faces of the structure. The floor area of a building excludes attics, basements, cellars, unenclosed porches, or any floor space in an access01y building or in the principal building which is designed for the parking of motor vehicles in order to meet the parking requirements of these Land Development Regulations.

Division 9.5 B of the Land Development Regulations defines basements as spaces where 50 percent or more of the perimeter is below ground level. Spaces defined as basements dedicated to various functions such as services, storage, meeting, support, loading and unloading are not included in computations of Building Floor Area, but are included when considering other impacts such as housing, parking and transportation.

Building Floor Areas Exclude:
- Areas dedicated to Employee Housing as per the Housing Mitigation Plan
- Temporary Buildings, such as Tents.

In accordance with these definitions the Total Maximum Building Floor Area for Sub-Areas 1, 2, 4, and 5 will be limited to 838,000 square feet.

Floor Area Ratio (FAR).
Floor Area Ratio (FAR) is defined as:

> *Floor Area Ratio (FAR). Floor area ratio means the intensity of building, measured as a ratio derived by dividing the total floor area of a building or structure by the lot or sub-area.*

- The Maximum Floor Area Ratio (FAR) for the total of Sub-Areas 1, 2, 3, 4, and 5 shall not exceed .40
- The Maximum Floor Area Ratio (FAR) for the total of Sub-Areas 1, 2, 3 and 4 shall not exceed .60

Lodging Capacity.
Lodging Capacity within Sub-Areas 1, 2, 3, 4, 5 shall not exceed 2,208 guests (APO) as listed in Section 4.3.2.C:

a. Guest. A guest is a person who is accommodated in overnight lodging facilities within the Planned Resort. The number of guests is calculated by the "average peak occupancy" of the lodging accommodations.

b. Average peak occupancy. For the purposes of this Section, the following average peak occupancies (APOs) shall be used in calculating the capacity of guest accommodations:

(I) Hotel, motel, or similar lodging unit. A hotel, motel, or similar lodging unit that exists as sleeping quarters and does not contain other types of living spaces such as a living room or kitchen, shall be assigned an APO of two (2).

(2) Dwelling unit. A dwelling unit, used for short-term rental, shall be assigned an APO of four (4).

Other. Other lodging facilities that do not meet the definitions above shall have an APO assigned that is the sum of the number of bedrooms the lodging facility contains multiplied by two (2).

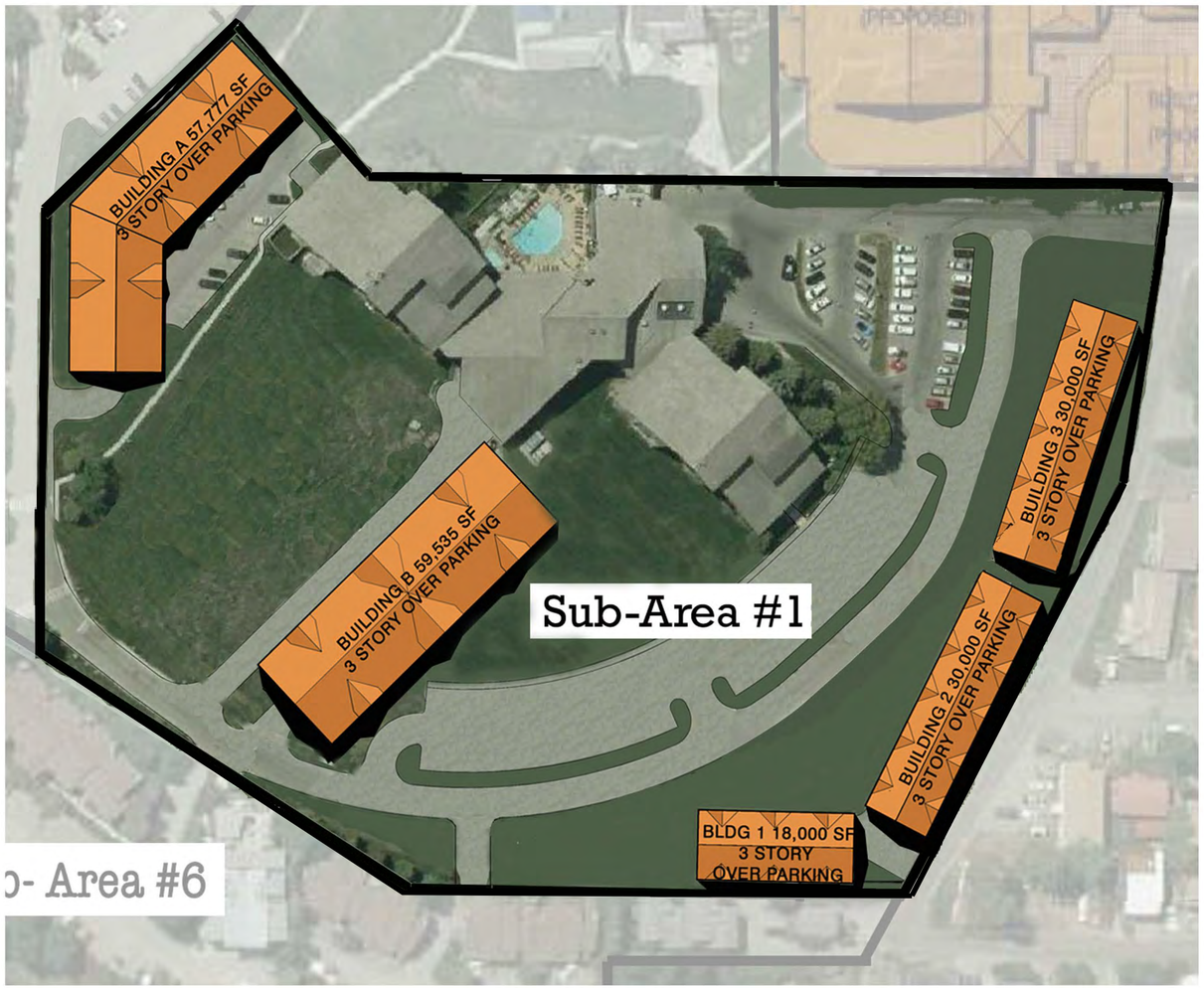
B./D. Sub-Area Plan

For planning purposes the land in the Snow King Planned Resort District has been reconfigured as follows:

Sub-Area #1: Existing Hotels, Hotel Additions and employee housing.
Sub-Area #2: KM6 Area between Hotel and Snow King Center
Sub-Area #3: Existing and proposed condominiums
Sub-Area #4: Snow King Mountain Recreation area
Sub-Area #5: Snow King Mountain West Base area and One Town Hill
Sub-Area #6: Existing Condominium Area *

*Sub-Area #6 - See statement regarding existing condominiums

C. Sub-Area #1



Sub-Area 1
Hotel Area and Hotel / Condominium Expansion

Sub-Area 1 consists of the existing Snow King Hotel as well as two proposed condominimim buildings (Building A & Building B) associated with the Snow King Hotel. In addition, this sub area includes proposed appartments for employee housing located on Vine St (Buildings 1, 2, & 3).



D. Sub-Area #2

Sub-Area 2 KM6 Area	
Ground Surface Coverage (Example)	
Buildings	133,000
Pavement: Roads & Parking	N/A
Walks, Pathway, Plaza, Patio	17,330
LSR	0.44
Other Impervious (Bike/Foot Paths, Tennis Courts, Etc.)	7,730
Total Impervious Coverage	150,330



Sub Area #3
Existing and Proposed Condominiums

Sub-Area 3 consists of the Grand View, Love Ridge, and Simpson Patent condominimum developments and the Grand View Lodge. Lots 53, 57, and 58 are the remaining lots platted for condominimum development within this sub-area. The Jackson Town Council approved building plans for a condominimum building on lot 53 and the planning/building departments issued a building parmit for building D on lot 53 which expired in 2009. The architectural drawings for this building are shown in the sketch drawing section of this master plan. The Town Council approved a development plan for a building on lot 57 in 2004, the architechtural plans for this building are included in the sketch drawing section of this master plan. Condominimums on lot 58 are proposed to match buildings on lots 53 and 57 in architectural design.



G. Sub Area #4

Sub Area #4 Snow King Mountain Recreation Area

Sub-Area 4 primarily consists of Snow King Mountain recreation use area and supporting structures.

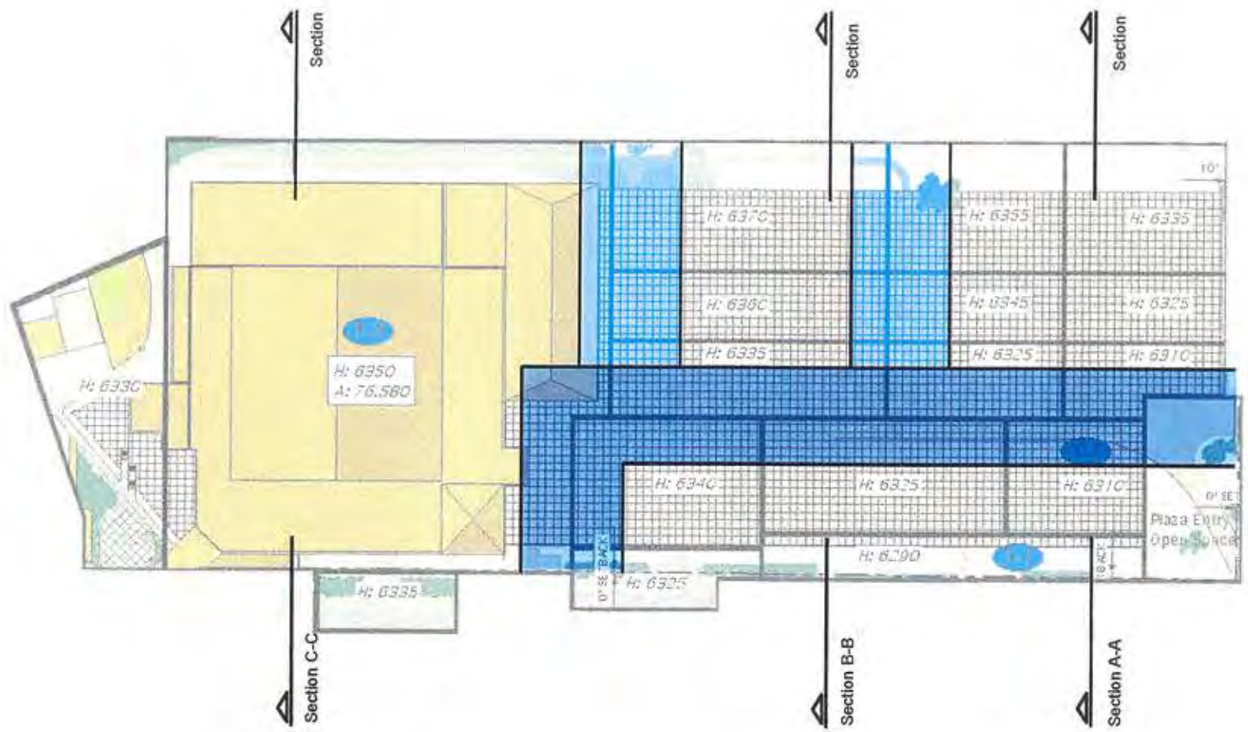


Sub-Area #5 - Snow King Mountain
West Base Area & One Town Hill

Sub-area 5 contains the West base area for Snow King Mountain ski area operations and the One Town Hill condominimum complex. Future development proposed for this sub-area includes a maintenance facility and office spaces for mountain operations, snowmaking pump house, and a mountain sports training complex. These additional buildings would be attached or constructed adjacent to the existing Snow King Sports and Event Center ice rink. While not directly within this sub-area, a gondola and ticket booth are proposed to be located in the shaded area that has historically been leased to the ski area for operations. This area is shaded in light green on the map. This map also indicates a second sheet of ice and expanded ski club facilities which are located on Town of Jackson land for illustrative purposes and are not associated with this master plan.



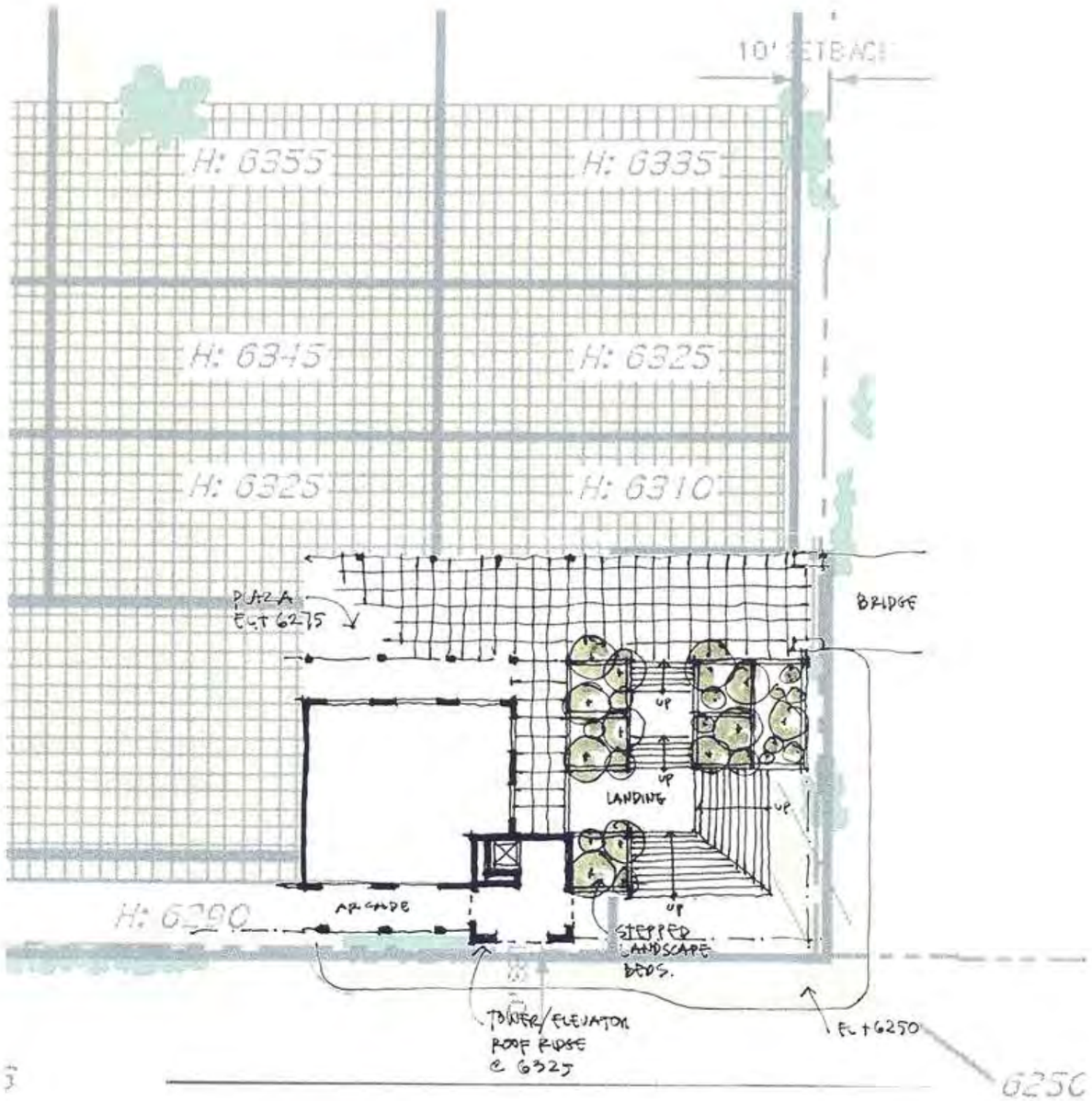
SNOW KING MASTERPLAN - ELEVATION ALONG SNOW KING AVE.
27 FEB 01



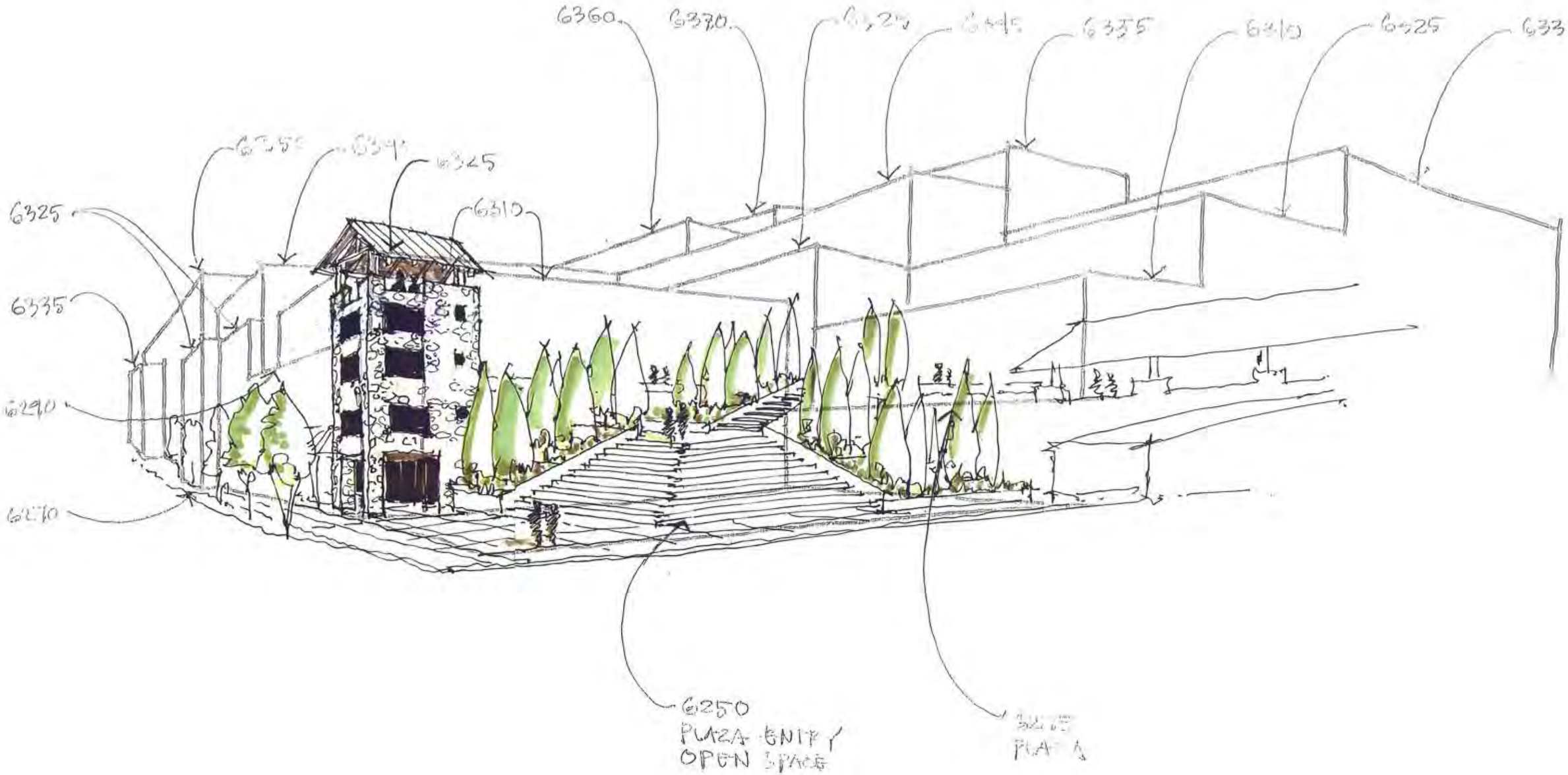
Primary Circulation

Secondary Circulation

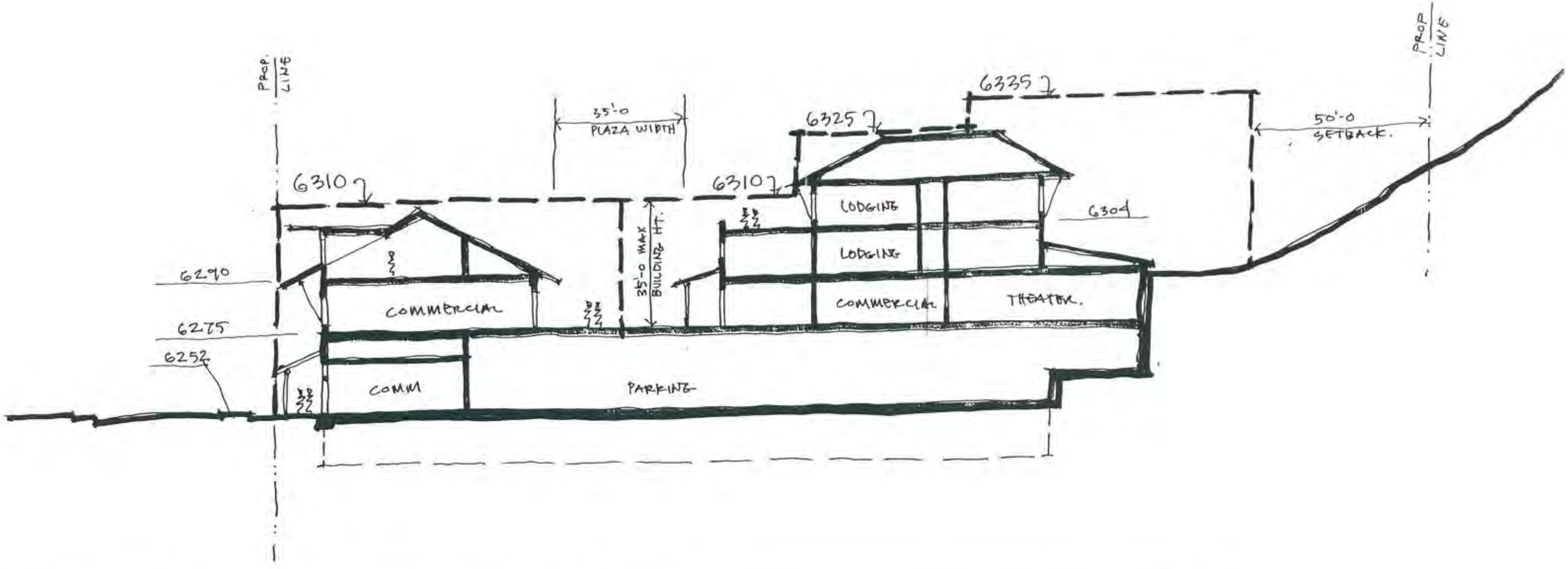
CIRCULATION OVERLAY ZONE



PLAZA/ENTRY SKETCH

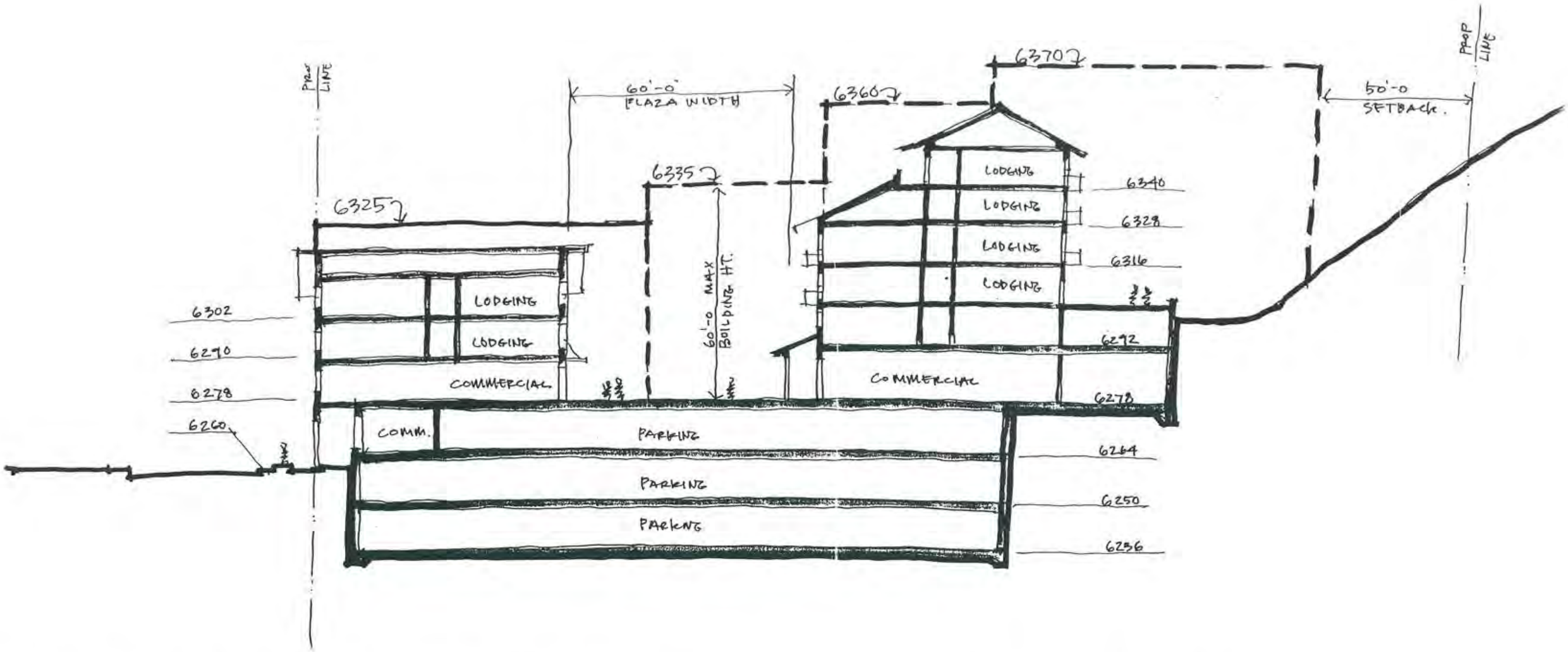


SNOW KING MASTERPLAN (REVISED)
27 FEB 01



SNOW KING MASTERPLAN PROPOSED ENVELOPE REVISIONS 14 NOV 00

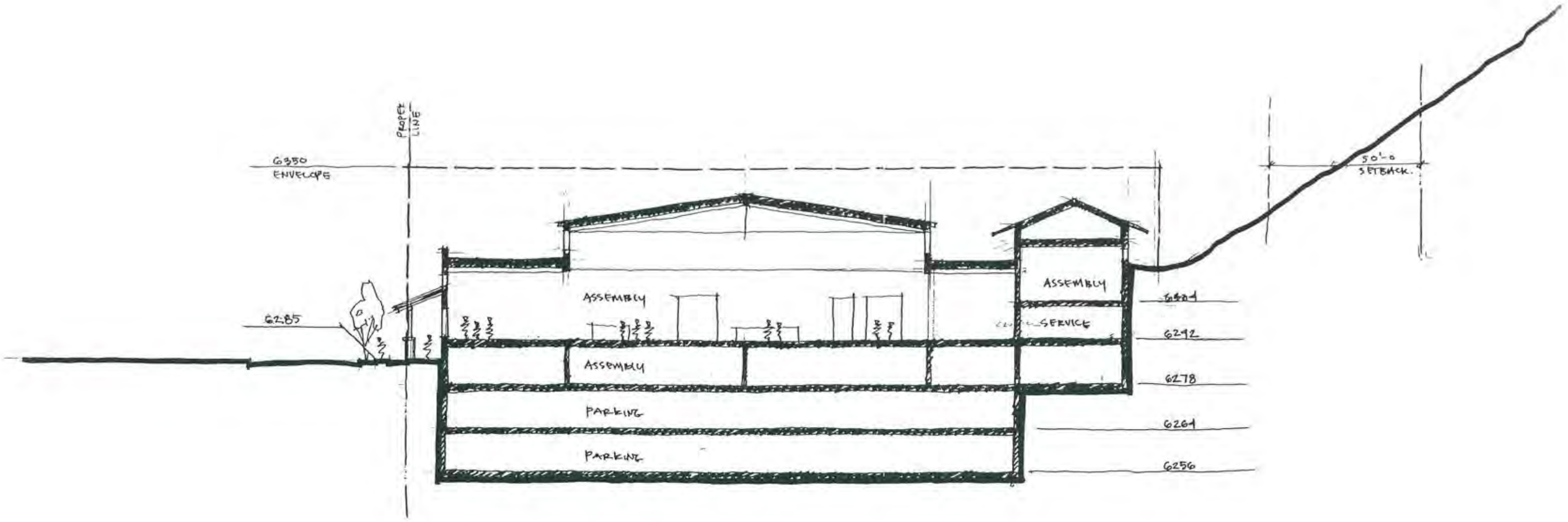
SECTION A-A



SNOW KING MASTERPLAN PROPOSED ENVELOPE REVISIONS.

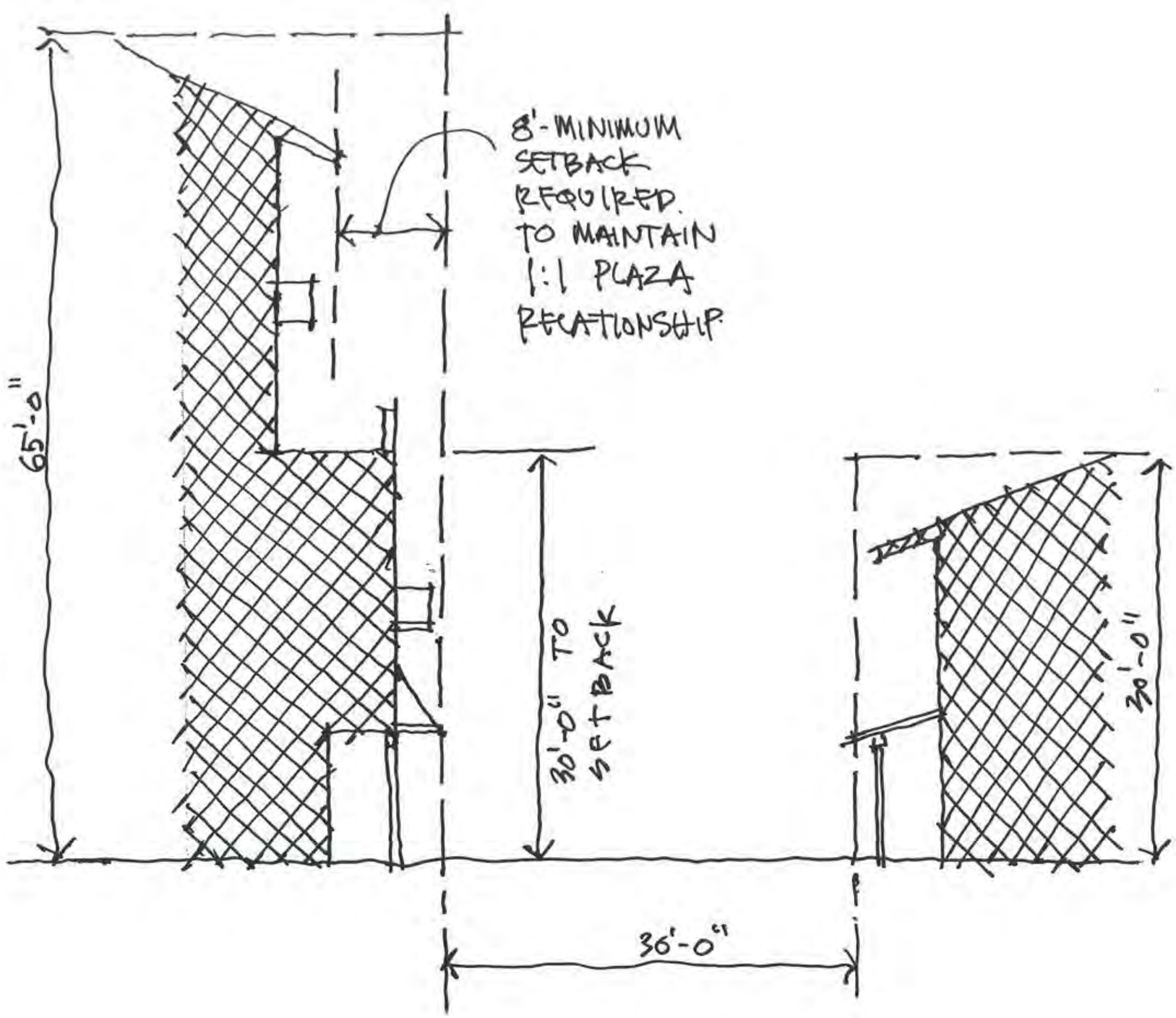
14 NOV 00

SECTION B-B

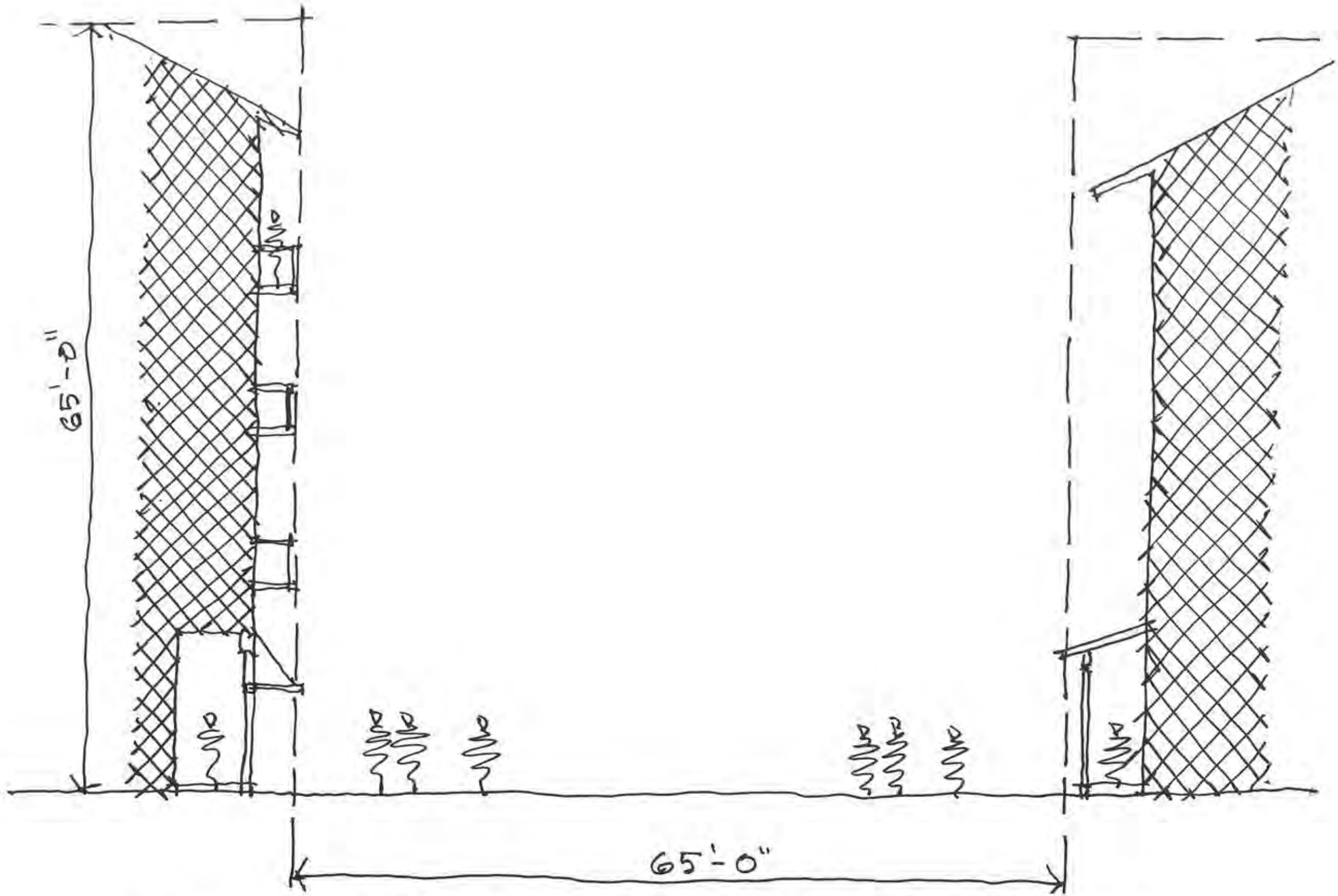


SNOW KING MASTER PLAN · TRANSVERSE SECTION KM-6 CONFERENCE CENTER 1/16" = 1'-0" 20 SEPT 00

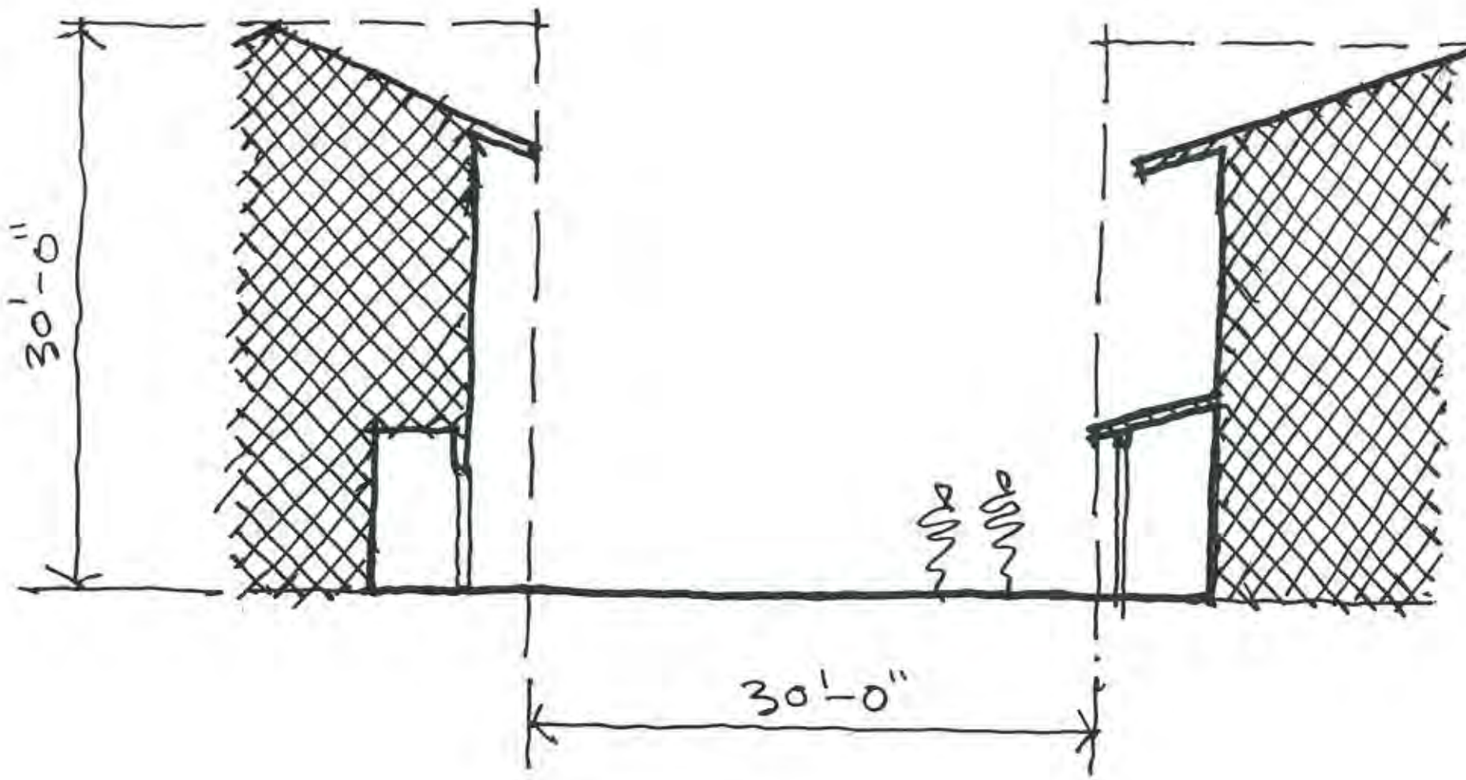
SECTION C-C



SNOOQUALMIE MASTERPLAN – PLAZA 1:1 ASYMMETRIC ENVELOPES EXAMPLE



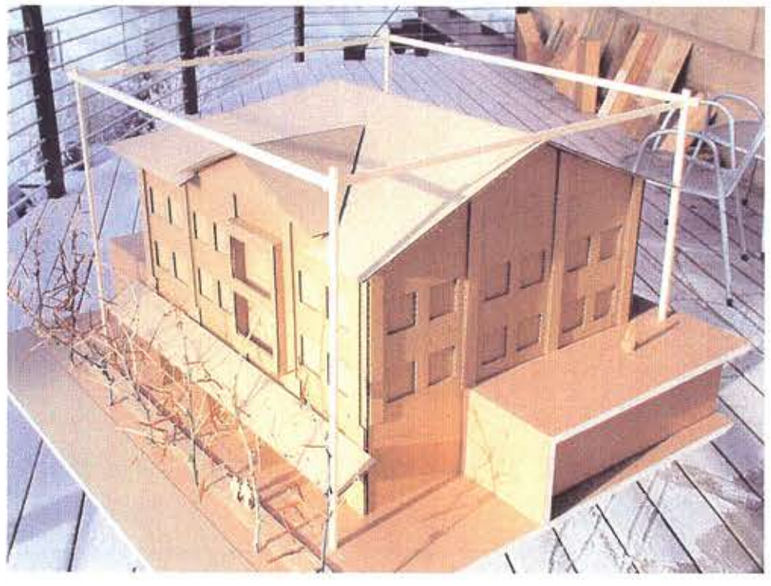
SNOW FING MASTERPLAN - PLAZA 1:1 MAXIMUM.

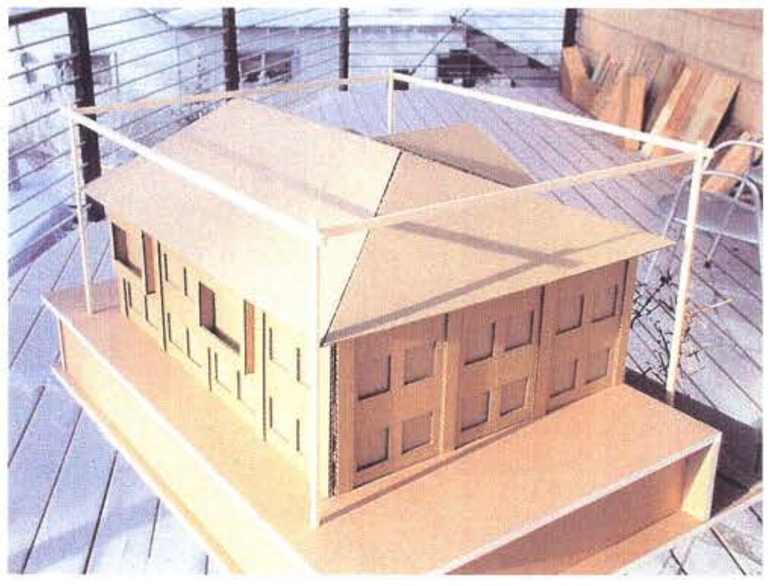


SNOW KING MASTERPLAN - PLAZA 1:1 MINIMUM

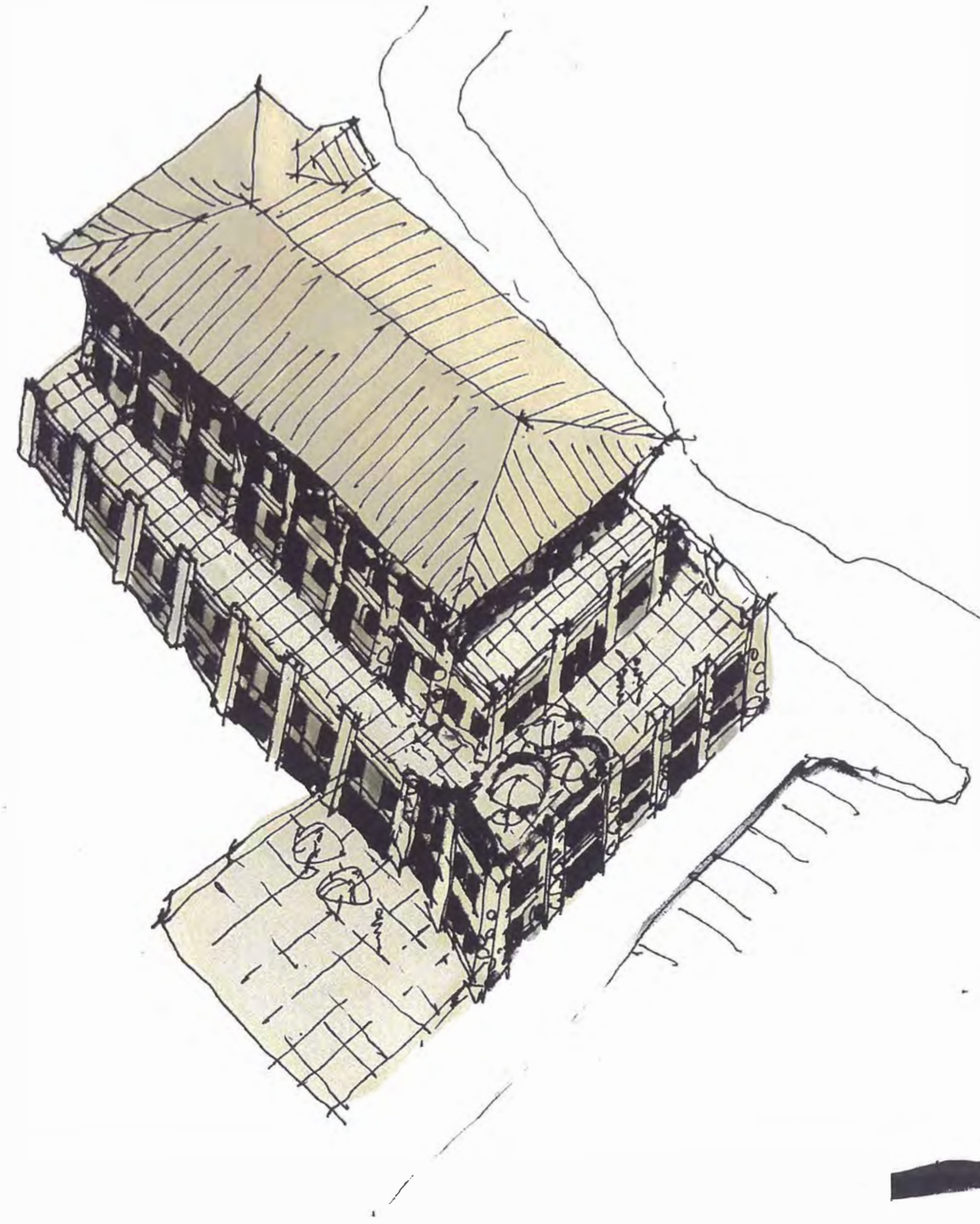


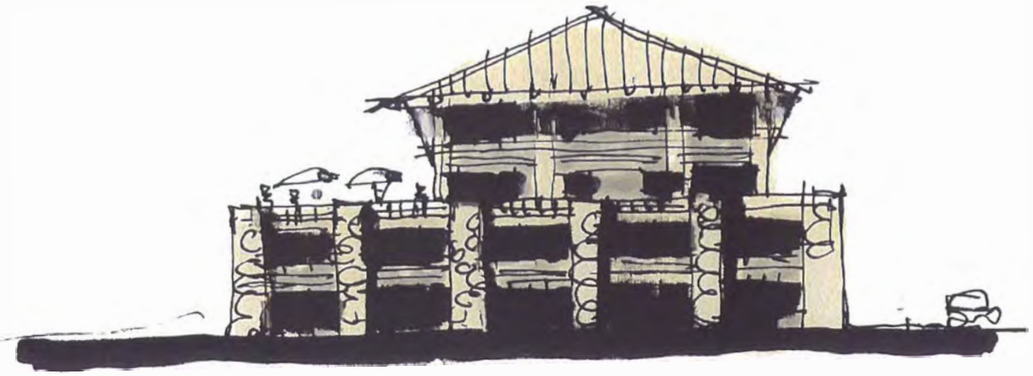


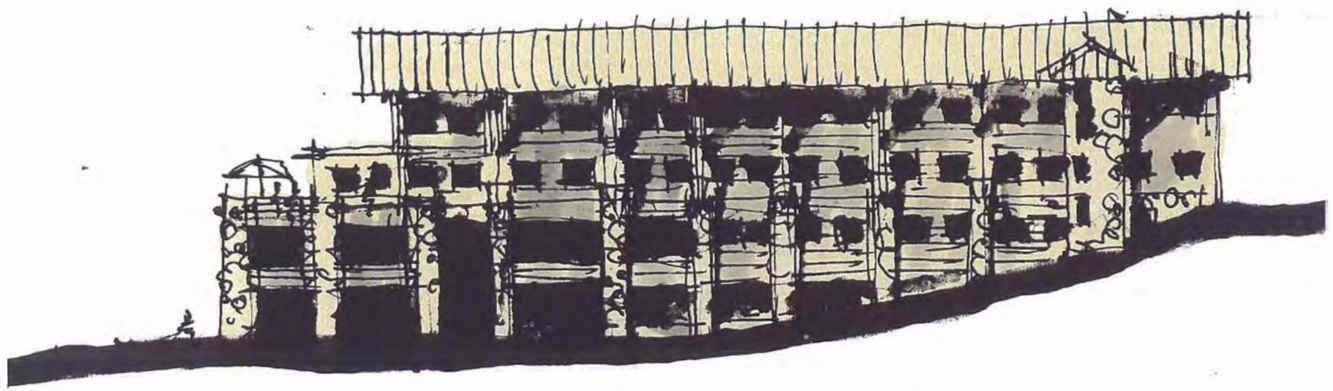




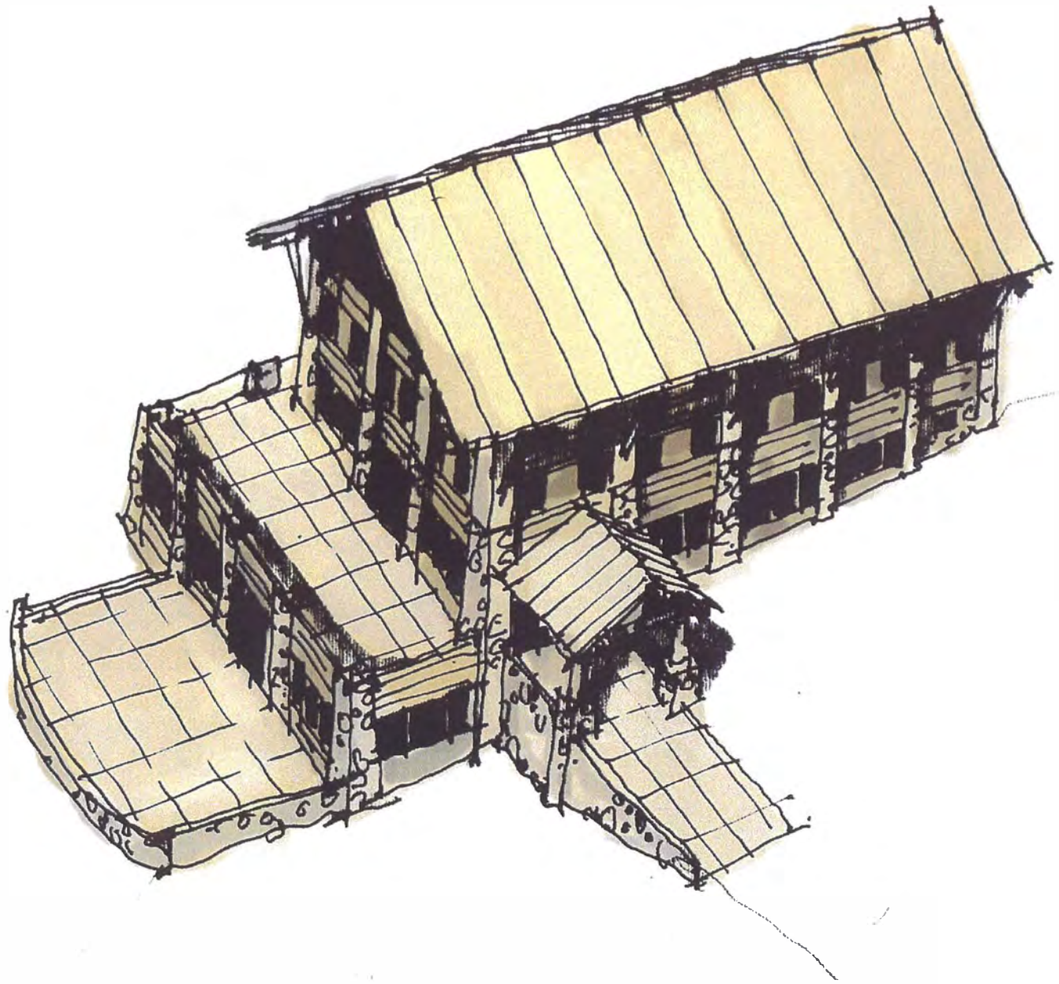
Three-Dimensional Building Envelope Study

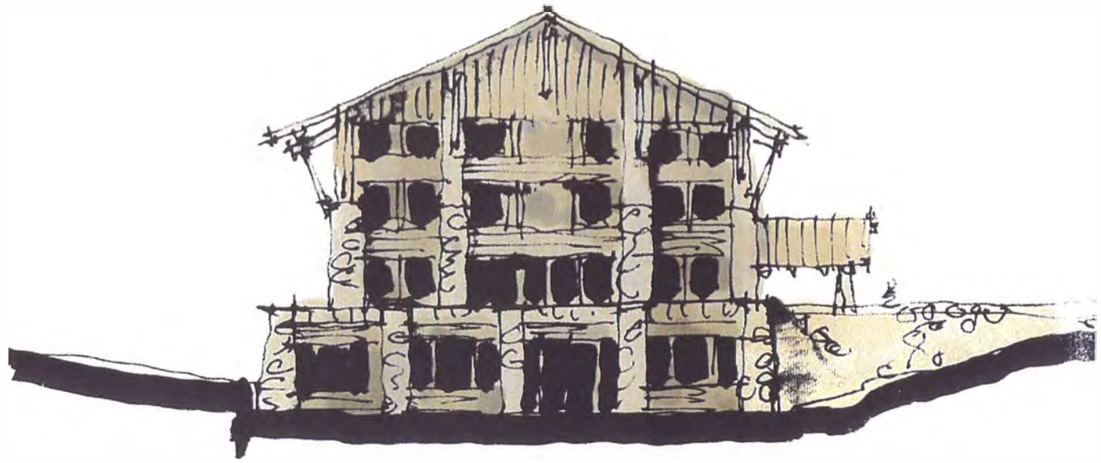


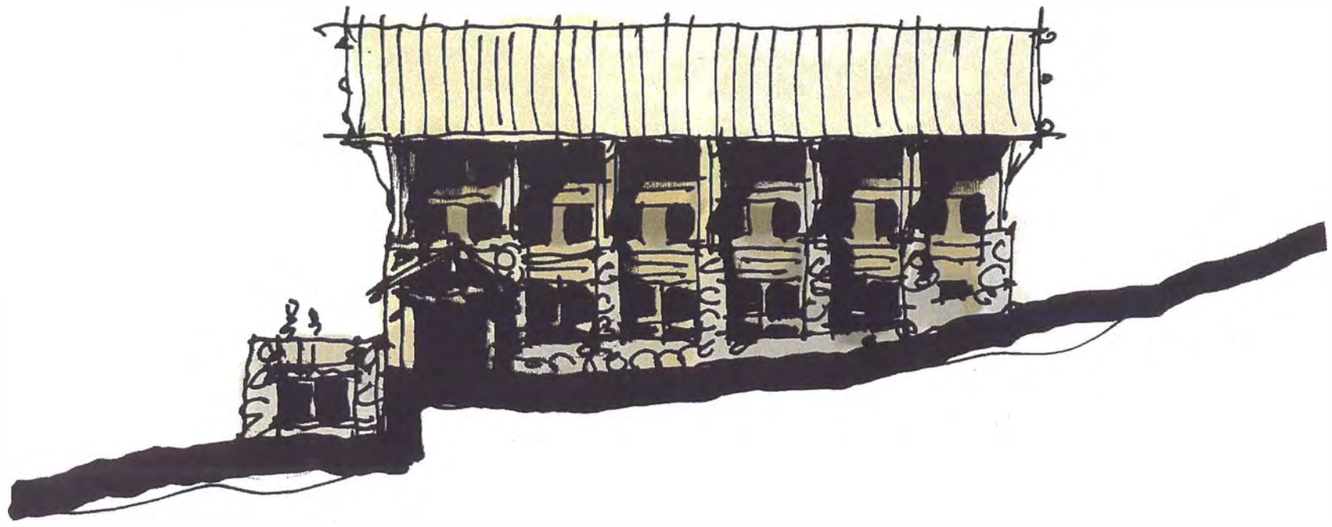




Architect's Supplemental Sketches • PINE LODGE







Architect's Supplemental Sketches • MID-MOUNTAIN LODGE



View of Snow King from North of Visitor's Center



View South from Corner of Cache and Snow King



Architect's Rendering Lot 53 Proposed Building





Side View Proposed Building on Lot 53



Architect's Rendering Proposed Building on Lot 57



Architect's Rendering Proposed Building on Lot 57



Architect's Rendering Proposed Building on Lot 57



Architect's Rendering Proposed Building on Lot 57



VII. HOUSING ELEMENT

A. Housing Mitigation Plan

Affordable workforce housing shall be provided in conjunction with all commercial development and redevelopment at the resort in accordance with the Jackson Land Development Regulations. The applicant for each development or redevelopment permit shall submit a housing mitigation plan that demonstrates compliance with the affordable workforce housing requirements that are in effect at the time of the application. All development within the Snow King Resort District prior to 2020 has satisfied employee housing requirements under the then-existing Master Plan and will not require any additional mitigation in the event of changes to Town and County Land Development Regulations except for as may be required through a change of use. The following housing mitigation plan pertains to all future development within the district from the date this Maser Plan is approved forward .

At least thirty percent (30%) of the employee-housing required for each commercial development shall be provided within the Snow King Resort District. In general, affordable workforce housing included in each development is intended to satisfy this requirement, however, the affordable workforce housing may be provided at other locations within the resort district.

Housing for Snow King Mountain employees associated with mountain operations such as lift operators, ski patrollers or groomers, is exempt from the 30% requirement and may be provided entirely off site. Administration and maintenance facilities shall also be exempt from this 30%. Resort support uses not related to ski area operations and that include a physical development opportunity for creating affordable workforce housing on site, shall provide 30 percent of the required employee housing on the development site or within the resort district.

The applicant is responsible for obtaining all necessary development permits from either the Town or County, for the construction of all affordable workforce housing. Approval of all Final Development Plans for any development shall be contingent on approval of any necessary development plans to construct affordable workforce housing.

The Snow King Resort Master Association (SKRMA) will be responsible for the general implementation and administration of this Housing Element. Individual developers of specific developments or any property within the resort district will be responsible for building the required housing and SKRMA will coordinate and facilitate the locating of affordable workforce housing within the resort district when it is not possible to incorporate the housing in the individual development that generates the requirement. The required affordable workforce housing will be developed commensurate and concurrently with the free market development that generates the housing requirement.

This Housing Element will cover all the development that occurs within Sub-Areas l through 6 and will be managed following these guidelines:

• SKRMA will be responsible for ensuring that developers within the resort district follow the standards set forth herein and the affordable workforce housing requirements in the Jackson Land Development Regulations. Calculations will be based on 100% of the required housing being located within the Town of Jackson. A minimum of 30% must be located within the limits of the Snow King Resort PRD District and an additional 10% within 1 mile of the PRD district boundaries.

• Location of Affordable Workforce Housing within the Resort District limits will be in a variety of locations to meet the minimum 30% required to be housed within the district. This Master Plan identifies tentative locations of employee housing units within the Resort District. The intent is to, where possible, locate housing in small nodes. Although sufficient areas have been identified within this resort district to

accommodate 100% of the required housing, the object would be to locate, as development occurs, up to 70% of the required housing in other locations, to be determined, within the limits of the Town of Jackson.

• SKRMA will ensure that any developers and/or landowners within the district finance, build, own or sell with required restrictions, and manage the units needed to comply with the Snow King Housing Mitigation Plan, or contract with other entities to do so. When units are owned by others, occupancy of the units will be monitored by SKRMA and deed-restricted as described. All required units will be newly built restricted units. Deed restrictions will specify that occupancy of the units required under this plan will be limited to Teton County employees and their immediate family.

• All future development within the Snow King Resort district will be subject to the Housing Requirements in the Town Land Development Regulations in place at the time of the application in addition to the requirements listed within this Housing Element. However, in the event that the State of Wyoming changes or eliminates workforce housing requirements, the minimum housing requirements for the Snow King Resort District will be those adopted with the 2000 Snow King Resort District Master Plan.

• Up to 25% of the required affordable workforce housing within the resort district can be satisfied through the use of dormitory units and may be rented to non-qualified employees.

• In addition to various forms of housing such as apartments, duplex, dormitories, townhouses, or other types of housing, rental units may be configured in the form of condominiums owned by SKRMA (or its agents). These employee housing condominiums will be managed in accordance with the deed restrictions and other requirements of this Housing Mitigation Plan.

• Housing will be developed in increments in tune with commercial development phases. Developed housing will meet or exceed the required needs of each phase as computed in accordance with this section. When the developed housing exceeds the required needs, this excess developed housing will be credited towards the requirements of future phases.

• A housing unit in the Snow King resort district may be used to meet an affordable workforce housing requirement only one time. Once the unit has been approved, counted and duly restricted for such purpose, the unit shall not be approved or counted again to meet another housing requirement.

• Employees of entities located within the Snow King PRD will have priority for occupancy in the **SKRMA** controlled units. Other available units will be open for any other qualified household.

• All development that existed prior to the adoption of this Master Plan is exempt from the requirements of this Housing Mitigation Plan, except for redevelopment or changes of use that would increase the number of required employee housing units. Any future redevelopment or change of use within the "Existing Condominium Parcels" that increase the number of employees within that area, will need to comply with the requirements of this Housing Element at the expense of the development entity.

• The type and layout of housing will vary as time goes by. For planning purposes, we have used averages of 150 SF per person for dormitory housing and 370 SF per person for apartment housing.

• Habitable spaces built within the Snow King Resort PRD District to comply with the requirements of this Housing Element will be exempt from consideration in any maximum development space and FAR computations.

• Since all of the resort-wide development within the District is intended to be classified as commercial, there will not be a need for any park and school or other residential exactions. However, all development will need to provide affordable workforce housing as per this Section. Since all residential-type

development that is contemplated will be available for short-term rentals, this development will all be considered as commercial and will need to comply with this Section. Any non-commercial and non-short-term rental residential development that may be proposed in the future within the District will need to pay exactions as per the current Land Development Regulations at the time of final Development Plan Approval.

• Only entities authorized by SKRMA will be allowed to operate any business within the limits of the Snow King PRD District. SKRMA will require all these entities to provide information regarding the number of employees working within the Snow King PR District and will collect dues and assessments as needed from employers to compensate SKRMA and its agents for any costs associated with this Housing Element and other requirements of this Master Plan.

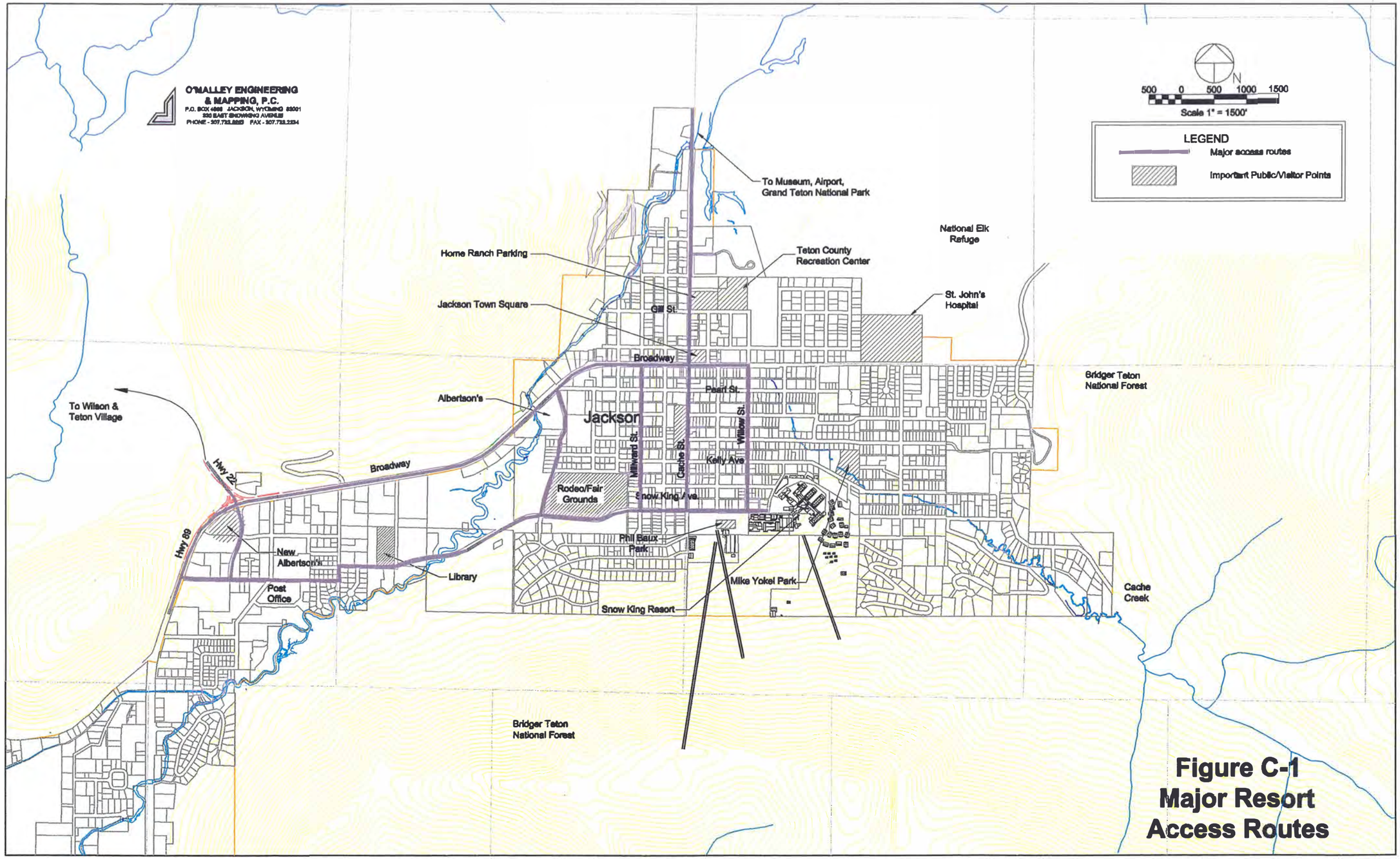


Figure C-1
Major Resort
Access Routes

VIII.TRANSPORTATION ELEMENTS

A. Snow King Resort Master Plan - Traffic Analysis and Transportation Plan

Overview
Snow King Resort has been successful at encouraging guests of the Resort to walk or utilize existing public/private transit systems for both on-site and off-site events. With moderate improvements to the street and sidewalk system in the vicinity of Snow King Resort, the addition of a convenient Town shuttle system, and implementation of an aggressive Transportation Demand Management program, the existing street system is sufficient to accommodate the projected buildout traffic.

Definitions
The principal terms used to describe the adequacy of transportation facilities are *Capacity* and *Level of Service.* Briefly, the capacity of a transportation facility reflects its ability to accommodate a stream of people or vehicles. In the Third Edition of the *Highway Capacity Manual* (Updated 1997), capacity is defined as the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a roadway during a given time period under prevailing roadway, traffic, and control conditions. Capacity is typically expressed in terms of persons per hour or vehicles per hour (vph). Person flow is important for defining the roles of pedestrian, transit, and high-occupancy vehicle treatments. As the number of buses or high-occupancy vehicles in a traffic stream increases, the number of vehicles that can pass a given point decreases, but the person flow may actually increase.

Level of Service (LOS) is a measure of the quality of the traffic flow. These qualitative measures characterize the operational conditions within a traffic stream (or intersection) and their perception by motorists and pedestrians. These conditions include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each facility designated by the letters A to F. LOS A represents the best operating conditions (no delays, freedom to maneuver, no conflicts, etc.) while LOS F represents the worst (grid-lock).

A variety of factors influence capacity and level of service including:
- Roadway geometry (horizontal and vertical alignment)
- Lane width
- Design speed
- Lateral clearance
- Queuing areas at intersections
- Passing zones
- Vehicle type (percentage of trucks and buses)
- Weather conditions
- Directional flow
- Signalization
- Access control
- Volume of pedestrians and bicyclists
- Land-use characteristics.

C.1 Existing Conditions

Roadway System

The primary access routes to Snow King Resort all feed onto Snow King Ave, which is an East-West collector street within the overall Town of Jackson street network. Snow King Ave has an eastern terminus that flows directly into the Snow King Resort Hotel. There is no vehicular access to the resort from the South, East, or North. The secondary access routes (which all feed onto Snow King Avenue) include Cache St, Willow St, and to a lesser extent, Vine St. While pedestrians and cyclists can still access from directions other than the West, the topography and condominium development to the North and East of the Resort make non-vehicular access routes negligible. Snow King Mountain restricts access from the South, and anyone approaching from the South is likely already using and enjoying Resort features and facilities. Therefore, the focus areas for traffic studies, previous and current, include Snow King Ave, Cache St, Willow St, and Vine St.

Figure 1: Overview of local traffic network & Snow King Resort Access



Review of Baseline Studies and Datasets

The previous traffic studies that have been performed and will be used for comparison are detailed in the table below. The 1999 study performed by O'Malley Engineering & Mapping was the original baseline study included in the2000 Snow King Master Plan. The 2003 and 2008 studies were performed by Rendezvous Engineering for the purpose of the TMMS and reporting on the status of Snow King Resort's TDM system. The 2006 dataset was performed by WYDOT over a two-day period in Mid-July as part of an ongoing traffic volume monitoring program. In 2011, as part of an analysis of the Maple Way-Snow King Avenue Corridor Analysis, L2 Data Collection performed traffic counts along Snow King Ave as far East as Cache St (dataset does not include Willow St or Vine St, see 7.5 References for all above cited sources).

Table 1: Historical/Baseline Traffic Count Data that include some, or all, of the study area.

Report Year	Count & Report Performed By:	Data Collection Period
1999	O'Malley Engineering & Mapping	August 16 & September 2, 1999
2003	Rendezvous Engineering	August 5-15, 2003
2006	WYDOT	Mid-July, 2006
2008	Rendezvous Engineering	August 5-11, 2008
2011	L2 Data Collection	August 16-17, 2011
2016	Nelson Engineering	July 25-Aug. 19, 2016

Roadway System Traffic Volumes

The observations and data gathered in 2019 have been compiled into average daily traffic (ADT) and are shown in Table 2 and Figure 3 alongside the historical data listed in Table 1. It is important to note the slight difference in data collection timeframes, varying from Mid-July to Mid/late-August reflect a noticeable

difference that represents the difference between highest hour (approximately Mid-July), and 30th highest hour (accepted benchmark and period for previous studies). Nonetheless, the additional datasets from Mid-July, as well as additional roadway segments surveyed in more recent studies, provide valuable additional data can be used for comparison in future years.

Most of the study area roadway segments showed an increase in ADT when compared to the most recent datasets from 2016. However, a slight decrease in ADT has been observed at Snow King Ave, East of Cache. Due to road condition and geometry, it is believed that traffic has a tendency to flow from Snow King Ave to Willow St more-so than from Snow King Ave to Vine St. The data collected during this study indicates strongly that this is the case. The volume of traffic using Vine St is significantly less than Willow St. This can be attributed to Vine St's termination at the 'Tee' intersection with Kelly St, whereas Willow St is a North-South route that leads downtown and provides access to Broadway (East of Town Square). Another additional measurement taken during this survey was on Snow King Ave/Snow King Loop East of Vine St, which is both the entrance to Snow King Hotel and its other adjoining Resort properties such as Love Ridge Condominiums, Grandview Lodges, and the Snow King Resort Conference Center. Compared to the 2016 ADT data, there was a significant increase in traffic heading East into the resort, and condominiums; which appears to be indicative of higher bookings, hotel occupancy, and/or conference events at this time of year for 2019 compared to 2016.

Table 2: Comparison of study area ADT from 1996-2019

Street Segment & Location	July 1996 ADT	Late August 1999 ADT	August 2003 ADT	Mid July 2006 ADT	August 2008 Weekday ADT	Mid-August 2011 ADT	August 2016 ADT	July-August 2019 ADT
SKA West of Cache	7658	4833	5729	4216	5893	6100	N/A	N/A
SKA East of Cache	6055	4298	5064	6077	4682	5290	4009	3041
SKA East of Willow	N/A	2654	3809	N/A	3506	N/A	2596	3150
SKA East of Vine	N/A	N/A	N/A	N/A	N/A	N/A	2277	3640
Cache North of SKA	4863	2554	2774	1683	2725	2723	1795	4982
Willow North of SKA	1215	1602	2120	2205	1782	1978	4524	6219
Vine North of SKA	N/A	N/A	N/A	N/A	1155	N/A	1087	1874

Figure 3: Comparison of study area ADT from 1996-2019

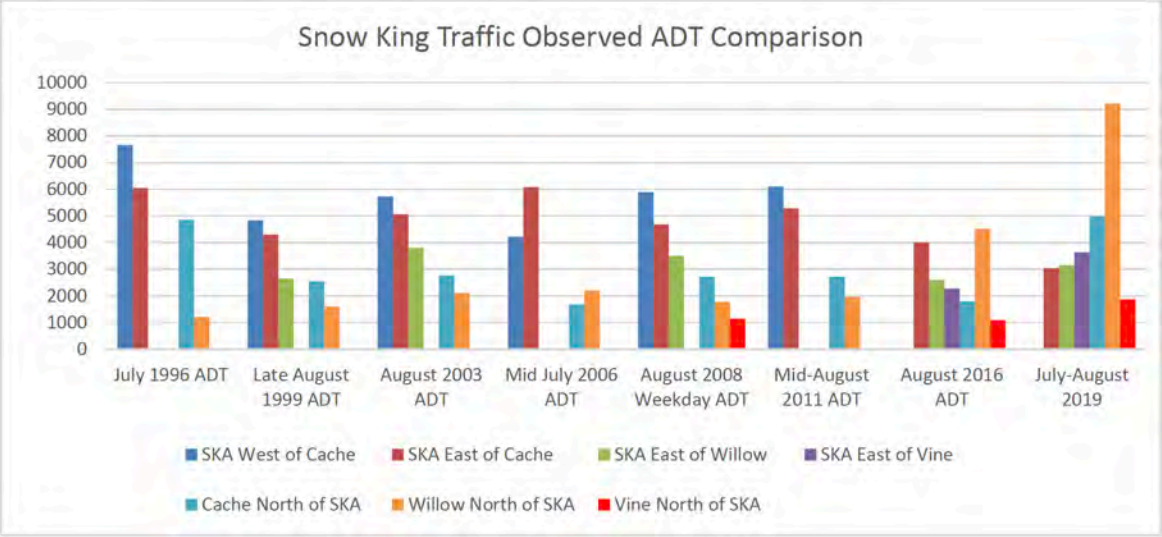
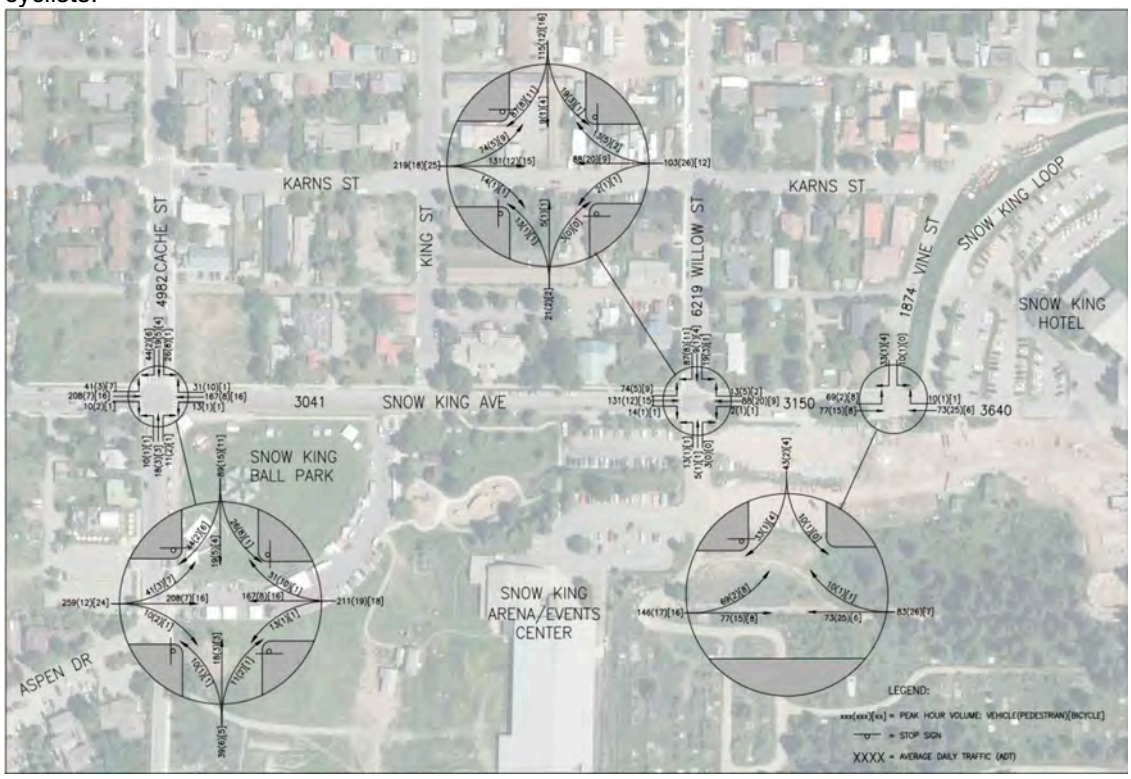
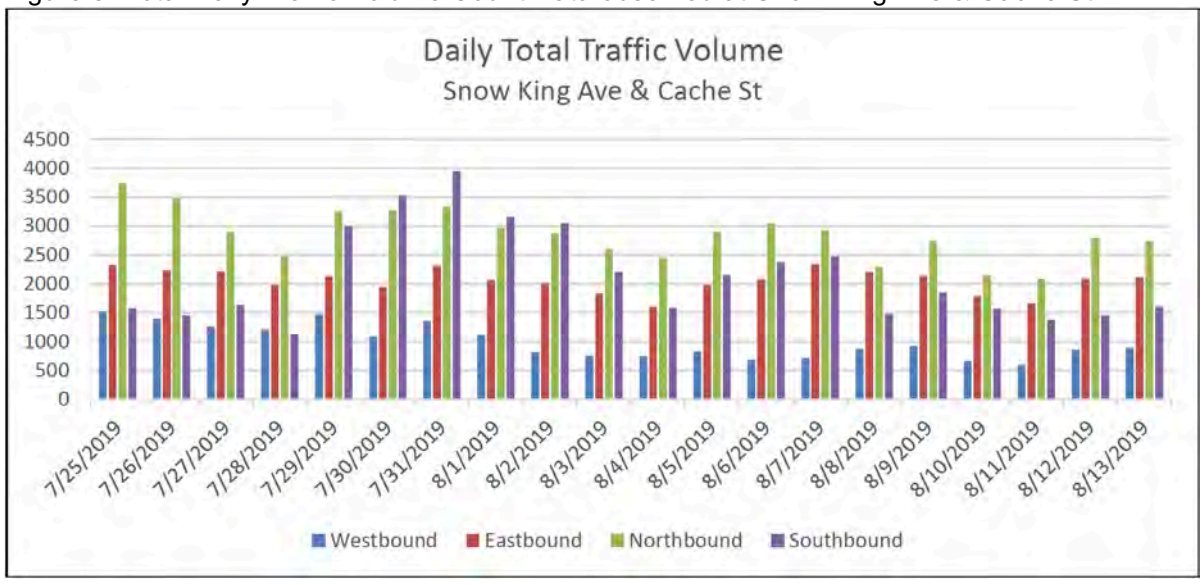


Figure 4: Overview of 2019 ADT, Peak Hour Volume, and turning movements for vehicles, pedestrians, and cyclists.



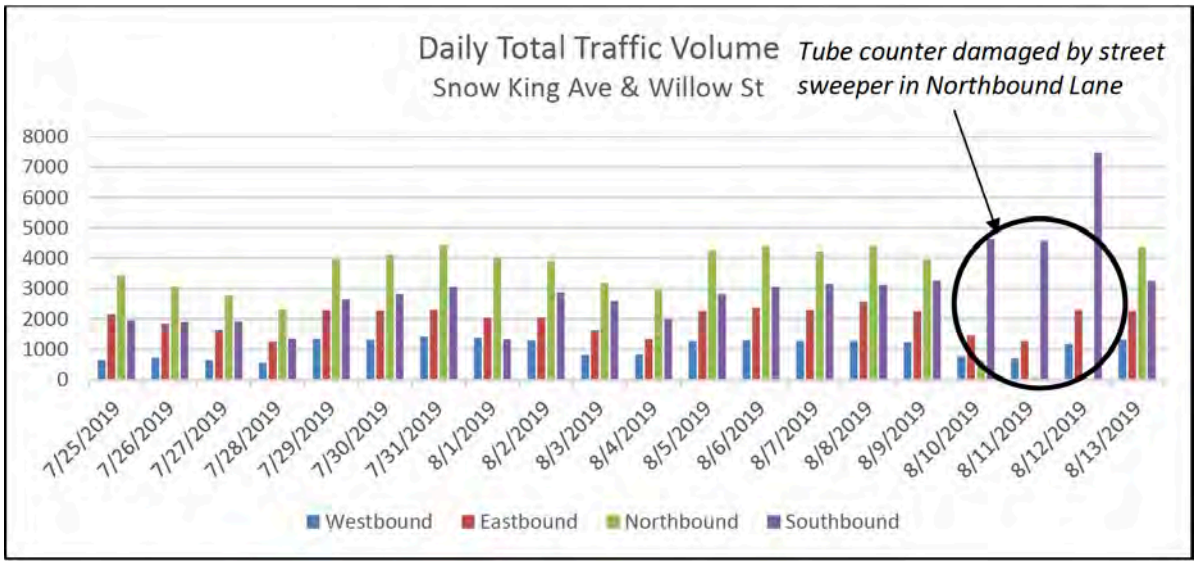
Directional daily total traffic volumes can be reviewed in Figures 5-7. At the intersection of Snow King Ave and Cache St the flow of traffic can be seen to be predominately East-West averaging 3000 vehicles per day. Northbound traffic is noticeable higher than Southbound, as going Northbound on Cache St provides access to N Highway 89 and the National Parks, as well as a direct route to downtown Jackson (Figure 5).

Figure 5: Total Daily Traffic Volume Count Data observed at Snow King Ave & Cache St.



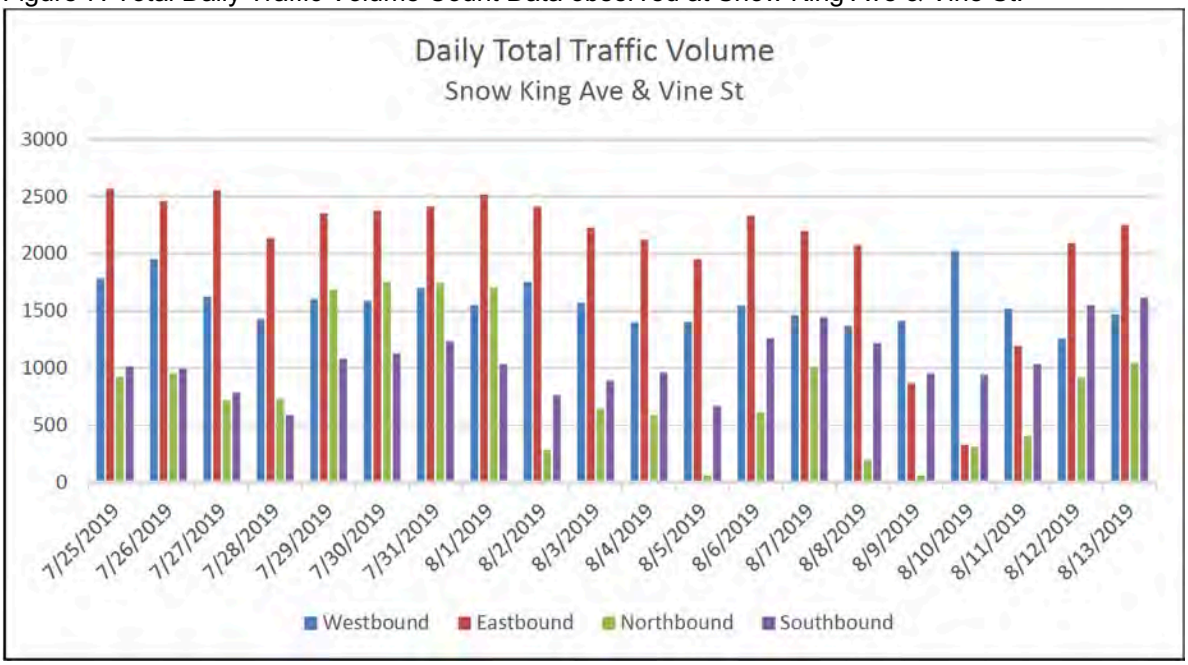
Daily traffic volumes for Snow King Ave and Willow St can be seen in Figure 6. This data demonstrates, again, that Willow St is being largely used as an arterial route North that circumnavigates the traffic of downtown and provides quick access to downtown from the East, or access to East Jackson. The Northbound traffic at this intersection averages 3200 vehicles per day (VPD), while southbound averages 3000 VPD. East-West traffic, using the aforementioned East-West corridor, averages approximately 2000 VPD (Figure 5).

Figure 6: Total Daily Traffic Volume Count Data observed at Snow King Ave & Willow St.



The intersection of Snow King Ave and Vine St observed good data collection for the duration of the study; damage to the tube counters did occur from street sweeping equipment, but they were promptly discovered and repaired before a significant data gap was created. (Figure 7). The predominant flow of traffic at this intersection can be seen to be flowing Eastbound into Snow King Resort, and its associated condominiums/accessory structures

Figure 7: Total Daily Traffic Volume Count Data observed at Snow King Ave & Vine St.



An analysis of ADT over typical peak season Weekdays vs. Weekends can be seen in Table 3. The Weekend ADT is predictably lower than Weekday ADT at all intersections, with varying ratios dependent on the street segment. The observed average ratio of Weekday:Weekend ADT is 1.29, which is slightly lower than the 2016 observed ration of 1.41.

Table 3: Comparison of Weekday vs. Weekend ADT for respective street segments.

	Weekday Average ADT	Weekend Average ADT	Overall Average ADT	Weekday:Weekend ADT Ratio
SKA East of Cache	3180	2718	3041	1.17
SKA East of Willow	3354	2673	3150	1.25
SKA East of Vine	3763	3354	3640	1.12
Cache North of SKA	5390	4032	4982	1.34
Willow North of SKA	6811	4835	6219	1.41
Vine North of SKA	2064	1432	1874	1.44
		Average ADT Ratio:		**1.29**

Alternative Transportation Analysis

Use of alternative transportation means varies between Snow King Resort Employees and Guests. As part of the wording in the TDM Strategy, each shall be reviewed separately (see next section for respective analysis). Initial manual count data, performed from 7:00-9:00 AM and 4:00-6:00 PM on 8/8/19 and 8/13/19 yielded the peak hour traffic numbers in Table 4. Including all routes at all intersections, a commuter hour modal split of 24% was observed, averaged over the three days of manual data collection. This is a slight decrease from the alternative transportation modal split of 30% observed in 2016.

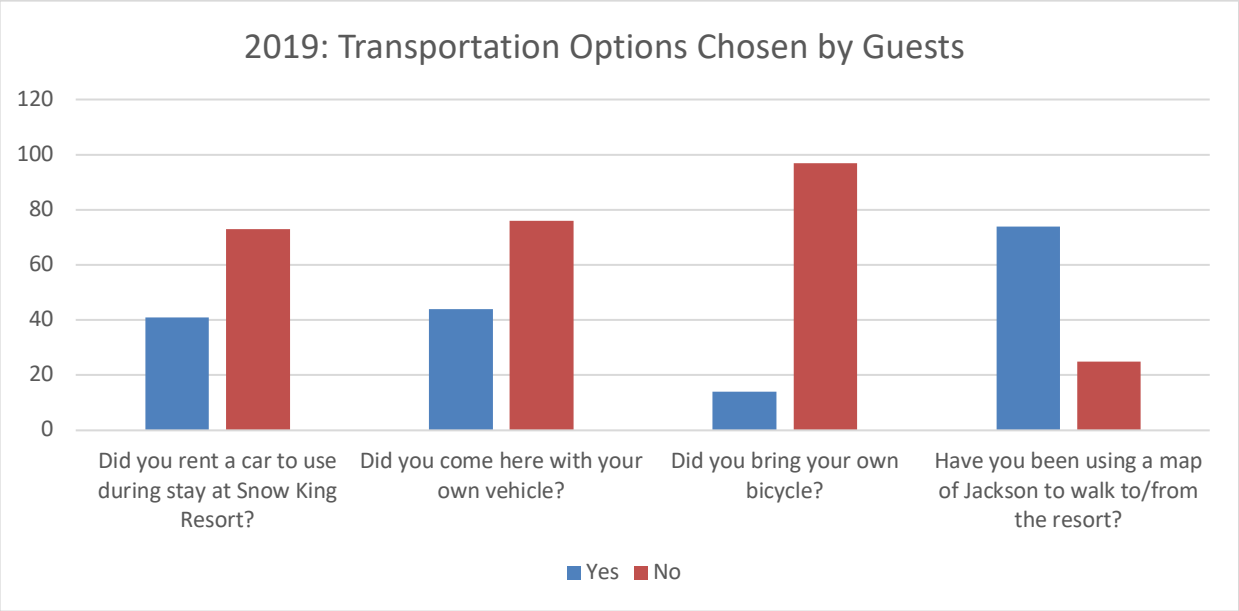
Table 4: Peak Hour Directional Traffic by Transportation Mode & Observed Modal Split by Route.

Intersection & Direction	Total Vehicles	Total Pedestrians	Total Cyclists	Modal Split Ratio
SKA & Cache Eastbound	259	12	24	14%
SKA & Cache Westbound	211	19	18	18%
SKA & Cache Northbound	39	6	5	28%
SKA & Cache Southbound	89	15	11	29%
SKA & Willow Eastbound	219	18	25	20%
SKA & Willow Westbound	103	26	12	37%
SKA & Willow Northbound	21	2	2	19%
SKA & Willow Southbound	115	12	16	24%
SKA & Vine Eastbound	146	17	16	23%
SKA & Vine Westbound	83	26	6	39%
SKA & Vine Southbound	43	2	4	14%
			Average:	**24%**

Resort Guest Alternative Transportation Analysis:

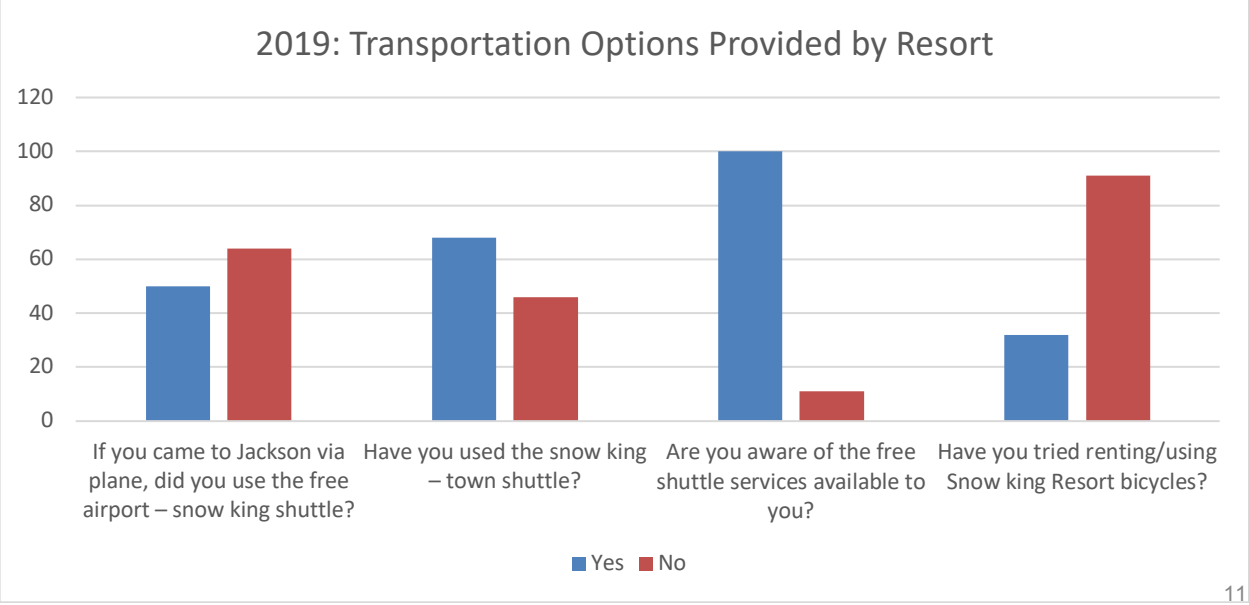
The majority of insight that was gathered into the transportation mode choices made by Guests was through analysis of the Resort Guest Questionnaires. Several of the TMMS strategies are aimed at encouraging Guests to ride the Bus, walk, or bike, through financial incentives as well as convenience. The data in Figure 8 indicates approximately 1/3 of Resort Guests flew into Jackson Airport and rented vehicles for the duration of their stay. However, approximately 30% of Guests that stayed at the Resort came to Jackson with their own vehicles. This provides the basis to assume that approximately 1/3 of Snow King Resort Guests arrived to Jackson via plane, and did not rent their own personal vehicles (Figure 9). This assumption is strongly supported by the figure that roughly 78% of Guests chose, at some point in their visit, to walk to and from downtown Jackson (Figure 8, last question).

Figure 8: Transportation choices made by Guests.



The Resort-furnished transportation options seem to be relatively well known by Guests and experience significant use (Figure 9). Approximately 43% of Guests arriving by plane took advantage of the Snow King Resort Shuttle, and over half of the Guests are regularly using the Resort-Town Square Shuttle. Less than 10% of Guests were unaware of the shuttle services available to them, or at least unaware that they were free/included with their stay at Snow King Resort. Approximately 18% of Guests took advantage of the Resort bike rentals, which is a relatively good achievement based on the age and interest range of Resort Patrons (Figure 9).

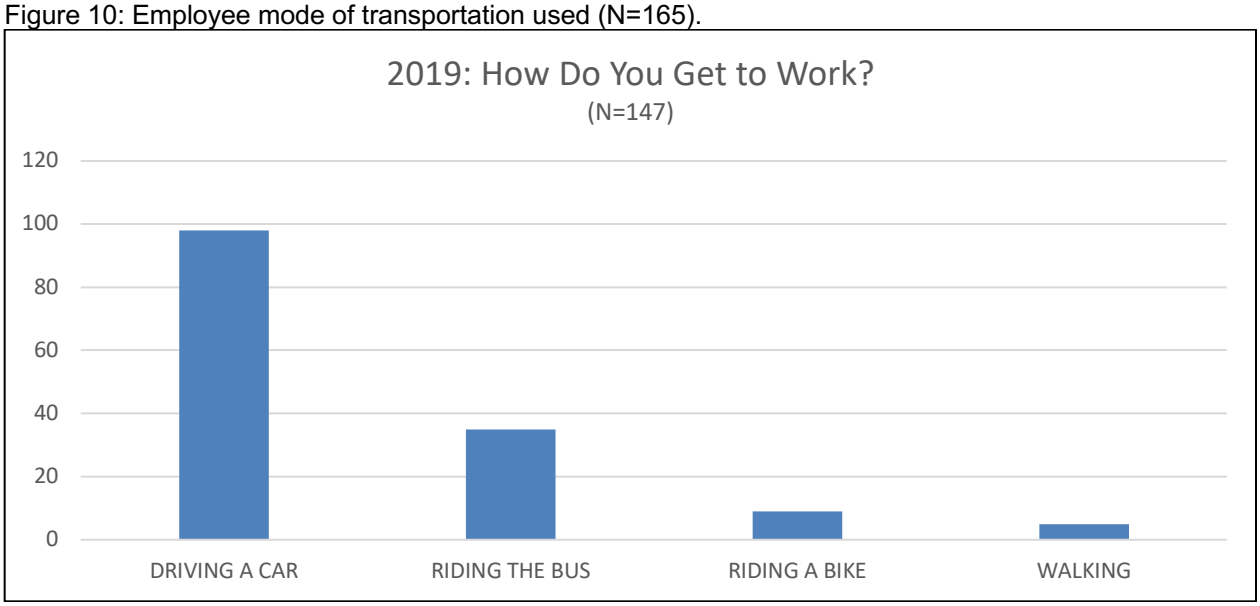
Figure 9: Guest usage of Resort provided transportation options.



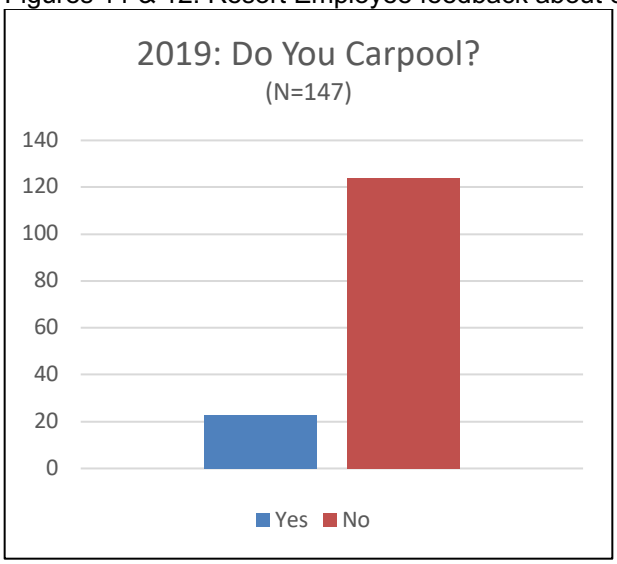
4.2.2 – Resort Employee Alternative Transportation Analysis:

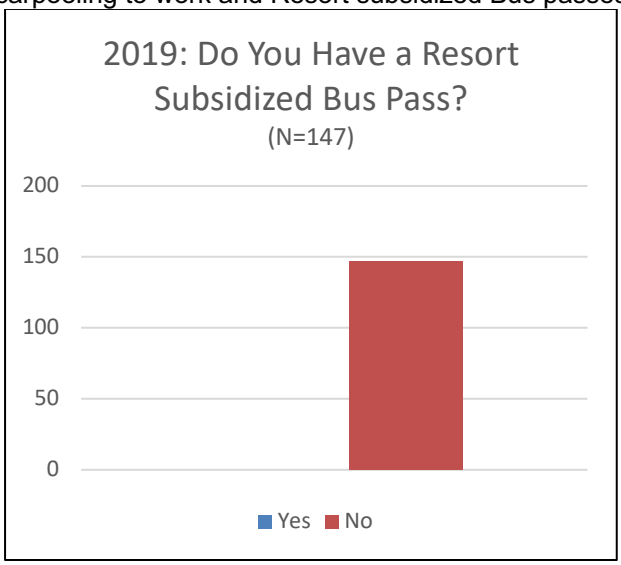
A review of the transportation choices made by Snow King Resort Employees revealed that the vast majority of Employees are either driving in personal vehicles, or riding the STARTBus (Figure 10). While this does not demonstrate an effort to encourage Employees to cycle, or walk to work, the public transportation ridership comprises over 1/3 of Resort Employees using alternative transportation.

Figure 10: Employee mode of transportation used (N=165).



Figures 11 & 12: Resort Employee feedback about carpooling to work and Resort subsidized Bus passes.

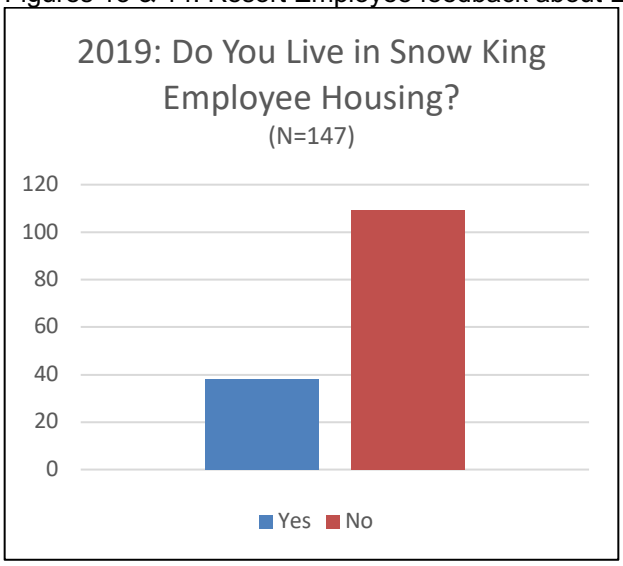


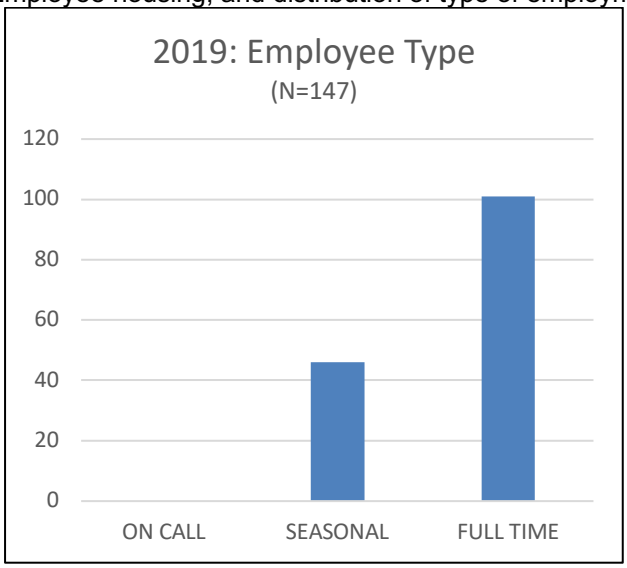


Approximately 28% of the Employees that choose to drive a vehicle to work responded 'Yes' when asked if they regularly carpooled, which significantly adds to the effort to reduce non-single-occupancy vehicles (Figure 11). When asked if the Resort provided discounted rates for STARTBus passes, 100% of Employees responded 'No.' While the majority of Employees likely live in the Town of Jackson, where the STARTBus Town Shuttle is free and therefore doesn't require a paid Bus pass, this leaves in question the benefits offered to Employees that live in Teton Village, Teton Valley, Idaho, or Star Valley/Alpine, Wyoming (Figure 12).

When surveyed about Employee housing, approximately 28% responded that they were offered, and currently live in, Snow King Resort provided Employee housing. This Employee benefit comes in several options- either in rented apartment units in the Town of Jackson, or seasonally leased motel rooms at the Kudar Motel (Figures 13 and 14).

Figures 13 & 14: Resort Employee feedback about Employee housing, and distribution of type of employment.





STARTBus Ridership

The STARTBus program has been serving Snow King Resort since its creation in 1987; however, only since 2015/2016, have START Bus drivers started collecting count information about ridership at the Snow King Resort stop.

One of the prominent conclusions from the 2016 Traffic Study was that the ridership data collection could be improved upon. Unfortunately, the START Bus program was attempting to do so across all of their lines and routes, but reported an issue mid 2019 regarding the data collection. Due to data collection software problems, the Start Director informed us that the current ridership dataset is unavailable.

Parking Impact Analysis

An important part of Snow King Resort's business, and the associated impact on the surrounding residential community, is the usage of both Resort-owned, as well as public parking lots. The aerial drone photography that was collected from 8/22/19 – 8/26/19 demonstrated an average mid-afternoon to early evening usage that can be seen in Table 6. During the typical mid-day times when this data was collected at either 10 AM, or 5 PM, it can be assumed that most Hotel Guests were out doing daytime activities (i.e., visiting National Parks, shopping, etc). The data shows continued medium usage in the Resort adjacent parking lots, with an average of 40% capacity throughout all observed periods. The Arena Lot, and the Overflow Dirt Lot remained largely unused throughout most of the week of observations with averages of 23% and 30%, respectively. The Snow King Ball Park Lot had low-moderate usage, with an average capacity of 26%.

Table 6: Summary of Parking Lot maximum capacity and average observed usage.

Parking Lot #	1	2	3	4	5
Lot Description	**Ball Park Lot**	**Arena Lot**	**Hotel Main Lot**	**Hotel Rear Lot**	**Overflow Dirt Lot**
Total Capacity	86	79	149	71	64
Average % of Max Capacity:	**26%**	**23%**	**40%**	**35%**	**30%**

Transit Systems

The Town of Jackson's public transit system consists of the expanding presence of the START Bus system, a Teton County bu service that originated in 1987 as transportation from Jackson to Teton Village. In recent years the START Bus services have expanded to provide Monday-Friday commuter lines from Star Valley, Wyoming and Teton Valley, Idaho, as well as a free town shuttle consisting of multiple lines running every day from 7:00 AM-8:00 PM.

Snow King Resort was included as a stop as early as the START Bus program's inception in 1987. Other than Teton Village, it is the only other stop in the entire START Bus operation that is on private land (all other stops

are on public roads). Since 1987, the frequency of Bus pickup/drop-off frequency has increased steadily to a current rate of hourly trips to Teton Village, and 30-minute intervals for the free town Shuttle.

Pedestrian and Other Non-Motorized Facilities

Snow King Resort is served by a series of 5-foot wide detached and 6-foot wide attached concrete sidewalks along Snow King Avenue. A short section of wooden boardwalk is located on the north side of Snow King Avenue. A 3-ft. wide sidewalk is located along both sides of South Cache Street from Snow King Avenue to Broadway Avenue. A series of horse trails and hiking trails diverge from the resort and access various parts of Snow King Mountain and the National Forest lands to the south of the Resort. These trails and sidewalks are shown in **Figures C- 9, C-9A, C-98, C-9C, C-10, and C-11.**

The best pedestrian route from the resort to the town square is via Snow King Avenue and Cache St. Most Snow King guests walk the sidewalk on Snow King and Cache streets to access other parts of the downtown. The Jackson Hole Pathway System does not access the Resort at this time; however, designated bike routes connect the pathway system to the resort. Bicyclists use the vehicle travel lanes or parking lanes of Snow King Avenue to travel to and from the Resort. Two popular trails for hiking and biking originate at Phil Baux Park and go up the mountain to connect to the greater Snow King trail system on National Forest Lands.

C.2 Travel Demand Analysis

Travel demand for the Snow King Resort is determined by correlating existing conditions and traffic counts at the resort with future conditions. Additional information developed includes trip generation (based on Resort buildout), estimated modal split, and peak hour calculations.

Trip Generation

Trip generation for Snow King Resort is focused on summer conditions. Trip generation for Resort buildout is calculated from several factors including: total overnight guestrooms (hotel), total condominium units, commercial uses and densities, and number of employees. **Table C-5** lists existing conditions at the time of the original master plan (2000) and proposed conditions, projection rates, and traffic projections for Snow King Avenue east of Willow Street. The Institute of Transportation Engineers (ITE) Trip Generation Manual indicates that typical projection rates for resort hotels vary between 10 and 15 trips per day per lodging unit. Removing the Vine Street traffic counts and the Phibbs Law Office counts from the Snow King Avenue counts (East of Willow) and dividing by the number of lodging units yields an average projection rate of 10.1 trips per day per unit (at full occupancy). According to ITE, hotel condominium units generate between 4 and 18 trips per day per unit with an average rate of 9.5 trips. Teton County has historically used a townhouse trip generation factor of 7.2 trips per unit per day. Dividing the number of condominium units into the number or trips accessing the condominiums yields a trip generation factor of 8.0 trips per day. For these projections a hotel rate of 10.2 and a condominium rate of 8.0 are used. The floor area, guest numbers and conference seats are shown for comparison purposes.

Table C-5

Use Description	Existing (2000)	Proposed	Gen. Rate	Projected Existing ADT	Final ADT
Hotel Rooms	204	654	10.2	2,080	8,752
Condo Units	38	95	8.0	304	1,064
Employee Housing		65	4		260
Alpine Slide (Rides/day)	900	1,350	*		
Restaurant Seats	47	0	*		
Lounge/Bar Seats	50	0	*		
Total				**2,384**	10,076
Floor Area	160,000	730,000			
Total Guests	616	1,844			
Conference Seats	250	1,000			

A - Indicates maximum occupancy accessed from the Resort.
6 = Indicates 204 employees to be housed on-site in 65 - 3 and 4 bedroom units.
* = Indicates projection included in resort (hotel) rate.
ADT = Average Daily Traffic

In general, the trip generation factor of 10.2 yields traffic volumes consistent with the recorded volumes. Minor differences between the recorded and projected ADTs maybe due to several factors including lower hotel occupancy rates, shared uses, and high pedestrian and transit activity.

The projected final ADTs in **Table C-5** reflect a "worst-case" scenario. The Resort may build more condominiums and fewer hotel rooms resulting in lower projected traffic volumes. Also, as shown in **Table C- 2,** changes in room occupancy and alpine slide ridership do not appear to significantly impact traffic volumes. There is a certain amount of "background" traffic along East Snow King Avenue that exists whether the hotel has guests or not. Consequently, the traffic projections in **Table C-5** likely overstate the future traffic volumes.

The traffic volume on Willow Street averages 51% of the volume on Snow King Avenue east of Willow. Assuming no changes to Willow Street (improvements at the MAC campus, installation of one-way pairs, etc.) and no changes in pedestrian, transit, or land uses, the projected traffic volume on Willow Street at Resort buildout is approximately 4,100 ADT. Analysis of **Figures C-2** through **C-7** and on-site observation indicate a significant flow of traffic eastbound on Snow King Avenue and then northbound on Cache and Willow Streets around 8 AM. Between 4 PM and 6 PM there is a similar flow in a southerly direction (on Willow) and a westerly direction (on Snow King).

Modal Split

Lack of data regarding ridership on private bus services, taxis and START at Snow King Resort and incompatible modal counting methodologies make it difficult to accurately determine modal split between automobiles, transit, pedestrians, and bicycles. The available data and conversations with START personnel indicate that Snow King Resort enjoys a high level of transit ridership compared to other areas in Teton County. The best estimate of current transit share is between 1% and 4% of vehicular trips at Snow King Resort. Improvements to summer transit operations (both public and private), emphasis on transportation demand management strategies, improved pedestrian facilities, and the additional of a frequent intra-town shuttle system should increase the transit mode share to 15-20%.

Snow King Resort is favorably located to reduce the percentage of automobile trips and increase percentages of transit and non-motorized trips. Pedestrian and bicycle trips varied from a low of 17% to a high of 40% of all trips on Snow King Avenue between the Resort and Willow Street. A typical modal split for this roadway segment during the summer is 20% ped/bike and 80% motorized. Estimated modal split of non-motorized trips between the Resort and Town Square is 2%-5% of all trips. Improved sidewalk and trail facilities coupled with frequent and convenient transit facilities will increase summer non-motorized mode share to 15% of all trips. At buildout, transit and non-motorized facilities are estimated to account for 35% of all trips for streets immediately adjacent to the Resort and 25% for other segments. **Figure C-14** shows the proposed Transit and Pathways system for the Resort area. **Table C-6** shows the estimated vehicular traffic for adjacent roadways with 25%-35% modal split.

Table C-6

Street Segment	ADT 2000	Projected Trips (No Additional Modal Split	Projected Trips (25%-35% Modal Split)
SKA - East of Willow	2,384	10,076	6,549
SKA - East of Cache	4,672	12,627	9,470
SKA - West of Cache	5,046	13,637	10,228
Willow	1,627	4,091	2864
Cache	2,991	8,083	6062

Peak Hour Forecasts

Peak hour and 30th highest hour is often a more useful measure of a roadway's capacity than ADT. Roadway planning efforts utilize the projected 30th highest hour to determine whether a roadway segment needs improvement. The 30th highest hour is typically between 70% and 80% of the peak hour(s) and reflects a break in the curve below which the majority of the hours in a year fall. Designing for the 30 highest hour provides the best balance between cost and function. The peak hour in Jackson is likely to occur around the July 4th holiday weekend. The 30th highest hour for Jackson would typically represent the highest daily hour in June or August. It is reasonable to assume that the peak hours identified in the traffic counts conducted at Snow King Resort during August 1999 reflect the 30th highest hour.

The peak hour averages 9.1% of the 24-hour total for the streets in the study area. The directional flow split at peak hour can be as great as 65/35. This directional split occurs during the AM and PM peaks when people are going to or from work. The projected peak hour counts for the study area are shown in **Table C-7.** These peak hours are based on the 25%-35% modal split projections listed in Table C-6.

Table C-7

Street Segment	Current Peak-Hour Traffic Per Lane	Projected Peak-Hour Traffic Per Lane
SKA - East of Willow	141	387
SKA- East of Cache	276	560
SKA - West of Cache	298	605
Willow	96	169
Cache	177	359

C.3 Level of Service

Street and Intersection Level of Service (LOS)
This analysis utilizes the *Highway Capacity Manual* prepared by the Transportation Research Board for two- way and four-way, stop-controlled, non-signalized intersections. Steps required to determine intersect ion capacity include:

- Define existing geometry and traffic conditions for the intersection.
- Determine the conflicting traffic through which each minor road movement and major road left turn movement must cross.
- Determine the size of the gap in the conflicting traffic stream needed by vehicles in each movement crossing a conflicting traffic stream.
- Determine the capacity of the gaps in the major road traffic stream to accommodate each of the subject movements that will use these gaps.
- Adjust the calculated capacities to account for impedance and the use of shared lanes.
- Estimate the average total delay for each of the subject movements and determine the level of service for each movement and for the intersection.

Specific information required for the calculations include:

- Volumes by movement for the hour of interest.
- Vehicle classification for the hour of interest.
- Peak Hour Factor.
- Number of lanes for minor and major streets.
- Grade of all approaches.
- Other geometric features of interest.

The methodology outlined in the *Highway Capacity Manual* utilizes gap acceptance modeling to determine the interaction of minor street and major street drivers. This modeling technique assumes that Two-way, Stop-Controlled intersections (TWSC) give no positive indication or control to the driver on the minor road as to when it is safe to leave the stop line and enter the major traffic stream. This modeling is based on three elements: the size and availability of gaps, the value of these gaps, and the relative priority of the various traffic streams.

The level of service criteria is given in **Table C-8.** Total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation.

Table C-8

Level of Service	Average Total Delay (seconds/vehicle)
A	<5
B	> 5 and <10
C	>10 and <20
D	> 20 and< 30
E	> 30 and< 45
F	> 45

The *Highway Capacity Manual* does not include a methodology for determining level of service *for* urban streets that are stop-controlled rather than signalized. Extrapolating from the methodologies for arterial streets, it appears that all streets in the vicinity of Snow King Resort are functioning at a level of service of NB. During peak hour congestion, the intersections at Willow - Snow King Avenue (for the Willow Street southbound leg) and Cache - Snow King Avenue degrade briefly to LOS C. The conditions on Cache Street will be influenced more by land use decisions for the downtown core than by the Snow King Resort.

Estimates of level of service for this street and Snow King Avenue to the west of Cache are based on the traffic projections in the Jackson Hole Transportation Plan. At Resort build-out, Snow King Avenue west of Cache will reach LOS *CID* for several hours during the day and the intersection at Cache will also function at LOS D during peak hours. The intersection at Willow will reach LOS D at peak hour. Presumably, the Willow - Snow King Avenue intersection will be converted from two-way stop-controlled intersection to four-way stop controlled intersection - improving the level of service to 8/C.

Sidewalk/Pathway Level of Service
Methodologies for determining LOS for sidewalks and pathways are poorly developed at this time. Until the fall of 2000, lack of sidewalks along Snow King Avenue and Willow Streets forced pedestrians *to* share the roadway with automobiles, buses, and trucks - for a LOS of D-F. The addition of sidewalks to these streets has raised the pedestrian LOS to A/8. (See **Figures 9, 9A, 98, and 10)**

C.4 Transportation Demand Management Program.

Transportation Demand Management Strategies
The purpose of a Transportation Demand Management program is to establish strategies that influence travel mode choice and minimize the use of single-occupant automobiles. These strategies are typically a combination of incentives (to transit and non-motorized modes) and disincentives (to single-occupancy automobiles). These TOM strategies are often financially based but can also utilize other management techniques such as marketing and housing. The primary goals are to reduce traffic congestion by reducing vehicular trips, reduce air pollution, and increase mode choice. Snow King Resort has already adopted some of these strategies, in particular the Resort provides free shuttle service for its guests to the airport, Teton Village, and downtown. The following list outlines some of the strategies necessary to influence mode choice and reduce automobile trips.

- Provide free or reduced-rate bus passes to all employees.
- Provide free or reduced-level bus/bike passes to guests and inform guests of the availability of transit and non-motorized modes prior to arrival.
- Continue (and increase frequency of) shuttle to Teton Village and Airport to encourage guests to use transit rather than renting automobiles.
- Provide employee ride-share incentives. Provide free parking for multi-occupancy vehicles and paid parking for single-occupancy vehicles.
- Continue to have groups as a large percentage of the lodging business.
- Construct the majority of development in a dense pattern near the shared parking area.
- Support and participate in community wide mass transportation invitations.
- Promote alternative travel modes through advertising and marketing.
- Provide "town" bikes at a nominal rate for guests.
- Coordinate with Town to provide a frequent and convenient Town Square - MAC Campus - Snow King shuttle system.
- Coordinate with the Town to provide improved sidewalk and pathway systems along Willow, King, and Cache.
- Provide information and reservation services and staging areas for float trips, snowmobile operators, and other tour operations.
- Develop parking district with combination of free and fee parking.
- Provide on-site and nearby employee housing.
- Require off-site parking for employees.
- Provide START Bikes and promote alternative modes of travel for employee and guests

A combination of five or more of the above strategies are required to ensure the the modal-split assumptions listed in **Table C-6** are to be realized.

Another strategy to reduce vehicle trips in the downtown (although not necessarily along Snow King Avenue) is to provide additional parking at the Resort to be used for downtown employee parking. In combination with a convenient in-town shuttle system, capturing employees at Snow King will help reduce traffic along West Broadway, Pearl Avenue, and Cache Street. Employees will be less likely to use their vehicles during the day for errands and more likely to walk or use the shuttle. An employee parking lot at the Resort is likely to generate only two trips per day per parking space (incoming and outgoing) rather than the more typical six to

ten trips per day.

Travel Demand Management Monitoring system

A TDM monitoring program helps insure that the TDM program meets the goals of reducing single-occupancy vehicle trips and increasing the use of alternative travel modes. The following items should be considered as part of the monitoring program:

- Prior to issuance of a building permit for the first approved Final Development Plan, conduct baseline traffic counts for all modes.
- Every three years, conduct 24-hour traffic counts, pedestrian counts, bicycle counts, parking counts, and transit counts. These counts shall begin two years following completion of the first Final Development Plan project.
- Conduct guest and employee surveys to determine mode choice, success of alternative traffic modes, and satisfaction with transportation options.
- Conduct parking surveys to determine parking utilization by employees, guests, locals, and other visitors.
- Conduct parking counts for all surface parking lots over 10 spaces as part of the required transporting monitoring.
- Correlate hotel occupancy with traffic counts and available transportation options.
- Survey transit providers (public and private) to determine utilization during peak travel periods. Maintain a database of transit ridership.
- Snow King will participate in any Town of Jackson TDM programs for the entire base area including surrounding property owners and users as requested in the future.
- Ensure a minimum of at least 5 TDM Strategies are implemented at all times.
- In the event that all businesses in the Town of Jackson are required to fund the START Bus in the future, the Snow King Resort district will follow the same obligations as other businesses.
- Prior to development of sub-area 2, the parking lots in this area are to be available for public day use. The Town of Jackson may require these lots to be paved and stormwater infrastructure addressed (temporary and/or permanent) when deemed necessary by the Town. Both parking capacity and stormwater requirements shall be reviewed as part of the required TDM reporting every 3 years and/or as part of other permit review including but not limited to Conditional Use Permits. Parking capacity will be triggered for consideration when peak parking occupancy reaches 80% for the lots located in subarea #2 and in those lots adjacent to the recreational amenities in subarea #1. Stormwater consideration will be determined by the Town Engineer based upon increased impact to the Town right of way and infrastructure and other associated factors.

The primary gauge of the effectiveness of the TDM program will be whether or not there is a relative reduction in the peak hour traffic counts. The goal of the TDM program is to reduce the projected build out trips by 25%- 35%. Other measures of effectiveness will include the number of transit riders vs. hotel occupancy and/or traffic counts, parking counts vs. hotel occupancy, and ped/bike volumes vs. traffic counts.

C.5 Recommendations and Proposed System Improvements

Snow King Resort will participate with the Town in developing the most effective transportation network for the Snow King area and the downtown. The Resort looks forward helping formulate the best routes between the Resort and the MAC/Town Square area as well as determining an equitable cost-sharing arrangement for transit, streets, and sidewalks.

C.6 Phasing Plan

Snow King Resort anticipates coordinating sidewalk and street improvements with the Jackson Transportation Improvement Projects (JTIP). The final sidewalk and landscaping along the south side of Snow King Avenue will be constructed with the parking and plaza facilities. Depending on funding for Jackson sidewalks in the Capital Improvement Fund, intersection improvements at Willow Street will be constructed prior to major reconstruction at the Resort. Sidewalk improvements to South Cache Street, South King Street, and South Willow Street will also depend on the Jackson Capital Improvement Fund. Snow King Resort anticipates cost-sharing some of the improvements at Willow-Snow King intersection.

Actual timing of improvements will be influenced by the results of the Transportation Demand Management Monitoring Program. However, it must be recognized that the success of both the pedestrian and transit

systems are interrelated. It is unlikely that shuttle and transit ridership will increase without improvement to pedestrian and bicycle facilities. People are more willing to walk if they have the option to ride (on a shuttle) some of their route. Studies indicate that most people are unwilling to leave their vehicles and walk or use transit unless these facilities are convenient, safe, go to the desired destinations (Town Square, Teton Village, Airport, etc.), and function (in the case of transit) in a timely manner. Town land use patterns and the Town Parking Masterplan also influence the transit program. Aggressive efforts to minimize employee parking in the downtown core will only succeed with convenient satellite parking (including Snow King Resort), safe and well-maintained sidewalks, and efficient transit facilities.

The most recent Transportation Demand Management Report completed in 2019 is included at the end of this Master Plan.

Snow King Resort Master Plan - C. Parking Elements

P.1 Parking Summary

Snow King Resort's parking plan provides a surplus of daytime and evening parking for both summer and winter. During both seasons, a larger parking surplus is available during the day. The Town of Jackson and/or Teton Village could use these extra spaces for downtown employee parking or a transit hub parking area. There will be 1,783 summer spaces and 1,643 winter spaces. Of these spaces, 1,415 summer spaces and 1,275 winter spaces will be available for shared parking. The peak shared parking demand on Snow King facilities will be 947 in the summer and 720 in the winter. The smallest surplus of spaces in the summer and winter evenings is 468 and 555 respectively. A significantly larger surplus exists during the daytime. **Table P-1** shows the estimated proposed parking at Resort build-out.

SKRMA shall continue to engage in discussions with the Town and property owners in Sub-Area #2 on a shared parking arrangement between Sub-Area #2 and the Town's Phil Baux park property. Unless otherwise agreed, SKRMA must enter into a shared parking agreement with the Town of Jackson by December 31, 2020 so long as both parties are continuing to negotiate in good faith. The shared parking agreement shall include, at least but not limited to, provisions regarding construction and maintenance of the shared parking areas, snow removal from said areas and storm water system installation and maintenance.

AREAS AVAILABLE FOR SHARED PARKING	Summer Number of Spaces	Winter Number of Spaces
New Hotel and Condominium Wings - Underground	240	240
- Surface	215	150
KM6 Area - Underground	640	640
KM6 Area (Add. Alternate) - Underground	105	105
Ice Rink & Ballfield - Surface	169	140
Periphery Buildings - Surface	46	0
Shared Parking Subtotal:	1415	1275
AREAS NOT AVAILABLE FOR SHARED PARKING		
Periphery Buildings - Underground	88	88
- Covered	40	40
Love Ridge - Underground	106	106
- Covered	5	5
Existing Condominiums	126	126
Maintenance Building	3	3
Non-shared Parking Subtotal:	368	368
Total Proposed Parking Available:	1783	1643

Summary of Proposed Parking to be Provided
Table P-1

Summary of Proposed Parking to be Provided
Table P-1

Using the Town of Jackson parking ratios as a guide, the Urban Land institute's shared parking model was used to generate the hourly parking demand for weekdays and weekends during the summer and winter seasons. **Tables P-2** & **P-3** summarize the hourly and peak hour parking demands generated by the shared parking model. Additionally, these tables indicate the peak parking demand occurs on weekday evenings. Summer parking demands are higher than winter. According to the shared parking model, a parking surplus exists both summer and winter. These surplus spaces will be available for other shared uses. Due to improved *efficiency,* the proposed shared parking will provide an adequate number *of* parking spaces while reducing the amount of land dedicated to parking.

Summer Weekday

	Shared Guest Parking Spaces	Shared Employee Parking Spaces	Total Shared Parking Spaces
6:00 AM	569	156	725
7:00 AM	551	156	707
8:00 AM	545	156	701
9:00AM	550	140	691
10:00 AM	530	125	655
11:00 AM	523	125	648
12:00 PM	568	125	693
1:00 PM	566	125	691
2:00 PM	556	125	681
3:00 PM	503	140	644
4:00 PM	557	140	698
5:00 PM	642	140	782
6:00 PM	763	140	904
7:00 PM	807	125	932
8:00 PM	837	109	947
9:00 PM	810	109	920
10:00 PM	764	140	904
11:00 PM	630	156	786
12:00 AM	590	156	746

[a] Max Shared Parking Space Demand = 947

[a,b] Shared Parking Space Supply = 1415

[c] Parking Surplus at Peak Hour = 468

Summer Weekend

	Shared Guest Parking Spaces	Shared Employee Parking Spaces	Total Shared Parking Spaces
6:00 AM	567	156	723
7:00 AM	448	156	604
8:00 AM	483	156	639
9:00 AM	474	140	615
10:00 AM	441	125	565
11:00 AM	439	125	564
12:00 PM	508	125	633
1:00 PM	553	125	678
2:00 PM	563	125	688
3:00 PM	545	140	686
4:00 PM	563	140	703
5:00 PM	615	140	756
6:00 PM	710	140	850
7:00 PM	782	125	906
8:00 PM	799	109	908
9:00 PM	776	109	886
10:00 PM	752	140	892
11:00 PM	656	156	812
12:00 AM	629	156	785

[a] Max Shared Parking Space Demand = 908

[a, b] Shared Parking Space Supply = 1415

[c] Parking Surplus at Peak Hour = 507

[a] Does not include condominium parking because of its low ability to function as shared parking

[b] Shared parking supply from table P-1

[c] Represents minimum parking surplus

Summer Shared Parking Summary
Table P-2

Winter Weekday

	Shared Guest Parking Spaces	Shared Employee Parking Spaces	Total Shared Parking Spaces
6:00 AM	371	156	527
7:00 AM	390	156	546
8:00 AM	403	156	559
9:00 AM	386	140	526
10:00 AM	339	125	464
11:00 AM	334	125	459
12:00 PM	396	125	520
1:00 PM	408	125	532
2:00 PM	360	125	484
3:00 PM	318	140	458
4:00 PM	387	140	527
5:00 PM	463	140	603
6:00 PM	575	125	700
7:00 PM	595	125	720
8:00 PM	595	109	704
9:00 PM	548	109	657
10:00 PM	484	140	624
11:00 PM	401	156	557
12:00 **AM**	372	156	528

[a] Max Shared Parking Space Demand = 720

[a, b,d] Shared Parking Space Supply = 1275 Parking Surplus at Peak Hour = 555

Winter Weekend

	Shared Guest Parking Spaces	Shared Employee Parking Spaces	Total Shared Parking Spaces
6:00AM	344	156	500
7:00 **AM**	372	156	528
8:00 AM	385	156	**541**
9:00 **AM**	376	140	517
10:00 AM	330	125	**455**
11:00 AM	301	125	426
12:00 PM	406	125	531
1:00 PM	414	125	538
2:00 PM	391	125	516
3:00 PM	347	140	**488**
4:00 PM	385	140	526
5:00 PM	447	140	587
6:00 PM	551	140	692
7:00 PM	559	125	683
8:00 PM	579	109	688
9:00 PM	538	109	647
10:00 PM	503	140	644
11:00 PM	449	156	605
12:00 **AM**	426	156	582

[a] Max Shared Parking Space Demand = 692

[a, b,d] Shared Parking Space Supply = 1275

Parking Surplus at Peak Hour = 583

[a] Does not include condominium parking because of its low ability to function as shared parking

[b] Shared parking supply from table P-1

[c] Represents minimum parking surplus

[d] 82 summer spaces deducted from available parking supply

Winter Shared Parking Summary

Table P-3

P.2 Shared Parking Design Process:

A shared parking model, developed by The Urban Land Institute (ULI), was used to determine the parking requirement for Snow King. Snow King is well suited for a shared parking model because of its multiple land uses with varied peak parking times. The proposed large, centralized parking facility also improves the efficiency of shared parking by creating a large number of spaces with high turnover. This will enable the motorist to find parking with minimal effort.

The shared parking model tracks the required parking for various land uses in order to optimize the number of spaces. Shared parking reduces the amount of parking required compared to the standard computational methods which determine parking based on isolated single land use. Shared parking can improve the accuracy of the parking estimates and improve the efficiency of parking facilities. The ULI shared parking model follows four distinct steps as shown in **Figure P-4.** A more detailed illustration of the shared parking methodology is shown in **Figure P-5.** The first step evaluates the existing and proposed land uses. Each use will have its own set of parking requirements that will affect the amount of parking.

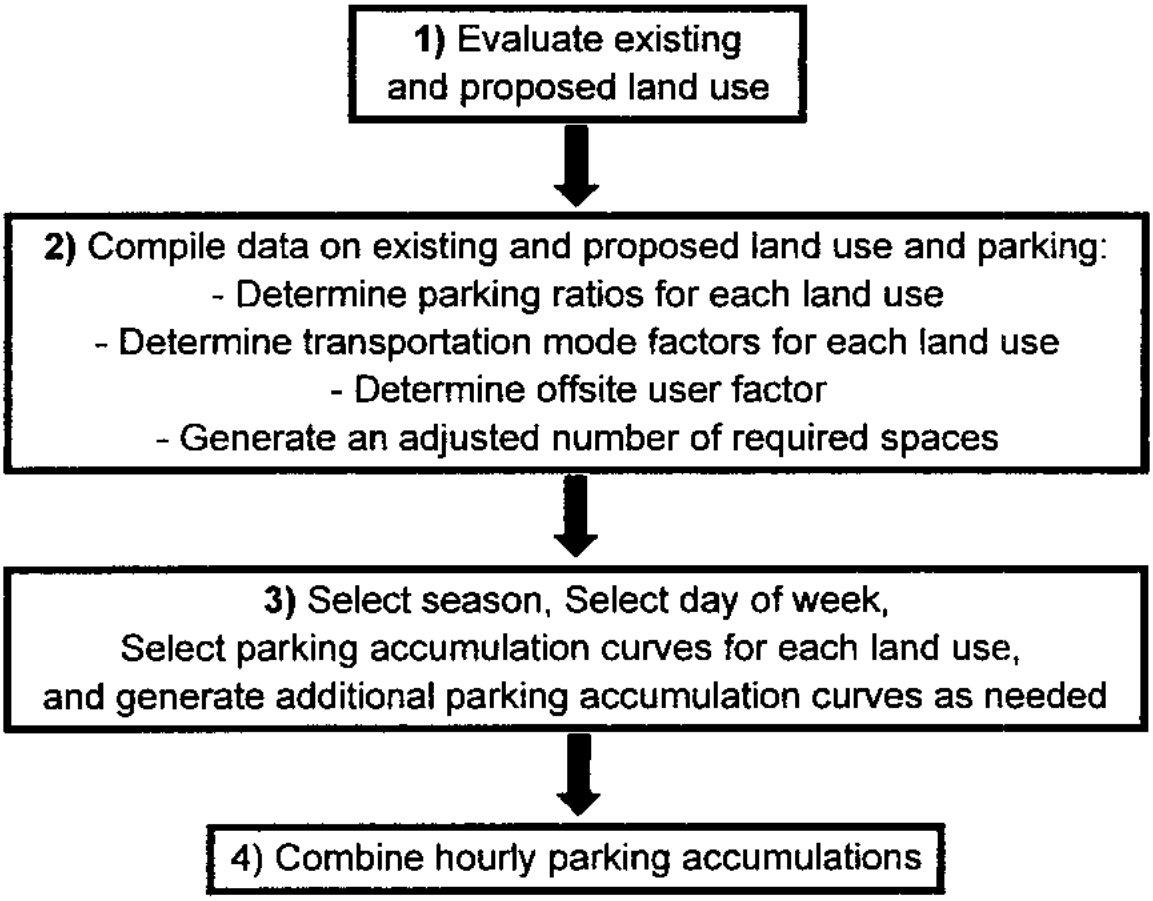
The second step involves compiling data on the land uses and parking. During this step, parking ratios are determined **(Table P-6,** Column D) for each land use using the Town of Jackson standards as a guide. These ratios are then applied to the size or number of units **(Table P-6,** Column A) proposed for each use resulting in the required number of parking spaces **(Table P-6,** Columns E and K). Although this parking space number represents the minimum number of spaces required by the town, in effect, this number will represent the maximum. This is because a combined use parking lot allows multiple uses during a single trip which, in turn, allows the parking lot to function more efficiently.

To more accurately predict the parking demand, the model needs to be adjusted to compensate for factors such as multiple use and businesses that are compatible with non-automobile use. This adjustment is made by using two factors, a "transportation mode factor" (TMF) and an "offsite user factor" (OUF). The TMF **(Table P-6,** Columns H & **N)** adjusts the required number of spaces to compensate for land uses that are compatible with non-auto use. The OUF **(Table P-6,** Columns I & 0) adjusts the required number of parking spaces for combined uses within the area and prevents an automobile from being counted more than once for visits involving more than one land use. These factors are included in the calculations on **Table P-6,** which is discussed in **Appendix B,** and applied to the "Number of Spaces Required (Unadjusted)" already discussed. It is important to note that the "Adjusted Number of Spaces Required" **(Table P-6,** Columns J & P) does not yet represent any shared parking for varied hourly peaks. Thus, the "adjusted number of spaces required" is the parking required after adjusting for the mode of transportation used and if guests use more than one facility. The "adjusted number of spaces required" represents the peak parking which is a single value that cannot vary.

The third step requires the determination of parking accumulation curves for each land use, which are shown and discussed in Appendix A. These curves are a function of how busy a given facility is each hour. The values for the curves indicate parking needs during the day and when a facility needs the most parking. With these curves, it is possible to see how a land use impacts the parking demand at each hour throughout the day. These curves can be used to represent seasonal use, daily use, or monthly use. In this study, weekday versus weekend use and summer versus winter use were examined. For convenience, summer and winter parking accumulation curve data has been compiled in **Table P-7.** The goal of using these curves is to maximize parking efficiency by locating a decline in parking by one land use and allowing the resulting excess parking to be utilized by a different use.

The fourth step uses static peak parking requirements from **Table P-6** with parking accumulation percentages from **Table P-7** to produce the adjusted shared peak parking for summer and winter shown in **Table P-8** and **Table P-9** respectively. These values are the parking spaces required for each land use at each hour of the day. In this fourth step, every hour is examined to determine how many cars will need to be parked for each use based on the parking accumulation curves. Tracking the variation of parking peaks as seen in the accumulation curves, allows for improved parking efficiency by allowing shared use. By generating parking demands for each hour of the day, the peak parking hour and demand are identified. A chart of the shared parking demands is provided with **Graphs 1, 2, 3,** & **4.** These charts indicate how shared parking can utilize the peaks and valleys in hourly demand to improve parking efficiency.

When the four steps of the design process are complete comparisons can be made between the proposed parking and the required parking. **Table P-10** summarizes the required at various steps along the design process. The number of the spaces required with and without credit for the TMF and OUF is included in this table as well as the parking requirement with shared parking. These comparisons are made for both the town and the composite parking requirements during the summer and winter season. The required amount of shared parking shows a significant reduction from the unadjusted numbers. The composite requirement, which is slightly higher than the town requirement, would require a maximum of 2,989 winter spaces if numbers were based on separate individual land use. After modeling the hourly shared parking demands, it was calculated that 947 parking spaces would be required for the summer weekday shared parking peak demand. Peak shared parking demands and the corresponding surplus of spaces are shown on **Tables P-2 and P-3.**



Shared Parking Design Process
Figure P-4

Benefits of Shared Parking Discussion

Determining the proper amount of parking for new development requires balancing the needs of the business, the needs of the community, and the community parking standards. Businesses, of course, do not want to "under-park". Under-parking frustrates customers, hurts business, and limits the flexibility of a development. Under-parking can also negatively impact surrounding residential areas because of "spill-over" during peak times. Over-parking generates other problems:

- Not counting land costs, surface parking costs the developer from $2,500 to $5,000 per space to construct.
- Structured parking can cost between $10,000 and $25,000 per space.
- Land used for parking is unavailable for other activities - including open space.
- Parking lots generate storm water runoff that is laced with pollutants such as oil, radiator coolant, and asbestos from brake linings. The cost to the developer and the community to collect and dispose of this pollution is high. Oil separator storm water units can cost between $5,000 and $50,000 depending on the volume of runoff.
- Over-parking encourages automobile use and discourages alternative transportation means such as transit, walking, and bicycling. This automobile use generates additional air pollution.
- Unnecessarily large parking areas are unfriendly, intimidating, and alienating. Pedestrians are forced to maneuver between destinations unless the lots include designated pedestrian facilities.

Blind adherence to national parking standards tends to encourage over-parking. A number of communities in the United States have begun revising their standards and the trend is toward reducing total parking spaces and developing alternative transportation. For example, metropolitan Portland and the State of Oregon are instituting new standards after determining that over-parking results in less efficient land usage and lower floor to area ratios. They have found that in areas where transit is provided and other non-auto modes are convenient, less parking can be provided and yet accessibility and mobility remain high - even for auto traffic. Shared parking helps reduce total parking demand. The key to shared parking is good transit, good pedestrian facilities, and different peak hours between adjacent uses. Minimizing impacts to surrounding neighborhoods can be challenging. Many communities form neighborhood parking districts in which stickers are required to park along residential streets. Successfully protecting adjacent neighborhoods requires increased parking enforcement as well as implementing the items necessary for a successful shared parking system.

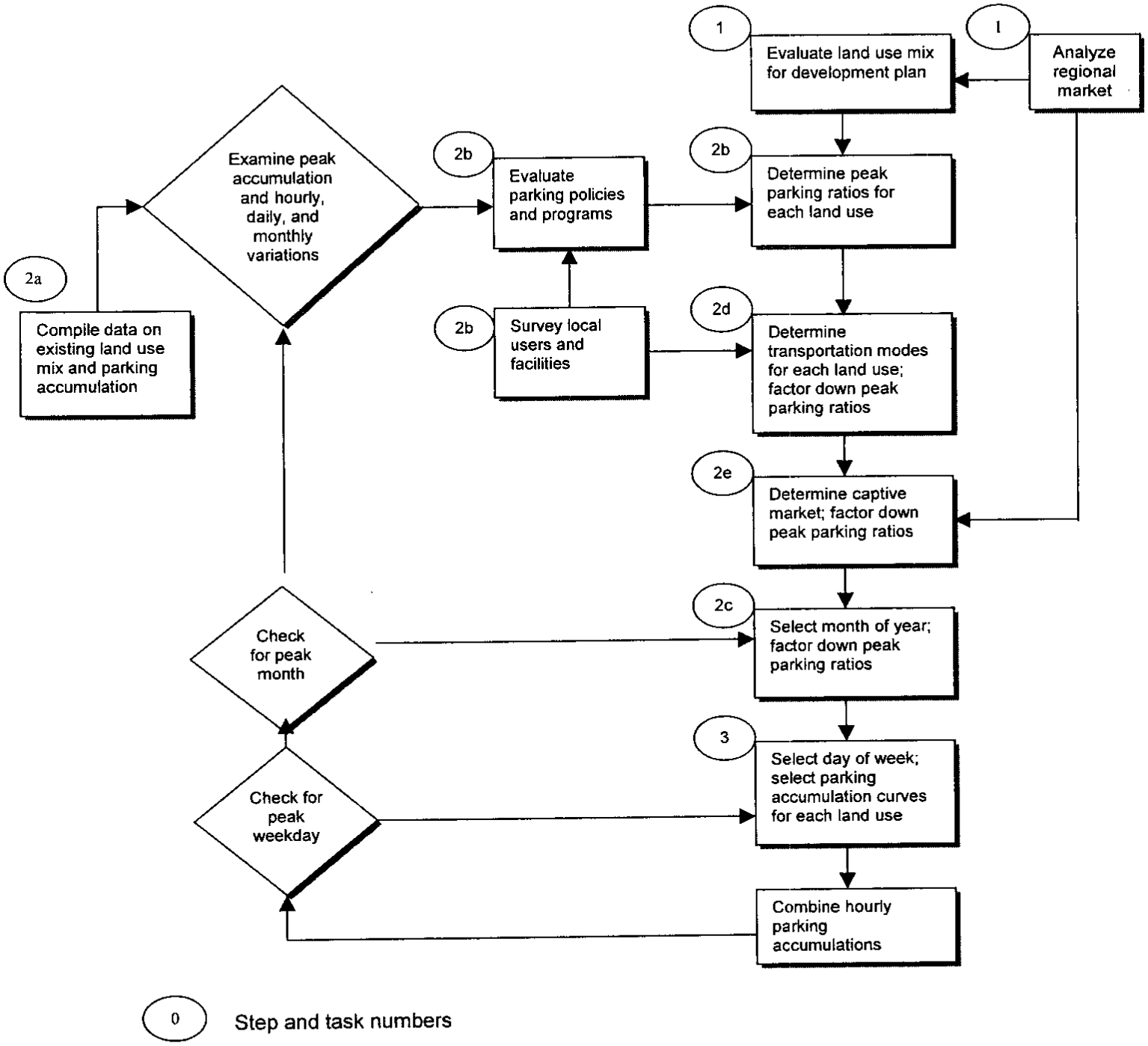
Fregonese Calthorpe Associates, regional and urban planning specialists, recently completed a report for the Town of Jackson titled, "Redevelopment Opportunities & Parking Analysis". This report proposes several changes to the Town of Jackson Parking Code and recommends, among other things, reducing the minimum parking requirements for commercial/office and lodging units. Shared parking allows for a net reduction in parking area while still providing adequate parking. **Table P-2** shows the Resort has the ability to provide 1415 shared spaces for a net surplus of 468 shared parking spaces during the peak hour of parking demand. This surplus represents one floor of the proposed structured parking lot in the KM6 area. As mentioned in Section C.4, providing additional parking at Snow King Resort to be used for downtown employee parking may be desirable for the community. In addition, this surplus parking could be used in the winter to provide an in-town transit parking lot for skiers heading to the Jackson Hole Mountain Resort in Teton Village. Snow King Resort looks forward to working with the Town of Jackson to develop effective transportation and parking solutions for the Resort and the community.

Snow King Resort Master Plan - Parking Elements

Appendix A
Parking Accumulation Curves

Parking accumulation represents the percent of peak parking utilized and is a function of how busy a land use is. Parking accumulation curves are based on those available in the ULI Shared Parking handbook. Some curves were modified to more accurately reflect the Jackson community by considering factors such as the hours of operation and pattern of use. Parking accumulation curves were created for the conference facilities, entertainment activities, ski area, health club, and resort staffing since no values for these activities were available in the Urban Land Institute literature.

Hotel:
Parking accumulation for hotel guests is based on the Urban Land Institute parking accumulation curves. These curves represent the scenario that parking accumulation increases as guest's check-in causing a peak in parking after guests have checked-in that remains high during the night until the morning when the accumulation drops due to guests leaving during the day. The summer parking accumulation was taken directly from ULI information. Based on past experience, the winter accumulation represents approximately 75% of the summer figures.



Shared Parking Methodology
(Source: Shared Parking, Urban Land Institute)
Figure P-5

	Units or SF (A)	Required Town of Jackson Parking Ratio per unit (B)	Urban Land Institute Parking Ratio per unit (C)	Proposed Composite Parking Ratio per unit (D)	Summer: Max. Parking Spaces Required (Unadjusted) (E)	Summer: Parking Demand Elligible for Sharing (F)	Summer: Parking Demand Not Elligible for Sharing (G)	Summer: Transport. Mode Factor [a] (H)	Summer: Offsite User Factor [b] (I)	Summer: Adjusted Number of Spaces Required (J)	Winter: Max. Parking Spaces Required (Unadjusted) (K)	Winter: Parking Demand Elligible for Sharing (L)	Winter: Parking Demand Not Elligible for Sharing (M)	Winter: Transport. Mode Factor [a] (N)	Winter: Offsite User Factor [b] (O)	Winter: Adjusted Number of Spaces Required (P)
Condominiums:																
Existing / Approved [f]	103	1.5	2.5	2.0	206	0	206				206	0	206			
Love (3 bedroom) [f]	53	1.5	2.5	2.0	106	0	106	0.80	1.00	0	106	0	106	0.80	1.00	0
Hotel Guest Rooms																
Existing	204	0.75	1.25	1.00	204	204	0	0.60	1.00	122	204	204	0	0.50	1.00	102
New	714	0.75	1.25	1.00	714	714	0	0.60	1.00	428	714	714	0	0.50	1.00	357
Subtotal Guest Units:	1074															
Conference (SF) (1/150)	76000	0.00667	0.5 [d]	0.00667	507	507	0	1.00	0.50	253	507	507	0	1.00	0.50	253
Theaters (Seats)	460	0.33	0.30	0.33	152	152	0	0.95	0.90	130	152	152	0	1.00	0.90	137
Resort Amenities:																
Miniature Golf (holes)	18	n/a	n/a	n/a	13	13	0	1.00	0.70	9	0	0	0	n/a	n/a	0
Horseback Rides (Horses)	20	0.25	n/a	0.25	5	5	0	1.00	0.80	4	0	0	0	n/a	n/a	0
Alpine Slide (person/hr)	143	n/a	n/a	0.33	47	47	0	1.00	0.70	33	0	0	0	n/a	n/a	0
Restaurant (Seats)	850	0.33	10 [e]	0.33	281	281	0	0.90	0.20	50	281	281	0	1.00	0.20	56
Lounge/Bar (Seats)	250	0.5	10 [e]	0.5	125	125	0	0.90	0.40	45	125	125	0	1.00	0.40	50
Commercial (SF) (1/250)	67200	0.002	4 [e]	0.004	269	269	0	0.90	0.50	121	269	269	0	1.00	0.50	134
Health Club		n/a [h]	n/a	100	100	100	0	1.00	0.90	90	100	100	0	1.00	0.90	90
Employees (1.0/#rooms)	1074	n/a	n/a													
With Housing on Site [c]	204	1.0	1.0	1.0	204	156	48	1.00	1.00	156	196	148	48	1.00	1.00	156
Snow King Ski Area		n/a [g]	n/a	130	0	0	0	1.00	1.00		130	130	0	1.00	1.00	130
TOTALS:		n/a [i]	n/a [i]	n/a [i]	2932	2572	360	n/a	n/a	1442	2989	2629	360	n/a	n/a	1465

[a] Transportation Mode Factor = % of people driving
[b] Offsite User Factor = % of users from offsite (not staying at the resort)
[c] During winter 8 dedicated employee spaces will not be available
[d] Refers to parking spaces per seat/person
[e] Parking spaces per 1,000 sf
[f] Parking ratio represents 2 units, assuming condos can be split into 2 separate rental units
[g] Ski area parking ratio is broken down between employees, hotel rooms, and skiers
[h] Health club parking ratio is based on workout machines, saunas, and square footage of other area
[i] See Table P-10 for parking totals using different parking ratios

Snow King Resort - Required Parking Spaces
Table P-6

Summer - Weekend & Weekday

SUMMER	WEEKDAY											WEEKEND										
	Hotel	Conference & Meeting	Theater	Ski Area & Other	Resort Activities	Restaurant /Lounge	Retail & Commercial	Health Club	Office	Employees Offsite Housing	Employees Onsite Housing	Hotel	Conference & Meeting	Theater	Ski Area & Other	Resort Activities	Restaurant /Lounge	Retail & Commercial	Health Club	Office	Employees Offsite Housing	Employees Onsite Housing
6:00 AM	100%	0%	0%	0%	0%	0%	0%	20%	0%	30%	100%	90%	0%	0%	0%	0%	0%	0%	0%	0%	25%	100%
7:00 AM	87%	0%	0%	0%	0%	50%	5%	20%	20%	45%	100%	70%	0%	0%	0%	0%	50%	5%	10%	3%	30%	100%
8:00 AM	66%	25%	0%	0%	0%	85%	16%	20%	60%	70%	100%	60%	15%	0%	0%	0%	85%	16%	15%	10%	60%	100%
9:00 AM	55%	45%	0%	0%	10%	80%	32%	15%	92%	85%	90%	50%	25%	0%	0%	15%	80%	32%	15%	12%	70%	90%
10:00 AM	45%	60%	0%	0%	60%	35%	50%	10%	100%	100%	80%	40%	30%	0%	0%	80%	35%	50%	15%	16%	70%	80%
11:00 AM	35%	70%	0%	0%	60%	20%	65%	20%	98%	100%	80%	35%	35%	0%	0%	100%	20%	65%	15%	18%	70%	80%
12:00 PM	30%	80%	0%	0%	70%	55%	73%	30%	88%	100%	80%	30%	40%	30%	0%	95%	55%	73%	20%	18%	70%	80%
1:00 PM	30%	80%	0%	0%	50%	60%	75%	30%	91%	100%	80%	30%	40%	70%	0%	65%	60%	75%	20%	13%	70%	80%
2:00 PM	35%	70%	0%	0%	70%	50%	73%	20%	97%	100%	80%	35%	35%	70%	0%	90%	50%	73%	15%	10%	70%	80%
3:00 PM	35%	50%	10%	0%	90%	30%	72%	15%	93%	100%	90%	40%	25%	70%	0%	100%	30%	72%	10%	8%	70%	90%
4:00 PM	45%	30%	58%	0%	80%	20%	66%	25%	74%	85%	90%	50%	15%	70%	0%	100%	20%	66%	15%	6%	70%	90%
5:00 PM	60%	30%	58%	0%	60%	25%	60%	40%	48%	85%	90%	60%	15%	70%	0%	80%	25%	60%	25%	3%	70%	90%
6:00 PM	70%	40%	67%	0%	50%	50%	61%	50%	25%	85%	90%	70%	20%	80%	0%	65%	50%	61%	20%	2%	70%	90%
7:00 PM	75%	40%	73%	0%	50%	50%	68%	50%	8%	70%	80%	80%	20%	90%	0%	65%	50%	68%	15%	0%	60%	80%
8:00 PM	90%	30%	83%	0%	0%	50%	65%	35%	5%	60%	70%	90%	15%	100%	0%	0%	50%	65%	10%	0%	45%	70%
9:00 PM	95%	30%	83%	0%	0%	35%	43%	20%	3%	30%	70%	95%	15%	100%	0%	0%	35%	43%	0%	0%	15%	70%
10:00 PM	100%	20%	83%	0%	0%	20%	22%	10%	1%	30%	90%	100%	10%	100%	0%	0%	20%	22%	0%	0%	15%	90%
11:00 PM	100%	0%	50%	0%	0%	15%	0%	0%	0%	15%	100%	100%	0%	70%	0%	0%	15%	0%	0%	0%	10%	100%
12:00 AM	100%	0%	30%	0%	0%	0%	0%	0%	0%	15%	100%	100%	0%	60%	0%	0%	0%	0%	0%	0%	10%	100%

Winter - Weekend & Weekday

WINTER	WEEKDAY											WEEKEND										
	Hotel	Conference & Meeting	Theater	Ski Area & Other	Resort Activities	Restaurant /Lounge	Retail & Commercial	Health Club	Office	Employees Offsite Housing	Employees Onsite Housing	Hotel	Conference & Meeting	Theater	Ski Area & Other	Resort Activities	Restaurant /Lounge	Retail & Commercial	Health Club	Office	Employees Offsite Housing	Employees Onsite Housing
6:00 AM	75%	0%	0%	0%	0%	0%	0%	30%	0%	30%	100%	75%	0%	0%	0%	0%	0%	0%	0%	0%	25%	100%
7:00 AM	65%	0%	0%	0%	0%	50%	5%	35%	20%	45%	100%	65%	0%	0%	0%	0%	50%	5%	15%	3%	30%	100%
8:00 AM	50%	15%	0%	10%	0%	85%	10%	35%	60%	70%	100%	50%	10%	0%	0%	0%	85%	16%	20%	10%	60%	100%
9:00 AM	40%	25%	0%	10%	10%	80%	20%	30%	92%	85%	90%	40%	15%	0%	30%	15%	80%	32%	30%	12%	70%	90%
10:00 AM	35%	30%	0%	30%	60%	35%	35%	20%	100%	100%	80%	35%	15%	0%	50%	80%	35%	50%	30%	16%	70%	80%
11:00 AM	25%	40%	0%	40%	80%	20%	45%	40%	98%	100%	80%	25%	20%	0%	65%	100%	20%	65%	30%	18%	70%	80%
12:00 PM	25%	40%	0%	50%	70%	55%	50%	60%	88%	100%	80%	25%	20%	35%	65%	90%	55%	73%	40%	18%	70%	80%
1:00 PM	25%	40%	0%	50%	50%	60%	55%	60%	91%	100%	80%	25%	20%	35%	65%	70%	60%	75%	40%	13%	70%	80%
2:00 PM	25%	35%	0%	55%	70%	50%	50%	40%	97%	100%	80%	25%	20%	35%	70%	90%	50%	73%	30%	10%	70%	80%
3:00 PM	25%	25%	10%	55%	90%	30%	50%	30%	93%	100%	90%	25%	15%	35%	60%	100%	30%	72%	20%	8%	70%	90%
4:00 PM	35%	15%	45%	50%	80%	20%	45%	50%	74%	85%	90%	35%	5%	55%	50%	100%	20%	66%	30%	6%	70%	90%
5:00 PM	45%	15%	45%	50%	60%	25%	40%	85%	48%	85%	90%	45%	5%	55%	40%	80%	25%	60%	50%	3%	70%	90%
6:00 PM	55%	20%	50%	50%	50%	50%	45%	100%	25%	85%	80%	55%	10%	75%	40%	65%	50%	61%	40%	2%	70%	90%
7:00 PM	55%	20%	60%	50%	50%	50%	50%	100%	8%	70%	80%	55%	10%	80%	40%	65%	50%	68%	30%	0%	60%	80%
8:00 PM	65%	15%	60%	40%	0%	50%	45%	70%	5%	60%	70%	65%	5%	80%	40%	50%	50%	65%	20%	0%	45%	70%
9:00 PM	70%	15%	55%	20%	0%	35%	30%	40%	3%	30%	70%	70%	5%	80%	30%	0%	35%	43%	0%	0%	15%	70%
10:00 PM	75%	10%	40%	5%	0%	20%	15%	20%	1%	30%	90%	75%	5%	70%	10%	0%	20%	22%	0%	0%	15%	90%
11:00 PM	75%	0%	30%	0%	0%	15%	0%	0%	0%	15%	100%	75%	0%	65%	0%	0%	15%	0%	0%	0%	10%	100%
12:00 AM	75%	0%	20%	0%	0%	0%	0%	0%	0%	15%	100%	75%	0%	60%	0%	0%	0%	0%	0%	0%	10%	100%

Parking Accumulation
by Percent of Peak Parking

Table P-7

Summer Weekday

Summer Weekday	Condominiums		Hotel Guest Rooms		Lodging Sub-Totals	Conferences, Meetings, & Groups	Theater	Resort Activities				Activity Sub-Totals	Resort Amenities				Amenities Sub-Totals	Total of Guest Spaces	Employees with Onsite Housing	Total Shared Spaces	Max Adjusted Non Shared Spaces Req
	Existing/ Approved	Proposed	Existing	New				Ski Area & Other	Miniature Golf	Horseback Rides	Alpine Slide		Restaurant	Bar	Retail & Commercial	Health Club					
Peak Parking	n/a	n/a	122	428	551	253	130	0	9	4	33	46	50	45	121	90	256	1286	156	n/a	1442
6:00 AM	n/a	n/a	122	428	551	0	0	0	0	0	0	0	0	0	0	18	18	569	156	725	1442
7:00 AM	n/a	n/a	106	373	479	0	0	0	0	0	0	0	25	23	6	18	47	551	156	707	1442
8:00 AM	n/a	n/a	81	283	364	63	0	0	0	0	0	0	43	38	19	18	76	545	156	701	1442
9:00 AM	n/a	n/a	67	236	303	114	0	0	1	0	3	5	40	36	39	14	88	550	140	691	1442
10:00 AM	n/a	n/a	55	193	248	152	0	0	5	2	20	28	18	16	60	9	85	530	125	655	1442
11:00 AM	n/a	n/a	43	150	193	177	0	0	7	3	26	37	10	9	79	18	106	523	125	648	1442
12:00 PM	n/a	n/a	37	129	165	203	0	0	6	3	23	32	28	25	88	27	140	568	125	693	1442
1:00 PM	n/a	n/a	37	129	165	203	0	0	5	2	17	23	30	27	91	27	145	566	125	691	1442
2:00 PM	n/a	n/a	43	150	193	177	0	0	6	3	23	32	25	23	88	18	129	556	125	681	1442
3:00 PM	n/a	n/a	43	150	193	127	13	0	8	4	30	41	15	14	87	14	114	503	140	644	1442
4:00 PM	n/a	n/a	55	193	248	76	75	0	7	3	26	37	10	9	80	23	111	557	140	698	1442
5:00 PM	n/a	n/a	73	257	330	76	75	0	5	2	20	28	13	11	73	36	120	642	140	782	1442
6:00 PM	n/a	n/a	86	300	386	101	87	0	5	2	17	23	25	23	74	45	141	763	140	904	1442
7:00 PM	n/a	n/a	92	321	413	101	95	0	5	2	17	23	25	23	82	45	150	807	125	932	1442
8:00 PM	n/a	n/a	110	386	496	76	108	0	0	0	0	0	25	23	79	32	133	837	109	947	1442
9:00 PM	n/a	n/a	116	407	523	76	108	0	0	0	0	0	18	16	52	18	86	810	109	920	1442
10:00 PM	n/a	n/a	122	428	551	51	108	0	0	0	0	0	10	9	27	9	45	764	140	904	1442
11:00 PM	n/a	n/a	122	428	551	0	65	0	0	0	0	0	8	7	0	0	7	630	156	786	1442
12:00 AM	n/a	n/a	122	428	551	0	39	0	0	0	0	0	0	0	0	0	0	590	156	746	1442

Summer Weekend

Summer Weekend	Condominiums		Hotel Guest Rooms		Lodging Totals	Convention	Movie Theater	Resort Activities				Activity Totals	Resort Amenities				Amenities Sub-Totals	Total of Guest Spaces	Employees w/ Onsite Housing	Total Shared Spaces	Max Adjusted Non Shared Spaces Req
	Existing/ Approved	Proposed	Existing	New				Ski Area & Other	Miniature Golf	Horseback Rides	Alpine Slide		Restaurant	Bar	Retail & Commercial	Health Club					
Peak Parking	n/a	n/a	122	428	551	253	130	0	9	4	33	46	50	45	121	90	256	1286	156	n/a	1442
6:00 AM	n/a	n/a	110	386	496	0	71	0	0	0	0	0	0	0	0	0	38	567	156	723	1442
7:00 AM	n/a	n/a	86	300	386	0	0	0	0	0	0	0	25	23	6	9	71	448	156	604	1442
8:00 AM	n/a	n/a	73	257	330	36	0	0	0	0	0	0	43	38	19	14	88	483	156	639	1442
9:00 AM	n/a	n/a	61	214	275	63	0	0	1	1	5	7	40	36	39	14	90	474	140	615	1442
10:00 AM	n/a	n/a	49	171	220	76	0	0	7	3	26	37	18	16	60	14	101	441	125	565	1442
11:00 AM	n/a	n/a	43	150	193	89	0	0	9	4	33	46	10	9	79	14	131	439	125	564	1442
12:00 PM	n/a	n/a	37	129	165	101	39	0	9	4	31	44	28	25	88	18	136	508	125	633	1442
1:00 PM	n/a	n/a	37	129	165	101	91	0	6	3	21	30	30	27	91	18	124	553	125	678	1442
2:00 PM	n/a	n/a	43	150	193	89	91	0	6	4	30	41	25	23	88	14	110	583	125	688	1442
3:00 PM	n/a	n/a	49	171	220	63	91	0	9	4	33	46	15	14	87	9	102	545	140	686	1442
4:00 PM	n/a	n/a	61	214	275	38	91	0	9	4	33	46	10	9	80	14	106	563	140	703	1442
5:00 PM	n/a	n/a	73	257	330	38	91	0	7	3	26	37	13	11	73	23	114	615	140	756	1442
6:00 PM	n/a	n/a	86	300	386	51	104	0	6	3	21	30	25	23	74	18	118	710	140	850	1442
7:00 PM	n/a	n/a	98	343	441	51	117	0	6	3	21	30	25	23	82	14	110	782	125	906	1442
8:00 PM	n/a	n/a	110	386	496	38	130	0	0	0	0	0	25	23	79	9	68	789	109	908	1442
9:00 PM	n/a	n/a	116	407	523	38	130	0	0	0	0	0	18	16	52	0	38	776	109	886	1442
10:00 PM	n/a	n/a	122	428	551	25	130	0	0	0	0	0	10	9	27	0	7	752	140	892	1442
11:00 PM	n/a	n/a	122	428	551	0	91	0	0	0	0	0	8	7	0	0	0	656	156	812	1442
12:00 AM	n/a	n/a	122	428	551	0	78	0	0	0	0	0	0	0	0	0	0	629	156	785	1442

Summer Adjusted & Shared Hourly Peak Parking

Table P-8

Winter Weekday

Winter Weekday	Condominiums		Hotel Guest Rooms		Lodging Totals	Convention	Movie Theater	Resort Activities				Activity Totals	Resort Amenities				Amenities Sub-Totals	Total of Guest Spaces	Employees w/ Onsite Housing	Total Shared Spaces	Max Adjusted Non Shared Spaces Req
	Existing/ Approved	Proposed	Existing	New				Ski Area & Other	Miniature Golf	Horseback Rides	Alpine Slide		Restaurant	Bar	Retail & Commercial	Health Club					
Peak Parking	n/a	n/a	102	357	459	253	137	130	0	0	0	130	56	50	134	90	274	1309	156	n/a	1465
6:00 AM	n/a	n/a	77	268	344	0	0	0	0	0	0	0	0	0	0	27	63	371	156	527	1465
7:00 AM	n/a	n/a	66	232	298	0	0	0	0	0	0	0	28	25	7	32	87	390	156	546	1465
8:00 AM	n/a	n/a	51	179	230	38	0	13	0	0	0	0	48	43	13	32	94	403	156	559	1465
9:00 AM	n/a	n/a	41	143	184	63	0	13	0	0	0	0	45	40	27	27	83	386	140	526	1465
10:00 AM	n/a	n/a	36	125	161	76	0	39	0	0	0	0	20	18	47	18	106	339	125	464	1465
11:00 AM	n/a	n/a	26	89	115	101	0	52	0	0	0	0	11	10	60	36	149	334	125	459	1465
12:00 PM	n/a	n/a	26	89	115	101	0	65	0	0	0	0	31	28	67	54	158	396	125	520	1465
1:00 PM	n/a	n/a	26	89	115	101	0	65	0	0	0	0	34	30	74	54	128	408	125	532	1465
2:00 PM	n/a	n/a	26	89	115	89	0	72	0	0	0	0	28	25	87	36	109	360	125	484	1465
3:00 PM	n/a	n/a	26	89	115	63	14	72	0	0	0	0	17	15	67	27	115	318	140	458	1465
4:00 PM	n/a	n/a	36	125	161	38	61	65	0	0	0	0	11	10	60	45	143	387	140	527	1465
5:00 PM	n/a	n/a	46	161	207	38	61	65	0	0	0	0	14	13	54	77	175	463	140	603	1465
6:00 PM	n/a	n/a	56	196	252	51	68	65	0	0	0	0	28	25	60	90	182	575	125	700	1465
7:00 PM	n/a	n/a	56	196	252	51	82	65	0	0	0	0	28	25	67	90	148	595	125	720	1465
8:00 PM	n/a	n/a	66	232	298	38	82	52	0	0	0	0	28	25	60	63	94	596	109	704	1465
9:00 PM	n/a	n/a	71	250	321	38	75	26	0	0	0	0	20	18	40	36	46	548	109	657	1465
10:00 PM	n/a	n/a	77	268	344	25	55	7	0	0	0	0	11	10	20	18	8	484	140	624	1465
11:00 PM	n/a	n/a	77	268	344	0	41	0	0	0	0	0	8	8	0	0	0	401	156	557	1465
12:00 AM	n/a	n/a	77	268	344	0	27	0	0	0	0	0	0	0	0	0	0	372	156	528	1465

Winter Weekend

Winter Weekend	Condominiums		Hotel Guest Rooms		Lodging Totals	Convention	Movie Theater	Resort Activities				Activity Totals	Resort Amenities				Amenities Sub-Totals	Total of Guest Spaces	Employees w/ Onsite Housing	Total Shared Spaces	Max Adjusted Non Shared Spaces Req
	Existing/ Approved	Proposed	Existing	New				Ski Area & Other	Miniature Golf	Horseback Rides	Alpine Slide		Restaurant	Bar	Retail & Commercial	Health Club					
Peak Parking	n/a	n/a	102	357	459	253	137	130	0	0	0	130	56	50	134	90	274	1309	156	n/a	1465
6:00 AM	n/a	n/a	77	268	344	0	0	0	0	0	0	0	0	0	0	0	45	344	156	500	1465
7:00 AM	n/a	n/a	66	232	298	0	0	0	0	0	0	0	28	25	7	14	82	372	156	528	1465
8:00 AM	n/a	n/a	51	179	230	25	0	0	0	0	0	0	48	43	22	18	110	385	156	541	1465
9:00 AM	n/a	n/a	41	143	184	38	0	39	0	0	0	0	45	40	43	27	112	376	140	517	1465
10:00 AM	n/a	n/a	36	125	161	38	0	65	0	0	0	0	20	18	67	27	124	330	125	455	1465
11:00 AM	n/a	n/a	26	89	115	51	0	85	0	0	0	0	11	10	87	27	162	301	125	426	1465
12:00 PM	n/a	n/a	26	89	115	51	48	85	0	0	0	0	31	28	98	36	167	406	125	531	1465
1:00 PM	n/a	n/a	26	89	115	51	48	85	0	0	0	0	34	30	101	36	150	414	125	538	1465
2:00 PM	n/a	n/a	26	89	115	51	48	91	0	0	0	0	28	25	98	27	130	391	125	516	1465
3:00 PM	n/a	n/a	26	89	115	38	48	78	0	0	0	0	17	15	97	18	126	347	140	488	1465
4:00 PM	n/a	n/a	36	125	161	13	75	65	0	0	0	0	11	10	89	27	138	385	140	526	1465
5:00 PM	n/a	n/a	46	161	207	13	75	52	0	0	0	0	14	13	81	45	143	447	140	587	1465
6:00 PM	n/a	n/a	56	196	252	25	102	52	0	0	0	0	28	25	82	36	143	551	140	692	1465
7:00 PM	n/a	n/a	56	196	252	25	109	52	0	0	0	0	28	25	91	27	130	559	125	683	1465
8:00 PM	n/a	n/a	66	232	298	13	109	52	0	0	0	0	28	25	87	18	75	579	109	688	1465
9:00 PM	n/a	n/a	71	250	321	13	109	39	0	0	0	0	20	18	58	0	40	536	109	647	1465
10:00 PM	n/a	n/a	77	268	344	13	96	13	0	0	0	0	11	10	30	0	8	503	140	644	1465
11:00 PM	n/a	n/a	77	268	344	0	89	0	0	0	0	0	8	8	0	0	0	449	156	605	1465
12:00 AM	n/a	n/a	77	268	344	0	82	0	0	0	0	0	0	0	0	0	0	426	156	582	1465

Winter Adjusted & Shared Hourly Peak Parking

Table P-9

Summer	Winter	
2256	2321	Town of Jackson Parking Requirement (Total Parking) [a]
n/a [c]	n/a [c]	Urban Land Institute Parking Requirement (Total Parking) [a]
2932	2989	Composite Parking Requirement (Total Parking) [a]
1292	1376	Town of Jackson Parking Requirement with Transportation Factor and Non-Resort User Factor [b]
n/a [c]	n/a [c]	Urban Land Institute with Transportation Factor and Non-Resort User Factor [b]
1442	1465	Estimated Composite Parking Required with Transportation Factor and Non-Resort User Factor [b]
947	720	Estimated Composite Parking Required with Transportation Factor and Non-Resort User Factor and shared parking
1415	1275	Proposed Shared Parking
1783	1643	Proposed Total Parking

[a] Required parking numbers represent the parking required for each use separately with no credit given for combined trips or alternative transportation

[b] Parking numbers represent the required parking based on parking ratios with credit given for combined trips and alternative transportation

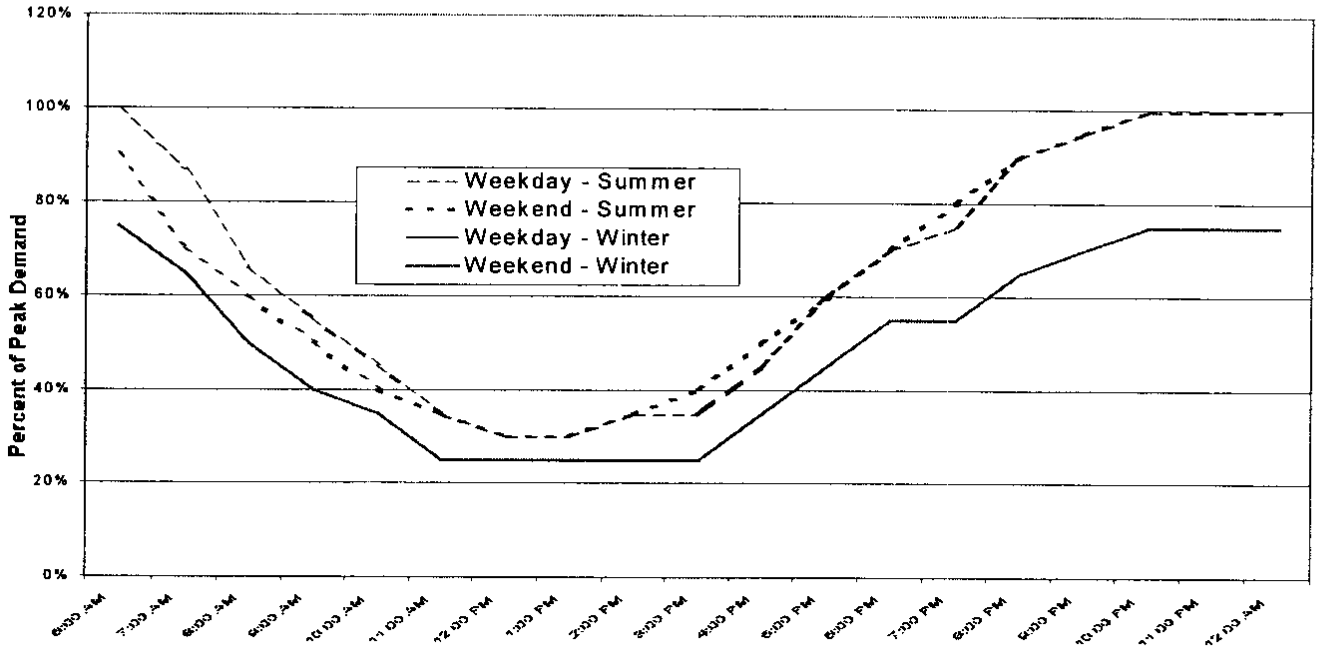
[c] Complete parking demands can not be computed since several land uses exist in Jackson which are not included in the ULI parking ratios

Required Parking Summary
Table P-10

Appendix A
Parking Accumulation Curves

Parking accumulation represents the percent of peak parking utilized and is a function of how busy a land use is. Parking accumulation curves are based on those available in the ULI Shared Parking handbook. Some curves were modified to more accurately reflect the Jackson community by considering factors such as the hours of operation and pattern of use. Parking accumulation curves were created for the conference facilities, entertainment activities, ski area, health club, and resort staffing since no values for these activities were available in the Urban Land Institute literature.

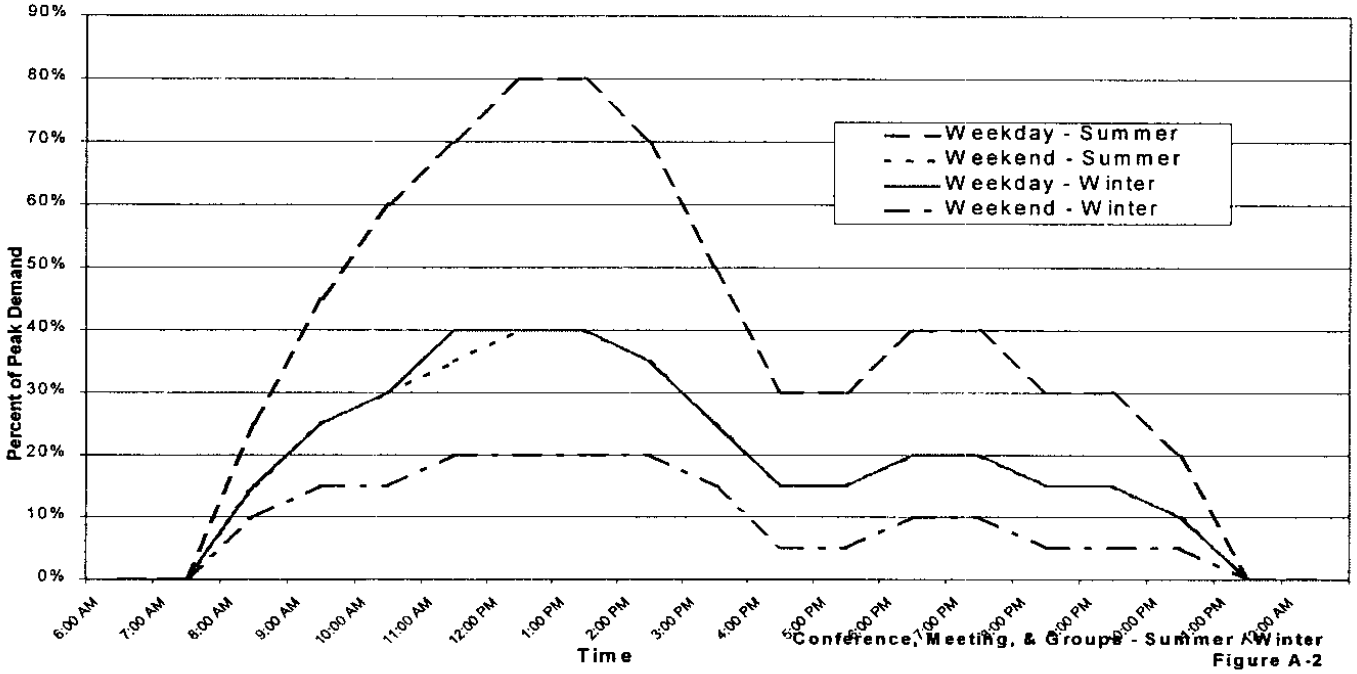
Hotel:
Parking accumulation for hotel guests is based on the Urban Land Institute parking accumulation curves. These curves represent the scenario that parking accumulation increases as guests check-in causing a peak in parking after guests have checked-in that remains high during the night until the morning when the accumulation drops due to guests leaving during the day. The summer parking accumulation was taken directly from ULI information. Based on past experience, the winter accumulation represents approximately 75% of the summer figures.



Hotel - Summer / Winter
Figure A-1

Conference, Meetings, & Groups:

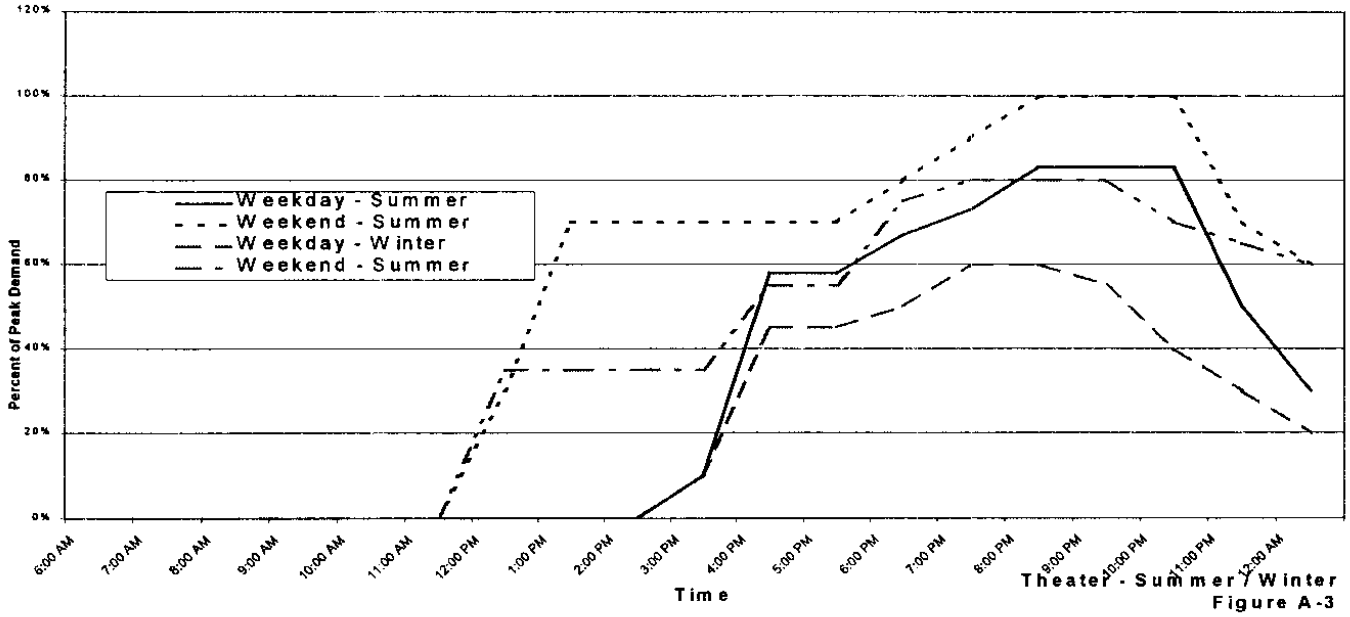
No parking accumulation curves were available from the Urban Land Institute for hotel conference space. Parking accumulation curves were generated based on past and projected use. Summer weekday provided the heaviest use of the facilities peaking between 12:00 p.m. and 1:00 p.m. with an additional peak in the evening hours between 6:00 p.m. and 7:00 p.m. summer weekend use is approximately half of the weekday use. Winter use is approximately half of the summer use.



Conference, Meeting, & Groups - Summer / Winter
Figure A-2

Theater:

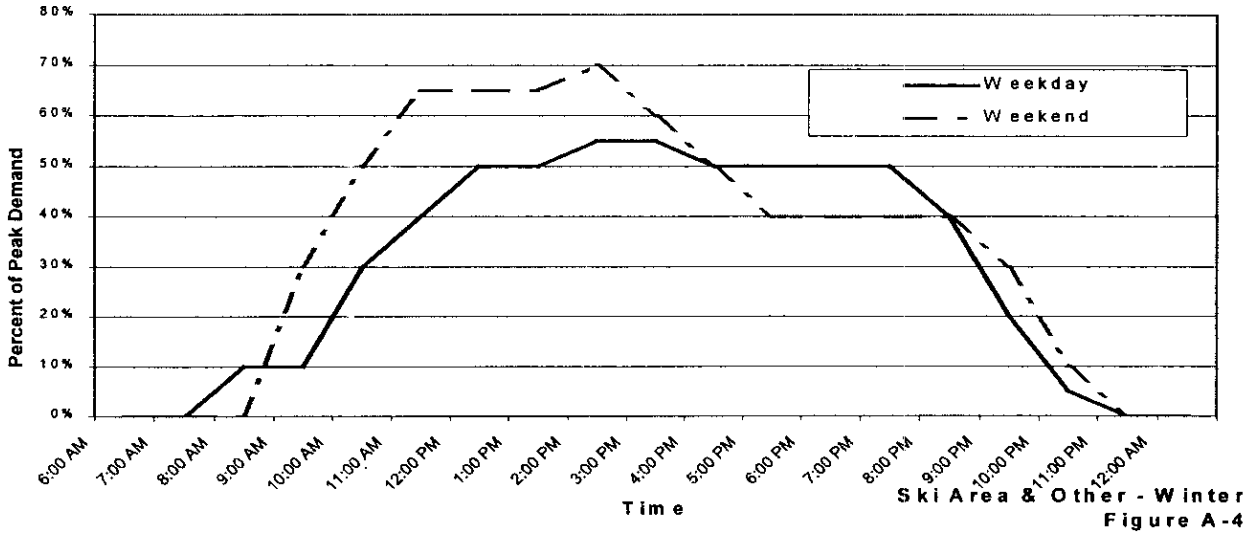
Parking accumulation curves come directly from the ULI recommendations. Summer months represent the busiest season because of the summer releases. Additionally, increased visitor traffic also increases demand on theater parking. Heaviest use occurs during the summer weekend evenings, with summer weekdays having slightly less use. Winter is represented with less use than the summer months.



Theater - Summer / Winter
Figure A-3

Ski Area & Other:

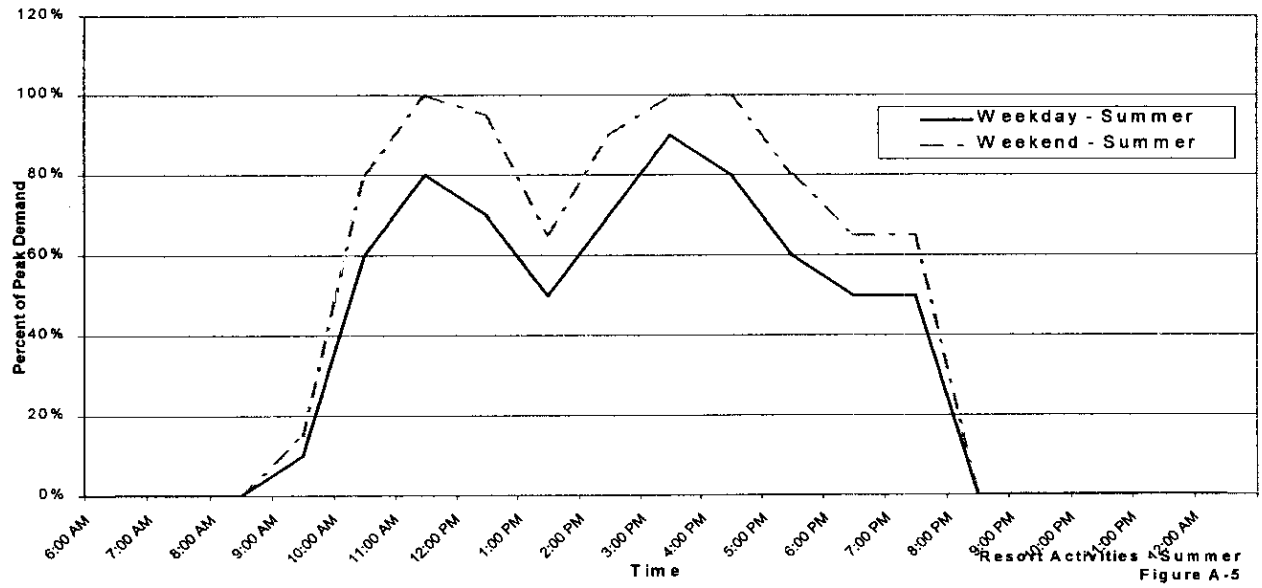
No parking accumulation curves were available from the ULI to represent demand on ski areas. Parking accumulation curves were generated based on experience with past use. Snow King typically sees two daily peaks corresponding to use during lunch as well as after school. The later peak generally continues into the evening hours. Weekends have a higher peak use with lower use in the evening.



Ski Area & Other - Winter
Figure A-4

Resort Activities:

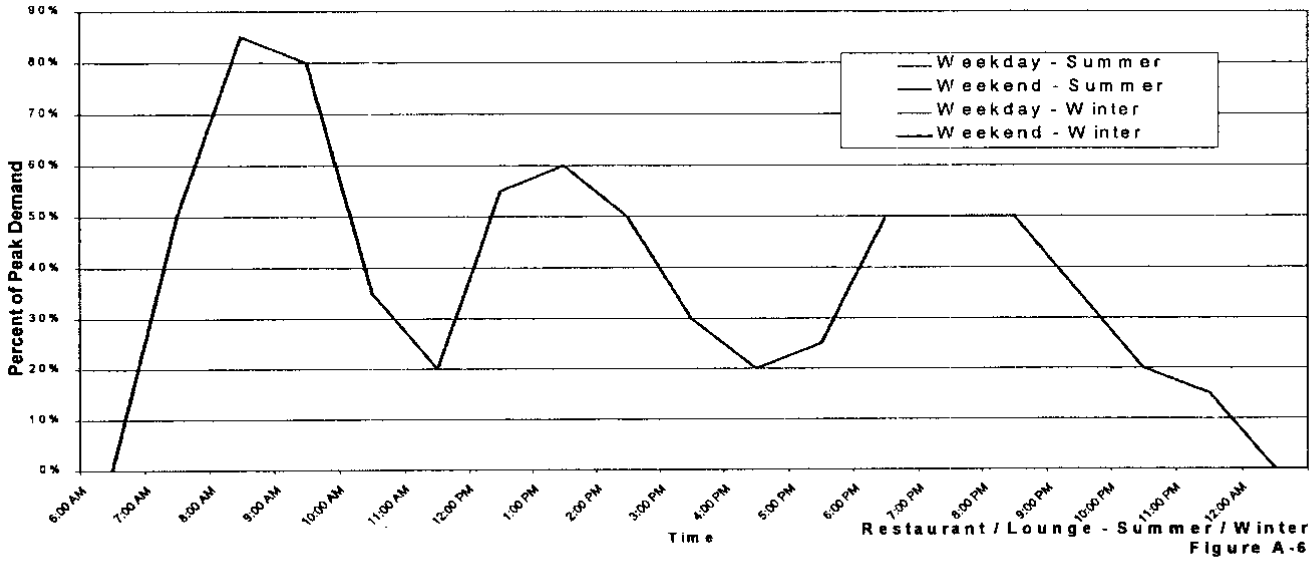
No parking accumulation curves were available from the ULI to represent demand on resort activities. Parking accumulation curves were generated based on experience with past use. The ski area typically sees two daily peaks corresponding to use before lunch as well as before dinner. Weekends have a higher use than weekdays.



Resort Activities - Summer
Figure A-5

Restaurant & Lounge:

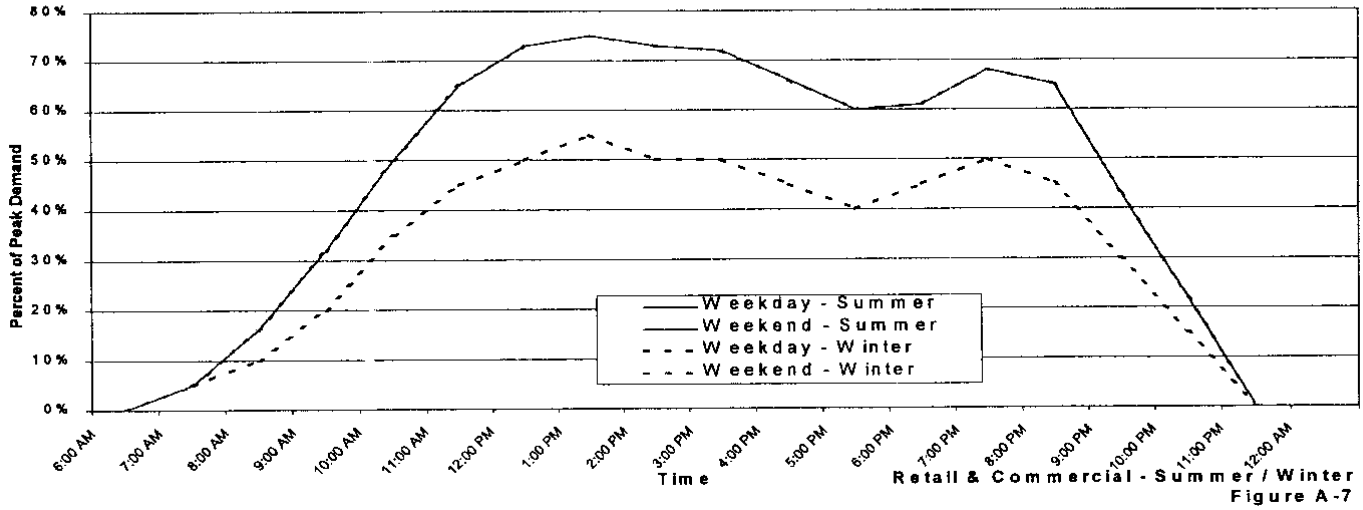
ULI hotel restaurant and lounge parking accumulation curves were consulted, however, the different hours of Snow King's restaurant and lounge required a new curve. The new parking accumulation curve was generated based on past experience and represented composite use of both the restaurant and the bar. The curve shows three peaks corresponding to meal times. Breakfast is the largest of the peaks followed by lunch and dinner. The dinner peak extends until approximately 9:00 p.m. to compensate for evening use of the bar.



Restaurant / Lounge - Summer / Winter
Figure A-6

Retail & Commercial:

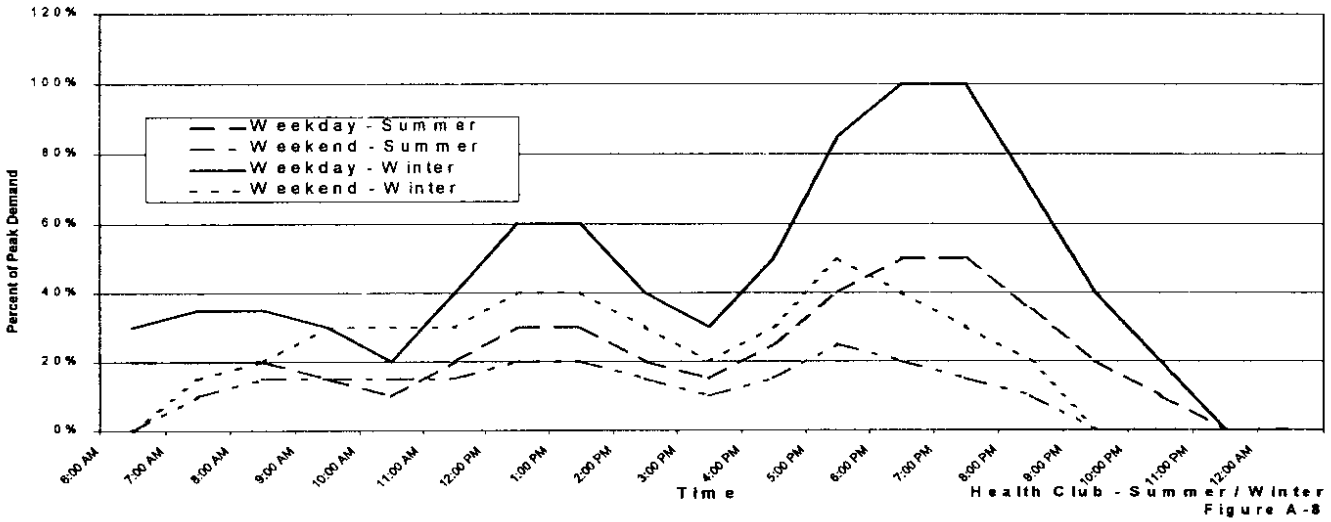
Parking accumulation curves come from the ULI recommendations with an increase in evening use to correspond with visitor shopping patterns. Summer represents the highest demand during the midday with a second peak in the evening. Winter demand is reduced from the summer demand.



Retail & Commercial - Summer / Winter
Figure A-7

Health Club:

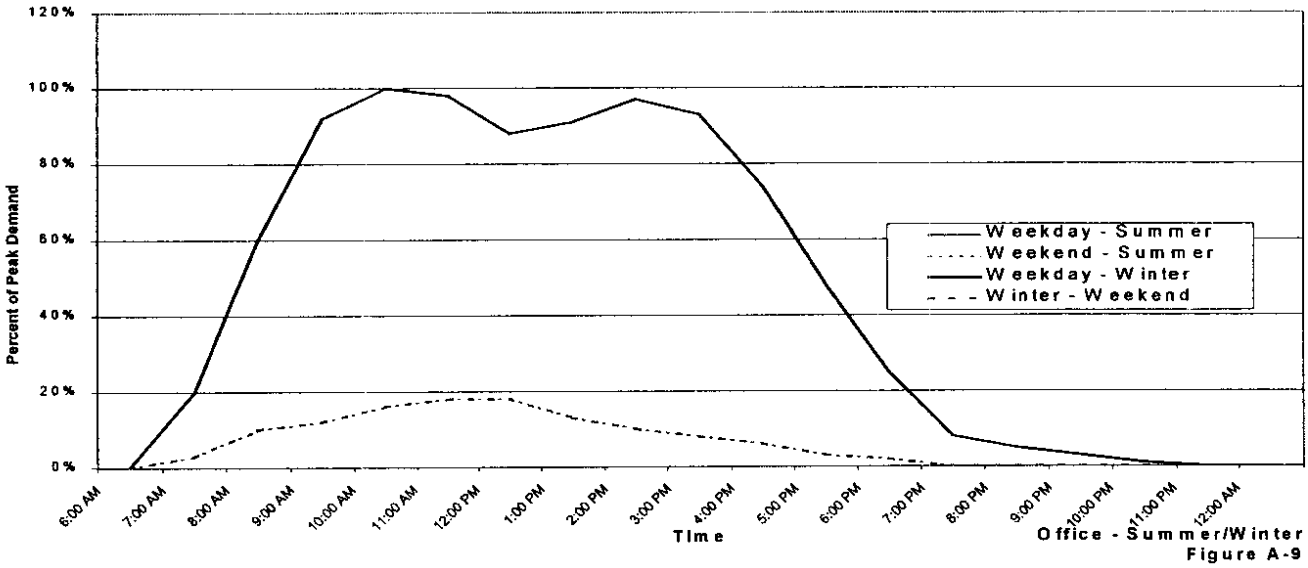
No parking accumulation curves were available from the ULI to represent demand on health clubs. Seasonal demand varied significantly. The largest demand occurs during winter weekdays after work. Weekends and summer weekdays have significantly smaller peaks. Peaks during the weekdays represent times before and after work as well as during lunch.



Health Club - Summer / Winter
Figure A-8

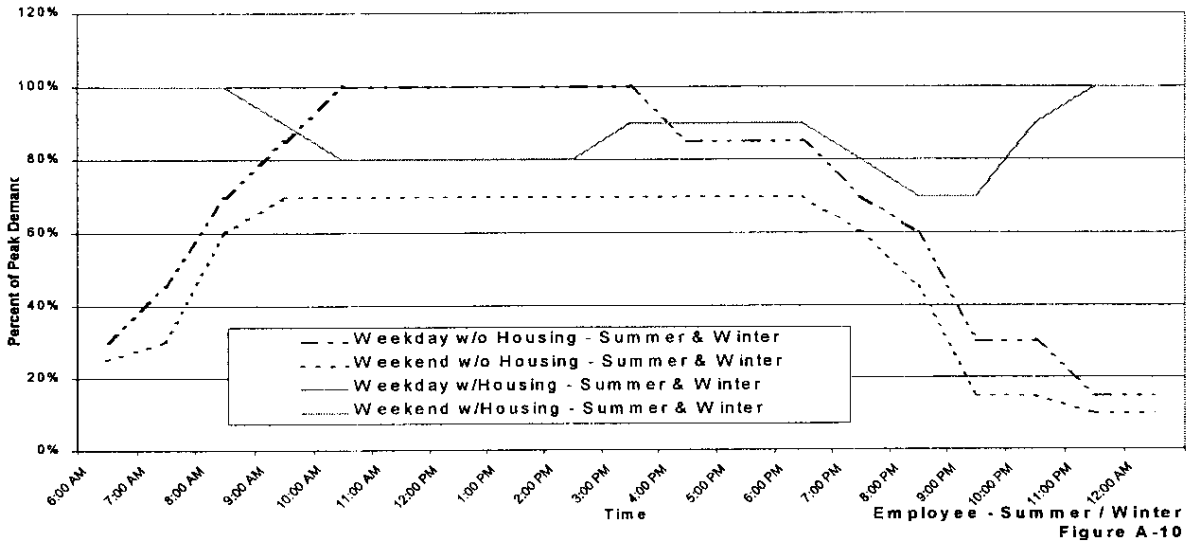
Office:

Parking accumulation for office use is based on the Urban Land Institute parking accumulation curves. This category of use has little influence on the overall parking because there are no offices located within the proposed use.



Office - Summer/Winter
Figure A-9

Employee:
No parking accumulation curves were available from the ULI to represent parking demand created by hotel employee use. Additionally, there are two types of employees to be considered, those housed on site and those coming from offsite. For the employees housed on site, the parking accumulation was about 80% for most of the day with a slight drop in the evening which increases again starting at 9:00p.m. For the employees with offsite housing, parking accumulation was created using the staffing schedule. Offsite employees parking showed an accumulation of 100% by 10:00a.m. which remained high until about 3:00 p.m. when employees began leaving.



Employee - Summer / Winter
Figure A-10

Appendix 8
A Discussion of Assumptions in Table P-4: Required Parking Spaces

Each land use and corresponding parking ratio is examined to determine the required number of parking spaces for both the summer and winter season. It is proposed that some of these parking spaces are available for a shared parking system. The parking quantities are split into shared parking and non-shared parking. These quantities are adjusted further to compensate for alternative transportation use and multi-stop auto trips. The computations produce the "adjusted number of spaces required" which represents the number of spaces that would be required if each land had to provide its own separate parking lot.

Parking ratios (Table P-4, Column D):
The parking ratio relates the required number of parking spaces to units of a land use (i.e. the number of hotel rooms or number of theater seats). The parking ratios utilize the Jackson Comprehensive Plan parking standards except as noted.

The exceptions include parking ratios for lodging, miniature golf, and the alpine slide. Other ratios including the Snow King Ski Area and the health club are based on a maximum number of users likely to be using the facilities at a given time.

The lodging ratio was revised upward from 0.75 parking spaces per unit to 1.0 parking spaces per unit to compensate for employees not housed on site. This increase improves parking capacity since the comprehensive plan appears to already include employees in the parking ratio.

The comprehensive plan does not include a miniature golf parking ratio. This analysis utilized 0.7 spaces per miniature golf hole. This ratio assumes that the golf course is frequented by larger groups who typically carpool and that the course can accommodate slightly less than one group per hole.

The alpine slide ratio assumes a similar ratio to a theater, which requires a ratio of 0.33 spaces per user. The number of users is based on revenue from the slide, which is converted to users per hour. The number calculated is likely to be conservative since it cannot account for users who typically ride the slide more than once.

The Snow King Ski Area and skating rink parking spaces are based on past use. The ski area has excess capacity to serve its users, a pattern, which is likely to continue. The anticipated parking requirement is 130 parking spaces. Most large functions such as the fireman's ball and the ski club ball occur during the off- season when excess parking is available.

The health club parking is based on the number of users expected. It is expected that a large percentage of locals will use the club with most driving independently. The health club will require 100 parking spaces.

Number of spaces required (unadjusted) (Table P-4, Columns E & K):
This number represents the parking required for each land use if it were standing alone. The amount of parking is generated by applying the parking ratio to the appropriate number of units. This number is larger than what will ultimately be required since many of the land uses will share the parking area allowing users to park once and use several facilities.

Number of spaces available/not available for sharing (Table P-4, Columns F/G & UM):
A portion of the proposed parking will be available for shared use. In order for shared use to work, it is best if there is a central, easily accessed parking area. Since the periphery buildings have parking lots in various locations and sizes, these will not be included in the available shared parking space number. Furthermore, existing condos or approved condos with their own parking will not be included in any of the shared parking.

Transportation mode factor (Table P-4, Columns **H** & **N):**
Snow King Resort's use of shuttle busses and its proximity to the START bus system allow guests travel around the town and county without depending on automobiles. In fact a large percentage of guests do not impact the parking facilities since they fly or are bused to Jackson. The TMF enables the parking to be

adjusted for the low use of cars by guests visiting the resort. This factor can also be applied to any land use where alternative transportation modes are used. A factor of 1.0 indicates that every user is driving a car, while the summer lodging factor of 0.60 indicates 60% of the guests drive. A justification of the lodging's transportation mode factor based on existing use is available in **Figure 8 -1.**

Typical Summer Day

Number of Rooms Occupied	Type of Guest	Mode of Transport	Percent	Number of Parking Spaces Occupied
30	Bus Tour	Bus	100%	6
145	Convention	Fly & Bus	**49%**	
		Fly & Drive	21%	30
		Drive	30%	**44**
25	independent Traveler	Drive	100%	25
200	Total Rooms		Total Spaces =	105

Transportation Mode Factor = total Occupied Car Spaces / Total Occupied Rooms

= 105 / 200

= 52%

Therefore, **60% appears a reasonable Transportation mode Facto**

Typical Winter Day

Number of Rooms Occupied	Type of Guest	Mode of Transport -	Percent	Number of Parking Spaces Occupied
5	Bus Tour	Bus	100%	3
35	Convention	Fly & Van	56%	
		Fly & Drive	**24%**	8
		Drive	20%	7
60	independent	Fly & Van	56%	
	Traveler	Fly & Drive	14%	8
		Drive	30%	18
100	Total Rooms		Total Spaces =	45

Transportation Mode Factor = total Occupied Car Spaces / Total Occupied Rooms

= 45 / 100

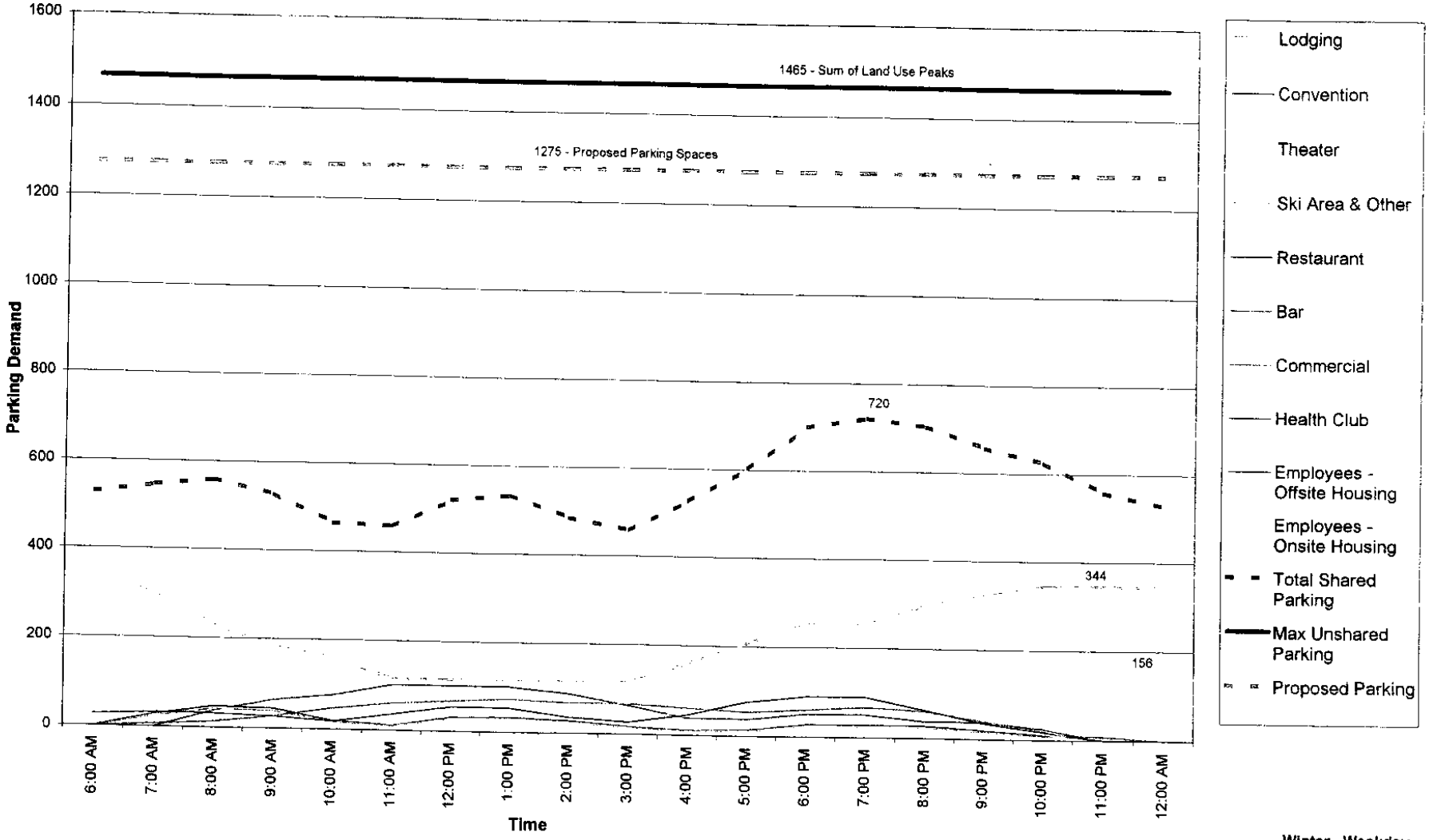
= 45%

Therefore, 50% appears a reasonable Transportation mode Facto

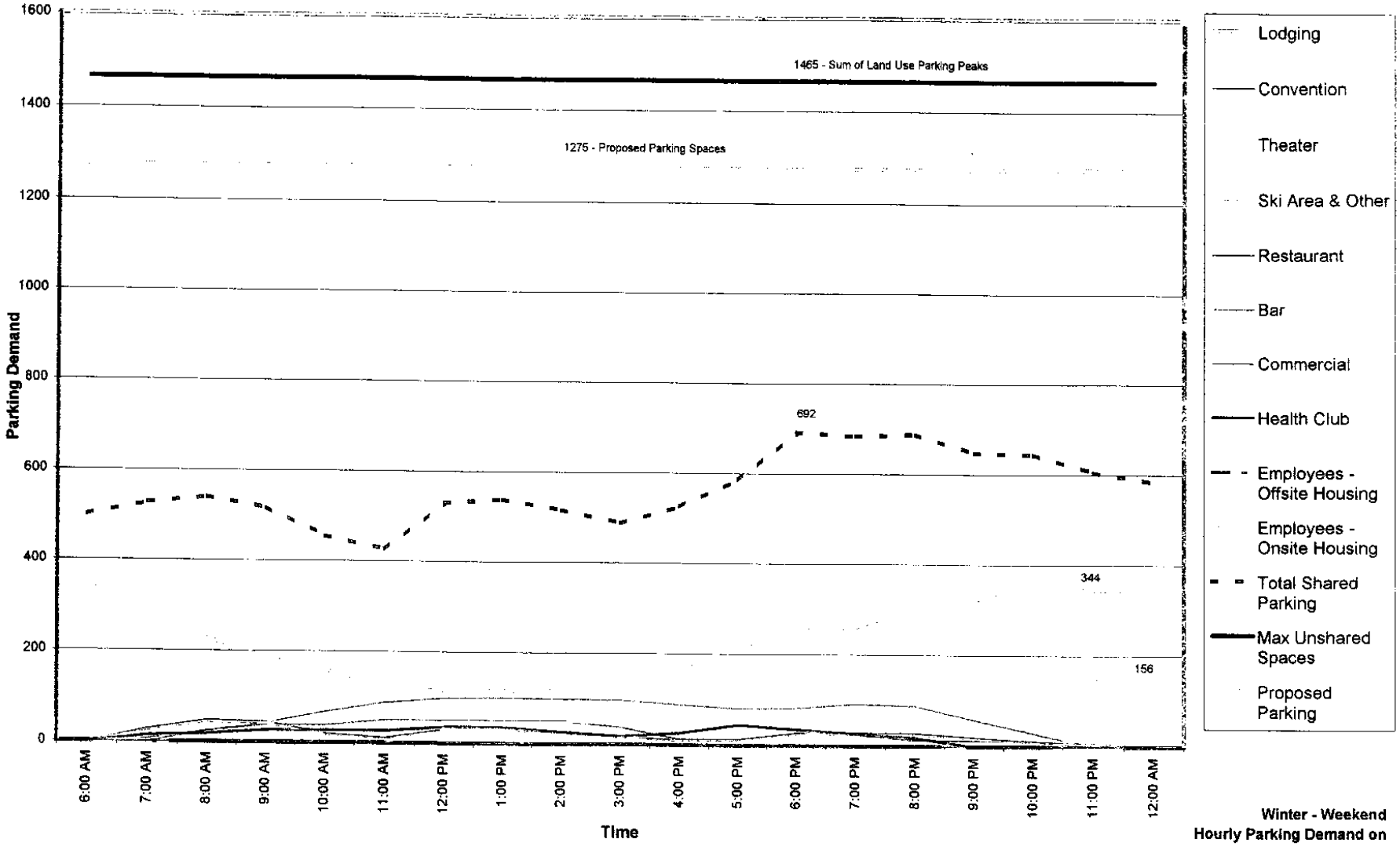
Lodging Transportation Mode Factor
Snow King Resort: Present Situation
Table 8-1

Offsite user factor (Table P-4, Columns I & 0): This factor indicates how many users come from offsite to use a facility. It is likely that many of the conference participants or restaurant and bar patrons will also be hotel guests, so the OUF will allow the required parking to be adjusted for this internal trip. An OUF of 1.0 indicates that 100% of the users come from offsite, while the summer conference factor of 0.50 indicates that 50% of conference attendees come from offsite. This factor allows the required parking to be adjusted so that guests are not counted twice in the parking demand.

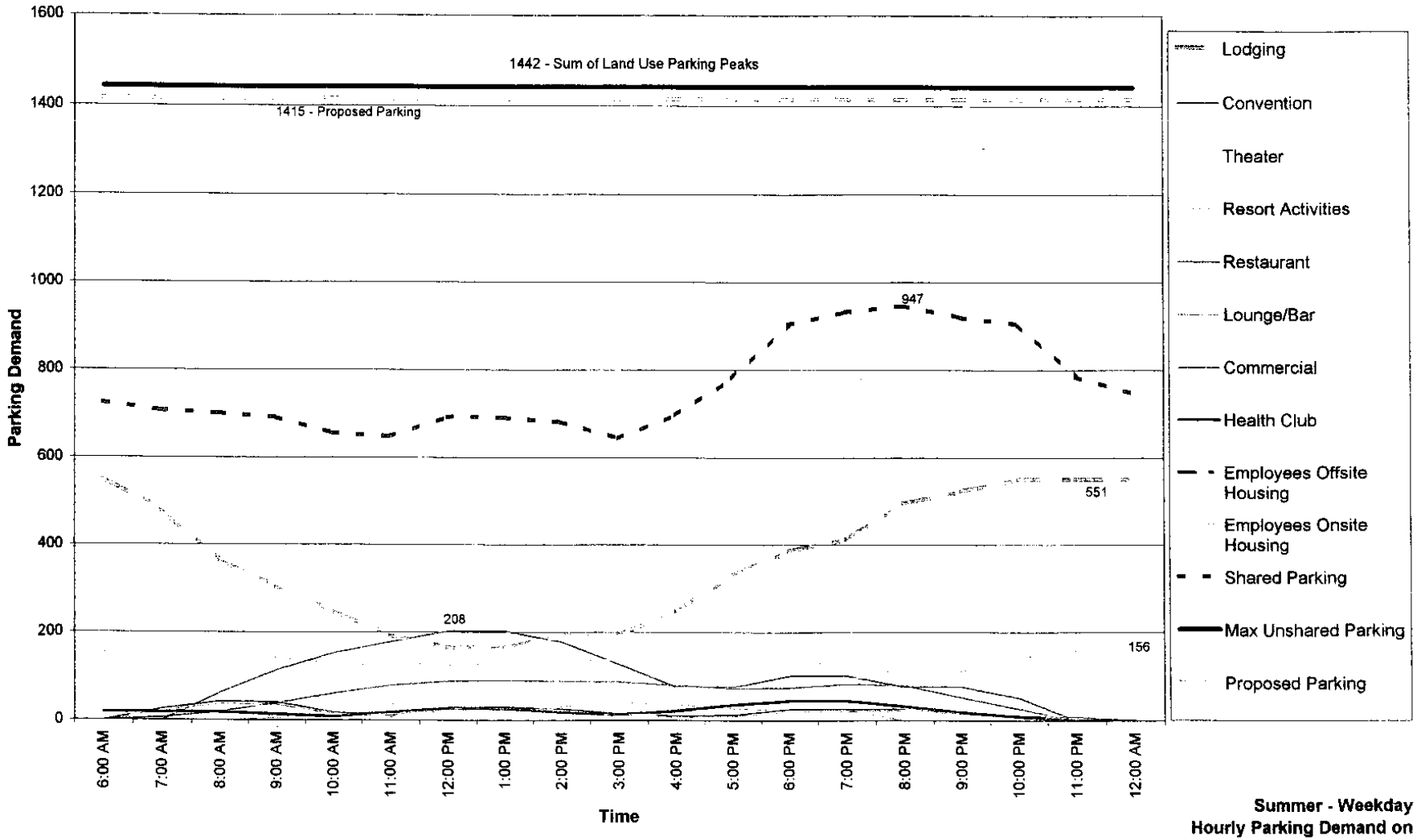
Adjusted number of spaces (Columns J & P):
This number represents a reduction in required parking after the TMF and the OUF are applied. This number is a more accurate estimate of the required parking since it avoids counting users more than once and considers users who use alternative transportation. This number does not yet include any sharing of parking spaces



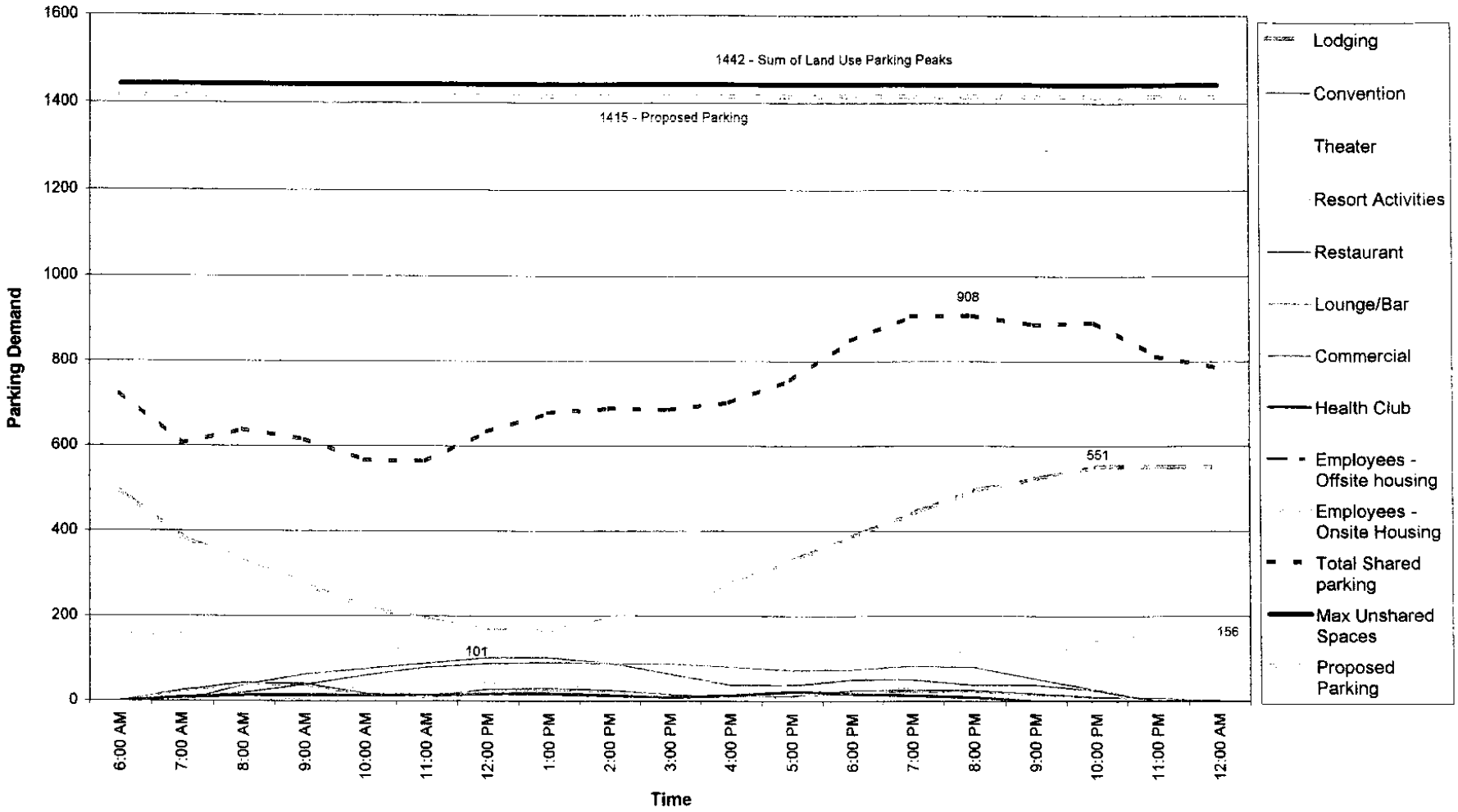
Winter - Weekday Hourly Parking Demand on Snow King Resort Parking Graph P-1



Winter - Weekend
Hourly Parking Demand on Snow King Resort Parking
Graph P-2



Summer - Weekday Hourly Parking Demand on Snow King Resort Parking
Graph P-3



Summer - Weekend
Hourly Parking Demand on
Snow King Resort Parking
Graph P-4

IX. CAPITAL IMPROVEMENTS PLAN

A. Introduction and Summary

The Snow King Water Supply, Wastewater Management and Storm Water Discharge Systems are designed and developed to meet the critical requirements associated with the function of such a vital gathering center. The Snow King Resort Master Plan represents urban planning that incorporates both destination vacationers and local commerce. Due to the difficulty of consistently servicing such a varying utility demand, peak design considerations were used in the design.

In establishing flow characteristics for the Resort, quantities of water consumption and wastewater production were calculated utilizing historical prediction charts for each service type and then applying this rate to the square footage of the service area. The square footage and water volume values have been summarized in the enclosed "Water and Waste Water Usage Table." It is necessary to keep in mind that this table reflects both the amount of water usage and the amount of water discharged, and has no allocation for water consumption use. The additional consumption use refers to the volume of water lost, evaporated, transpired, or otherwise utilized through leakage, washing, lawn irrigation or utility use. This quantity has been accounted for in the water service design considerations.

Total water usage is based on domestic needs, fire sprinkler suppression, (fire sprinkler suppression and fire hydrant demands are based upon minimum regulatory fire flow and flow duration requirements per Uniform Fire Code [UFC]), irrigation needs and fire hydrant flow requirements. The domestic water demand takes into account both the existing probable peak usage in addition to the proposed Master Plan peak flow rate of 223 gpm. Total peak demand is then calculated by uses expected from such resort facilities. This peak demand is 2,300 gpm. It is essential to understand that a flow of 2,300 gpm includes fire suppression of 1750 gpm, which is not a normal daily system demand. Thus, when removing the fire suppression, normal peak-operating demand is found. The resulting normal peak operating demand is approximately 550 gpm.

The existing and future water usage predictions previously noted do not consider water required for snow making. The Town of Jackson has been concerned about utilizing potable supplies for snowmaking. Snow King has additionally been concerned that the Town of Jackson water is warmer than ideal for snowmaking. To address these concerns, snowmaking water capacity will be expanded this summer (2000) in a joint project with the Town of Jackson to bring cooler water from Flat Creek to the Summit Lift pump house.

The wastewater sanitary system considers the existing Town of Jackson infrastructure capacity, potential wastewater produced by the current land use plan, and the potential flow created by this Snow King Master Plan. The current peak flow is 106 gpm. The proposed Master Plan creates an additional 305 gpm. Existing upstream land use has the potential to produce an additional peak flow of 35 gpm. These peak flows are calculated from average day flows that are increased based on a peak flow multiplier. This peak flow multiplier has been produced from previous Town of Jackson maximum day vs. average day wastewater studies. The result is a total potential peak wastewater flow of 796 gpm. Maximum development of the Master Plan exceeds the existing Town of Jackson West Karns Avenue infrastructure by 245 gpm. The additional peak hour flows require the existing 8-inch diameter line located on West Karns, north of the rodeo grounds be increased to a 10-inch diameter line. The capacity of the existing 8-inch diameter interceptor is 593 gpm. This Town of

Jackson interceptor should be upgraded when the percentage of wastewater produced by the Master Plan exceeds eighty percent of the 593 gpm, or 475 gpm. Planning for these costs should be a consideration in the Master Plan phases of construction. (See supporting water and sewerage design consideration calculations.)

Storm water runoff considerations are calculated in a similar manner. Design considerations give respect to existing Resort usage and Master Plan development.

Runoff calculations are based on the Jackson Rainfall Intensity Duration data for 10-year and 100-year event frequencies. Detention basins of natural appearance have been designed and designated to accommodate the 10-year storm event. Discharge leaving detention areas will not exceed the predevelopment rate for a 10-year storm. Storm water runoff generated from 1-year to 10-year events release the highest concentration of pollutants and settleable solids. These storms will pass through treatment facilities located at the catch basin receptacles. These storm water catch basins will remove the pollutants without possible re-suspension by future runoffevents.

The Storm Water Runoff from the developed site will proceed directly to a Town of Jackson collection facility, but shall not discharge at a rate greater than the 10-year and 100-year predevelopment rate. Storm water runoff from the Forest Service property will be naturally diverted around the Resort. The 100-year storm event will bypass the detention areas and be handled by the proposed storm water facilities that connect to the Town of Jackson system.

Consideration has also been given to other utilities. Electricity, gas, cable TV and telephone are all available at the site and will be expanded as needed. Private in-resort telephone and broadband capabilities will also be expanded as needed. Two-way radio, telephone and internet capabilities at our mountain-top (Snow King West) site is also used by the Resort to provide broadband connectivity.

The Town of Jackson retains updated information related to all capital improvements within the Snow King Resort District for public reference.

B. Water Supply System Plan

The Snow King Resort Water Supply System Plan was developed to meet the critical requirements associated with public water distribution. The first requirement was to determine the quantity of water need for domestic supply to accommodate the proposed facilities. The second objective is to provide fire flow suppression through fire sprinkler and fire hydrant supply.

Design Consideration - Water Service

l) Potential Flow Required by Master Plan

The practice for predicting water consumption was to develop a system capable of meeting maximum day demand

Existing and Master Plan Combined

Max Daily Flow	=	319,800 gpd
(See Waste Water Calcs.)	=	223 gpm *

* Total pre and post development Max. Day Waste Water Flow

Total peak demand is based upon the demand required for domestic flow, fire sprinkler flow, lawn sprinkler flow, and fire hydrant flow. Fire flow shall provide 1,500 gpm for a minimum to w-hour duration. Fire hydrant flow shall provide a minimum 250 gpm flow.

QT = QDomestic + QFire Sprinkler + QL Sprinkler + Q Fire Hydrant

QDomestic = 450 gpm *

QFire Sprinkler = Fire Sprinkler Flow = QFS

QL Sprinkler = Lawn Sprinkler Flow = QLS
QFire Hydrant= Fire Hydrant Flow = QFH

* Use Multiplier factor of 2 x Max Day Waste Water flow. Accounts for additional water usage not recorded as Waste Water flow.

UNIFORM FIRE CODE

Classification Group A Occupancy

Division I (UFC-91, Sect. 9117)

Group R Occupancy

Division I & 3

Minimum Reg. Fire Flow & Flow Duration

Table No. A-111 - A-I UFC-91 pg. 496
Type 111 One-hr@ 6,000 gpm

75% Fire Flow Reduction

Assuming FS Installation = 1,500 gpm
For 2-hr duration

QL. Sprinkler = QLS 100 gpm (Assumed)

QFire Hydrant = **QF.H.** 250 gpm

OT= 2,300 gpm = Peak Hour Demand

QT = QFS - QFH = 548 gpm = Normal Max Operating Demand

2) Existing Infrastructure Capacity

The fact that maximum day water demand may occur several days consecutively led us to consider checking for a water supply that would provide the maximum day demands, 548 gpm, and a source that could provide the peak hour demand, 2,300 gpm.

The expanded Snow King system will tie into the existing Town of Jackson 6-inch diameter high pressure line that parallels the Resort's northern property boundary. The new Snow King water main would complete a high-pressure water main loop creating a system more efficient that the existing dead-end main. The existing source is a system comprised of six-inch diameter service nourished from a twelve-inch diameter line located in East Kelly Avenue.

The Town of Jackson water system has sufficient water supply and storage to meet the maximum day demands, 548 gpm, and the peak fire and domestic demand of 2,300 gpm. Snow King will need to provide the additional water mains to complete the high-pressure zone and deliver the water to proposed Resort facilities.

C. Sanitary Sewer

Design Consideration

The Snow King Resort Sanitary Sewer Management Plan was developed to meet two crucial objectives. The first, to determine the infrastructure required on-site to handle the capacity of the proposed facilities. The second, to convey sanitary sewer flows away from the Resort and distribute these discharges into the Town of Jackson sanitary system. The following design considerations are incorporated into the design and shall be considered during construction phases of the Master Plan

I) Existing Town of Jackson Collector Capacity - Upstream of MH CI 0-16
- Alley parallel and between E. Kelly and E. Karns MH Cl0-30 to MH CI0-16
- Existing 1O" PE pipe / minimum slope downstream = 1.47%
- Land use currently designated: residential
- Existing 1O" will handle 1,550 gpm maximum

2) Existing Collector System and Land Use Flow Potential - Upstream of Resort

The Snow King Collector sewer objective is to collect wastewater from various Resort service lines and carry it by gravity to the Town of Jackson Interceptor Sewers.

Current Snow King Resort Flow Potential

204 Hotel Units at 225 gpd/room	45,900 gpd
40 Condominium Units at 2 Units Each at 225 gpd/unit	18,000 gpd
Motel Restaurant Services - 200 seats at 80 gpd	1 6,000 gpd
Pitchfork Townhomes - 19 units at 450 gpm	13,500 gpd
Clark's Knoll Townhomes - 19 units at 450 gpd	8,550 gpd
Existing Max. Day Waste Water Flow Total (I)	101,950 gpd
Total (I)	71 gpm
Existing Peak Hour Flow	106 gpm

3) Dwelling Units Representing Potential Upstream Flows:

Zone	Area	Max Density	No. of Units	Flow Max Day (gpd)
AR	34.7 Acre	4.6/Acre	160	70,400
NC-2	25 Lots	2/Lot	50	22,000
NC/SF	144 Lots	1/Lot	144	63,360
SR	139.1 Acre	2.9/Acre	403	77,320
R	80 Acre	I /Acre	80	35,200
PRD	Pitchfork	30 Units	30	13,200
PRD	Snow King	See Table		88.450
			867	470,230

Average Day Flow (Max Day/2)	=	235,115 Gpd
Max Day Flow	=	470,230
		328 Gpm
Peak Hour Flow (Avg Day *3)	=	490 Gpm
Potential Upstream Max Day		
Flow Minus Snow King Resort	=	368,280 Gpd
Potential Upstream Avg. Day		
Flow minus Snow King Resort	=	184,140 Gpd
Potential Upstream Peak Hour		
Flow Minus Snow King Resort	=	552,420 Gpd
	=	385 Gpm

Existingl0"P.E./n = 0.010/S=l.47%

Q = 1.49 AR2/3 S1/2 ***/ n***

0 = 1,550 gpm: Capacity of Existing Collector

Storm water runoff generated by the 1 -year to 10-year storm events on roads.

4) Potential Flows for Snow King Master Plan

The collector sewers have been designed for peak flows that include a factor applied at four times the expected average daily flow. The collector sewers were then sized using the peak flows and Manning's equation. Manning's equation is utilized to predict the adequate pipe diameter required for full flow design based on pipe diameter, pipe slope and peak flow, a minimum slope of 0.75 percent was used to represent a minimum pipe slope scenario. The pipe is then checked for a minimum scouring velocity of 2.5 ft/s applied with a lower average daily flow rate.

Proposed Master Plan Flow Potential-2000

494 Hotel Units at 225 gpd/room	=	111,150 gpd
120 Hotel Units at 225 gpd/room		27,000 gpd
100 Hotel Units at 225 gpd/room		22,500 gpd

Commercial Space and Assembly at 146,000 SF Assume .05 gpd / ft2 (5000 SF at 225 gpd per)	7,300 gpd
Commercial Theaters/Health Club/Daycare/ Pool at 37,000 SF. Assume 0.11 gpd/ft2 (2000 SF at 225 gpd per)	4,200 gpd
Restaurant/Services - 200 seats at 80 gpd each	16,000 gpd

Employee Housing at 18 units at 450 gpd each	=	8,100 gpd
Condominiums at Love Ridge at 40 units at 450 gpd each	=	1 8,000 gpd
Cottages at 8 units at 450 gpd each	=	3,600 gpd
Proposed Max. Day Flow Total (2)	=	217,850gpd
Proposed Max. Waste Water Flow (2)	=	152 gpm
(See Water and Waste Predicted Usage Table for additional breakdown)	=	223 gpm
Max Daily Waste Water Flow (1 & 2)	=	319,800 gpd
Avg Day Flow (Day/2)	=	108,925 gpd 76 gpm
Peak Hour Flow (Avg Day* 4)	=	305 gpm

5) Total Flow - Existing and Proposed

Existing Peak Hour Flow (Reflects potential flow upstream from Resort		385 gpm
Proposed Peak Hour Flow (Reflects 2000 Snow King Master Plan		305 gpm
Existing Max. Day Waste Water Flow (1)		106 gpm
Total Flow (QT= 385+305+71)	=	796 gpm

6) Existing Collector Capacity at the Resort Discharge

10" PE / n = 0.010 / S = 1.47%
Q = 1.49 AR 2/3 S 1/2 n Full Flow = Manning's Equation
QE.C . = 1,550 gpm Capacity of Existing Pipe = QE.C.
QT= 796 gpm
QE.C. = 1,500 fpm > QT = 796 gpm

7) Existing Town of Jackson Collector Capacity - Downstream ofResort

- Line parallel with West Karns Avenue between Mateosky Park and Flat Creek Drive MH Cl0-10
- Existing 8" clay / minimum slope downstream = 1.2 %
- Current land use designated: residential

The existing Town of Jackson Interceptor Sewers were checked for the capacity of three times the future maximum expected average daily flow, the maximum future flows are representative of the maximum possible build-out potential of all upstream sewers in accordance with the current land use plan.

Dwelling Units Representing Potential Downstream Flows Influencing Existing Collector Capacity on West Karns Avenue.

Zone	Area	Max Density	No. of Units	Flow- May Day (gpd)
AR	12 Acre	4.6/Acre	55	24,200
NC *I* MHP	6 Lots	2 / Lot	12	5,280
PI SP	24 Acre			l0,560

Existing Downstream Max Day Flow Potential		40,040
Existing Downstream Max. Day Flow Potential	=	30 gpm
Existing Downstream Peak Hour Flow		42 gpm
* (Reflects max build-out of existing land use upstream of Park and Snow King Resort)		385 gpm
Proposed Peak Hour Flow (Reflects 2000 Snow King Master Plan)		305 gpm
Existing Peak Hour Flow (1)		106 gpm
Potential Total Peak Hour Flow at MH CI 0-10		838 gpm

Existing Collector Capacity

8" Clay / n == 0.013 *I S* = 1.2 %
Manning's equation for Full Flow
0 = 1.49 A R2/3 S I/ 2 n = 593 gpm
593 gpm < 830 gpm

Therefore, 8" existing TOJ sewer main must be replaced with new 1O" main, approximately 1,200 LF

The peak hour flows for maximum build-out and the proposed Snow King facilities exceed the downstream Town of Jackson 8-inch diameter collector by 245 gpm. Expansion in accordance with the Master Plan beyond a potential flow of 593 gpm will require approximately I 200 linear feet of existing Town of Jackson interceptor to be replaced with a l0-inch diameter interceptor. The interceptor could be replaced upon reaching 80 percent of the 593 gpm that exceeds the 8-inc h interceptor's capacity. This would allow the Town of Jackson and Snow King Resort to plan and acquire the funding required to replace this line. The Town may be interested in creating a joint investment account that both parties could contribute to annually, raising and sharing the cost. of the infrastructure replacement. It would be of great benefit for the Master Plan to indicate rate of development, so that a proper fund could be established that would accrue at a rate equal to the anticipated replacement occurrence.

Note :

Town of Jackson WWTF Flows Indicate

- Max day = 2 * Avg day
- Max hour = 2.7 * Avg day

Snow King Master Plans Calculations Utilize

- Max day = 2 * Avg day
- Max hour = 4 * Avg hour

TOJ Line Capacity Calculations Utilize

- Max day = 2 * Avg day
- Max hour = 3 * Avg day

D. Storm water Management Plan

A complete storm water management program contains many elements including on-site infiltration and detention, collection, and transport systems. The Snow King Resort Storm water Management Plan was developed to meet several major objectives associated with post-development storm water runoff. The most critical is to convey storm water away from developments, thus diminishing the water buildup from minor storms and damage that can be associated with major storms.

Storm water Runoff Design Conditions

The methodology for calculating peak rate of runoff from undeveloped and developed areas and runoff storage is "Rational Method." Runoff calculations are based on the Jackson Intensity Duration Frequency data CIA "RATIONAL METHOD"

Find: Rainfall intensities for 10-year and 100-year events.
Find: Max allowable pre-development release for 100-year storm event.

The rational method assumes that the maximum flow will occur at the time when all of the runoff flows from the contributing watersheds reach the outlet.

Existing Site Conditions (In Acres)

Sub- Area	Total Area	Pervious Area	Impervious Area
l	4.51	13.50	1.03 (Roof &Asphalt)
2	4.96	4.52	0.044 (Dirt)
3	5.28	5.28	0.00
4	13.09	12.09	1.00
5	13.55	10.27	3.28 (Roof &Asphalt)
6	17.70	16.70	1.00 (Dirt)

Pre-Development Runoff Summary

Sub-Area	Time of Concentration (min)	10-Year Event (CFS)	100-Year Event (CFS)
1	20.3	3.88	6.09
2	24.9	1.23	1.93
3	22.2	1.08	1.69
4	28.4	2.82	4.51
5	22.3	5.11	8.02
6	29.8	3.48	5.52

Pre-Development Runoff and Conditions

Assume 100% pervious surface conditions
C= 0.3 for undeveloped with sparse grass

Time of concentration

$$Tc = \frac{1.8\,(1.1-C)\,VL}{(S)\,\wedge\,1/3} = \frac{1.8\,(1.1-0.3)\,V2200}{(15)\,\wedge 1/3} = 27.4 \text{ min}$$

Rainfall Intensity: 10-Year 0.89 in / hr
100-Year 1.40 in / hr

QIO = 0.3 (0.89) 69 18.45 CFS
QIOO = 0.3 (1.40) 69 28.98 CFS

Post-Development Runoff and Conditions

No development shall cause adjacent landowners, water courses or conduits to receive storm water runoff from the proposed development at a higher peak flow rate than would result from the same storm event occurring over the site if the land was in its undeveloped condition. The storm events considered will be for a 10-year and 100-year event.

Post-Development Site Conditions

Sub-Area	Total Area	Pervious Area	Impervious Area
1	14.51	6.22	8.29
2	4.96	1.06	3.90
3	5.28	2.72	2.56
4	13.09	9.29	3.80
5	13.55	11.13	2.42
6	17.70	16.07	1.63

Post-Development Runoff Summary

Sub-Area	Total Area	Pervious Area	Impervious Area
1	20.31	9.32	14.63
2	31.71	2.98	4.72
3	28.1	2.45	3.92
4	13.09	9.29	3.80
5	13.55	11.13	2.42
6	17.70	16.07	1.63

Storm water Runoff Summary

Sub-Area	Acres	Post-Dev. Runoff (CFS)	Minimum Diameter Storm Pipe (3 CFS)	Design Release	(CFS)
I	14.51	14.63	24"	9.67	6.09
2	4.96	4.72	15 "	3.12	1.93
3	5.28	3.92	15"	2.59	1.69
4	13.09	7.23	18"	4.78	4.51
5	13.55	7.15	1 8"	4.71	8.02
6	29.80	5.99	15 "	4.10	5.52
		43.65	Mass Cale. -	28.98	
				Ind. Cale.	27.76

27.76 Max allowable release- 100-year event base

Storm water subsurface facilities are required to carry the runoff from a 25-year storm event as minimum design criterion. Storm water surface facilities shall be sized to handle additional runoff from the 100-year storm event as a minimum.

Non-contaminated storm water from roofs and landscaped areas shall be designed to flow into natural detention areas. These designed detention areas shall be sized to accommodate the 100-year storm event. The rate of flow leaving these detention areas shall not exceed the pre-development rate for the 10-year to 100-year storm.

Sub-Area Release and Storage Summary - 100-Year event

Sub-Area	Acres	Re lease (CFP)	Storage Volume (CF)
1	14.51	6.09	5,987
2	4.96	1.93	3,135
3	5.28	1.69	2,085
4	13.09	4.51	1,545
5	13.55	4.71	966
6	29.80	5.52	50

Previous calculations show that a 36" pipe in a 4' x 5' percolation trench provides 10.05 CF/LF storage. 24"provides 7.43 CF/F: storage.

Sub-Area	Volume	Length 36"	24"
1	5,987 CF	596 LF	806
2	3,135	312	422
3	2,085	208	281
4	1,545	153	208
5	966	96	130

Storm water runoff generated by the 1 -year to 10-year storm events on roads and parking areas shall pass through treatment facilities to remove and trap settleable solids and floating petroleum products from the storm water as practical without resuspension of contaminants by runoff from subsequent storm events. Storm water runoff generated by the 10-year to 100-year storm evens shall bypass the treatment facilities and proceed directly to the Town of Jackson collection facilities, but shall not discharge at a rate greater than the pre-development rate for the 10-year to 100-year storm event.

Storm water runoff from the Forest service property shall be naturally diverted around Snow King Resort utilizing resort facilities to handle mountain runoff for the 100-year storm event.

The Resort Master Plan should incorporate detention basins of volume as shown in the 100-year storage summary table. Additional infrastructure will then carry overland flow not detained on site. The Storm Water infrastructure shall be sized to accommodate 100-year event storms and be incorporated with the existing Town of Jackson Storm Water Infrastructure.

E. Other Utilities

The Site is supplied with sufficient capacity of electrical, gas, telephone and cable television lines. Expansion of these utilities will be available as expansion occurs. Within the site, the Snow King Resort Master Association will administer private telephone, internet, broadband satellite /cable TV lines and construct additions as needed. In cooperation with the Town of Jackson, the Applicant is undertaking an expansion of the snowmaking water capabilities during the summer of 2000. The mountaintop west electronic site was expanded during the 1999 summer to allow for additional wireless telephone and high-speed internet equipment. Additional room is available at this site for future expansion to serve the Resort and the community at large.

F. Additional Conditions

At the time of approval of this Master Plan, the following conditions were included as part of the approval:

The applicant shall be responsible to complete offsite storm drainage improvements necessary to convey storm water flows from the site to the Kelly Avenue drainage system and, if warranted based on the provided engineering analysis, complete improvements to the Kelly Avenue drainage system that are a consequence of the development within the Snow King Master Plan.

To facilitate the conveyance of storm water flows between the Kelly Avenue storm drainage system and Snow King Estates, the applicant shall provide the Town with a storm drainage easement in the easterly area of the site. The easement location and language shall be mutually agreed to by the Town and the applicant.

An additional water system analysis and information shall be provided and approved by the Town Engineer. The additional information shall be provided with and without the Town's system supplying snow making water and shall include but not be limited to: a comprehensive Town water system hydraulic model which indicates the adequacy of the existing Town system at the estimated build out date of the development, a review of available fire flow capacities in the area of the resort at build out, a review of the water velocities produced in transmission pipes which are 8 inches in diameter and less, an analysis of the existing Town storage capacity, a summary of the installation of the proposed high pressure zone, calculations indicating the size of the proposed storage tank preliminary pump sizing calculations and an implementation plan for onsite systems.

The applicant shall be responsible to ensure that under, the additional water demands created from the developments build out, the Town's system shall remain in compliance with DEQ water system regulations and Town ordinances.

The applicant shall insure that the Town's right to inspect onsite water systems is maintained.

Sanitary sewer systems completed shall be constructed, tested and maintained in accordance with DEQ and Town standards.

The applicant shall insure that the Town's right to inspect onsite sewer systems is maintained

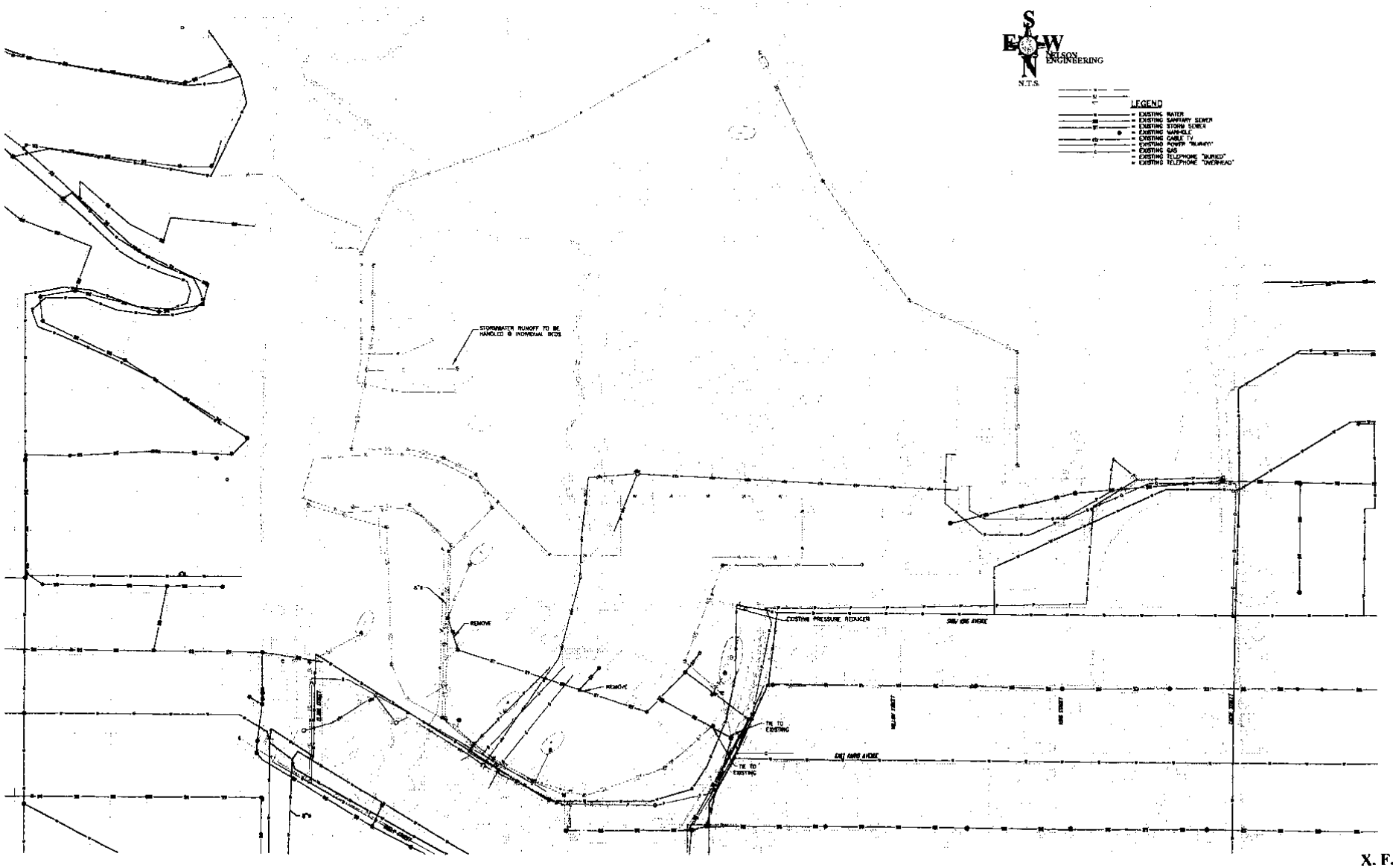
The applicant shall be required to provide the Town with financial mitigation fees for the completion of the Willow Street corridor (from Snow King Avenue to Broadway Avenue) and the intersection of Snow King/Willow.

The amount collected shall be based on the calculated increased levels of traffic and pedestrian impacts created from the development together with the estimated project completion costs for roadway, curb, pedestrian and landscaping improvements. The improvements required shall be based on the preliminary design as completed in the year 2000 charette process. The mitigation fee to be provided to the Town shall be based on the estimated project costs required to complete the corridor work at the time the fee is due. Any improvements to the Willow Street corridor that are completed by others prior to reaching the levels of new development described below are not to be included in the calculations of mitigation fees. The mitigation fees shall be provided to the Town in cash at the time the levels of development are reached and prior to issuance of building permits.

The total new square footage allowed under the original master plan is estimated to be approximately 700,000 SF. This new square footage does not include the existing hotel building or the Love Ridge development. As such the mitigation fees shall be forwarded to the Town as follows:

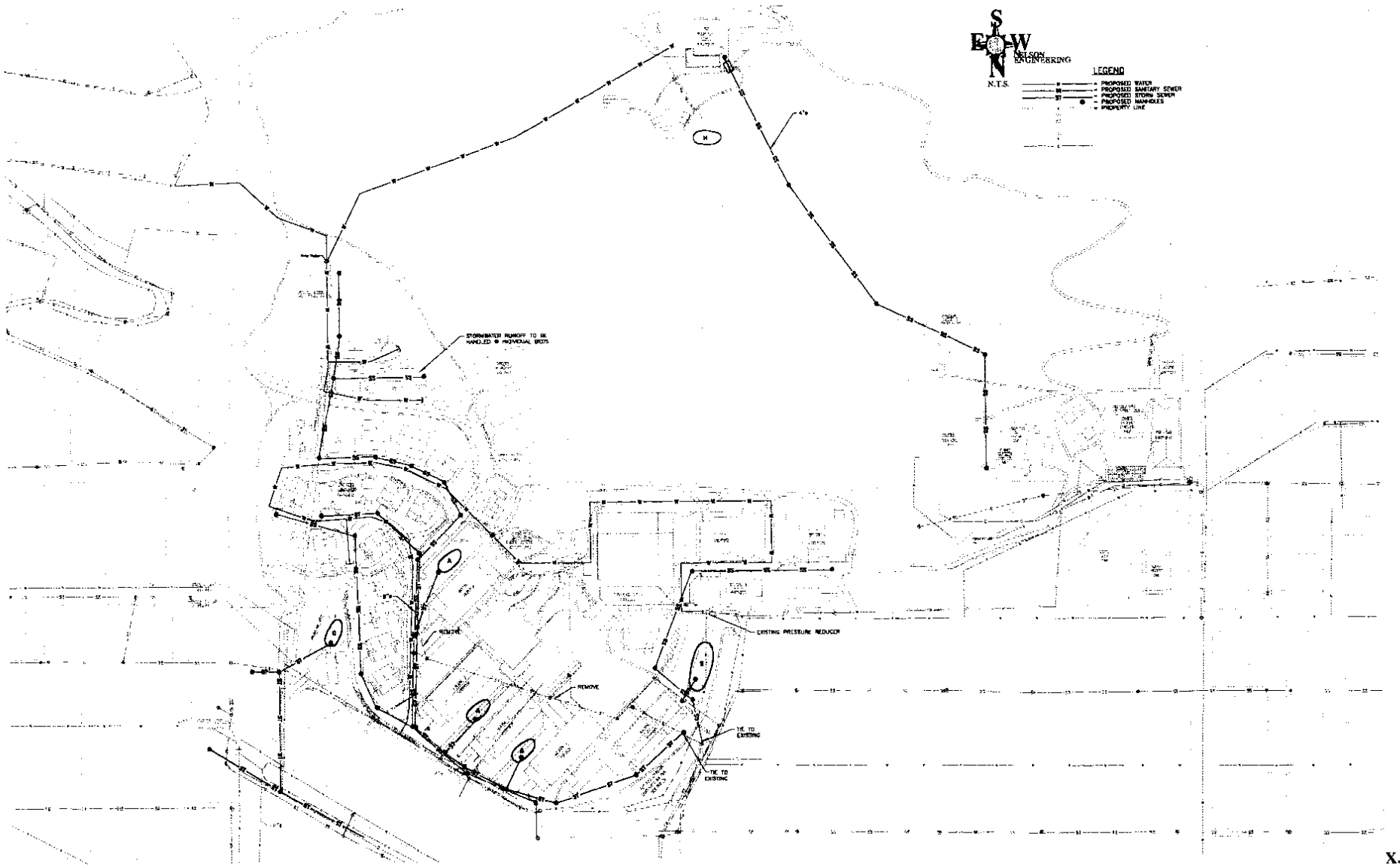
At 400,000 SF of new development: The applicant shall provide an additional mitigation fee in the amount of 15% of the total estimated project cost required to complete the Willow Street corridor.

At 600,000 SF of new development: The applicant shall provide an additional mitigation fee in the amount of 15% of the total estimated project cost required to complete the Willow Street corridor.



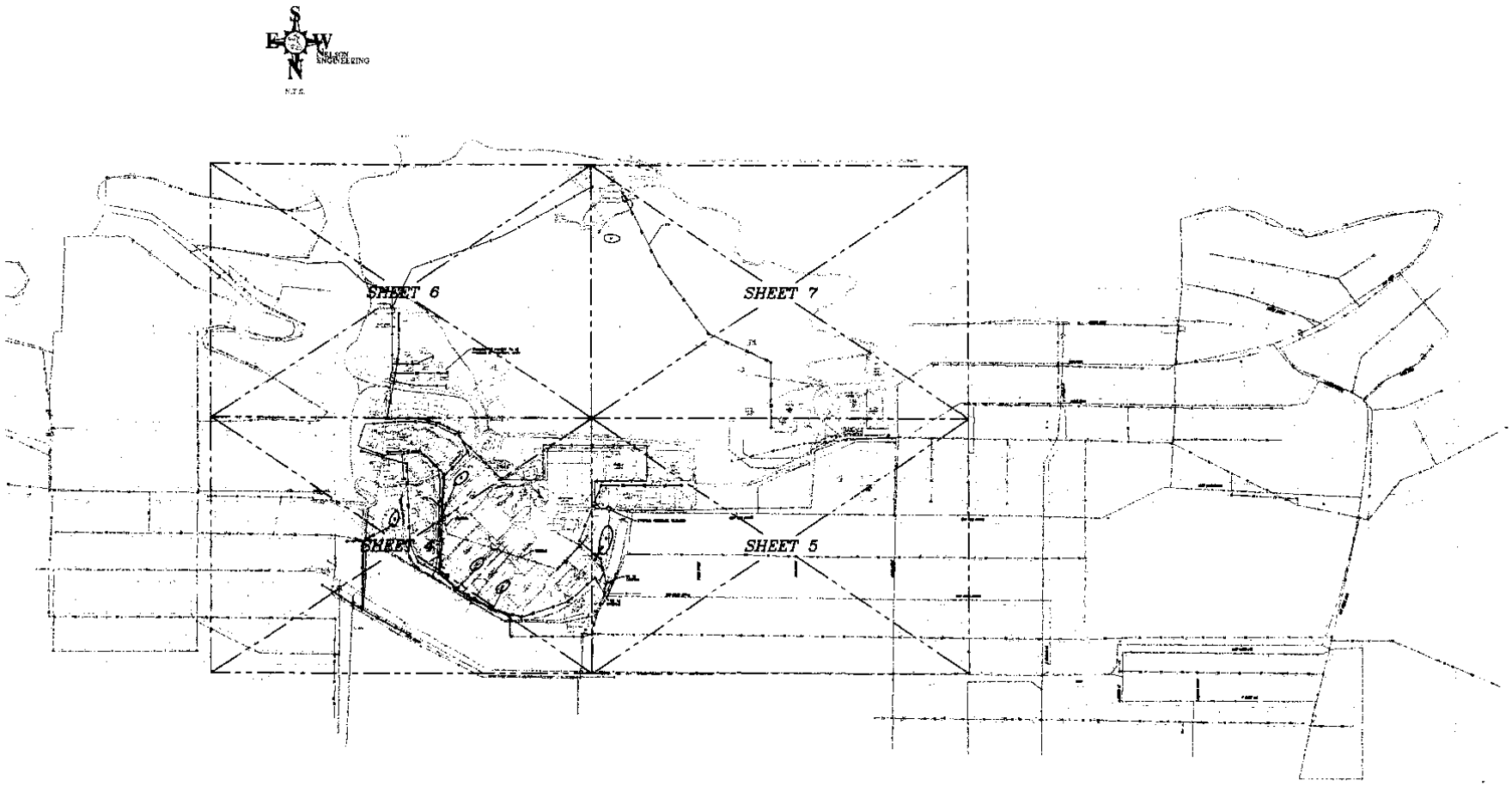
X. F. 3

EXISTING UTILITY PLAN



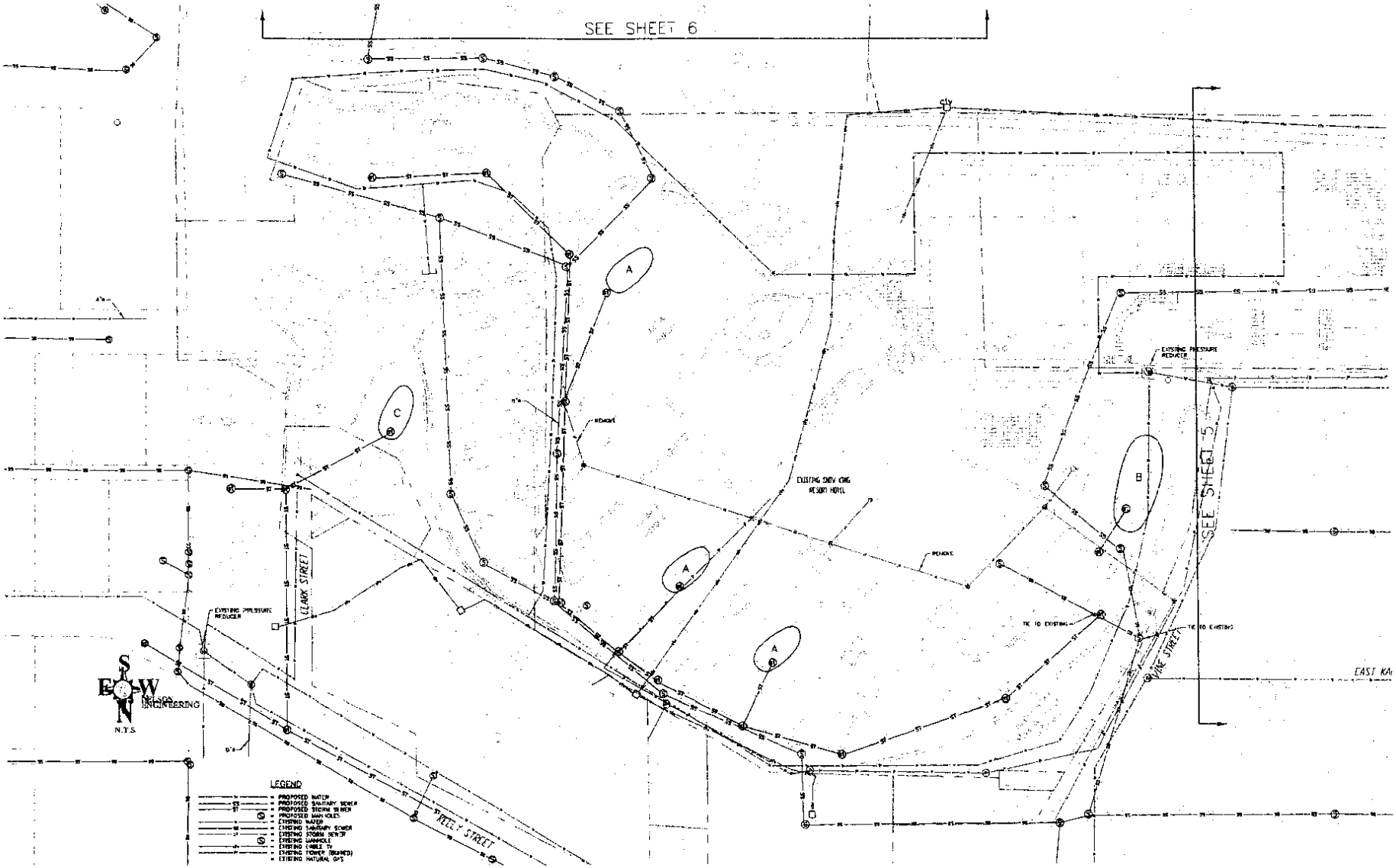
X. G

PROPOSED UTILITY PLAN



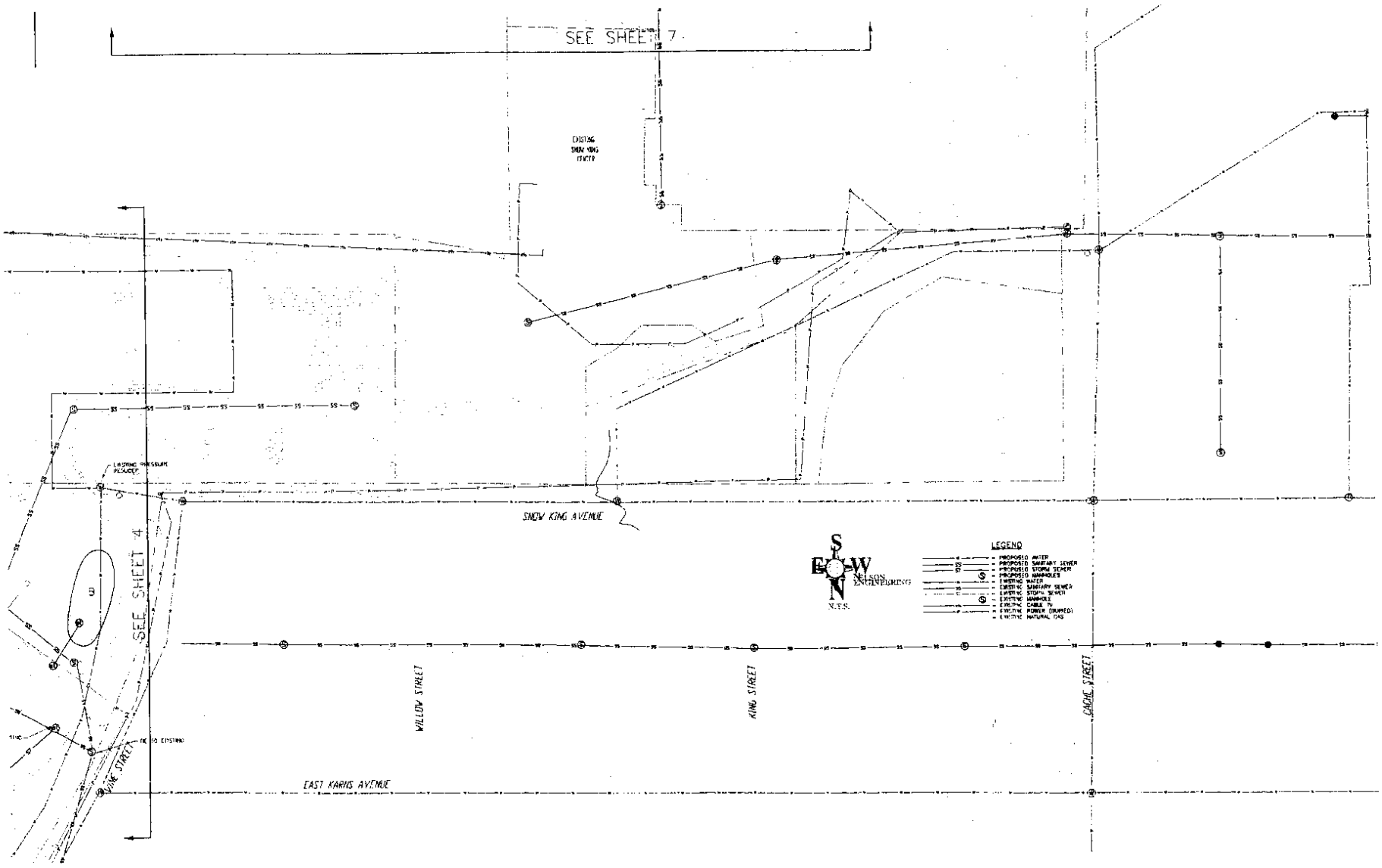
X. H

ENLARGED PLAN INDEX



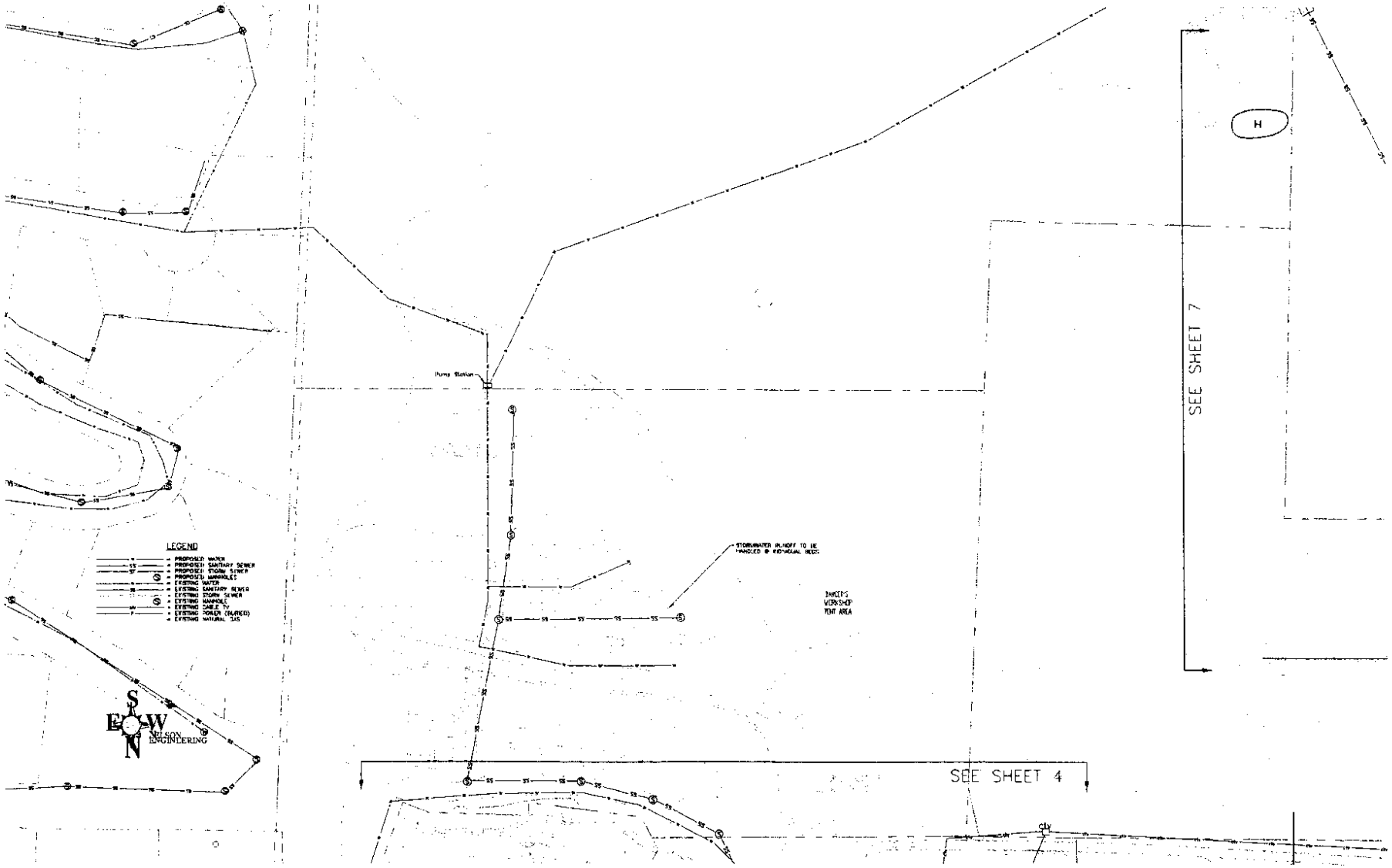
X.1

ENLARGED PLAN – SHEET 4



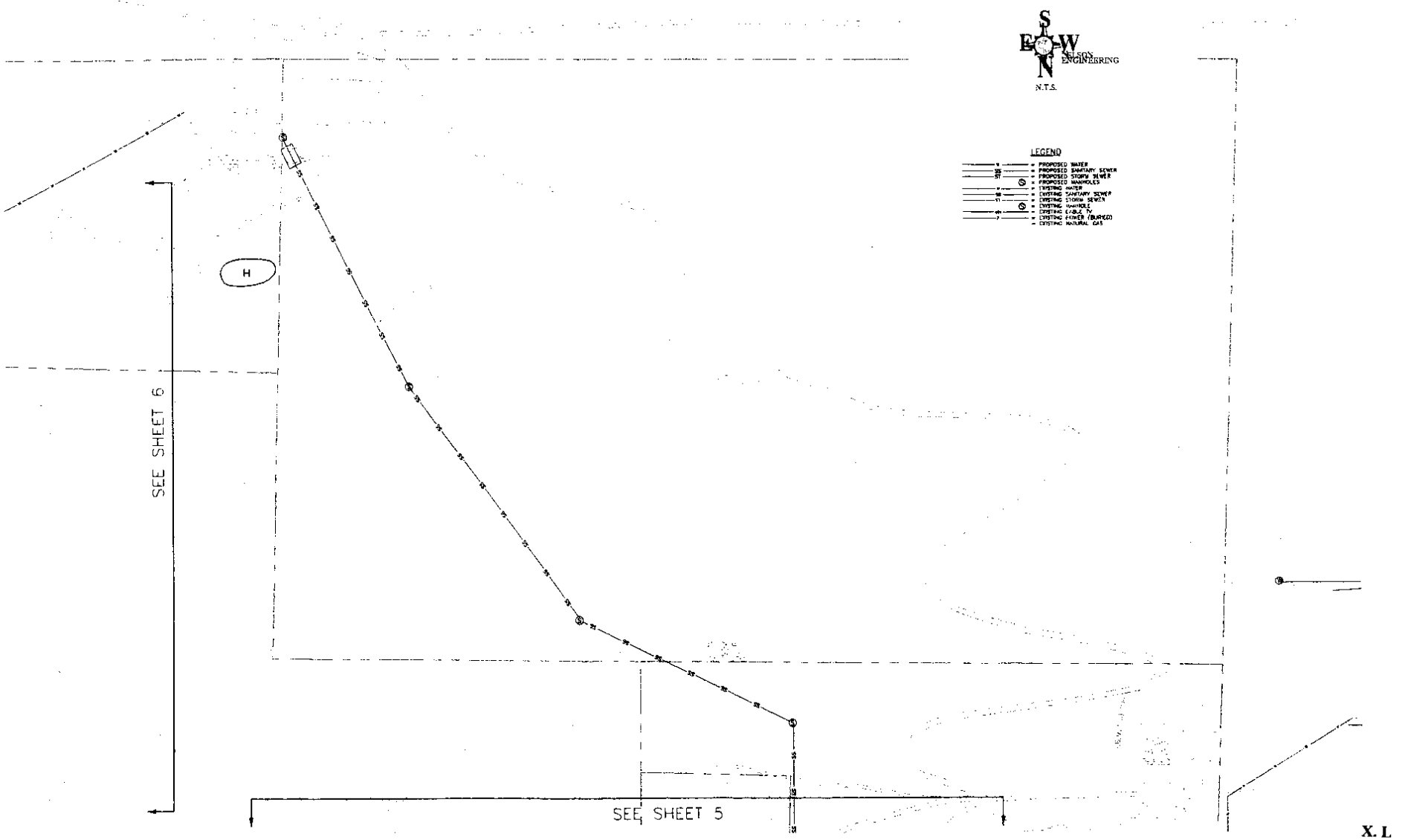
X. J

ENLARGED PLAN – SHEET 5



X. K

ENLARGED PLAN – SHEET 6



X. L

ENLARGED PLAN – SHEET 7

XI. PHASING AND THE SNOW KING RESORT MASTER ASSOCIATION

The PRD regulations require a phasing plan and an explanation of relevant management policies and procedures that will guide the implementation of the master plan. The phasing plan must include performance objectives and must be sufficient to assure that development will take place in a logical sequence and that an adequate monitoring program is in place to determine the accomplishment of proposed remedies and mitigation measures for projected impacts.

Snow King will develop the property in phases and in a well-balanced manner. While there is no specific timeline and individual phases will be constructed according to market demand, Snow King will ensure that all facilities required for the convenience of guests, public safety and mitigation of any negative impacts are constructed in a timely and concurrent fashion and follow a logical sequence. As additions are completed, the entire infrastructure and other required performance components for each phase will be in place and performance standards will be adhered to. These components include utilities, parking, housing and transportation elements that will be developed in increments in tune with commercial, lodging and other development. When any of these components are built in excess of the required needs of a particular phase, and in excess of the cumulative needs to date, this excess will be credited towards the requirements of future phases. Final Development Plans for each building or phase will address the specific impacts and required mitigation associated with it.

The Snow King Resort Master Association (SKRMA) will oversee the proper phasing and administration of all development within the Resort District. The intent of this organization is to have one voice represent the Resort District, to ensure that adequate monitoring programs are established for development within the district and for the required SKRMA fee assessment, collection and expenditure.

SKRMA will be controlled by the landowners in the District and will ensure that development occurs in groups, or bundles, that ensure a well-balanced development. SKRMA is managed by a Board of Directors consisting of up to seven members elected by the District property owners, with voting based on assessed valuation as described in the Board bylaws. SKRMA will assign responsibilities and cost-sharing among entities other than the applicants. SKRMA will provide an annual report to the Town of Jackson that includes, but is not limited to, current membership and contact information, phasing plan compliance, and financial information.

The responsibilities of SKRMA include, but are not limited to the following:

- Serving as the conduit for all major development applications within the Resort District.
- Assessing dues and fees for landscaping, snowplowing, and common area road repairs within the district.
- SKRMA is tasked with the responsibility of carrying out the Transportation Demand Monitoring plan associated with this Master Plan and submitting results as required to the Town of Jackson.
- The organization will have one primary point of contact for all inquiries, billing, and organizational requests. SKRMA will exist in perpetuity to oversee the administration and development plans of the Resort District and to ensure that resort commitments within this Master Plan are transferable to all future owners of property within the District.
- SKRMA is ultimately responsible for ensuring all parties within the Resort District install, maintain, and operate all private infrastructure including water, sewer, stormwater, and roads within the district.
- SKRMA members will pay dues on an annual basis to cover costs associated with the management and operation of the organization. In July, 2019 SKRMA adopted a required minimum District-wide fee as set forth in the conditions of approval ("SKRMA Fee"). This minimum required SKRMA Fee shall be assessed as set forth in the conditions of approval. This minimum required SKRMA Fee will not be assessed on Uses that solely take place on United States Forest Service property irrespective of where a ticket for that Use is purchased as described in the conditions of approval. All property owners within the Planned Resort District

shall contribute the required minimum SKRMA fee to SKRMA via this District-wide fee structure.

- Implementation and monitoring of the Transportation Demand Management Plan, Housing Mitigation Plan, adherence to Design and Dimensional Limitation Plans and will act as the Architectural Review Board for the Snow King Planned Resort District. The Snow King Resort Master Association will be responsible for building or providing all required improvements or services as needed according to the phased development commensurate and coincidental with phases of the resort's development.
- SKRMA will be empowered to either own or have others build and own, as well as to maintain, employee housing, parking areas and structures and other infrastructure. All roads, pathways and utilities within the extent of this Master Plan will remain private.
- SKRMA will act as a Master Association for all the property owners within the district with respect to common utilities, safety, transportation, employee housing and parking.
- SKRMA will coordinate members to manage snow removal, lighting, signing, construction and maintenance of common roads.
- SKRMA shall ensure that private shuttle service continues to be offered from the Resort District to downtown Jackson, the Jackson Hole Airport and to Teton Village. If SKRMA is unable or elects not to provide private shuttle service as provided herein, SKRMA must provide a reasonable and equitable contribution to START as determined by the START Board, Town Council and SKRMA and based upon a defined metric of ridership by Resort District guests.
- SKRMA will serve as the vehicle for pre-screening any final development applications prior to presentation to the Town of Jackson for final development approval. All Final Development plans submitted for review by the Town shall be first reviewed and approved by the Snow King Resort Master Association.
- Ultimately, SKRMA will act as a pseudo improvement district and be entitled to assess and collect dues and assessments from all property owners, renters, resort guests and from any entities performing management functions, owning property or obtaining revenues within this Planned Resort District. These dues are intended to cover all of SKRMA's costs including various mitigation plans, constructing and maintaining any improvements that are its responsibility.

All areas and developments within the resort district will be encouraged to participate as members of SKRMA. This SKRMA fee funding mechanism will serve to maintain the minimum resources required for the maintenance of the Resort District. The SKRMA Fee will be used at the discretion of the SKRMA board for communal improvements, repairs, and maintenance, marketing, events, or other Resort District obligations. It is to be noted that these funds are not to be construed solely as a funding mechanism for the ski area only, but rather as a reserve to ensure that the District can maintain compliance with all obligations of the Master Plan.

Upon the Jackson Town Council's approval of this Master Plan area Amendment, SKRMA shall assess a minimum of a 1% fee ("**SKRMA Fee**") on the following uses identified in the Master Plan area (collectively, "Uses"):

a. Non-residential uses as defined in the Master Plan except for Institutional Uses in LDR, Section 6.1.8;
b. Commercial Amusement;
c. Indoor Recreation;
d. Home and Temporary uses;
e. Outdoor Amusement/Recreation;
f. Agricultural Uses;
g. Tour Operators/Outfitters;
h. Temporary Uses; and
i. Special Events.

Uses that occur exclusively within the Master Plan area or Uses that occur both within the Master Plan area and on adjacent United States Forest Service property must be assessed the SKRMA Fee. The SKRMA Fee is not required to be assessed on Uses that solely take place on United States Forest Service property irrespective of where a ticket for that Use is purchased (by way of example only, if someone takes the Rafferty lift to access the ropes course, the Rafferty lift ticket is subject to the SKRMA Fee, but the ropes course ticket is not). The SKRMA Fee shall be used at the discretion of the SKRMA Board as a funding mechanism to maintain the Resort District and satisfy SKRMA's obligations under the Master Plan.

To ensure the ski lifts operate as provided herein, SKRMA shall maintain a $500,000 reserved fund generated by the SKRMA Fee ("**Reserved Fund**"). The Reserved Fund shall only be used by SKRMA to ensure the ski lifts operate as provided herein. The Reserved Fund shall be adjusted for inflation every 3 years in accordance with a Denver-based, or other more specific, Consumer-Price Index as approved by the Town. The Reserved Fund shall be established within 3 years of the date the SKRMA Fee is first collected and the SKRMA Fee shall exclusively be used to achieve the $500,000 balance until the Reserved Fund is fully funded. At all times when the Reserved Fund is fully funded, the SKRMA Fee is unrestricted for SKRMA use. If the SKRMA Fee is unable to generate sufficient income to replenish the Reserved Fund by the next required annual report, SKRMA must designate a line of credit to guarantee the $500,000 in the Reserved Fund or add funds from any other source within 3 months.

Summary of Snow King Resort Master Association Commitments:

Conditions of Approval

(Snow King Planned Resort District Master Plan)

1. If Snow King Resort Master Association (SKRMA) fails to comply with any of the conditions listed in these conditions of approval, in addition to any other enforcement powers granted to the Town of Jackson through the Land Development Regulations ("LDRs") and Jackson Municipal Code, the Town of Jackson may withhold pending building permits (including permits for remodels and maintenance) for any development within the Master Plan area.

2. Upon the Jackson Town Council's approval of this Master Plan area Amendment, SKRMA shall assess a minimum of a 1% fee ("**SKRMA Fee**") on the following uses identified in the Master Plan area (collectively, "Uses"):

a. Non-residential uses as defined in the Master Plan except for Institutional Uses in LDR, Section 6.1.8;
b. Commercial Amusement;
c. Indoor Recreation;
d. Home and Temporary uses;
e. Outdoor Amusement/Recreation;
f. Agricultural Uses;
g. Tour Operators/Outfitters;
h. Temporary Uses; and
i. Special Events.

Uses that occur exclusively within the Master Plan area or Uses that occur both within the Master Plan area and on adjacent United States Forest Service property must be assessed the SKRMA Fee. The SKRMA Fee is not required to be assessed on Uses that solely take place on United States Forest Service property irrespective of where a ticket for that Use is purchased (by way of example only, if someone takes the Rafferty lift to access the ropes course, the Rafferty lift ticket is subject to the SKRMA Fee, but the ropes course ticket is not). The SKRMA Fee shall be used at the discretion of the SKRMA Board as a funding mechanism to maintain the Resort District and satisfy SKRMA's obligations under the Master Plan.

3. SKRMA shall provide an annual report to the Town of Jackson by June 15 of each year, for the prior April 15 to April 15 year period, which shall include the following information:
a. Phasing plan compliance;
b. Confirmation that the SKRMA Fee (as defined herein) has been collected;
c. The current balance of the SKRMA Fee fund,
d. The current balance of the Reserved SKRMA Fund (as defined herein);
e. A list of the categories of expenditures that over the previous April 15 to April 15 year period the SKRMA Fee has been spent on within the Resort District (not including specific dollar amounts);
f. SKRMA Board composition and contact information;
g. Status of the SKRMA organization with the Secretary of State;
h. The current SKRMA membership and contact information;
i. Any irregular avalanche control the previous ski season;
j. Confirmation of whether the ski lifts operated an average of 49/hours a week for the previous ski season;
k. Information regarding the private shuttle service, if provided, and if not, the financial contribution SKRMA made to START the previous year; and
l. Information on special events with the Resort District which have more than 200 guests including, but not limited to, the number of events, the location of each event, any complaints received from neighbors outside the Resort District, and the type of event.

4. SKRMA shall ensure that private shuttle service continues to be offered from the Resort District to downtown Jackson, the Jackson Hole Airport and to Teton Village. If SKRMA is unable or elects not to provide private shuttle service as provided herein, SKRMA must provide a reasonable and equitable contribution to START as

determined by the START Board, Town Council and SKRMA and based upon a defined metric of ridership by Resort District guests.

5. SKRMA shall provide a Transportation Demand Management (TDM) report to the Town of Jackson every 3 years, starting 3 years from the date the Master Plan Amendment is approved by Jackson Town Council.

6. SKRMA shall ensure the ski lifts operate an average of 49 hours per week between December and March, barring unforeseen weather conditions; mechanical failures; acts of God; operational challenges outside the control of SKRMA or the ski mountain operator that necessitate deviation. The hours of operation shall include accommodation of key user groups including, but not limited to, the Doug Coombs Foundation and the Jackson Hole Ski and Snow Board Club.

7. To ensure the ski lifts operate as provided herein, SKRMA shall maintain a $500,000 reserved fund generated by the SKRMA Fee ("**Reserved Fund**"). The Reserved Fund shall only be used by SKRMA to ensure the ski lifts operate as provided herein. The Reserved Fund shall be adjusted for inflation every 3 years in accordance with a Denver-based, or other more specific, Consumer-Price Index as approved by the Town. The Reserved Fund shall be established within 3 years of the date the SKRMA Fee is first collected and the SKRMA Fee shall exclusively be used to achieve the $500,000 balance until the Reserved Fund is fully funded. At all times when the Reserved Fund is fully funded, the SKRMA Fee is unrestricted for SKRMA use. If the SKRMA Fee is unable to generate sufficient income to replenish the Reserved Fund by the next required annual report, SKRMA must designate a line of credit to guarantee the $500,000 in the Reserved Fund or add funds from any other source within 3 months.

8. Snow King Mountain Resort, LLC ("Snow King Mountain") is the current owner of all recreational improvements. Snow King Mountain shall not sell off individual recreational improvements to different owners. This condition shall not prevent Snow King Mountain from selling all of Snow King Mountain's recreational improvements to a different owner.

9. Building permits within Sub-Area #2 shall not be issued until construction has commenced on an aerial tramway (i.e. gondola). Nor shall the proposed zip-line in sub area #4 be allowed to open until construction of the gondola has commenced. Notwithstanding the foregoing, if SKRMA proceeds with its application and construction of a gondola in good faith, this condition shall not take effect if a regulatory or judicial circumstance prevents SKRMA from building the gondola. Further, this condition shall be void if the Town and SKRMA fail to come to agreement on a lease for the landing of the gondola by August 1, 2020.

10. SKRMA shall continue to engage in discussions with the Town and property owners in Sub-Area #2 on a shared parking arrangement between Sub-Area #2 and the Town's Phil Baux park property. SKRMA must enter into a shared parking agreement with the Town of Jackson by December 31, 2020 so long as both parties are continuing to negotiate in good faith. The shared parking agreement shall include, at least but not limited to, provisions regarding construction and maintenance of the shared parking areas, snow removal from said areas and storm water system installation and maintenance.

11. SKRMA shall continue to engage in discussions with the Town regarding a Mountain Sports Center and second sheet of ice within the Master Plan area but shall not be obligated to construct or provide land for a Mountain Sports Center or second sheet of ice. The conceptual maps included in the Master Plan currently show a proposed location for the Mountain Sports Center in Sub-Area #5, though this location may change. A Mountain Sports Center, ice rink, affordable or workforce housing, and a maintenance facility shall be permitted by right within Sub-Area #5. All other uses within Sub-Area #5 shall require a conditional use permit.

12. SKRMA shall provide updated information for Chapter 10 of the Master Plan, by December 31, 2020, specifically with respect to the current conditions within the resort district, including updated maps, and discuss the current capacity utilization compared to the potential buildout capacity. This information shall be kept on file at the Town and may incorporated into the Master Plan at a later date.

IX. COMMUNITY SERVICES ELEMENT

Introduction

The PRD regulations include an optional Community Services element to describe the interrelationship between the district and the community. It is recognized that community services are an important part of maintaining the balance between visitors and residents and can contribute significantly to the quality of life of the community.

Community involvement is of paramount interest to Snow King. Community service attributes are woven throughout this Master Plan and are an integral and foremost part of Snow King's vision and philosophy. Since 1939 Snow King has been a proud community partner. Being a "Community Resort" is in fact part of Snow King's Mission Statement. For over 60 years Snow King and the Jackson Hole community have had a very close and symbiotic relationship. Snow King's services to the community are well known and indisputable. Snow King hosts, assists and supports practically all of the local non-profit organizations and service clubs. Our doors are always open and our record of community assistance, involvement, dedication and good will is impeccable. Snow King is very proud of its continuous contributions to this community as a partner. This Master Plan is one more step in continuing and expanding upon this tradition.

Snow King as a Community Partner

A stated purpose and intent of the Resort District is to provide recreational opportunities that rely on indigenous natural attributes of the area. These opportunities are provided to both the community and the visitor through the development of district facilities. The unique in-town nature of these recreational amenities makes them a very important asset to town residents and visitors.

The Snow King Mountain provides a venue for the junior ski racing programs, adult ski racing as well as recreational skiing and snowboarding, both day and night. In addition, the ski area contributes to community integration through supporting efforts of the Doug Coombs Foundation to give low-income students and families the opportunity to learn to ski. On the mountain, improved snowmaking provides early season training opportunities for foreign, regional and local ski racing programs as well as for recreational skiers. The tubing park has become an extremely popular winter outdoor family activity for both locals and visitors. The ski area also accommodates many other special events such as the Town Downhill, regional and national races, and snowmobile events such as the annual World Championship Hill Climb.. As a very unique and special service, Snow King presently provides is after school ski programs with access via the activity bus to Town and Wilson schools in cooperation with the Teton County School District. Snow King has embraced the spectacular growth of uphill skiing in the wintertime through progressive policies to allow this activity and ultimately charge affordable season-long and day ticket prices. This activity will continue to be permitted into the future and where possible distinct trails and routes will be further improved for this user group.

Snow King Mountain supports Jackson/Teton County Parks and Recreation Department programs such as the annual Snow King Hill Climb Run, as well as offers reduced rates for community events and non-profit organizations such as the Teton County School District Winter Sports Program, the Doug Coombs Foundation ski programs, the Jackson Hole Ski and Snowboard Club, and Teton Youth and Family Service programs.

As part of the 2019 update to this Master Plan, Snow King Mountain may build a mountain sports center adjacent to the Snow King Center but is not mandated to do so. This sports center is envisioned to include indoor rock climbing and athletic training facilities available to the public. Snow King intends to work with and support the Jackson Hole Ski and Snowboard Club to expand and improve the existing lodge room and administrative facilities above. SKRMA is committed to working with the Town of Jackson and other partners in planning for a second sheet of ice and for the construction of a Mountain

Sports Training Facility. As part of proposed improvements at the summit of the mountain, Snow King Mountain seeks to build a planetarium and observatory that can be used for educational and scientific purposes as well as making the world of astronomy more accessible to the community. These multi-million-dollar investments into infrastructure that directly benefit the community are another direct way of demonstrating Snow King's commitment to Jackson Hole.

During both summer and winter, Snow King Mountain hosts a wide variety of athletic events and competitions for the community including uphill ski races, obstacle course races, bike races, running races, scavenger hunts, snowmobile races, and downhill ski races.

The Hagen trail connection to Cache Creek, the tubing hill and snowboard terrain park diversify and improve the winter activities while annual events, such as the Hill Climb, continue to draw large numbers of visitors. The figure skating and hockey programs have blossomed since the opening of the Snow King Center. An excellent example of public-private partnership, the Snow King Center has been successfully providing recreation and many other services to the community for over 20 years.

During the summer, Snow King provides a trail system that has become a much-used hiking, running, biking and horseback riding area for residents and visitors alike. Summer mountain improvements envision trail upgrades, pathways, outdoor pools, climbing walls, a planetarium and observatory, on-mountain dining, and additional outdoor activities. . Unlike winter uphill travel, where there are high costs associated with snowmaking, grooming, and ski patrol, summer use of the trail system for hiking on Snow King will be free to the public in perpetuity. Ultimately, Snow King desires to serve as the primary jumping off point for access to USFS trails in the greater Snow King trail system with improved trails for hikers, bikers, uphill skiers, and outdoor recreationalists of all kinds.

It must be noted that many of our community partnership activities mentioned above often come at a high cost to Snow King Resort and the operation of lodging, conference space, and on-mountain activities provide the financial and operational platform, as well as the resources necessary to support these and other community-oriented activities.

Snow King Resort has provided the largest year-round meeting and conference facilities in the county since 1976. These facilities are regularly used by virtually every community organization in Jackson Hole. In many cases, Snow King has provided the only appropriate facilities available for community events and programs.

Within the larger Wyoming community, Snow King has, over the years, hosted practically all of Wyoming's professional and trade associations as well as many statewide events, political conventions and innumerable meetings. Larger facilities will attract other Wyoming and regional gatherings that have outgrown our facilities.

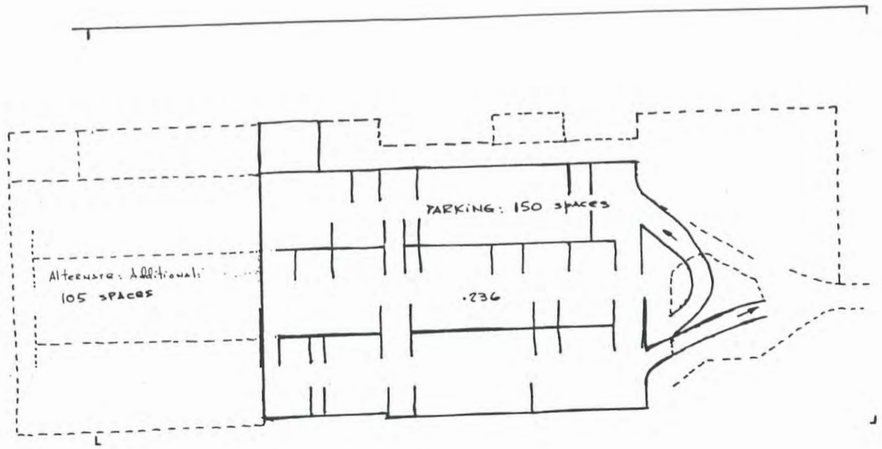
Snow King has, for many years, been one of the largest employers in Teton County. Among the large employers, we pride ourselves in maintaining a very high rate of year-round, stable and level employment. This is a valuable contribution to the stability of our local workforce.

Since the hotel opened in 1976, we have always had our doors open to a great variety of community meetings and events. We have also pioneered innovative relationships with the U.S. Forest Service, the Town of Jackson and many community organizations, such as the Jackson Hole Ski Club. Virtually every non-profit organization in Teton County uses Snow King facilities to bring people together.

Although it would frankly be tedious to list all the community groups that Snow King has assisted and cooperated with over the years, we would like to highlight some specific examples. Snow King provides discounted, and sometimes complimentary, rates for meeting and lodging rooms to a wide variety of governmental and non-profit organizations. Snow King assists arts organizations, the Jackson Hole Ski and Snowboard Club, the Doug Coombs Foundation, St. John's Hospital, the school district and many others with programs. Providing rooms for visiting speakers or artists and nameless other acts of community involvement are the norm for Snow King. Each year Snow King donates over fifty thousand dollars in complementary rooms, activities, and services to community non-profits and will continue to support these organizations into the future. Community Service is an integral part of the Snow King culture.

Every season for the past 5 years Snow King Mountain has offered locals appreciation days with free or discounted activities that are affordable to the permanent population and Snow King will continue this practice into the future as a means of supporting our community.

Since its construction, Snow King Resort has contributed to the community a lively, multi-purpose facility. Summer and winter, Snow King's facilities have encouraged visitors to step out of their rooms and into the mountains. Indoors and outdoors, Snow King has enhanced the daily life of the community from youth skiing and skating to Rotary lunches and Chamber of Commerce banquets. From catering to the desires of visitors to fulfilling community needs, Snow King's dual roles exemplify the "town as heart of the region" and our own "community resort" goals. This Master Plan intends to improve upon this dual function in the future and presents a next-generation vision of Snow King's partnership with the Jackson Hole community.



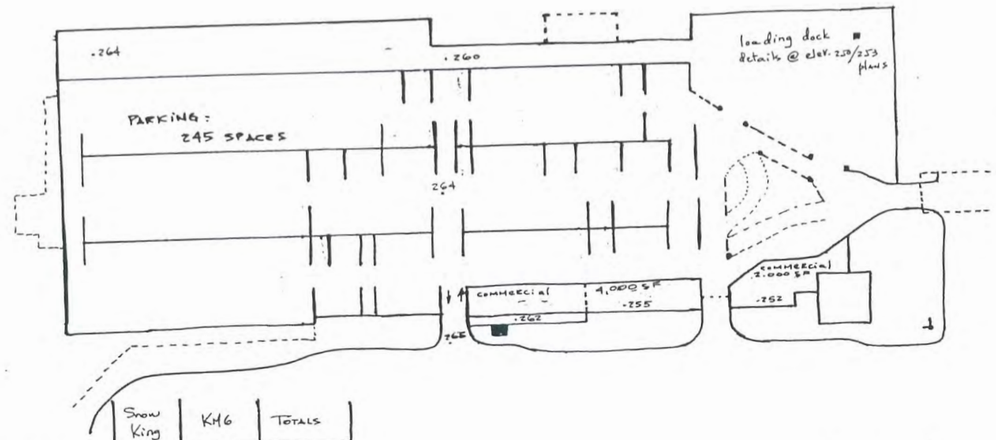
ALTERNATE - ADD

	SNOW KING	KMG	TOTALS
PARKING SPACES	28	77	105 EA
PARKING & CIRCULATION SF	14,000	28,000	42,000 SF
Mech. & SUPPORT	2,000	2,000	4,000 SF

BASE BUILDING

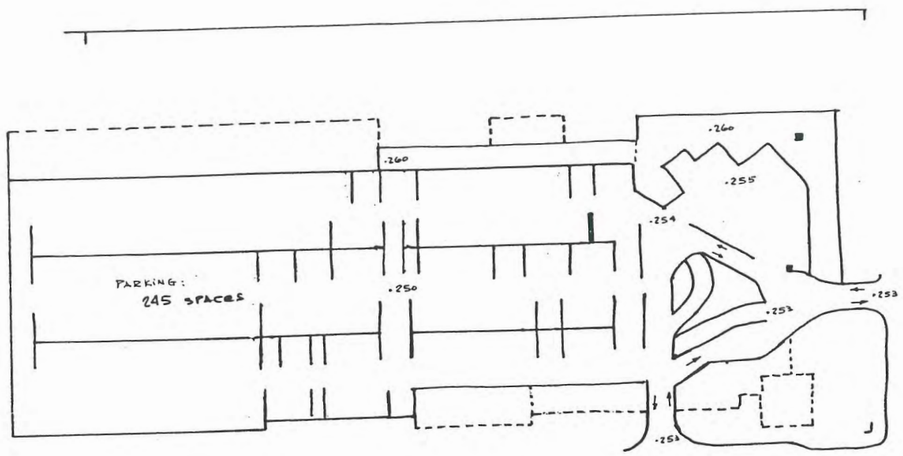
KMG: 150 parking spaces
64,000 SF PARKING & circul.
4,000 SF Mechanical & support (underg.)

Elev. 236



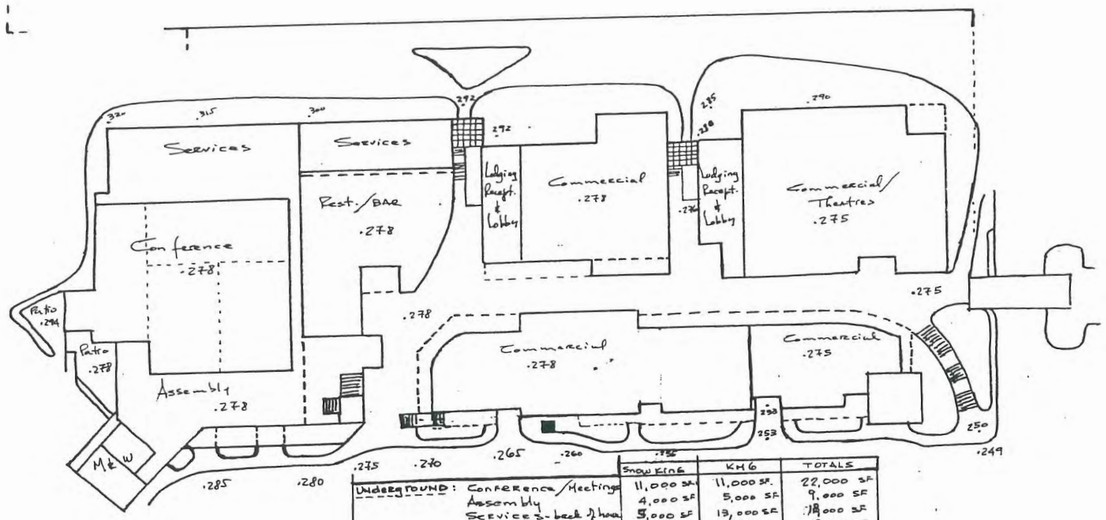
	Snow King	KMG	TOTALS
Parking Spaces	25	220	245
Parking & Circ. SF	13,000 SF	89,000 SF	102,000 SF
Undarg. Support & Mech	3,000 SF	13,000 SF	16,000 SF
Commercial	–	6,000 SF	6,000 SF

Elev. 260/264



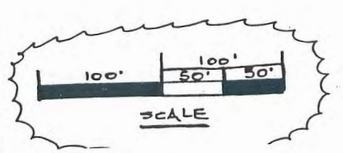
	SNOW KING	KMG	TOTALS
PARKING SPACES	25	220	245
PARKING & CIRC. SF	13,000 SF	89,000 SF	102,000 SF
UNDERG. SUPPORT & MECH.	2,000 SF	6,000 SF	8,000 SF
UNDERG. LOADING DOCK	–	22,000 SF	22,000 SF

Elev. 250/253

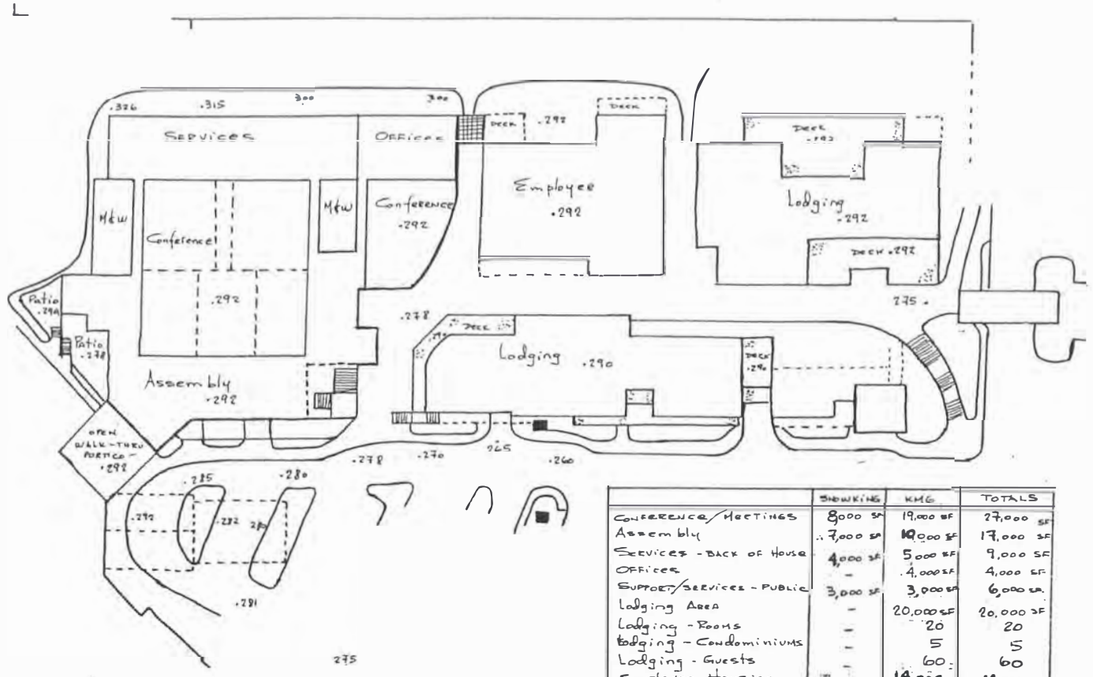


		SNOW KING	KMG	TOTALS
UNDERGROUND:	Conference/Meetings	11,000 SF	11,000 SF	22,000 SF
	Assembly	4,000 SF	5,000 SF	9,000 SF
	Services - back of house	5,000 SF	13,000 SF	18,000 SF
	Support & Service - public	2,000 SF	–	2,000 SF
ABOVE GROUND:	Commercial (F&B)	–	11,000 SF	11,000 SF
	Commercial (Luxury)	–	34,000 SF	34,000 SF
	Assembly	–	3,000 SF	3,000 SF
	Lodging lobby & Recept.	–	6,000 SF	6,000 SF
	Theatres or Commercial	–	9,000 SF	9,000 SF
GROUND COVERAGE:	Buildings	22,000 SF	111,000 SF	133,000 SF
	Landscaped Plaza	–	37,000 SF	37,000 SF
	Pathways, Sidewalks	2,000 SF	15,000 SF	17,000 SF

Elev. 275/278

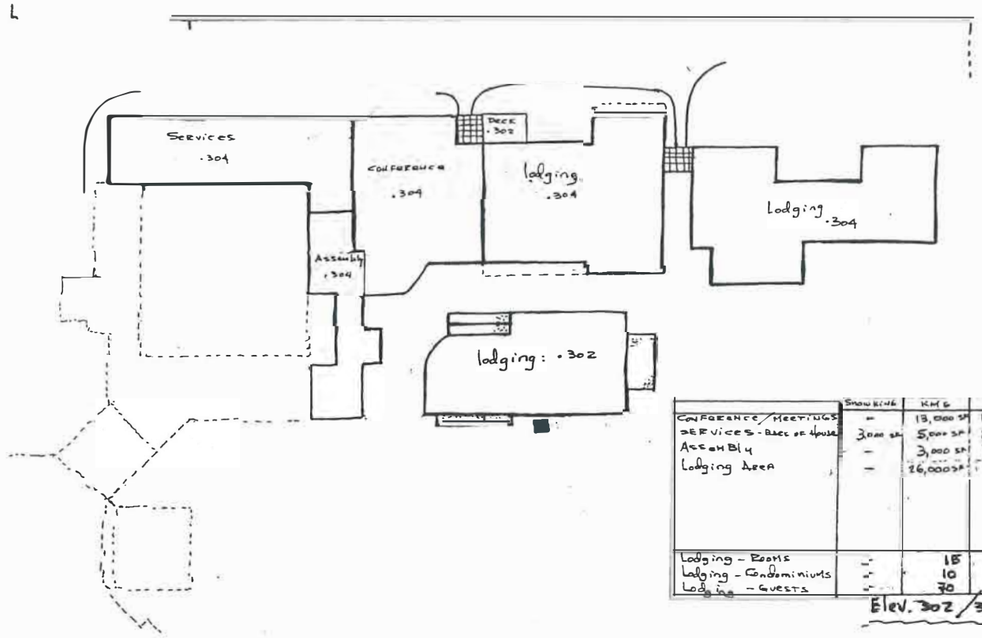


CONCEPTUAL BUILDING DESIGNS - SUB AREA 2



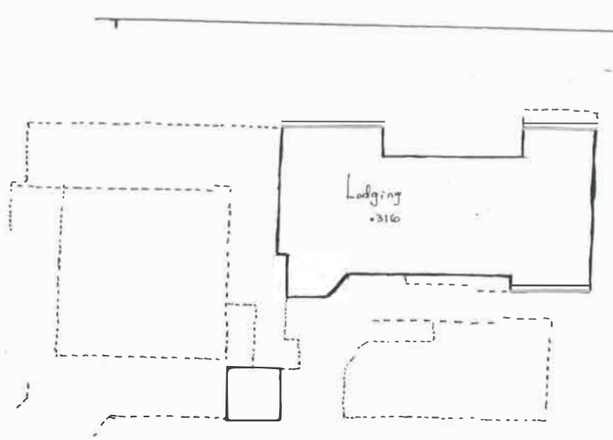
	SHOWKING	KMG	TOTALS
CONFERENCE/MEETINGS	8,000 SF	19,000 SF	27,000 SF
Assembly	7,000 SF	10,000 SF	17,000 SF
SERVICES - BACK OF HOUSE	4,000 SF	5,000 SF	9,000 SF
OFFICES	-	4,000 SF	4,000 SF
SUPPORT/SERVICES - PUBLIC	3,000 SF	3,000 SF	6,000 SF
Lodging Area	-	20,000 SF	20,000 SF
Lodging - Rooms	-	20	20
Lodging - Condominiums	-	5	5
Lodging - Guests	-	60	60
Employee Housing	-	19,000 SF	19,000 SF
	-		

Elev. 290/292



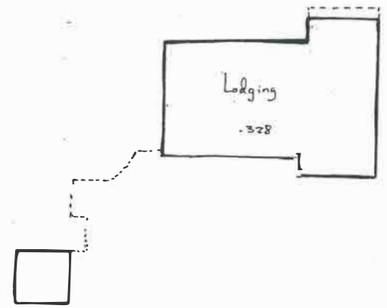
	SHOWKING	KMG	TOTALS
CONFERENCE/MEETINGS	-	13,000 SF	13,000 SF
SERVICES - BACK OF HOUSE	3,000 SF	5,000 SF	8,000 SF
ASSEMBLY	-	3,000 SF	3,000 SF
Lodging Area	-	26,000 SF	26,000 SF
Lodging - Rooms	-	15	15
Lodging - Condominiums	-	10	10
Lodging - Guests	-	30	30

Elev. 302/304



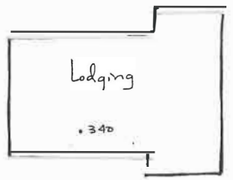
Lodging Area	KMG 16,000 SF	TOTALS 16,000 SF
Lodging - Rooms	30	30
Lodging - guests	60	60

Elev. 316



	KMG	TOTALS
Lodging Area	12,000 SF	12,000 SF
Lodging - Rooms	18	18
Lodging - guests	36	36

Elev. 328



	KMG	TOTALS
Lodging Area	12,000 SF	12,000 SF
Lodging - Rooms	17	17
Lodging - guests	34	34

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

December 20, 2023

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosh, WI 53142

RE: GEOTECHNICAL-ENGINEERING REPORT, BEAR DEVELOPMENT – SNOW KING LOOP LOTS 53 AND 58, TETON COUNTY, WYOMING
PROJECT NO: 23072

Dear Nick,

We are pleased to present this Geotechnical-Engineering Report on our geotechnical site exploration for the proposed development at Lots 53 and 58 on Snow King Loop in Teton County, Wyoming. This report describes site conditions observed during the subsurface exploration, presents engineering analyses and recommendations to support the design and construction of foundation elements, and presents pre-construction and post-construction slope stability analyses.

Jorgensen Geotechnical explored subsurface conditions by drilling seven (7) boreholes and excavating four (4) exploratory test pits throughout Lots 53 and 58. A geophysical exploration was also performed comprising MASW and ReMi exploration techniques. In general, the site is underlain primarily by landslide debris, a chaotic mixture lean clay (CL), clayey gravel (GC), and clayey sands (SC). The site sits on a mapped landslide which likely mobilized prior to the Quaternary period. As such, we assume the soil at the site to be well consolidated. We also observed weathered sandstone bedrock during the subsurface exploration. The weathered bedrock was only observed in one borehole, BH-02, at 67.5-ft below ground surface (bgs), and is assumed to be part of the Cretaceous-age Bacon Ridge Formation (Kb).

Building locations and foundation elevations are based on preliminary design data provided by Hoyt Architecture, dated July 19, 2023. As the design progresses, we will be able to make site-specific recommendations.

If you have any questions about this report, or if we may provide other services to you, please contact us. As the project progresses, we will be available to answer questions for you.

Respectfully submitted,
JORGENSEN GEOTECHNICAL







Bruce Jackson G.I.T.
Geotechnical Design Engineer Technician

Harrison Carter, P.E.
Geotechnical Project Manager

Dominique Brough, P.G.
Geotechnical Project Manager

Geotechnical-Engineering Report

Bear Development – Snow King Loop Lots 53 and 58 | Teton County, Wyoming



43.471263°N, -110.753274°W

December 20, 2023

PREPARED FOR

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosh, WI 53142

PREPARED BY

Jorgensen Geotechnical, LLC
PO Box 9550
1315 HIGHWAY 89 S., Ste. 201
Jackson, WY 83002

PROFESSIONAL GEOLOGIST
DOMINIQUE KIMBERLY BROUGH
PG-4010
12/20/23
WYOMING

Professional Engineer
HARRISON CARTER
17289
Date: 12/20/2023
WYOMING

CONTENTS

1.0 INTRODUCTION 1

2.0 PROJECT DESCRIPTION 1

3.0 GEOTECHNICAL EXPLORATION 2

3.1 DESCRIPTION 2
3.2 SUBSURFACE SOIL CONDITIONS 4
3.3 GROUNDWATER 7
3.4 EARTHQUAKES AND GROUND SHAKING 8
3.5 GEOLOGIC AND GEOTECHNICAL HAZARDS 9
3.5.1 Potential Settlement/Compressible Clays 9
3.5.2 Seismic and Fault Related Hazards 9
3.5.3 Slope-Related Hazards 9

4.0 GEOTECHNICAL ENGINEERING ANALYSES 9

4.1 SLOPE STABILITY ANALYSES 9
4.1.1 Results 10
4.2 SETTLEMENT 11
4.3 LATERAL EARTH PRESSURES 11
4.3.1 Active Pressures 12
4.3.2 At-Rest Pressures 12
4.3.3 Passive Pressures 12

5.0 GEOTECHNICAL RECOMMENDATIONS 13

5.1 RECOMMENDATIONS OVERVIEW 13
5.2 REINFORCED FILLS 13
5.3 ENGINEERED AGGREGATE PIERS 13
5.4 DEEP FOUNDATION ELEMENTS 14
5.5 EARTHWORK 14
5.5.1 Site Preparation 14
5.5.2 Excavation and Cut Slope Stability 14
5.5.3 Final Backfilling and Grading 14
5.5.4 Compaction 15
5.5.5 Compaction Requirements 15
5.5.6 Observation during Construction 16

6.0 LIMITATIONS 16

7.0 REFERENCES 17

Note: Clicking on a desired section in the table of contents will direct the reader to that section and clicking on the Jorgensen logo in the upper left of the page will bring you back to this page.

FIGURES

Figure 1: Site Location and Geologic Map 2
Figure 2: Borehole, Test Pit and Geologic Cross Section Location Map 4
Figure 3: Geologic Cross Section A-A' 5
Figure 4: Geologic Cross Section B-B' 5
Figure 5: Geologic Cross Section C-C' 6

TABLES

Table 3-1: U.S. Seismic Design Maps Summary 8
Table 4-2: Soil Parameters Used for Slope Stability Analysis B-B' 10
Table 4-3: Soil Parameters Used for Slope Stability Analysis C-C' 10
Table 4-4: Summary of Stability Analyses Results 10
Table 4-5: Lateral Pressure Parameters for Landslide Debris 11
Table 5-1: Compaction Parameters for Stony Fill 15

APPENDICES

Appendix A: Site Exploration Procedures and Subsurface Exploration Logs
Appendix B: Figures
Appendix C: Lab Testing Results
Appendix D: Soil Engineering Parameters
Appendix E: Calculations
Appendix F: Slope Stability Analyses

1.0 INTRODUCTION

Jorgensen Geotechnical, LLC was commissioned by Bear Development, LLC to perform a subsurface surface exploration and geotechnical engineering and analyses for the proposed development for Lots 53 and 58 accessed by Snow King Loop in Teton County, Wyoming. The purposes of the exploration were to provide information and geotechnical-engineering recommendations pertaining to:

- Subsurface soil conditions
- Site preparation and earthwork
- Geophysical exploration
- Seismic site classification per the International Building Code
- Evaluation of settlement and/or collapse potential
- General foundation design and construction recommendations
- Slabs-on-grade design and construction recommendations
- Lateral earth pressures for retaining structures
- Subgrade preparation
- Slope Stability Analyses
    - Existing Conditions
    - Proposed Conditions
    - Proposed Seismic Conditions

A detailed description of the subsurface exploration and graphical logs are shown in Appendix A, Figures in Appendix B, laboratory testing results are included as Appendix C, determination of soil engineering parameters in Appendix D, Calculations for settlement in Appendix E, and Slope Stability Analyses in Appendix F.

2.0 PROJECT DESCRIPTION

The project site is located in Jackson, Wyoming and is situated at the base of Snow King Resort. Preliminary plans were provided by Hoyt Architecture, dated July 19, 2023. The plans indicate the development for lots 53 and 58 will include two housing units: each with a first-floor parking garage area with three floors of living space above.

It is our understanding the project is in the early stages of the design, and the architectural plans are subject to substantial changes. As the project progresses, Jorgensen Geotechnical is available to consult with team members to increase design and construction efficiency based on our understanding of the subsurface conditions and the proposed design.

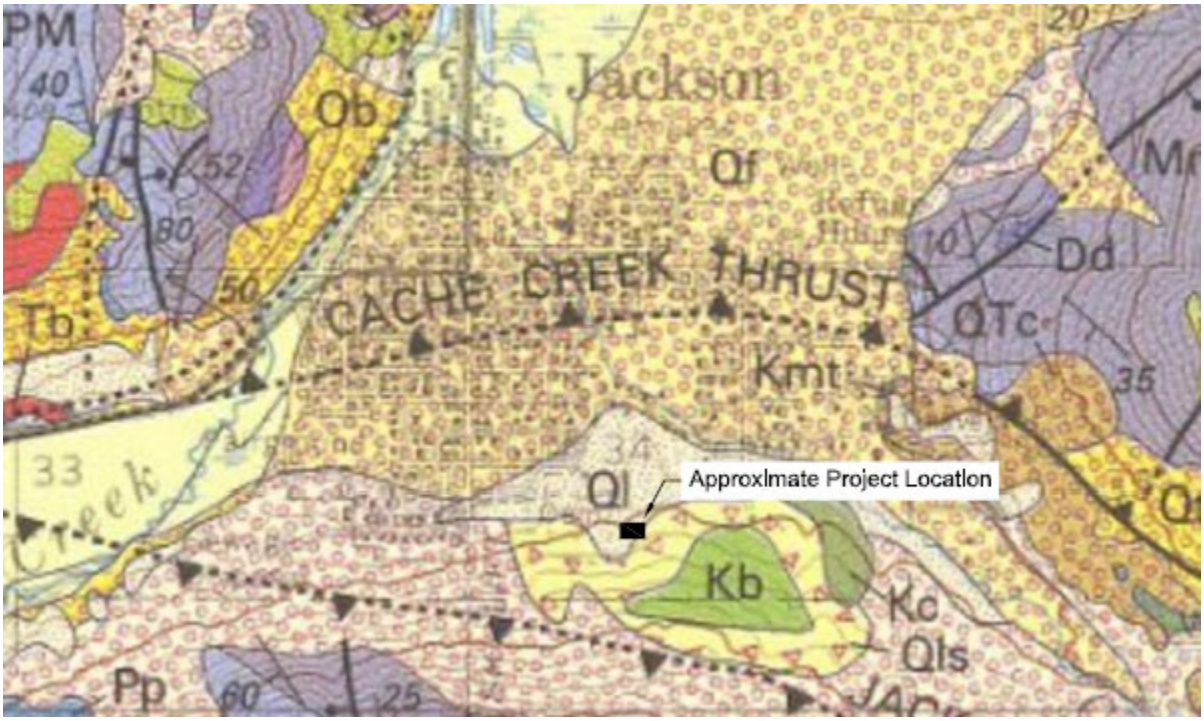


Figure 1: Site Location and Geologic Map

3.0 GEOTECHNICAL EXPLORATION

3.1 Description

JG developed the following description of the site based on field visits, meetings with the project team, our review of available historical aerial imagery, and observations made during the subsurface exploration.

Item	Description
Location and Parcel Information	• Lots 53 and 58 are located at the base of Snow King Resort and are accessed via Snow King Loop. The project area sits at a generalized latitude and longitude of 43.471263°N, -110.753274°W.
Existing Conditions	• The project location slopes from the north upwards to the south and ranges in elevation from approximately 6,400-ft Above Mean Sea Level (AMSL) on the northern boundary of Lot 53, to approximately 6,530-ft AMSL on the southern property boundary of Lot 58. The lots are bisected by a dirt road that provides access for employees at Snow King Resort. • Lot 53 is currently being used for storage by Snow King Resort. • A retaining wall approximately 20-ft tall is present on Lot 53 between the storage area and the access road. This Retaining wall comprises H-piles, lagging, and tie-backs and was built based on construction drawing dated August 13, 2007. • Slopes at the project site range from 10 to 35%.

	• Current utilities at the site include power, gas and water.
Geologic Setting	• The project location is found on the Geologic Map of Grand Teton National Park (Love et. al., 1992), in an area that contains three mapped geologic units including Loess (Ql), a fine-grained, windblown deposit, Landslide Debris (Qls), and the Bacon Ridge Sandstone (Kb). The soils observed from the subsurface exploration seem to be consistent with mapped geology. • The project location sits on a mapped multiple slump/multiple flow landslide, and is understood to be deep seated(WSGS, Wyoming Geologic Hazards Map Tool). A portion of the project site is capped with a wind-blown deposit known as loess which was likely deposited during or after the Pinedale Glaciation Period, or between approximately 30,000 to 10,000 years ago. The mapped loess stratigraphically overlies portions of the mapped landslide unit. • Numerous Quaternary faults (i.e., relatively young and potentially active) are mapped throughout the area. The Teton Fault is mapped approximately 8 miles northwest of the project, at the base of the eastern flank of the Teton Range (Zellman, 2019). Slip rates along the Teton fault is estimated to be between 0.2 and 1.0 mm/year. The Hoback Fault is located approximately 3 miles to the southwest of the project site but is considered old and inactive.

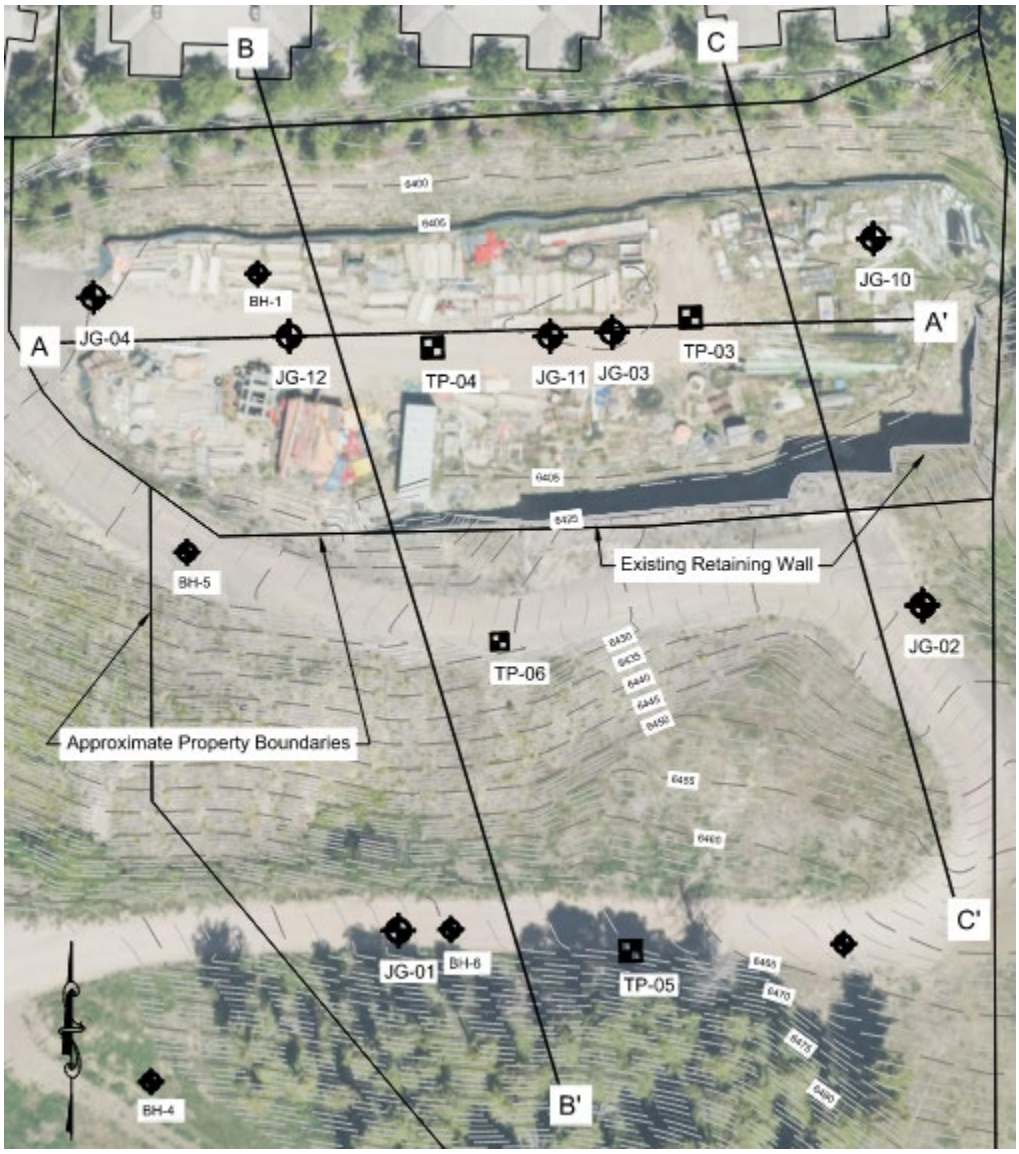


Figure 2: Borehole, Test Pit and Geologic Cross Section Location Map

3.2 Subsurface Soil Conditions

In general, three soil types were encountered during the subsurface exploration:

- **Landslide Debris** – consisting of clayey gravels (GC), lean clays (CL), and clayey sands (SC). The landslide debris soils are assumed to be derived from native colluvium soils prior to mobilization. These landslide debris soils exhibited chaotic deposition, which is also represented in the MASW plots provided by Atlas Geophysics. These results can be found attached to Appendix A.
- **Loess** – consisting of lean clay with sand (CL).
- **Weathered Bedrock** – consisting of soft weathered sandstone of the Bacon Ridge Formation (SC).

Below are three generalized geologic cross-sections spanning both north-south and east-west depicting the subsurface soil conditions and approximate foundation elevations for the buildings on Lots 53 and 58. Cross-section alignments can be found in Figure 2 and complete figures can be found in Appendix B.

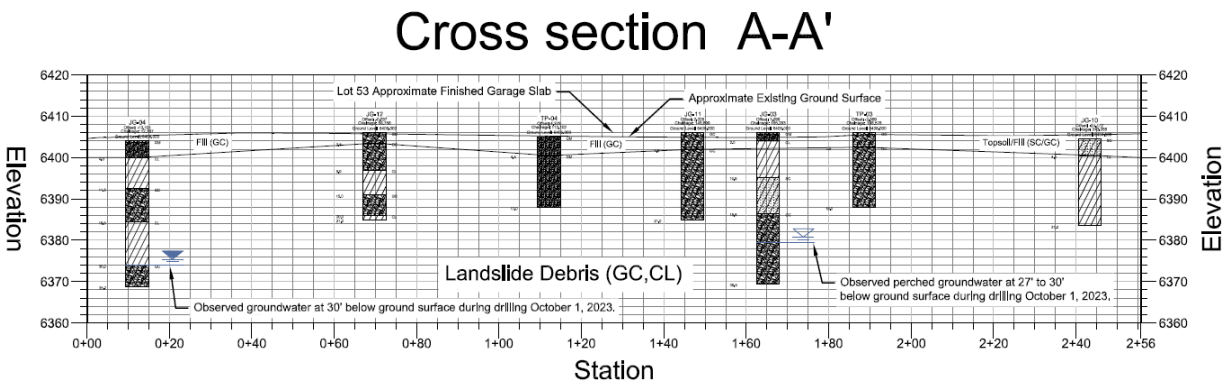


Figure 3: Geologic Cross Section A-A'

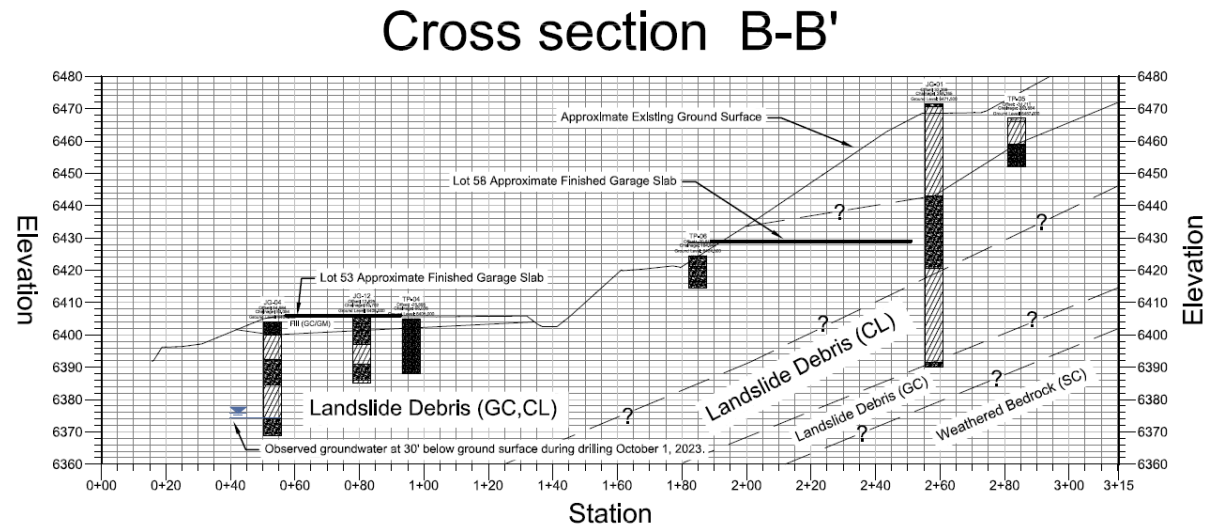


Figure 4: Geologic Cross Section B-B'

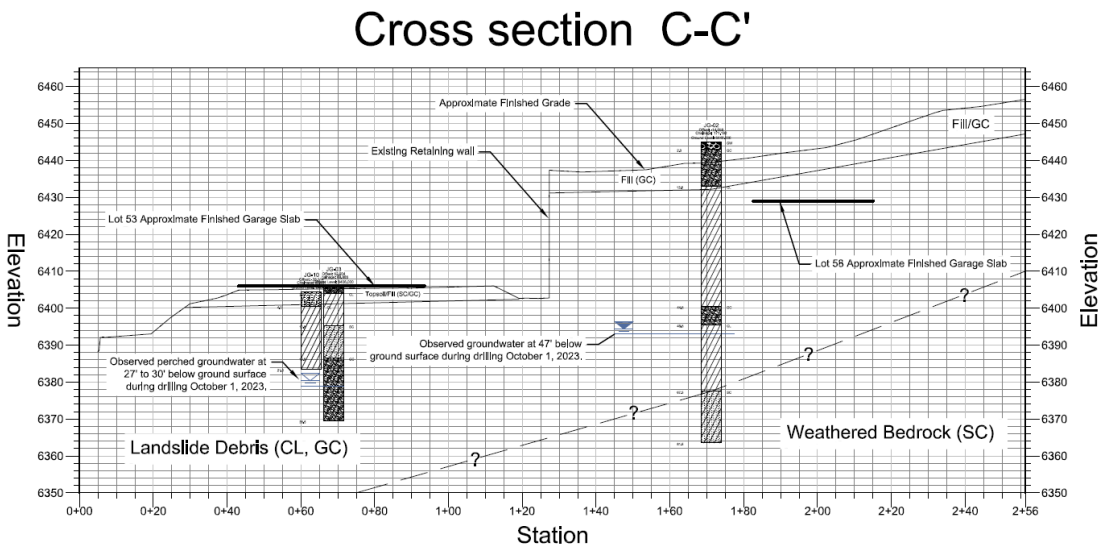


Figure 5: Geologic Cross Section C-C'

The table below describes each soil and rock layer, and detailed borehole logs are represented graphically in Appendix A. **It is important to note that** the borehole exploration techniques used either a 4-inch coring barrel or a 1.5-inch diameter split spoon sampler, limiting the soil that was collected during the drilling effort. It is likely that gravels larger and cobbles 3.0-inches are present but were unable to be logged due to the sampling method. Cobbles and boulders were encountered in the test pits.

Layer	Layer Name	Description	Geotechnical Considerations and Uses
1	**Topsoil/Fill (GC/GM/SC)**	• Observed in all boreholes and test pits • Depths ranging from 1- to 4.5-ft bgs • Classified as a Clayey **Gravel** with Sand, Silty **Gravel** with sand, or a Clayey **Sand** with Gravel. • Both the topsoil and fill are assumed to be derived from native soils • Brown to dark brown • Contains construction debris, including rebar, wood and concrete.	• Undocumented construction fill should be remove from beneath foundations • Non-structural applications
2	**Landslide Debris (GC/CL)**	• Observed in all boreholes and test pits	• Acceptable bearing layer with appropriate subgrade

		• Classified as Clayey **Gravel** with Sand, **Lean Clay**, **Lean Clay** with Sand, Sandy **Lean Clay** with Gravel, • Reddish brown to brownish gray • Coarse-grained soils are loose to very dense • Fine-grained soils are soft to very stiff • **Chaotic deposition, including charcoal fragments** • Observed 15-25% cobbles by volume • 10-55% gravel • 15-30% sand • 25-90% Clay/Silt	improvement methods • Settlement concerns • Structural applications • Non-structural applications
3	**Weathered Bedrock (SC)**	• Observed in BH-02 at 67.5-ft bgs • Classified as Clayey **Sand** • Grayish brown to reddish gray • Very dense • 55% sand • 45% fines	• Unlikely to be reached during construction

3.3 Groundwater

Groundwater was encountered in three boreholes during the subsurface exploration. Groundwater was observed in JG-02 at a depth of 47-ft bgs, JG-04 at a depth of 30-ft bgs, and a region of perched groundwater was encountered in JG-03 ranging from 27- to 30-ft bgs. These groundwater levels were incorporated into our slope stability analysis modeling and are discussed further in Appendix E.

The exploration occurred during a time of year that is considered to take place after peak groundwater levels have occurred, therefore the groundwater levels encountered during the drilling effort are *not* expected to represent peak groundwater levels. Groundwater levels fluctuate in response to seasonal snowmelt, runoff and flow levels in nearby rivers and streams, and is likely most heavily influenced by spring runoff and natural springs uphill. Soil moisture conditions on this site are most likely influenced by surface infiltration due to precipitation, snowmelt, and uphill natural springs. Two groundwater standpipes were installed on Lot 53 as part of the subsurface exploration. These standpipes were installed in JG-10 and JG-12, to total depths of 20 and 21-ft bgs, respectively.

Groundwater data was also presented in the previous Site Investigation Report published by Nelson Engineering, which was dated July, 2021. In this Report, they describe their encounters with perched groundwater to be in relatively thin (<1-ft in thickness) saturated zones. Groundwater measurements taken between 2005 and 2021 typically coincided with these saturated zones. We assume the measured groundwater levels at the site to be heavily influenced by spring runoff and natural springs uphill of the site.

3.4 Earthquakes and Ground Shaking

Jackson, Wyoming is located within the Intermountain Seismic Belt, a zone of seismicity that extends from southern Utah through eastern Idaho, western Montana, and Western Wyoming (Smith and Arabasz, 1991). The Teton fault, located along the eastern margin of the Teton Range, approximately 8-miles northeast of the site, is considered an important structural element of the Intermountain Seismic Belt. Predicted recurrence intervals for maximum credible earthquakes have passed for most of the fault systems capable of generating magnitude 7.5 earthquakes in western Wyoming (Case, 1997), implying the risk of major earthquakes is relatively high. In the event of a large magnitude earthquake (i.e., approximately 7.5), strong ground shaking, liquefaction, or slope movement could potentially cause damage to structures (Smith, et al., 1993).

Shear wave velocity calculated by Atlas Technical Consulting LLC, of Salt Lake City, Utah using ReMi geophysical exploration method for the project site is 1,200 ft/s. The IBC references ASCE 7-16 to determine the ground motion accelerations. Based on subsurface soils, and the results from the geophysical exploration, the site is classified as Site Class C ("Very dense soil and soft rock"). For your convenience, Seismic Design Maps (SEAOC, 2019) values are summarized in Table 3-1: U.S. Seismic Design Maps Summary.

Table 3-1: U.S. Seismic Design Maps Summary

Maximum Considered Earthquake (MCE) Spectral Response Acceleration Parameters			
	Short Period (S_s) =	1.024	
	1-Second Period (S_1) =	0.336	
Site Coefficients and Adjusted MCE Spectral Response Acceleration Parameters			
F_a =	1.2	S_{MS} =	1.229
*F_v =	1.5	*S_{M1} =	0.504
Design Spectral Response Parameters			
	S_{DS} =	0.819	
	*S_{D1} =	0.336	

*Note: Values for F_v, S_{M1}, and S_{D1} were determined in accordance with Section 11.4.4 of ASCE 7-16. Per Section 11.4.8 of ASCE 7-16, if the proposed structure foundation will include seismic isolators or damping systems, a site response analysis shall be performed in accordance with Section 21.1.

The project site is located in an area of moderate seismic activity. The current peak horizontal acceleration (PGA) with a probability of occurrence of 2% in 50 years is approximately 0.454g (USGS, 2014). The site amplification factor at PGA is 1.2, resulting in a site modified peak ground acceleration (PGA_M) of 0.545. This has been applied for the analysis of seismic lateral loading on retaining walls Section 4.3.

The provisions of the IBC are intended to provide uniform levels of performance for structures depending on their intended use and the risk inherent to their failure. The approach adopted in the IBC is intended to provide a uniform margin of safety against collapse at the design motion. The design earthquake ground motion is selected at a ground shaking level that is 2/3 of the maximum considered earthquake (MCE) ground motion, which has a likelihood of exceedance of 2% in 50 years (corresponding to a return period of 2,500 years). The IBC is not intended to prevent damage or loss of

function during a major earthquake; it is intended to reduce the risk of loss of life. Structural design should follow the level of risk tolerable by the Design team.

3.5 Geologic and Geotechnical Hazards

3.5.1 Potential Settlement/Compressible Clays

The primary geotechnical concern at the project site is differential settlement of foundation elements placed on unimproved landslide deposits. Based on the borehole logs, in-situ testing, lab testing, and geophysical exploration, the subgrade soils comprise a range of chaotic mixture of soils, from compressible clays to competent stony soils. The soft clays are expected to experience moderate to severe settlement, while the stony soils are *not* expected to experience substantial settlement. Calculated settlement values are discussed in Section 5.2 and calculation spreadsheets are shown in Appendix E.

3.5.2 Seismic and Fault Related Hazards

The owner should be aware that in the event of a large magnitude earthquake (i.e., approximately 7.5), strong ground shaking could potentially cause damage to structures (Smith et al, 1993). The owners may wish to consider the option of carrying earthquake insurance in addition to homeowner's insurance. Older faults mapped in the immediate vicinity of the property are believed to be old and inactive. Surface rupture due to faulting is very unlikely, and no slope failure is anticipated to occur.

3.5.3 Slope-Related Hazards

In the event of an earthquake or extreme precipitation event, rock fall, debris flows, or avalanches produced from the steep slopes to the south of the development area could potentially cause damage to structures, especially following wildfires. Risk assessment of the slope related hazards was beyond the scope of this Report, but we present slope stability analyses of several slopes captured in the cross section Lot 53 and 58. These are discussed in Section 4.1 and presented in Appendix F.

4.0 GEOTECHNICAL ENGINEERING ANALYSES

4.1 Slope Stability Analyses

The slope stability analyses were performed using SLOPE/W module of Geostudio. We analyzed two sets of geometry for global slope stability, taken from cross sections B-B’ and C-C’. Pre-construction and post-construction external geometry was determined using topographic data provided by Jorgensen Associates, as well as proposed design data provided by Jon Althschuld of Chinook Landscape Architecture, LLC.

Soil-strength parameters were determined using direct testing methods, as well as correlations based on index tests and SPT N-Values. A detailed discussion on soil-strength parameters can be found in Appendix D. The parameters used in the stability analysis are shown in Table 4-2 and Table 4-3. We incorporated a phreatic surface into model based on observed water conditions during the drilling effort. We included surcharge loads to account for future building loads and evaluated seismic conditions using a pseudo-static approach.

Table 4-2: Soil Parameters Used for Slope Stability Analysis B-B'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (CL)	115	100[1]	35
Landslide Debris (GC)	125	50[2]	40
Landslide Debris (GC/CL)	120	100[2]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

Table 4-3: Soil Parameters Used for Slope Stability Analysis C-C'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (GC/CL)	120	100[1]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

4.1.1 Results

Results of the stability analyses are summarized in Table 4-4. Appendix F shows the output of the stability model for Cross-Section B-B' and C-C'.

Table 4-4: Summary of Stability Analyses Results

Cross section	Analysis	FS	Change in FS[1]
B-B'	Pre-construction	1.646	-1.03%
	Post-construction	1.629	
	Post-Construction Seismic	1.173	N/A
C-C'	Pre-construction	2.281	+12.93%
	Post-construction	2.576	
	Post-Construction Seismic	1.753	N/A

1. Negative indicates a reduction in FS from pre-construction to post-construction, while positive indicates an increase in FS from pre-construction to post-construction.

Discussion regarding accepted FS can be found in Appendix F. Changes in Factors of Safety (FS) from pre-construction to post-construction conditions range from -1.03 to 12.93%, though all of the post-construction conditions indicate static FS's above the 1.5 threshold for residential construction ranging from 1.629 to 2.576. Post-construction seismic conditions indicate factors of safety from 1.173 to 1.753, both of which are above the 1.1 FS threshold for maximum allowable permanent seismic deformations of 2 inches (FHWA 2011).

Residual strength results from strain-softening behavior; i.e., soils become weaker with shearing (as in the case of slope movement) decreasing from peak strength to residual strength. Reduced shear strength usually occurs only in soils that have been previously sheared while undisturbed soils typically exist at peak strength. It is possible that sheared soils exist on this site or nearby and exhibit behavior

consistent with residual strength. In this case, seismic slope stability may result in factors of safety less than 1.0. **However, soil shearing was not observed during subsurface exploration at this site. If pockets or layers of soft, weak, or sheared soils are observed during construction, work shall cease, and Jorgensen Geotechnical be notified immediately to evaluate site conditions and review the stability model.**

4.2 Settlement

As described is Section 3.5.1, several different soil types were encountered at the site, all of which represent different levels of settlement potential, increasing the risk of differential settlement which is particularly damaging to structures. Settlement calculations were performed for the compressible clay, and the potentially compressible clayey sands. Because the stony soils contain varying amounts of matrix soils (i.e., clays and sands), estimated settlement is difficult. Though, it is important to note that in general, as the matrix content increases, the risk of settlement increases.

Item	Settlement Analyses – Slopewash	
	Scenario 1	**Scenario 2**
Bearing Layer	**Clay** – Foundation system is placed in direct contact with the clay soils	**Colluvium** - Foundation placed in direct contact with clayey sand soils
Foundation Assumptions	Comprises typical reinforced concrete spread footings	
	Bearing pressure of 3,000 pounds per square foot	
	Buried 3-feet below finished grade	
	Spread footings is 2-feet wide	
Calculated Settlement	3.38-inches	1.67 -inches

The risk of settlement can be reduced by several subgrade improvement methods, of which are discussed below in Section **Error! Reference source not found.**.

4.3 Lateral Earth Pressures

Lateral pressures were calculated using methods suggested by Bowles (1996) for at-rest, active, and passive conditions and are presented in Table 4-5. These values assume a combination of lean clay and clayey gravel landslide debris will be used as non-structural backfill. We have assumed an estimated internal friction angle of 36° and a unit weight of 130 pcf based on experience working with similar soil deposits and laboratory testing. Calculations assume level backfill against foundation walls or retaining walls.

Table 4-5: Lateral Pressure Parameters for Landslide Debris

Condition	Coefficient of Earth Pressures	γK (equivalent fluid pressure)
Static Conditions Level Backfill	K_o = 0.41 K_a = 0.26 K_p = 3.85	54 pcf 34 pcf 501 pcf
Earthquake Conditions	K_{ae} = 0.38	49 pcf

Level Backfill	K_{pe} = 3.46	449 pcf

Lateral earth pressure design will be estimated based on the concept of equivalent fluid pressures, in which the soil pressure-distribution is triangular against the foundation or retaining wall. The following sections summarize each design situation.

4.3.1 Active Pressures

Application	Retaining walls which are allowed to deflect and develop an active soil wedge
Resultant Force Calculation	½ $\gamma K_a H^2$; pounds per horizontal foot of wall
Resultant Force Location	one-third the wall height (1/3 H) above the base
Seismic Coefficient[1]	K_s = 0.338g (r·α·PGA) per the FHWA (2011)
Seismic Calculation Basis	Mononobe-Okabe equations (Bowles, 1996)
Seismic Resultant Force	½ (γK_{ae} - γK_a) H^2; pounds per horizontal foot of wall
Seismic Resultant Force Location[2]	Applied at 60% of the wall height above the base

1. Discussion and calculations for the Seismic Coefficient can be found in Appendix F.
2. Research has indicated that lateral pressures due to earthquakes are non-hydrostatic in distribution, and the resultant acts above the lower third-point of the wall (Bakeer, et al, 1990).

4.3.2 At-Rest Pressures

Application[1]	Walls which are restrained and not allowed to deflect
Resultant Force Calculation	½ $\gamma K_0 H^2$; pounds per horizontal foot of wall
Resultant Force Location	One-third the wall height (1/3 H) above the base

1. Design control of such walls shall be whichever generates the higher resultant force: at-rest pressures or active seismic pressures.

4.3.3 Passive Pressures

Application[1]	Toe of retaining walls where the wall is allowed to move into soil
Resultant Force Calculation	½ $\gamma K_p H^2$; pounds per horizontal foot of wall
Resultant Force Location	One-third the wall height (1/3 H) above the base
Design Control	k_s = 0.338g (r·α·PGA) per the FHWA (2011)
Seismic Calculation Basis	Mononobe-Okabe equations (Bowles, 1996)
Seismic Resultant Force Location	One-third the wall height (1/3 H) above the base

1. Passive pressure design should neglect loose fill and soil located within the frost zone.

5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 Recommendations Overview

The fine-grained soils encountered at the site exhibit moderate settlement potential as described above in Section 4.2. Typical spread footings are likely to experience settlement greater than 1-inch if placed above the compressible soils. The risk of settlement can be reduced by **ground improvement techniques** such as geosynthetic reinforced fills, or engineered aggregate piers (EAPs). The risk of settlement can also be reduced by incorporating **deep foundation elements** such as driven piles or micropiles into the foundation design. Subgrade improvement methods to reduce the risk of future differential settlement are discussed in Section **Error! Reference source not found.**, below.

Due to the need for a construction shoring system, if mass excavation (i.e., over-ex and replace with geosynthetic reinforced fill) is selected, the shoring system will need to be extended at or below the over-excavation limit, increasing the overall height of the shoring system. Deep foundation elements and aggregate piers would negate the need for mass excavation below the shoring system.

It should be noted that different subgrade improvement methods correspond with different levels of risk reduction. Any subgrade improvement method that leaves problematic soil beneath foundation systems has a higher level of risk than those that do not. Similarly, deep foundation elements greatly reduce the risk of settlement by transferring the foundation load past the problematic soils and into the underlying competent soils. Typically, the cost of a foundation system correlates to the risk reduction (i.e., the more expensive foundation system the more risk reduction).

5.2 Reinforced Fills

Reinforced fill comprise imported soil compacted and interbedded with a pre-determined geosynthetic. The reinforced fill will better distribute the foundation load thereby reducing the load applied to the fine-grained, compressible and reducing the amount of future potential settlement. Exact thickness of a reinforced fill is currently unknown due to the limited design data available, though it can be expected to be four to six fee thick with a geosynthetic layer placed at every 1-ft increment.

5.3 Engineered Aggregate Piers

Engineered aggregate piers are a ground improvement technique that utilize compacted aggregate to reinforce potentially problematic soils. The piers are predrilled with an auger to the full design-depth (or to a refusal condition on competent rock/soil), a select aggregate is dumped into the predrilled hole from the surface, and the aggregate is then compacted with a down hole compactor attached to an excavator. The compaction effort not only compacts the imported aggregate, but also densifies the surrounding native soils. The increased density of the select aggregate as well as the surrounding native soils reduces the potential of future foundation settlement. One major benefit of EAPs compared to deep foundation elements, is the EAPs are a ground improvement technique, therefore the foundation footings do not need to be designed as grade beams as it would need to be for deep foundation elements, but typical spread footings.

Aggregate piers are typically designed and installed by a design-build contractor. Such as Keller, Geotech Foundation Company, and Montana Helical Piers. Jorgensen is available to provide design values and recommendations to the selected contractor for final design and price estimates.

5.4 Deep Foundation Elements

Foundations consisting of grade beams supported by deep foundation elements, such as driven piles or micropiles, typically allow very little vertical movement of structural elements. This option represents the lowest risk of future foundation settlement.

Both micropiles and driven piles are typically designed and installed by a design-build contractor. Jorgensen is available to provide design values and recommendations to the selected contractor for final design and price estimates.

5.5 Earthwork

5.5.1 Site Preparation

Prior to the placement of any fill, concrete slabs, or foundation elements, the site should be cleared and stripped of topsoil and all organic debris. No brush, roots, frozen material, or other deleterious or unsuitable materials shall be incorporated in the foundation subgrade or structural fill. All exposed subgrade surfaces should be free of mounds and depressions which could prevent uniform compaction. If unexpected fills or obstructions are encountered during site clearing or excavation, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

During the excavation, the equipment may disturb and loosen the surface of the subgrade soils. All disturbed areas should be compacted with a smooth-drum vibratory roller, in vibratory mode with a minimum of three passes, prior to the placement of structural fill and footing construction. The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed and approved by a representative of this office.

5.5.2 Excavation and Cut Slope Stability

OSHA regulations (29CFR1926) appear to classify the coarse-grained at the site as Type C soil. For planning and design purposes, simple cut slopes should be no steeper than 1.5H:1V. According to OSHA, any cut slope greater than 20 feet in height requires additional analysis. Shallow groundwater conditions at the site may impact shoring requirements. These recommendations are based on observations made at the time of the site exploration. The contractor shall be responsible for adherence to OSHA and other safety regulations by observing soil conditions at the time of construction.

The design of a temporary construction shoring system is beyond the scope of this report. Jorgensen Geotechnical is available to coordinate with shoring contractors to provide design parameters and local expertise to the project and deliver the most efficient shoring option.

5.5.3 Final Backfilling and Grading

Properly compacted backfill and site drainage are very important to protect subgrade soils and prevent water from flowing to undesirable locations (i.e., to the highway). All soils at the site are acceptable for use as backfill and general site grading. Compaction guidelines for both soil types can be found in Section 5.5.4.

5.5.4 Compaction

Based on our borehole logs, compaction of the on-site soils during construction can be measured by performing a Standard Proctor test per ASTM D698 and performing nuclear density gauge testing during the compaction process. Site soils should be moisture-conditioned and placed in lifts and compacted to a predetermined percentage (typically either 92% or 95%) of the maximum dry density as determined by Standard Proctor testing. Soil should be moisture conditioned to between -2% and +2% of the optimum moisture content (OMC). Fine-grained soils require a sheepsfoot or padfoot roller.

It is important to note, the on-site soils contain fine-grained soils which become difficult to compact if moisture contents become too high. Moisture management of the compacted soils will be paramount to reach adequate densities. Additionally, groundwater may impact the ability to compact the soils during construction.

If imported "pit-run" is used as structural fill or if soils at the site contain more oversized clasts (greater than 3-inches) compaction testing with a nuclear density gauge is usually problematic due to the presence of stones. Therefore, we recommend compacting stony soils using a **method specification**, for which Table 5-1 provides initial guidelines.

Table 5-1: Compaction Parameters for Stony Fill

Compactor Type	Lift Thickness	Maximum Particle Size	Minimum Number of Passes[1]
5-ton vibratory	12 inches	9-inch[2]	3
1.5-ton vibratory	9 inches	6-inch	5
Hand-held	4 inches	4-inch	5

1. The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.
2. Occasional clasts to 12-inch are permitted, if encountered, but should not be nested.

The method specification may be established as follows:

- The contractor will place fill in loose lifts no greater than specified in the above table for whichever class of compactor is used.
- Fill will be compacted with the *minimum* number of passes specified above. The actual number of passes should be determined by observing compaction after each pass to determine if the surface is non-yielding. If the fill surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.
- Once the number of passes is determined, this **method** (unique to the material type, compactor, lift thickness, and number of passes) may be continued for the rest of the project as long as fill material properties and subgrade soil conditions remain the same.

It is important to establish a method specification as early in the construction as possible and apply it consistently for the entirety of the project. JG should observe lift thickness, number of passes, and equipment used during compaction. Additional guidance on construction observations may be found in Section 5.5.6.

5.5.5 Compaction Requirements

We recommend the following requirements for engineered fill materials:

Material Type and Location	Minimum Compaction Requirement	Moisture
Stony soils[1]: All Locations (Structural and Non-Structural Applications)	Non-yielding Condition	Usually 6-8%[2]
Non-stony soils	92% or 95% maximum dry density	+2-2% OMC

1. Stony soil may be imported or site-derived
2. Clean, stony soils are typically moisture insensitive and field observations are usually adequate to estimate when soils achieve the proper moisture.

We recommend compaction of fills be observed and tested during construction. If stony fill is not observed to be in a non-yielding condition or non-stony fills do not achieve the recommended compaction requirements, the area represented by the test should be reworked and retested as required to meet the requirements.

5.5.6 Observation during Construction

Recommendations in this report are contingent upon our involvement. If any unexpected soils or conditions are revealed during construction, this office should be notified immediately to survey the conditions and make necessary modifications. All excavations and foundation subgrades should be observed by a representative of JG prior to fill or concrete placement, especially if questionable materials are exposed. Notice shall be provided at a minimum of 24 hours before the requested observation.
We are able to provide the most value observing site conditions at the following times:

1. Upon completion of site preparation to verify all organics and unsuitable material have been removed, and to verify stony alluvial soils have been reached and structural fills have been prepared in accordance with Sections 5.5.1 and 5.5.4.
2. we can observe placement and compaction of fill and aid in the development of a method specification, Section 5.5.4.
3. We can perform density testing by means of proof rolls and with the use of a Nuclear Density Gauge for structural and non-structural soils.

6.0 LIMITATIONS

This report has been prepared based on a limited amount of data. Actual site conditions may vary. These services have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty is made or implied.

This report is site-specific and has been prepared in support of the proposed project. The report is for the sole use of the current property owner and their design and construction team and shall be considered non-transferable to future property owners without the written consent of Jorgensen Geotechnical. Under no circumstances are the figures and text to be used separately.

7.0 REFERENCES

American Concrete Institute, 1997, Guide for Concrete Floor and Slab Construction: ACI302.1R-896.

American Society of Civil Engineers, Minimum Design Loads for Building and Other Structures: ASCE/SEI Standard 7-16.

Bakeer, R.M., S.K. Bhatia, and I. Ishibashi, 1990, Dynamic Earth Pressure with Various Gravity Wall Movements *in* Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen, ed.): ASCE Geotechnical Special Publication 25, p. 887-899.

Bowles, J.E., 1996, Foundation Analysis and Design, 5th Ed. : McGraw Hill.

Case, J.C., 1997, Earthquakes and Active Faults in Wyoming; Wyoming State Geological Survey, Preliminary Hazards Report 97-2.

Das, B., 2011, Principles of Foundation Engineering, 7th edition, Cengage Learning, Stamford, CT, USA.

Duncan, J.M., Horz, R.C., and Yang, T.L., 1996, Shear Strength Correlations for Geotechnical Engineering, Virginia Tech, Department of Civil Engineering, Blacksburg, Virginia, pp. 86.

FHWA (1996) "Design Guidance: Geotechnical Earthquake Engineering for Highways," Geotechnical Engineering Circular No. 3, Federal Highway Administration, Vol. 1 and Vol. 2, Reports No. FHWA-SA-97-076 and FHWA-SA-97-077

FHWA (2011) "LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations," Geotechnical Engineering Circular No. 3, Report No. FHWA-NHI-11-032, 592 p"

Gilbert, J.D., D. Ostenaa, and C. Wood, 1983, Seismotectonic Study Jackson Lake Dam and Reservoir, Minidoka Project, Idaho-Wyoming: Seismotectonic Report 83-8, US Bur. Reclam.

Hatanaka, M. and Uchida, A., 1996, Empirical Correlation Between Penetration Resistance and Internal Friction Angle of Sandy Soils, Soils and Foundations, Vol. 36, No. 4, pp. 1-9, https://doi.org/10.3208/sandf.36.4_1.

Holland, J.A., and W. Walker, 1998, Controlling Curling and Cracking in Floors to Receive Coverings: Concrete Construction Publication Number C980603.

Hynes-Griffin, M.E., and Franklin, A.G., 1984, Rationalizing the Seismic Coefficient Method: U.S. Army Corps of Engineers, Waterways Experiment Station, Miscellaneous Paper GL-84-13.

International Building Code, 2021.

Kelly, D., 2006, Seismic Site Classification for Structural Engineers, Structure Magazine, pp. 21-24.

Kulhawy, F.H., and Mayne, P.W., 1990, Manual of Estimating Soil Properties for Foundation Design, Electric Power Research Institute, Palo Alto, California.

Love, J.D., & Albee, H.F., Geologic Map of the Jackson Quadrangle, Teton County, Wyoming, 2004.

Machette, M.N, Pierce, K.L., McCalpin, J.P., Haller, K.M., and Dart, R.L., 2001, Map and Data for Quaternary faults and folds in Wyoming, United States Geological Survey, Open-File Report 01-461.

McCalpin, J.P., Machette, M.N., and Haller, K.M., compilers, 1994, Fault number 726a, Grand Valley fault, Swan Valley section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed October 30, 2023.

Nagaraj, T.S., and Murthy, B.R.S., 1985, Prediction of the Preconsolidation Pressure and Recompression Index of Soils, Geotechnical Testing Journal, American Society for Testing and Materials, Vol. 8, No. 4, pp.199-202.

NCHRP 12-70 (2008) "Seismic Analysis and Design of Retaining Walls, Buried Structures, Slopes and Embankments," NCHRP Report 611, Transportation Research Board, Washington, DC (2 volumes)

O'Connell, D.R.H., Wood, C.K., Ostenaa, D.A., Block, L.V., and LaForge, R.C., 2003, Final Report, Ground Motion Evaluation for Jackson Lake Dam, Minidoka Project, Wyoming: U.S. Bureau of Reclamation Report 2003-2.

Pack, John S., P.E., 2020, Simplified Design and Inspection Guide, copyright Heli-Pile, published March 2020, Denver, Colorado.

Pampeyan, E.H., Schroeder, M.L., Schell, E.M., and Cressman, E.R., 1967, Geologic map of the Driggs quadrangle, Bonneville and Teton Counties, Idaho, and Teton County, Wyoming, U.S. Geological Survey, Mineral Investigations Field Studies Map MF-300, 1:31,680.

Pit Slope Manual, 1982, Chapter 9, Waste Embankments: Mining Research Laboratories, CANMET Report 77-01.

Schmertmann, J.M., 1975, Measurement of in-situ shear strength, Proceedings of Conference on In Situ Measurement of Soil Properties, Raleigh, NC, USA, June.

Skempton, A. W., 1944, Notes on the Compressibility of Clays, Quarterly Journal of Geological Society, London, Vol. C, pp: 119-135.

Smith, R.B. and Arabasz, W.J., 1991, Seismicity of the Intermountain Seismic Belt, in Slemmons, D.B., Engdahl, E.R., Zoback, M.L., and Blackwell, D.D., editors, Neotectonics of North America: Geological Society of America, Decade Map Volume 1, p. 185-228.

Smith, R.B., Byrd, J.O.D., and Susong, D.D., 1993, The Teton fault, Wyoming: Seismotectonics, Quaternary History, and Earthquake Hazards, in Snoke, Q.W., Steidtmann, J.R., and Roberts, S.M., editors, Geology of Wyoming; Geological Survey of Wyoming Memoir No. 5, p. 628-667.

Structural Engineers Association of California, U.S. Seismic Design Maps, accessed October 30, 2023, from SEAOC website: https://seismicmaps.org/

Suprenant, B.A., and Malisch, 1998, Where to Place the Vapor Retarder: Concrete Construction Publication Number C980427.

Suprenant, B.A., and Malisch, 1999, Don't Use Loose Sand under Concrete Slabs: Concrete Construction Publication Number C99C0223.

Terzaghi, K., R.B. Peck, and G. Mesri, 1996, Soil Mechanics in Engineering Practice, 3rd Ed.: John Wiley & Sons.

U.S. Geological Survey Earthquake Hazards Program, 2014, Unified Hazard Tool, accessed October 30, 2023 from USGS website: https://earthquake.usgs.gov/hazards/interactive/

U.S. Geological Survey, 2006, Quaternary Fault and Fold Database for the United States, accessed October 30, 2023 from USGS website: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

Whitman, R.V., 1990, Seismic Design and Behavior of Gravity Retaining Walls in Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen ed): ASCE Geotechnical Special Publication 25, p. 817-842.

Wroth, C.P., and Wood, D.M., 1978, The Correlation of Index Properties with Some Basic Engineering Properties of Soils, Canadian Geotechnical Journal, Vol. 15, No. 2, pp. 137-145.

Zellman, M.S., DuRoss, C.B., and Thackray, G.D., 2019, The Teton fault—Teton County, Wyoming: Wyoming State Geological Survey Open File Report 2019-1, scale 1:75,000.

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX A

Site Exploration Procedures and Subsurface Exploration Logs

Field Exploration

Borehole Locations and Elevations

Borehole and test pit locations were determined by Jorgensen Geotechnical (JG) staff to bracket the approximate location of the proposed development. Approximate locations of the boreholes and test pits are presented in Figure 2. The approximate location of each borehole and test pit locations were estimated based on relative proximity to landmarks identifiable on aerial photography. Approximate GPS coordinates for each borehole were also collected in the field. Approximate elevations were based on topographic data from Jorgensen Associates.

Subsurface Exploration Procedure

JG conducted a site exploration at the proposed project site utilizing two different subsurface exploration techniques: geotechnical boreholes and open test pits. During the exploration effort, several disturbed samples from SPTs were collected during the drilling effort as well as bulk disturbed grab samples during the test pit excavation. Shelby tubes were used to collect relatively undisturbed samples of soft material for consolidation testing, shear testing, and index testing. The samples were tested at GCI in Salt Lake City, Utah, and the results are presented in Appendix B. Soil-engineering properties were based on visual classification, direct lab testing results, and accepted correlations based on index test results and SPT blow counts and are discussed further in Appendix D. The subsurface exploration techniques are described below.

Sonic Boreholes

On October 1 and 2, 2023, JG directed and oversaw the drilling of four sonic boreholes; two to 80-feet below the ground surface (bgs) and two to 35-feet bgs using a sonic drill rig operated by Cascade Drilling of West Jordan, Utah. Sonic drilling utilizes high frequency vibrations to advance a core barrel or casing into the subsurface soils while collecting one continuous disturbed sample. At predetermined intervals, standard penetration tests (SPT) were performed to generate blow count values and collect additional disturbed samples.

Hollow Stem Auger Boreholes

Three additional boreholes were completed each to 20-feet bgs on October 25, 2023 using a hollow stem auger (HSA) drilling technique with a Diedrich D120 drill rig operated by SK Geotechnical of Billing, Montana. The HSA drilling technique utilized a 4.25-inch inside diameter hollow auger with a solid stem rod in the center that is removed to perform standard penetration tests every 2.5-feet.

Open Test Pits

On October 31, 2023, JG directed and oversaw the excavation of four open test pits. The test pits were excavated using a Hitachi Zaxis 160 steel tracked excavator operated by FCExcvation. The test pits ranged in depth from 10 to 18-feet bgs. Disturbed bulk samples were collected from pertinent soil layers.

Borehole Logs

Field data were collected in the field digitally using the application pLog on a tablet. Draft logs were reviewed in the office, and final versions are presented below. Blow counts for SPT (field N-values) were adjusted to a standard hammer efficiency of 60% and overburden pressure of one atmosphere as suggested by Youd and Idriss (1997) and Fang (1991), to obtain the adjusted (N1)60 values in blows per foot. Soil type, thickness, consistency, and relative moisture content were observed and documented by Jorgensen Geotechnical staff.

Detailed borehole logs are attached. Site conditions may vary and actual soil conditions may differ from those presented in the borehole logs. The final logs represent JG's interpretation of the subsurface soil conditions. Actual soil conditions may differ from those observed in the boreholes.

In addition to borehole and test pit logs produced by Jorgensen Geotechnical, borehole logs presented in a report produced by Nelson Engineering dated July 28, 2021 were also reviewed to determined subsurface soil conditions and are presented below. Approximate borehole locations performed by Nelson Engineering are presented in Figure 2. Test pit logs presented in a report prepared by Womack and Associated dated June 4, 2012 for the water tank due south of the proposed project site were also reviewed.

Geophysical Exploration

Jorgensen Geotechnical contracted with Atlas Technical Consultants LLC of Salt Lake City to perform a geophysical evaluation at the project site. The primary purpose of the geophysical study was to develop subsurface shear-wave velocity profiles using Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Waves (MASW). The geophysical exploration was performed on October 23 and 24th 2024. One ReMi line and one MASW line were performed at the specific project site (Lots 53 and 58), while the other ReMi and MASW lines were performed on Lot 57.

The ReMi study extended to a maximum depth of 100-ft below the ground surface, allowing us to select a Site Class based on the results. Shear wave velocity for the ReMi line RL-2 performed at lots 53 and 58 produced a shear wave velocity of 1,201 ft/s, classifying the site as a Site Class C per ASCE 7-16

The MASW line ML-2 performed at the project site indicates the upper approximately 20-feet are softer (i.e., slower shear wave velocity), and the soils become denser at approximately 30-feet below the ground surface. Though the soils appear to become denser at 30-feet, the upper 20-feet appear to be chaotic and have portions that are dense, and portions that are soft, consistent with the observations made in the boreholes and test pits.

The full Report from Atlas is attached.



Photo 1: Typical sonic drilling setup/JG--01



Photo 2: Typical sonic drilling bulk sample/Landslide Debris (GC/CL)



Photo 3: Typical hollow stem auger drilling setup/JG-12



Photo 4: Typical SPT sample/JG-10 D3



Photo 5: Typical test pit excavation setup/TP-07



Photo 6: Landslide Debris (GC)/TP-03



Photo 7: Chaotic sorting in Landslide Debris (GC)/TP-03



Photo 8: Charcoal present within landslide debris/TP-03



Photo 9: Large angular cobbles ~'1 to 2' diameter/TP-04 spoils pile

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
0			D1				Gravel (GW): Slightly moist to moist, brown, medium dense, clast supported, sub-rounded clasts approximately 50% sand and 50% sub-rounded gravel [FILL]					
1												
2			D2				Gravelly LEAN CLAY with Sand (CL): slightly moist, brownish tan, stiff, 25-30% angular gravel, 15-20% sand, 55-65% fines, [LANDSLIDE DEBRIS]					
3												
4												
5			D3									
6												
7			D4									
8			D5									
9												
10												
11												
12												
13												
14			D6									
15												
16												
17			D7									
18			D8					12		31	16	15
19												
			D9									

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
□ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) / MC (%) / PL & LL (%) / Fines Content (%)
21							Gravelly LEAN CLAY with Sand (CL): slightly moist, brownish tan, stiff, 25-30% angular gravel, 15-20% sand, 55-65% fines, [LANDSLIDE DEBRIS]						
22			D10										
23													
24													
25			D11										
26													
27													
28			D12	67	11-16-21 38			11		28	16	12	
29							CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, very dense, 50-55% angular gravel, 15-25% sand, 25-30% fines [LANDSLIDE DEBRIS]						
30			D13										
31			D14										
32													
33			D15										
34													
35			D16										
36													
37			D17	56	46-50/5" 94								
38			D18										
39			D19										

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) / □ Fines Content (%) 20 40 60 80
41			D20				CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, very dense, 50-55% angular gravel, 15-25% sand, 25-30% fines [LANDSLIDE DEBRIS]						
42			D21										
43			D22										
44			D23										
45			D24										
46			D25										
47		⧗	D26	200	19-50/1" 84								
48													
49													
50													
51							LEAN CLAY, Sandy LEAN CLAY with Gravel, LEAN CLAY with Sand (CL): slightly moist, brownish tan, very stiff, 10-20% gravel, 20-30% sand, 50-90% fines, [LANDSLIDE DEBRIS]						
52													
53													
54													
55													
56			D27					13		33	15	18	●⊢
57													
58													
59			D28										

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
61							LEAN CLAY, Sandy LEAN CLAY with Gravel, LEAN CLAY with Sand (CL): slightly moist, brownish tan, very stiff, 10-20% gravel, 20-30% sand, 50-90% fines, [LANDSLIDE DEBRIS]						
62			D29										
63			D30										
64													
65			D31										
66													
67													
68			D32	115	19-31-50/4" 56			10		26	16	10	● ⊢
69			D33										
70			D34										
71			D35										
72													
73			D36					12		38	17	21	● ⊢
74													
75			D37										
76													
77													
78			D38										
79													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
81			D39	100	9-23-35 35		CLAYEY GRAVEL with Sand (GC): slightly moist, brownish gray, dense, angular 55% gravel, 15% sand, 30% fines [LANDSLIDE DEBRIS]						▲
82													
83													
84													
85													
86													
87													
88													
89													
90													
91													
92													
93													
94													
95													
96													
97													
98													
99													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) / MC (%) / PL & LL (%) / Fines Content (%)
1			D1				GRAVEL (GW): slightly moist to moist, brown, medium dense, clast supported, approximately 50% sand and 50% sub-rounded gravel [FILL]						
2													
3			D2				CLAYEY GRAVEL with Sand (GC): slightly moist, medium dense, brownish tan, 55% angular gravel, 15% sand, 30% fines [LANDSLIDE DEBRIS]						
4													
5			D3										
6													
7			D4							20	15	5	H
8													
9			D5										
10			D6										
11													
12			D7				LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel, (CL): Slightly moist, reddish brown, soft to medium stiff, homogeneous, 10-20% sub-angular to angular gravel , 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]						
13													
14													
15			D8					12		31	15	16	●⊣
16													
17													
18			D9	0	4-3-3 6								▲
19													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
21			D10				LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel, (CL): Slightly moist, reddish brown, soft to medium stiff, homogeneous, 10-20% sub-angular to angular gravel , 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]						
22													
23			D11					13		29	15	14	● ⊢
24													
25													
26			D12										
27													
28			D13	100	7-12-13 24	2.50							▲
29			D14										
30													
31			D15										
32													
33			D16					15		21	16	5	●
34													
35													
36			D17										
37													
38			D18	93	16-12-15 24								▲
39			D19					16		29	17	12	● ⊢

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
▽ At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
41			D20				LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel, (CL): Slightly moist, reddish brown, soft to medium stiff, homogeneous, 10-20% sub-angular to angular gravel , 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]					
42												
43			D21									
44												
45			D22				CLAYEY GRAVEL with Sand (GC): moist to wet, reddish brown to grayish tan, dense, homogeneous, 40-50% angular gravel, 20-30% sand, 30-35% fines [LANDSLIDE DEBRIS]					
46												
47							▽					
48			D23	100	14-25-31 45							
49			D24									
50							LEAN CLAY, LEAN CLAY with Sand (CL): wet, tan to reddish tan, stiff to very stiff, homogeneous, 0-10% angular gravel, 5-35% sand, 60-95% fines [LANDSLIDE DEBRIS]					
51			D25									
52												
53			D26					12		26	14	12
54												
55												
56			D27									
57												
58			D28	100	14-26-36 45							
59			D29									

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
☐ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) 8 16 24 32 / MC (%) / PL & LL (%) 20 40 60 80 / Fines Content (%) 20 40 60 80
61			D30				LEAN CLAY, LEAN CLAY with Sand (CL): wet, tan to reddish tan, stiff to very stiff, homogeneous, 0-10% angular gravel, 5-35% sand, 60-95% fines [LANDSLIDE DEBRIS]	14		37	14	23	
62													
63			D31										
64													
65			D32					13		31	17	14	
66													
67		⧗	D33	400	50/4" 66								
68			D34				CLAYEY SAND (SC): wet, grayish brown to reddish gray, very dense, 55% sand, 45% fines, ironoxide staining, organic odor [WEATHERED ROCK]						
69													
70			D35							21	16	5	
71													
72			D36										
73													
74													
75			D37										
76			D38										
77													
78			D39										
79													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
▽ At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
81			D40	0	50/2" 59		CLAYEY SAND (SC): wet, grayish brown to reddish gray, very dense, 55% sand, 45% fines, ironoxide staining, organic odor [WEATHERED ROCK]						
82													
83													
84													
85													
86													
87													
88													
89													
90													
91													
92													
93													
94													
95													
96													
97													
98													
99													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-03

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471750 **Longitude:** -110.753041 **Elevation:** 6406.00
Notes: Perched groundwater encountered between 27 and 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1			D1				SILTY GRAVEL with Sand (GM): slightly moist, dark brown, medium dense, 45% sub-rounded to rounded gravel, 25% sand, 30% fines [FILL]					
2							GRAVELLY LEAN CLAY with Sand (CL): slightly moist, brownish tan, soft, approximately 15-25% angular cobbles by volume, matrix supported, 30-35% angular gravel, 15-20% sand, 50% fines [LANDSLIDE DEBRIS]					
3			D2									
4												
5			D3					10		33	14	19
6												
7			D4	93	4-3-4 7							
8												
9			D5									
10			D6									
11							CLAYEY SAND with Gravel (SC): slightly moist, very light brownish tan, dense, approximately 15-25% angular cobbles by volume, matrix supported, 25-30% angular gravel, 30-35% sand, 40-45% fines [LANDSLIDE DEBRIS]					
12												
13			D7									
14												
15			D8					8		30	15	15
16												
17			D9	100	10-17-20 33							
18							CLAYEY GRAVEL with Sand (GC): moist to wet, reddish brown, medium dense, homogenous, approximately 15-25% angular cobbles by volume, matrix supported, 30-55% angular gravel, 20-30% sand, 30-50% fines [LANDSLIDE DEBRIS]					
19			D10									

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-03

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471750 **Longitude:** -110.753041 **Elevation:** 6406.00
Notes: Perched groundwater encountered between 27 and 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D11				CLAYEY GRAVEL with Sand (GC): moist to wet, reddish brown, medium dense, homogenous, approximately 15-25% angular cobbles by volume, matrix supported, 30-55% angular gravel, 20-30% sand, 30-50% fines [LANDSLIDE DEBRIS]					
22												
23			D12					12		35	15	20
24												
25			D13									
26												
27			D14	87	10-11-14 22							
28												
29			D15									
30			D16									
31			D17					11		29	15	14
32												
33												
34			D18									
35			D19	80	20-25-10 17							
36												
37												
38												
39												

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-04

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 30.00 on Oct 02 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 35.2 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471774 **Longitude:** -110.753619 **Elevation:** 6404.00
Notes: Groundwater encountered at 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1			D1				SILTY GRAVEL with Sand (GM): slightly moist, dark brown, medium dense, 45% sub-rounded gravel, 25% sand, 30% fines [FILL]					
2												
3			D2									
4							LEAN CLAY with Gravel (CL): slightly moist, brownish tan, soft, approximately 15-25% angular cobbles by volume, matrix supported, 15-20% angular gravel, 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]					
5			D3									
6												
7			D4	93	2-2-7			12		34	16	18
8			D5		8							
9												
10			D6									
11												
12							CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, dense, approximately 15-25% angular cobbles by volume, matrix supported, 35-55% angular gravel, 15-30% sand, 30-35% fines [LANDSLIDE DEBRIS]					
13			D7									
14												
15			D8					7		19	14	5
16												
17			D9	53	18-27-30							
18					49		LEAN CLAY with Sand (CL): slightly moist, brownish tan, medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-5% angular gravel, 25-30% sand, 65-70% fines [LANDSLIDE DEBRIS]					
19			D10									

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-04

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
▽ At time of drilling 30.00 on Oct 02 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 35.2 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471774 **Longitude:** -110.753619 **Elevation:** 6404.00
Notes: Groundwater encountered at 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D11				LEAN CLAY with Sand (CL): slightly moist, brownish tan, medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-5% angular gravel, 25-30% sand, 65-70% fines [LANDSLIDE DEBRIS]	17				
22												
23			D12							31	17	14
24												
25												
26			D13									
27												
28			D14	87	25-32-12 21							
29			D15									
30			D16									
31			D17				CLAYEY GRAVEL with Sand (GC): wet, grayish brown to reddish gray, very dense, approximately 15-25% angular cobbles by volume, matrix supported, 40-45% angular gravel, 15-20% sand, 40-45% fines [WEATHERED ROCK/LANDSLIDE DEBRIS]	10		33	15	18
32												
33												
34			D18									
35			~~D19~~	400	50/1" 83							
36												
37												
38												
39												

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
□ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-10

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471827 **Longitude:** -110.752751 **Elevation:** 6404.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-2 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1–4							CLAYEY SAND with Gravel (SC): slightly moist, very loose, brown, 20% angular gravel, 55% sand, 20% fines [TOPSOIL/FILL]					
3			D-1	40	1-1-4 4							
4–5							GRAVELLY LEAN CLAY with Sand. LEAN CLAY with Sand, LEAN CLAY (CL): dry, reddish tan, soft to medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-30% angular gravel, 10-20% sand, 50-90% fines, [LANDSLIDE DEBRIS]					
6			D-2	67	5-8-7 11							
8			D-3	60	5-5-6 9					25	16	9
10–11			D-4	67	9-17-12 18							
13			U-1					14		39	15	24
15–16			D-5	83	4-6-8 11			16		38	21	17
18			U-2					14		32	14	18
19												

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-10

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471827 **Longitude:** -110.752751 **Elevation:** 6404.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-2 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / ☐ Fines Content (%) 20 40 60 80
21			D-6	100	5-9-8 14		GRAVELLY LEAN CLAY with Sand. LEAN CLAY with Sand, LEAN CLAY (CL): dry, reddish tan, soft to medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-30% angular gravel, 10-20% sand, 50-90% fines, [LANDSLIDE DEBRIS]						▲
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-11

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471746 **Longitude:** -110.753110 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1–4			D-1	20	11-11-19 26		CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, medium dense, 55% sub-rounded gravel, 25% sand, 20% fines [FILL]					
5–7			D-2	79	5-11-50/5" 50		CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, medium dense to very dense, chaotic sorting, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 30-50% angular gravel, 15-30% sand, 35-40% fines, Charcoal present [LANDSLIDE DEBRIS					
8–9			D-3	90	8-12-14 20			7		22	15	7
10–12			D-4	83	4-9-12 16							
13–15			D-5	100	6-17-23 33							
16–17			D-6	73	10-18-20 31							
18			~~D-7~~	0	50/1" 79							
19			D-8	125	50/5" 77							

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-11

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471746 **Longitude:** -110.753110 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21							CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, medium dense to very dense, chaotic sorting, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 30-50% angular gravel, 15-30% sand, 35-40% fines, Charcoal present [LANDSLIDE DEBRIS					
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
☐ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-12

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471744 **Longitude:** -110.753401 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-3 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
0							CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, very loose, 55% rounded gravel, 25% sand, 20% fines [FILL]					
3			D-1	60	4-4-3 5		CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, loose to very dense, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 30-35% angular gravel, 25-30% sand, 40-45% fines [LANDSLIDE DEBRIS]					
5			D-2	93	9-19-50/5" 55			10		27	15	12
7			D-3	75	50/5" 78							
9							LEAN CLAY with Sand (CL): dry, tan, medium stiff, 10% angular gravel, 30-40% sand, 50-60% fines, [LANDSLIDE DEBRIS]					
10			D-4	100	6-6-14 15			13		27	17	10
13			D-5	93	4-6-15 17							
15			D-6	100	6-23-29 41		CLAYEY GRAVEL WITH SAND (GC): dry to slightly moist, brown, dense, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 50% angular gravel, 15% sand, 35% fines [LANDSLIDE DEBRIS]					
18			D-7	73	19-16-42 45							

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-12

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471744 **Longitude:** -110.753401 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-3 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D-8	100	6-9-15 20		SANDLY LEAN CLAY with Gravel (CL): dry to slightly moist, brown, medium stiff, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 20-30% angular gravel, 20-30% sand, 50% fines [LANDSLIDE DEBRIS]	11		26	14	12

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
□ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-03

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471762
Longitude: -110.752954
Elevation: 6406.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

Notes:
No groundwater encountered. Stopped at target depth and limits of excavtator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
0						CLAYEY GRAVEL with Sand(GC): dry to slightly moist, blackish brown, homogeneous, 45% sub-angular gravel, 30% sand, 25% fines, [FILL]						
4						CLAYEY GRAVEL with Sand(GC): dry to slightly moist, brown, clast supported, 25% sub-angular to angular cobbles by volume, remaining 50% angular gravel, 15% sand, 35% fines by mass, Large amounts of charcoal. Chaotic sorting. Layer of CL (-0.5") at 6.5' and 8' [LANDSLIDE DEBRIS]						

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-04

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471736
Longitude: -110.753241
Elevation: 6405.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160
Notes: No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
1						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, blackish brown, homogeneous, 45% sub-rounded gravel, 30% sand, 25% fines, Chunks of asphalt present, rebar [FILL]						
2												
3												
4												
5						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, clast supported, 15% sub-angular to angular cobbles by volume, remaining 50% angular gravel, 15% sand, 35% fines by mass, Large amounts of charcoal. Chaotic sorting. [LANDSLIDE DEBRIS]						
6												
7												
8												
9												
10												
11												
12			D-1									
13												
14												
15												
16												
17												
18												
19												

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-05

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471248
Longitude: -110.753015
Elevation: 6467.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Notes:
Contractor: FCE
Equipment: Hitachi Zaxis 160

No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
1						CLAYEY SAND (SC): dry, brown, loose, 15% gravel, 55% sand, 30% fines, [TOPSOIL]						
2						LEAN CLAY with Sand (CL): dry, light whitish tan, pinholed, 5% angular gravel, 15% sand, 80% fines, medium plasticity, Some gravels and cobbles present. Lime stringers present [LOESS]						
3												
4												
5												
6												
7			D-1									
8						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, clast supported, 35% angular cobbles by volume, remaining 50% angular gravel, 15% sand, 35% fines by mass, charcoal. Chaotic sorting. [LANDSLIDE DEBRIS]						
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

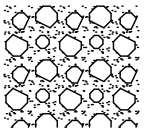
Test Pit ID: TP-06

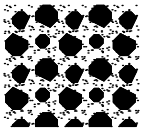
Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471498
Longitude: -110.753164
Elevation: 6424.50
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

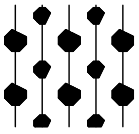
Notes:
No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

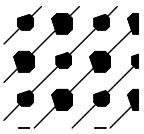
Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
0						CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, 40% angular cobbles by volume, remaining 55% angular gravel, 15% sand, 30% fines by mass, 2-4' cobbles and boulders [LANDSLIDE DEBRIS]						
4						CLAYEY GRAVEL with Sand (GC): slightly moist, dark reddish brown, dense, clast supported, 40% angular cobbles by volume, remaining 55% angular gravel, 15% sand, 30% fines by mass, 2-4' cobbles and boulders. Increased to very dense at bottom of pit. [LANDSLIDE DEBRIS]						
8						CLAYEY GRAVEL with Sand (GC): Dry, reddish brown, very dense, 80% angular cobbles by volume, remaining 55% angular gravel, 20% sand, 25% fines by mass, Appears to be layer of scree/ loose bedrock [LANDSLIDE DEBRIS/WEATHERED BEDROCK]						

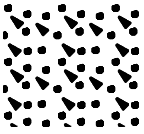
SOIL GRAPHICS

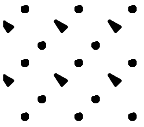
GW 

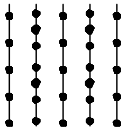
GP 

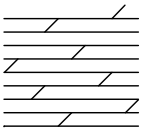
GM 

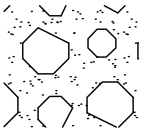
GC 

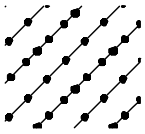
SW 

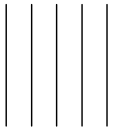
SP 

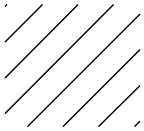
SM 

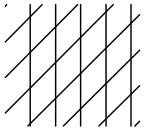
BEDROCK 

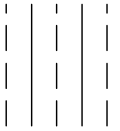
COBBLES/BOULDERS 

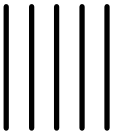
SC 

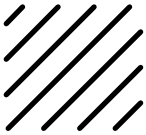
ML 

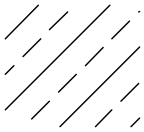
CL 

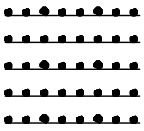
ML–CL 

OL 

MH 

CH 

OH 

PT 

NOTE: ANGLED DEMARCATIONS ON THE LOGS INDICATE APPROXIMATE OR POORLY DEFINED BOUNDARIES BETWEEN SOIL TYPES.

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**		**DRILL HOLE No. BH-1**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/11/05 10/12/05**		DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**		DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6408.5**		HOLE DIAMETER: **4"**	
		HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ALUVIAN GRAVEL, COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED ON EXCAVATED CUT SLOPE. SURFICIAL SOILS AT BORING SITE AND IN ADJACENT CUT SLOPES ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER (6' M.D.)*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-5' ARE ROCK CHIPS AND SILTY CLAY FINES*						
		4												
		5						*DRILLING THROUGH ROCK 4.8-6'*						
		6												
		7												
		8												
		9						*CUTTINGS 0-10.1' ARE ROCK CHIPS AND SILTY CLAY FINES*						
		10	X			BH1-1 2" SS	87	*DRY GREY GRAVEL, GP, FILGC, LIMESTONE FRAGMENTS IN MOIST BROWN SILTY SAND MATRIX*			>50			
		11	X											
		12												
		13												*10-20' DR REPORTS INTERVALS OF 1-4" SOFTER MATERIAL. PRIMARILY DRILLING THROUGH ROCK MATERIAL CUTTINGS ARE LIMESTONE FRAGMENTS IN SILTY SAND*
		14												
		15												
		16												
		17												
		18												
		19												
		20	X			BH1-2 2" SS	46	*MOIST BROWN GRAVEL W/ SILT AND SAND, GP-GM, GRAVELS ANGULAR, SILT STIFF. MULTICOLORED GRAVELS HIGHLY WEATHERED*			35			
		21	X											

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-1* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	22												DR MOD. TO EASY DRILLING IN 20–22' INTERVAL 8" ROCK 22.3–23'
		23												
		24												
		25				BH1-3 3"CS	25	MOIST BROWN CLAYEY SAND WITH GRAVEL, SC, PP=2.5 TSF, STIFF TO V. STIFF. FRAG. IN SHOE			8			
		26												DR 1–3" INTERVALS BETWEEN CLASTS
		27												
		28						SOME HIGHER PLASTICITY LEAN CLAYS IN CUTTINGS						
		29												
		30				BH1-4 2.5" SS	21	MOIST BROWN CLAYEY SAND WITH GRAVEL, SC, V. STIFF TO HARD, PP=4.0TSF	27	16	10		10	DR EASIER DRILLING FROM 29.5'± WITH LITTLE HAMMER ACTION
		31												
		32						HOLE CAVED TO 20' AFTER 30' SAMPLE						DR EASIER DRILLING FROM 29.5'± WITH LITTLE HAMMER ACTION FREQ. HAMMER PLUGGING 32–40'
		33												
		34												
		35												
		36												
		37												
		38												
		39												
		40						NO SLUFF IN HOLE @40' DIFFICULTY CLEANING HOLE TO REMOVE ROD INDICATES SOME CAVING IN 30–40' INTERVAL.						
		41				BH1-5 2" SS	70	MOIST BROWN CLAYEY SAND, SC, VERY STIFF TO HARD, FINE ANGULAR GRAVELS IN A SANDY CLAY MATRIX. UPPER 2" HIGHER MOISTURE CONTENT, MAY INDICATE SEEPAGE ZONE 40–41'	19	4	30		12	DR GRAVEL AND COBBLE ZONE 42–43' WATER LEVEL 11/3/05
		42												
		43												
		44												

S:\STANDARD\BORDERS\NE_BOREHOLE.DWG (BOREHOLE PG1) JUN 20 2002 08:53:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-1* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44						*CUTTINGS ARE MOIST TO WET OLIVE GREEN CLAYEY SAND*						*DR CONT. HAMMER CLOGGING FROM 42'*
		45	X			*BH1-6 2" SS*	*83*	*MOIST OLIVE GREEN CLAYEY SAND, SC, MED. STIFF TO STIFF, SLIGHTLY SANDY LENS WITHIN. SOME CALCIUM CARBONATE STRINGERS.*	*30*	*6*	*16*		*20*	
		46	X											
		47	X											
		48												
		49												
		50												
		51												
		52	X											*AT 52' DR APPROX. 12' OF WATER IN HOLE OVERNIGHT*
		53	X			*BH1-7 2" SS*	*40*	*AS ABOVE BUT GREY BROWN, SOME COAL/ORGANICS, PP=3.5-4.0 TSF.*			*22*			
		54	X					*BOH =52.0'*						
		55						*SET PIEZO (1"PVC) BOTTOM AT 51.1 SLOTTED BOTTOM 10' FILLED ANNULUS WITH SAND TO 38' 1' STICKUP*						
		56												
		57												
		58												
		59												
		60												
		61												
		62												
		63												
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJECTS\06-12 GRAND VIEW LODGES\DRILLING\BHBORINGLOG.DWG (BH-1 (2)) FEB 13 2006 10:56:01 AM PLOTTED BY: GYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-2**	PAGE: **1 OF 5**
DATE STARTED / FINISHED: **10/11/05 10/12/05**	DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6550.3**	HOLE DIAMETER: **4"**	
	HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	FREQ. GRAVEL, COBBLE. AND BOULDER SIZE CLASTS	1–6						*BORING LOCATED ON GRASSY AREA. SURFICIAL SOILS IN ADJACENT ROAD CUT ARE GENERALLY STIFF TO HARD GRAVEL AND SILT MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE. SEVERAL LARGE BOULDERS EXCAVATED FROM NEARBY WATER TANK EXCAVATION.*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		3–5						*CUTTINGS 0–5' ARE MOIST LT BROWN GRAVEL WITH WITH SILT, GP–GM*						*DR FREQ. COBBLES. HAMMER ACTION IS NEARLY CONTINUOUS*
		6												*DR NO GRAVEL/COBBLES FROM 6'±*
	WET TO SATURATED SOILS IN INTERVALS FROM 7'–18'	7–9						*DR VERY SOFT DRILLING 7–9.5' CUTTINGS ARE WET CLAY/SANDY CLAY. APPEARS TO BE A SATURATED ZONE*						
		10–11				BH2-1 2.5" CS	75	*FROM 9.5' SAND CONTENT OF CUTTINGS INCREASING MOIST GREY BROWN CLAY, CL, STIFF TO VERY STIFF, NONUNIFORM PLASTICITY IN SAMPLE.*			15			
		12–14												*DR GRAVELLY DRILLING 12'–13'*
		15–16				BH2-2 2" SS	75	*MOIST TO WET GREY CLAYEY SAND W/GRAVEL, SC, GRAVELS FINE TO MED. SANDS FINE. V. STIFF TO HARD, MEDIUM PLASTICITY*			16			
		17												
		18						*HAMMER PLUGGING FREQ. TO 17' CUTTINGS ARE MOIST CLAYS*						
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	19–21						*ROCKY DRILLING FROM 18' FREQ. HAMMER ACTION ON COBBLE AND GRAVELS. CUTTINGS SLIGHTLY MOIST*						

MATERIAL DESCRIPTION

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	22												*DR ROCKY DRILLING FROM 20'*
		23						*CUTTINGS TO 25' ARE GRAVEL/COBBLE FRAGMENTS IN SILT/SILTY CLAY WITH SAND MATRIX*						
		24												
		25	X			BH2-3 2.5"	25	*MOIST GREY SANDY SILT/SANDY CLAY, SC, V. STIFF*			18			
		26	X											*DR WET PLASTIC SOILS CONT. PLUG HAMMER. BORING ADVANCED WITH 1.875" ø NQ CORE FROM 30'*
		27	X											
		28												
		29												
		30						*CORING FROM 30' RETURN LOGGED AS IN"/IN"*						
		31		X				*30-30.8' WET SAT GREY CLAY, CL, WET FROM DRILLING FLUID. WITH 2 3" GRAVEL PARTICLES*						
		32		X			33/36	*30.8-33' MOIST GREY GREEN SANDY SILT, ML, V. STIFF TO HARD. GRADES TO SILTY SAND W RED COLORING SOME INTERVALS. TRACE CLAY. THROUGHOUT. 1 2" SEAM OF V.STIFF MED. PLASTICTY CH 31.0'*						
		33		X										
		34												
		35					2/60	*MOIST GREY SAND W/SILT, SP/SM, SANDS FINE, DENSE, WEAKLY CEMENTED*						
		36												
		37												
		38												
		39												
		40					35/60	*MOIST DENSE GRAY GREEN SAND W/SILT, SP-SM, DENSE, CONTAINS 1/4" THICK STRATA OF DK BROWN SILT W/SAND IN LOWER HALF*						
		41												
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\STANDARD\REFERENCE\BOREHOLE\BOREHOLE.PGU JUN 20 2002 09:53:53 AM PLOTTED BY: GREEN

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-2* PAGE: *3 OF 5*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44					43/60	*MOIST DENSE GRAY GREEN SILTY SAND, SM, SANDS FINE, SILT % INCREASING WITH DEPTH, LOWER 1.5' OF SAMPLE MAY BE SANDY SILT. 3–5 DARKER FINE GRAINED STRATA <1" THICKNESS IN INTERVAL*						
		45												
		46												
		47												
		48												
		49												*48–53 DR VARIABLE RATE OF ADVANCE IND. 6"± STRATA*
		50					60/60	*4" INTERVAL 48.2–48.6 SAT V. SOFT SILTY SAND (DRILLING FLUID). MOIST GRAY GREEN SILT, ML, V. STIFF, OCCASIONAL BLACK ANGULAR FINE GRAVELS.*						
		51						*SAND % INCREASING FROM 51' MOIST GREY GREEN SILTY SAND, SM, SANDS FINE, DENSE*						
		52												
		53												
		54					48/48	*MOIST GREY GREEN SILT, SILTY SAND, ML/SM, WEAKLY CEMENTED SILTSTONE UPPER 6"*						
		55												
		56												
		57					12/12	*AS ABOVE*						
		58												
		59												
		60					12/60	*DR COBBLE AND GRAVEL DRILLING AND LOSS OF DRILLING FLUID FROM APPROX. 58'. POOR RETURN, 2" MINUS SANDTONE GRAVELS AND SILTY SAND. APPEARS TO BE COBBLES IN SILTY SAND MATRIX.*						
		61												
		62												
		63												
		64												
		65					12/20	*BLOCKED OF AT 64.7 BY COBBLE. MED. COARSE GRAVEL SIZE FRAGMENTS QUARTZITE NO WATER RETURN 65.5–66'*						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\STANDARD REFERENCE FILES\LOGGING GRIDDLE.PGU JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-2* PAGE: *4 OF 5*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		67					14/40	*AS ABOVE.* *CONT. LOSS OF FLUID TO FORMATION*						
		68												
		69					18/30	*GRAVEL SIZE LIMEYSANDSTONE FRAGMENTS, SOME SAND ADHEREING TO GRAVEL SURFACES*						
		70						*BLOCKED OFF BY COBBLE @70.5*						
		71					15/30	*DR HARDER COMPETENT ROCK WITH THIN (<2") SOFTER INTERVALS THROUGHOUT. CONT. WATER LOSS.* *MOIST GREEN SILT W/SAND, ML, HARD, TRACE CLAYS.*						
		72												
		73												
		74					54/60	*UPPER 1' IS SILT W SAND, ML, SAT. SOFT (DRILLING FLUID)* *REMAINDER IS MOIST GREEN SANDY SILT, ML, GRADES TO SILTY SAND IN SOME INTERVALS, SANDS FINE. VERY STIFF TO HARD*						
		75												
		76												
		77												
		78												
		79												
		80					44/60	*UPPER 10" MOIST GREEN SAND W/SILT, SP-SM,* *9" INTERVAL MOIST GREEN THEN BLACK CLAY, CH, MED. TO HIGH PLASTICITY, V. STIFF TO HARD* *16" SAND W SILT AS ABOVE* *GRADES TO MOIST GREEN CLAY, CH, HARD, BOTTOM 4"*						*DR REPORTS RED SEDIMENT IN RETURN FLOW 80-81 NO RED MATERIAL IN CORE*
		81												
		82												
		83												
		84					21/51	*14" MOIST GREEN TAN SILTY SAND/SANDY SILT, DENSE/HARD SANDS FINE* *2" MOIST GREEN CLAY, CH/CL, MED. HIGH PLASTICITY , WITH FINE SAND. V. STIFF TO HARD* *5" COBBLES LARGE GRAVELS IN SILT W SAND MATRIX*						*DR REPORTS LITTLE WATER LOSS 83-88*
		85												
		86												*BIT BLOCKED@87.25 NO RETURN FROM 87.5 DR COBBLE DRILLING*
		87												
		88					18/30							
		89												

S:\STANDARD\BORERS\NE_BOREHOLE.DWG (BOREHOLE PLG) JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-2* PAGE: *5 OF 5*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		90						*FRACTURED BLUE GREY LIMESTONE, 1" MD*						*DR COBBLES NO RETURN 89.8–93*
		91					14/38	*FRACTURED LIMESTONE AS ABOVE*						
		92												
		93												
		94												
		95					23/30	*LIMESTONE, 7" CONT. CORE, REMAINDER FRACTURED GRAVEL SIZE*						
		96					20/30	*BLACK TO GREY FRACTURED LIMESTONE, 1.5" M.D. SOME SANDY CALY MATRIX. APPEARS TO HAVE WEATHERED SURFACES*						*BLOCKED@96.5*
		97												
		98												*NO REUTRN 98–103 COBBLES WITH SMOOTH INTERVALS (CORING THROUGH LARGER COBBLE)*
		99												
		100					27/60	*CONT. FRACTURED LIMESTON, WITH SANDY CLAY INTERVALS. FRAGS UP TO 3" CORE LENGTH. WEATHERED SURFACES*						
		101												
		102												
		103												
		104												*NO REUTRN 103–108 CONT. COBBLE DRILLING*
		105					40/60	*AS ABOVE TO BOH*						
		106												
		107												
		108						*SET PIEZOMETER 1" ø PVC.* *BOTTOM AT 107.7* *SLOTTED 97.7–107.7* *NO WATER MEASURED ON 11/3/05*						
		109												
		110												
		111												
		112												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\PROJECTS\2006\126-02 GRAND VIEW GEOTECH\DRAWINGS\LOGS\DWG GBH-2(5).DWG FEB 13 2006 11:06:21 AM PLOTTED BY: GYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-3** PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/20/05 10/20/05**	DRILLER: **PIEDMONT**
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6445.8**	HOLE DIAMETER: **4"**
	HAMMER TYPE: **140#**

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED UNDISTURBED GROUND. SOILS EXPOSED IN WATERLINE TRENCH TO WEST TO DEPTH OF APPROX. 15' ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE (6' M.D.)*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-10' ARE ROCK CHIPS AND SILTY CLAYEY SAND*						
		4												*10-9.5' DR COBBLES AND GRAVELS WITH MATRIX INTERVALS OF 1" OR LESS THICKNESS*
		5												
		6												
		7												
		8												
		9												
		10	X			BH3-1 2" SS	46	*MOIST LT BROWN SILTY CLAYEY SAND W/GRAVEL, SC-SM, GRAVELS FINE ANGULAR, WITH CALCEROUS STRINGERS. SANDS FINE. GRADES TO SILTY CLAY WITH GRAVEL, STIFF*			34			
		11												
		12												*COBBLES LESS FREQ. FROM 9.5'*
		13												
		14						*DR ROCK, 14.1-16.8'*						
		15												
		16												
		17												
		18												
		19												
		20	X			2" SS	NS				30/0			*DR GRAVEL AND COBBLES FREQ. FROM 20.5'*
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

S:\PROJ\2005\129-12 GRAND VIEW GEOTECH\ENGINEERING\DRIVE (ENGR)\ FEB 13 2006 11:46:48 AM PLOTTED BY: GYR

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-3* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22						*CUTTINGS ARE GRAVEL FRAGS AND RED SAND FROM 20'*						
		23												
		24												*WATER LEVEL 11/3/05*
		25												
		26				BH3-2 2"SS	33	*MOIST LT BROWN SILTY CLAY W GRAVEL , CL-ML, FILGC, GRAVELS FINE TO MED. LIMESTONE. STIFF TO VERY STIFF. DRILLING INDICATES HIGHER ROCK % THAN SAMPLE CONTENTS.*			30			*DR FREQ. PLUGGING 25-30' GRAVELLY*
		27												
		28												
		29												
		30												
		31				BH3-3 2.5" SS	100	*MOIST GREY BROWN SILTY SAND W.GRAVEL, SM, SANDS FINE, VERY STIFF*			17			
		32												*DR FREQ. HAMMER PLUGGING 30-35' DUE TO WET SILTY CLAY.*
		33												
		34						*CUTTINGS 35-40' ARE SILTY CLAY, GRAVEL, SILT, AND SAND MIXTURE*						
		35												
		36												
		37												
		38												
		39				BH3-4 2.5" SS	50	*MOIST GREY CLAY, CL HARD. SUSPECT WATER ABOVE IMPERMEABLE CLAY LAYER.*			>50			
		40												
		41				BH3-5 2" SS	58	*MOIST BROWN TO YELLOWBROWN SILTY CLAY W/GRAVEL, CL-ML, SOME COAL, STIFF TO VERY STIFF.*			12			*DR GRAVEL AND COBBLE ZONE 42-43'*
		42				BH3-6 2" SS	100	*MOIST GREY SILT W GRAVEL, ML, FRAGS UP TO 2", V. STIFF TO HARD.*			>50			
		43												
		44												

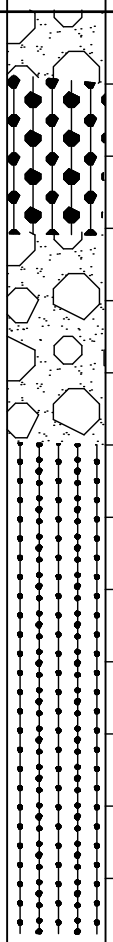
DRILLED BH3A TO 40' WITH DOWNHOLE HAMMER. SET PIEZO BOTTOM AT 33.25 SLOTTED TO 23.25. SAND 33.25-22.0' DRILLED BH3B APPROX. 7' EAST OF BH3A, 3B DRILLED WITH HAMMER TO 42' CASED 3.75"ø TRICONE WITH WATER FROM 42'

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\STANDARD\BORINGS\NE_BOREHOLE.PGU JUN 26 2002 09:35:3 AM PLOTTED BY: GREEN

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-3* PAGE: *3 OF 3*



DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
44						This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.						*DR SOFT EASY DRILLING FROM 44–45'*
45												
46												*DR COBBLES 3–6" WITH SOFT INTERVALS 46–49'*
47												
48												
49												*DR SMOOTH DRILLING FROM 49'–BOH*
50												
51	✕			*BH3-7 2" SS*	*100*	*MOIST GREY FINE SILTY SAND, SM, INCLUDES 4" OF CLAY WITH BLACK PEAT/COAL INCLUSIONS, V. STIFF*			*23*			
52	✕											
53												
54												
55												
56	✕			*BH3-8 2" SS*	*100*	*AS ABOVE. V. STIFF, DENSE.*			*20*			
57	✕					*BOH=–55.75'*						
58												
59												
60												
61												
62												
63												
64												
65												
66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\STANDARDS\BOREHOLE\NE_BOREHOLES.DVG (BOREHOLE.PGL) JUN 28 2002 08:13:53 AM PLOTTED BY: GREEN

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-4**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/22/05 10/23/05**	DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6487.8**	HOLE DIAMETER: **4"**	
	HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED ON UNDISTURBED GROUND. SOILS EXPOSED 50' HIGH CUT SLOPE DOWNSLOPE TO THE NORTH ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE (6' M.D.) SEEPS ARE EVIDENT IN AREA OF CUT FACE DOWNSLOPE OF BORING.*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-6' ARE ROCK CHIPS AND MOIST SILTY CLAYEY SAND*						
		4												*CUTTINGS MOISTURE % INCREASING FROM 6' FEWER ROCKS AND FREQ. BIT PLUGGING.*
		5												
		6												
		7												
		8												
		9	X			BH4-1 2.5" SS	79	*MOIST LT TAN GREEN SILTY SAND, TRACE CLAY, TRACE COAL, HARD.*			35			
		10	X											
		11												
		12												
		13												
		14	X			BH4-2 2" SS	50	*MOIST TO WET RED SILTY CLAYEY GRAVEL W/SAND, MED. PLASTICITY, STIFF TO V. STIFF. MOIST. CHAOTIC, NOT STRATIFIED*			17			*DRILLING WITH 3.75" ø TRICONE AND WATER FROM 15'*
		15	X											
		16												
		17												
		18												
		19												
		20												*DR ROCK 19.5-20.2'*
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

S:\PROJECTS\06-07\TRANSFER STATION GEOTECH\TRANSFER MAIN BUILDING BORING LOGS.DWG GINT-D MAR 14 2005 01:31:31 PM PLOTTED BY:

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-4* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*DR SOFT 20.5–22 DR 50% ROCK WITH 4"–8" INTERVALS OF SOFTER MATERIAL BETWEEN 22–29'*
		23												
		24												
		25												
		26												
		27												
		28												
		29												
▼		30												*WATER LEVEL 11/3/05*
		31												
		32												
		33												
		34						*AT 34' ATTEMPTED SPLIT SPOON, BORING CAVED TO 29' DRILLING WITH CASED 3.75" TRICONE FROM 34' DR SMOOTHER DRILLING AT 35'*						
		35												
		36												
		37												
		38												
		39				BH4-3 2" SS	92	*MOIST TO WET SILT, ML, TAN, MED PLASTICITY. SEAMS .5–1" THICK MAY BE SATURATED. STIFF.*			8			
		40												
		41												*DR COBBLES FROM 39.5 LOSING WATER FROM 40.5*
		42												
		43												
		44												

S:\STANDARD\BORERS\NE_BOREHOLE.DWG (BOREHOLE PLT) JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-4* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44						*DR CONT FRACTURED ROCKY DRILLING FROM 39' CUTTINGS ARE ANGULAR LIMETONE/SANDSTONE GRAVEL SIZE FRAGMENTS*						
		45												
		46												
		47												
		48												
		49												
		50												
		51												
		52												
		53						*DR CONT FRACTURED ROCKY DRILLING FROM 39' CUTTINGS ARE ANGULAR BLUE BLACK LIMESTONE/SANDSTONE GRAVEL SIZE FRAGMENTS*						
		54						*MAJORITY OF WATER LOST, 39'–BOH*						
		55						*BOH =55.75*						
		56						*SET PIEZO (¾"PVC) BOTTOM AT 36.1' SLOTTED BOTTOM 6' BENTONITE IN HOLE TO 36.1, SAND TO 20' FILLED ANNULUS WITH SAND TO 38'*						
		57												
		58												
		59												
		60												
		61												
		62												
		63												
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJ\2002\130-12 GRAND VIEW GEOTECH\BH\BORINGLOGS.DWG (BH-4 (3)) FEB 13 2006 11:07:07 AM PLOTTED BY: GVR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**		**DRILL HOLE No.** BH-5	PAGE: 1 OF 4
DATE STARTED / FINISHED: 10/24/05 10/25/05		DRILLER: PIEDMONT	
LOGGED BY: GYR/ROLFE		DRILL TYPE: TRACK MOUNT B-50	
BOREHOLE LOCATION/ELEVATION: SEE LOCATION MAP/6409.9		HOLE DIAMETER: 4"	
		HAMMER TYPE: 140#	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		1						*BORING LOCATED AT BASE OF 60' PLUS CUT SLOPE*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-10' ARE MOIST TO WET LT BROWN CLAY, SILTY CLAY WITH SOME GRAVEL FRAGMENTS.*						
		4						*DRILLING INDICATES OCCASIONAL COBBLES*						
		5						*MOIST TO WET PLASTIC SOIL CAUSING FREQ. PLUGGING FROM 4'*						
		6												
		7												
		8												
		9												
		10						*DR ROCK 9.5-11'*						
		11						*WET FROM 11' FREQ. HAMMER PLUGGING*						
		12												
		13												*NO WATER IN HOLE @13' AFTER 28 HOURS*
		14												
		15						*NQ CORING FROM 15' RETURN LOGGED AS IN"/IN"*						
		16					10/36	*MOIST LT BROWN CLAYEY SAND W. GRAVEL, COBBLE FRAG. IN SHOE. V. STIFF TO HARD PP> 3.0 TSF*						
		17												
		18												*18-23 LITTLE WATER LOSS SMOOTH DRILLING W/OCCASIONAL COBBLES*
		19					10/60	*AS ABOVE*						
		20												
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *2 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*MINIMAL WATER LOSS 23–28'*
		23												
		24												
		25					19/60	*COBBLE IN BIT. MOIST BROWN CLAYEY SAND, SC, SANDS FINE, CLAY FRACTION MED. TO HIGH PLASTICITY, TRACE GRAVELS, HARD*	29	4				
		26												*SOME WATER LOSS @29' REGAINED BY 30'*
		27												
		28												
		29												*DRILLING IND. SAT. SOFT/LOOSE ZONE 30'±1 28–33 SMOOTH DRILLING W/SOME COBBLES LOWER PORTION*
		30					51/60	*AS ABOVE W/COBBLES TO 6", MOIST TAN BROWN SILTY CLAY W/GRAVELS*						
▼		31						*DRILLER REPORTS SAND LENSE "PUSHING IN ON HOLE" AT 30' HOLE CASED TO 33'*						
		32												
		33												
		34												
		35					18/36	*ALL GRAVEL AND COBBLE FRAGMENTS, LITTLE FINE GRAINED MATERIAL*						*MIN. WATER LOSS 33–40'*
		36						*36–38' MOIST TAN BROWN CLAYEY SAND, SC, TRACE GRAVEL, MED. PLASTIC*						
		37					13/24	*ABUNDANT GRAVEL MOIST TAN TO GREY CLAYEY SAND W/GRAVEL, SC, MED. PLASTICITY*						*DRILLING IND. HIGHER GRAVEL FRACTION THAN IN RETURN FROM 33'*
		38												
		39					15/17	*MOIST BROWN CLAYEY SAND, SC, SANDS FINE, FINES MED. PLASTIC, V.STIFF TO HARD, TRACE GRAVEL*	28	12				
		40												
		41					9/43	*MOIST GREY CLAYEY SAND, W/ GRAVEL AND COBBLES, SC, V. STIFF TO HARD*						
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\PROJECTS\2006\126-02 GRAND VIEW LODGES\CAD\BHSBORINGLOG.DWG (BH-5C2) JAN 06 2006 10:56:56 AM PLOTTED BY CYR

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *3 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44												
		45					21/60	*MOIST TAN SILTY TO SANDY CLAY W/GRAVEL, CL, MED. PLASTICITY, V. STIFF TO HARD*						*TAN BROWN RETURN*
		46												
		47												
		48												
		49					13/24	*AS ABOVE*						
		50												*GOOD RETURN*
		51												
		52					15/36	*MOIST TAN BROWN SILTY CLAYEY SAND W/GRAVEL, SC-SM COAL IN SHOE @53' V/ STIFF TO HARD*						
		53												
		54					30/30	*MOIST TAN BROWN SILTY CLAY W/GRAVEL, INTERBEDDED COAL STRATA, V. STIFF, SOME MOTTLEING*						
		55												
		56												
		57					27/30	*AS ABOVE*						
		58												
		59												
		60					14/60	*MOIST BROWN SANDY SILTY CLAY W/GRAVEL, CL-ML, VERY STIFF*						
		61												
		62												
		63												
		64						*63-68 SOME KNOCKING, SOME FAST DRILLING*						
		65						*ORGANICS AT 65'*						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *4 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		67					34/60	*AS ABOVE TO 65' <u>FIBROUS ORGANIC MATERIAL @65±</u> BELOW ORGANICS IS MOIST BLUE GREY SANDY CLAY/CLAYEY SAND, STIFF TO VERY STIFF, WITH GRAVEL. BOTTOM 1' IS MOIST SILTY SAND/SANDY SILT/HARD/V. DENSE*						
		68												
		69												
		70					37/60	*SILTY SAND AS ABOVE SMOOTH DRILLING OCCASION KNOCKING, MOD FAST DRILLING*						
		71												
		72												*GOOD RETURN BLUE/GREY TO WHITE GREY*
		73												
		74						*<u>ORGANIC DEBRIS</u> MOIST BLUE GREY CLAYEY SAND W/ GRAVEL AND OCCASIONAL LARGE FRAGS OF WHITE LIMESTONE, STIFF TO VERY STIFF, CHARCOAL AND ORGANIC DEBRIS*						
		75					44/48							
		76												
		77												
		78					9/12	*MOIST BLUE GREY SANDY SILT, ML, TRACE GRAVEL LOW PLASTICITY STIFF TO VERY STIFF, CHARCOAL*						
		79												
		80					24/33	*AS ABOVE CHARCOAL IN SHOE*						
		81						*BOH AT 80.75 3/4" PIEZO INSTALLED PULLED CASING, CAVED TO 50' WATER IN BORING ABOVE 50' AS SEEN ON CLOTH TAPE. BENTONITE TO 45.5' BOTTOM OF PIEZO AT 45.5' SLOTTED TO 35.5 SAND TO 35.0' CAVED ABOVE*						
		82												
		83												
		84												
		85												
		86												
		87												
		88					18/30							
		89												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJECTS\2005\05-12 GRAND VIEW LODGES\ENGINEERING\DRAWINGS\BORINGLOGS\BH-5(4).DWG FEB 13 2006 10:07:36 AM PLOTTED BY: CYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-6**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **6/24/2021 6/25/2021**	DRILLER: **IME**	
LOGGED BY: **PRUETT**	DRILL TYPE: **TRUCK-MOUNTED CME85**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6466.0'**	HOLE DIAMETER: **8" OD HOLLOW STEM AUGER (HSA)**	
	HAMMER TYPE: **140# AUTO**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES DRIVE	SAMPLES UNDISTURBED	SAMPLES BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
1						*BORING LOCATED ON CENTERLINE OF MOUNTAIN ACCESS ROAD W/GRAVEL SURFACE. UPHILL ROAD CUTS EST. 3-7' HEIGHT. STEEP GRASSY SLOPES UPHILL AND DOWNHILL. SURFICIAL SOILS ON CUT SLOPES DRY SILTY/CLAYEY GRAVEL/GRAVELLY SILT/CLAY WITH COBBLES AND BOULDERS.*						*EASY DRILLING WITH INTERMITTENT BIT GRINDING FROM 1'-10'*
2												*2 MINUTES TO DRILL 0'-5'*
3												
4												
5	5			BH6-1 2" SS	83	*5.0'-6.5' MOIST, BROWN/LT BROWN GRAVELLY SILT/SILTY GRAVEL, HARD, ANGULAR LIMESTONE AND SANDSTONE GRAVELS, FILGC*			34			
6	7											*3 MINUTES TO DRILL 5'-10'*
7	11											*HARD DRILLING IN GRAVELS FROM 7'-8'*
8												
9												
10	6			BH6-2 2" SS	61	*10.0'-11.5' MOIST, LT BROWN/GRAY SILTY GRAVEL WITH SAND, DENSE, ANGULAR LIMESTONE GRAVEL FRAGMENTS, FILGC*			34			*MODERATE DRILLING WITH CONSTANT BIT GRINDING ON GRAVELS AND COBBLES FROM 10'-21'*
11	10											*4 MINUTES TO DRILL 10'-15'*
12	12											
13												
14												
15	12			BH6-3 2" SS	67	*15.0'-16.5' SAME AS ABOVE, TRACE SAND, LIMESTONE GRAVEL LODGED IN TIP OF SS*			47			
16	17											*5 MINUTES TO DRILL 15'-20'*
17	17											
18												
19												
20	17			BH6-4 2" SS	78	*20.0'-21.5' 0"-12" SAME AS ABOVE, DENSE, ANGULAR GRAY LIMESTONE AND MINOR YELLOW SANDSTONE GRAVELS, MEDIUM PLASTICITY SILT*			32			
21	15					*12"-14" MOIST, OLIVE GREEN SILTY CLAYEY GRAVEL WITH MINOR SAND*						
	11											

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
22	11											
	6			BH6-4B 3" DM	83	22.0'–23.0' MOIST, OLIVE GREEN LEAN CLAY CHAOTICALLY MIXED WITH MINOR GRAY SILTY CLAY, STIFF TO VERY STIFF, MINOR COAL FRAGMENTS, PP>4.0 TSF, ORANGE OXIDATION STAINING IN TIP OF SS	33	15	15	108	18	MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 21'–25'
23	13	X										
24												4 MINUTES TO DRILL 20'–25'
25	3											
	5			BH6-5 2" SS	83	25.0'–26.5' MOIST, GRAY GRAVELLY SILTY CLAY WITH SAND, STIFF, MEDIUM PLASTICITY SILTY CLAY, PP=1–2 TSF, ANGULAR LIMESTONE AND SANDSTONE CLASTS, SANDSTONE CLAST WITH SHELL FOSSIL, ABUNDANT ORANGE OXIDATION STAINING THROUGHOUT			13			SMOOTH EASY DRILLING FROM 25'–30'
26	6											
27												2 MINUTES TO DRILL 25'–30'
28												BIT GRINDING FROM 28'–29'
29	7			BH6-5B 3" DM	83	28.5'–29.5' MOIST, BROWN SILTY CLAYEY/CLAYEY GRAVEL WITH SAND, MEDIUM DENSE, FINE SAND, ANGULAR LIMESTONE FRAGMENTS, FILGC			16			
	14											
30	14			BH6-6 2" SS	67	30.0'–31.5' MOIST, BROWN SILTY GRAVEL WITH SAND, VERY DENSE, FINE SAND, ANGULAR LIMESTONE FRAGMENTS, FILGC, FROM 4"–8" GRAVEL WITH SILT AND SAND LENS, GRAVEL LODGED IN TIP OF SS			51			MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 30'–35'
31	23											5 MINUTES TO DRILL 30'–35'
	24											
32												
33	7											INCREASED BIT GRINDING FROM 33'–35'
	20	X		BH6-6B 3" DM	100	33.0'–34.0' MOIST, OLIVE GREEN CLAYEY GRAVEL WITH SAND, MEDIUM DENSE, ANGULAR LIMESTONE, DOLOMITE, AND SANDSTONE GRAVELS			19			
34												
35	11											HARD DRILLING WITH CONSTANT BIT GRINDING 35'–45'
	18			BH6-7 2" SS	83	35.0'–36.5' TOP HALF–MOIST, OLIVE GREEN CLAYEY GRAVEL WITH SAND BOTTOM HALF–MOIST BROWN SILTY GRAVEL WITH SAND, DENSE, ANGULAR LIMESTONE FRAGMENTS, FILGC			34			
36	16											GRINDING ON COBBLE/BOULDER FROM 39'–39.5' FOR 15 MIN W/ NO PROGRESS. MOVED BH 6' EAST (BH–6B) DRILLED TO 40.4 WHERE GRINDING ON BOULDER FOR 30 MINS W/ MINOR PROGRESS. MOVED BH 7' WEST (BH–6C/ MW) OF ORIGINAL BH
37												
38						MONITORING WELL DRY ON 6/28/2021						
39												
40	23											
	50			BH6-8C 3" DM	67	39.5'–40.5' 0"–3" PULVERIZED LIMESTONE GRAVEL/COBBLE 3"–8" MOIST, SILTY CLAYEY GRAVEL WITH COBBLES, VERY DENSE, FRACTURED GRAY SANDSTONE GRAVEL AT BOS			>50			
41												
42												
43												HARD DRILLING WITH CONSTANT BIT GRINDING 40'–45'
44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-6* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44												
		45	11			BH6-9 2" SS	117	*45.0'–46.5' 0"–4" MOIST, OLIVE GREEN SANDY LEAN CLAY WITH MINOR GRAVEL, PP>4.0 TSF*			34			*EASY TO MODERATE DRILLING WITH OCCASIONAL BIT GRINDING FROM 45'–47.5'*
		46	20					*4"–21" MOIST, BROWN/GRAY/OLIVE GREEN CHAOTICALLY MIXED GRAVELLY LEAN CLAY/SILTY CLAY/SILT WITH SAND, HARD, PP>4.0 TSF, MINOR ORANGE OXIDATION STAINING, VERTICAL CONTACTS IN BOTTOM 6"*						
			17											
		47												*STIFF SMOOTH DRILLING FROM 47.5'–50'*
		48												
		49												*9 MINUTES TO DRILL 45'–50'*
		50	6					*50.0'–51.5' SAME AS ABOVE, TRACE GRAVELS, VERY STIFF, COAL*						
			12			BH6-10 2" SS	122	*FRAGMENTS IN BOTTOM 6"*			26			
		51	18											*EASY TO MODERATE DRILLING WITH INCREASING BIT GRINDING FROM 50'–55'*
		52												
			15					*52.0'–53.0' SAME AS ABOVE WITH GRAVELS, HARD, COAL FRAGMENTS*						
			50	X		BH6-11 3" DM	67	*THROUGHOUT, TOP PORTION OF SAMPLE IS SATURATED DUE TO SURFACE WATER INFILTRATION FOR THUNDERSTORM INTO DRILL STRING*	25	11	>50	121	15	
		53												
		54												
		55												
			9					*55.0'–56.3' SAME AS ABOVE WITH COAL FRAGMENTS*						
			16			BH6-12 2" SS	94				>50			
		56	50/4"											*MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 55'–60'*
		57												
		58												*6 MINUTES TO DRILL 55'–60'*
		59												
		60	10					*60.0'–61.5' MOIST, GRAY SILTY SAND, DENSE, FINE SAND, FINE GRAVEL*						*INITIAL BORING CAVED TO 22' AFTER HSA REMOVAL*
			18			BH6-13 2" SS	89	*INTERVALS, COAL FRAGMENTS THROUGHOUT*			43			
		61	36											
		62												
			21			BH6-14 3" DM	55	*62.0'–62.9' SAME AS ABOVE, VERY DENSE*			>50			
			50/5"											
		63						*BOH = 62.9'*						
								MONITORING WELL CONSTRUCTION						
		64						*PIPE*						
								37.9 FEET OF 2" DIAMETER SCHEDULE 40 PVC CASING FROM 0.3'–18.2', 20–SLOT SCREEN FROM 18.2'–38.2'						
		65						*BACKFILL*						
								BENTONITE– 0.5'–1.5', SPOILS– 1.5'–16.5', BENTONITE– 16.5'–17.5', SILICA SAND– 17.5'–40', BENTONITE– 40'–49', SPOILS– 49'–62.9'						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733–2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-7**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **6/25/2021**	DRILLER: **IME**	
LOGGED BY: **PRUETT**	DRILL TYPE: **TRUCK-MOUNTED CME85**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6459.0'**	HOLE DIAMETER: **8" OD HOLLOW STEM AUGER (HSA)**	
	HAMMER TYPE: **140# AUTO**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES DRIVE	SAMPLES UNDISTURBED	SAMPLES BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
0						*BORING LOCATED ON UPHILL/SOUTH EDGE OF MOUNTAIN ACCESS ROAD. EXCAVATED CUT SLOPES ABOVE, MINOR FILLS DOWNSLOPE SIDE. GRAVEL WITH SAND ROADWAY G.S. STEEP GRASSY SLOPES BOTH UP AND DOWN SLOPES. EXPOSED SOILS IN CUTS ARE DRY SILTY/CLAYEY GRAVEL/GRAVELLY SILT/CLAY WITH COBBLES AND BOULDERS.*						*MODERATE TO HARD DRILLING WITH CONSTANT BIT GRINDING FROM 1'–9'*
4	6			BH7-1 2" SS	89	*4.0'–5.5' MOIST, BROWN AND DK BROWN CLAYEY GRAVEL WITH TRACE SAND, FRACTURED AND ANGULAR GRAVELS, FILGC, MEDIUM DENSE TO DENSE, 4" FRACTURED LIMESTONE COBBLE AT BOS. WATERLINE FILL OF NATIVE SOILS*			30			
5	5											*GRINDING ON COBBLE/BOULDER FROM 5.5'–6.5'*
	11											
9	4			BH7-2 2" SS	78	*9.0'–10.5' MOIST BROWN SILTY GRAVEL WITH TRACE SAND, FRACTURED AND ANGULAR LIMESTONE AND SANDSTONE GRAVELS, FILGC, MEDIUM DENSE, MINOR ORANGE OXIDATION STAINING THROUGHOUT, PULVERIZED LIMESTONE GRAVEL/COBBLE IN TOP 2"*			29			*15 MINUTES TO DRILL 4'–9'*
10	8											
	11											*EASY DRILLING WITH INTERMITTENT BIT GRINDING FROM 9'–19'*
14	5			BH7-3 2" SS	67	*14.0'–15.5' SAME AS ABOVE*			29			*3 MINUTES TO DRILL 9'–14'*
15	9											
	12											*3 MINUTES TO DRILL 14'–19'*
19	7			BH7-4 3" DM	100	*19.0'–20.5' CHAOTICALLY MIXED BROWN/DK BROWN SANDY LEAN CLAY AND GRAY SILTY CLAY WITH MINOR GRAVEL, VERY STIFF, ORANGE OXIDATION STAINING THROUGHOUT, PP>4.0 TSF*	25	14	18	117	14	
20	14	X										
21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-7* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 19'–23'*
		23												*GRINDING ON COBBLE FROM 22'–23'*
		24	4											
			7			BH7-5 2" SS	117	*24.0'–25.5' MOIST, BROWN/DK BROWN LEAN CLAY WITH SAND, MINOR GRAVELS, VERY STIFF, MINOR WHITE CALCAREOUS STRINGERS THROUGHOUT, PP=2–3 TSF*			19			*10 MINUTES TO DRILL 19'–24'*
		25	9											
			10											*SMOOTH EASY DRILLING FROM 23'–28'*
		26	17	X		BH7-6 3" DM	100	*25.5'–26.5' MOIST BROWN LEAN CLAY WITH SAND, PP=3–4 TSF, COARSE GRAVEL FRAGMENTS COMPLETELY WEATHERED INTO SAND TO FINE GRAVEL SIZED FRAGMENTS*	35	17	21	101	22	
		27												
		28												
		29	19											*EASY TO MODERATE DRILLING WITH CONSTANT BIT GRINDING FROM 28'–44'*
			28			BH7-7 2" SS	67	*29.0'–30.5' MOIST, BROWN SILTY GRAVEL WITH TRACE SAND, ABUNDANT FRACTURED GRAY LIMESTONE AND SANDSTONE GRAVELS, FILGC, VERY DENSE, ORANGE OXIDATION STAINING IN BOTTOM 6", GRAVEL LODGED IN TIP OF SS*			59			
		30	26											*5 MINUTES TO DRILL 29'–34'*
		31												
		32												
		33												
		34	15											
			23			BH7-8 2" SS	89	*34.0'–35.5' SAME AS ABOVE, NO OXIDATION STAINING, GRAY SANDY SILT LENS FROM 5"–7", GRAVEL LODGED IN TIP OF SS*			63			
		35	39											*4 MINUTES TO DRILL 34'–39'*
		36												
		37												
		38												
		39	17											
			50/5"			BH7-9 2" SS	91	*39.0'–39.9' SAME AS ABOVE, GRAY SANDSTONE GRAVEL LODGED IN TIP OF SS*			>50			
		40												*6 MINUTES TO DRILL 39'–44'*
		41												
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-7* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44	16					*44.0'–45.3' SAME AS ABOVE*						
		45	17			BH7-10 2" SS	69				>50			*HARD DRILLING WITH CONSTANT BIT GRINDING FROM 44'–56.5'*
			50/4"											
		46						*GROUNDWATER MEASURED AT 46.35' ON 6/28/2021*						
		47												*GRINDING ON COBBLE/BOULDER FROM 47'–48'*
		48												*20 MINUTES TO DRILL 44'–49'*
		49	17					*49.0'–50.3' SATURATED FROM 0"–4", MOIST FROM 4"–12", BROWN*						
			36			BH7-11 2" SS	75	*CLAYEY GRAVEL, VERY DENSE, PULVERIZED GRAY SANDSTONE COBBLE*			>50			
		50	50/4"					*FROM 5"–11", FILGC*						*GRINDING ON BOULDER FROM 50'–51.5'*
		51												*24 MINTUES TO DRILL 49'–54'*
		52												
		53												
		54	17					*54.0'–55.5' 0"–3" SATURATED SAND AND GRAVEL HEAVE*						
			36			BH7-12 2" SS	78	*3"–14" CHAOTICALLY MIXED MOIST, GRAY AND BROWN SILTY CLAYEY*			61			
		55	39					*GRAVEL, FRACTURED AND ANGULAR GRAVELS, VERY DENSE, FILGC, TIP OF SS IS SATURATED*						
		56												
		57												*MODERATE SMOOTH DRILLING FROM 56.5'–59'*
		58												
		59	11					*59.0'–60.0' SATURATED TO MOIST, GRAY/DK GRAY SANDY LEAN CLAY,*						
			30			BH7-13 3" DM	75	*VERY STIFF, MOIST CLAY PP>4.0 TSF, CHAOTIC BLACK COAL FRAGMENTS IN BOS*	29	15	21	114	18	
		60						*BOH = 60.0'*						
		61						*MONITORING WELL CONSTRUCTION*						
								PIPE						
		62						*59.4 FEET OF 2" DIAMETER SCHEDULE 40 PVC CASING FROM 0.3'–39.5', 20–SLOT SCREEN FROM 39.5'–59.5'*						
								BACKFILL						
		63						*BENTONITE– 0.5'–1.5', SPOILS– 1.5'–34.5', BENTONITE– 34.5'–37', SILICA SAND– 37'–59.5', BENTONITE– 59.5'–60'*						
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733–2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

PROJECT: Town of Jackson, Snow King Water Tank

PIT LOCATION: Southwest of center of tank

TEST PIT: TP- 1

Approximate Pit Dimensions (feet): Length: 40 Width: 15 Depth: 31.5

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6740' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① Clayey GRAVEL and COBBLE: Slightly moist to moist, dark brown, loose to medium dense, ~40% sandy clay is moderately plastic, ~60% angular gravel and cobbles up to 6" diameter, some silt, grades into below over 10" [COLLUVIUM]

② Silty sandy GRAVEL with clay and cobbles: Slightly moist, yellow tan, very slightly plastic, medium dense, few clasts up to 12" diameter, limestone clasts angular to subangular, grades into below [COLLUVIUM]

③ GRAVEL and COBBLE: Dry to slightly moist, reddish gray, fractures/voids lined with calcium carbonate, abundant voids, very loose, limestone, follows topography, consistently overlies olive sandy layer below, calcium carbonate mineralization on clasts, abundant raveling, bottom contact ~35-45 degrees [TALUS]

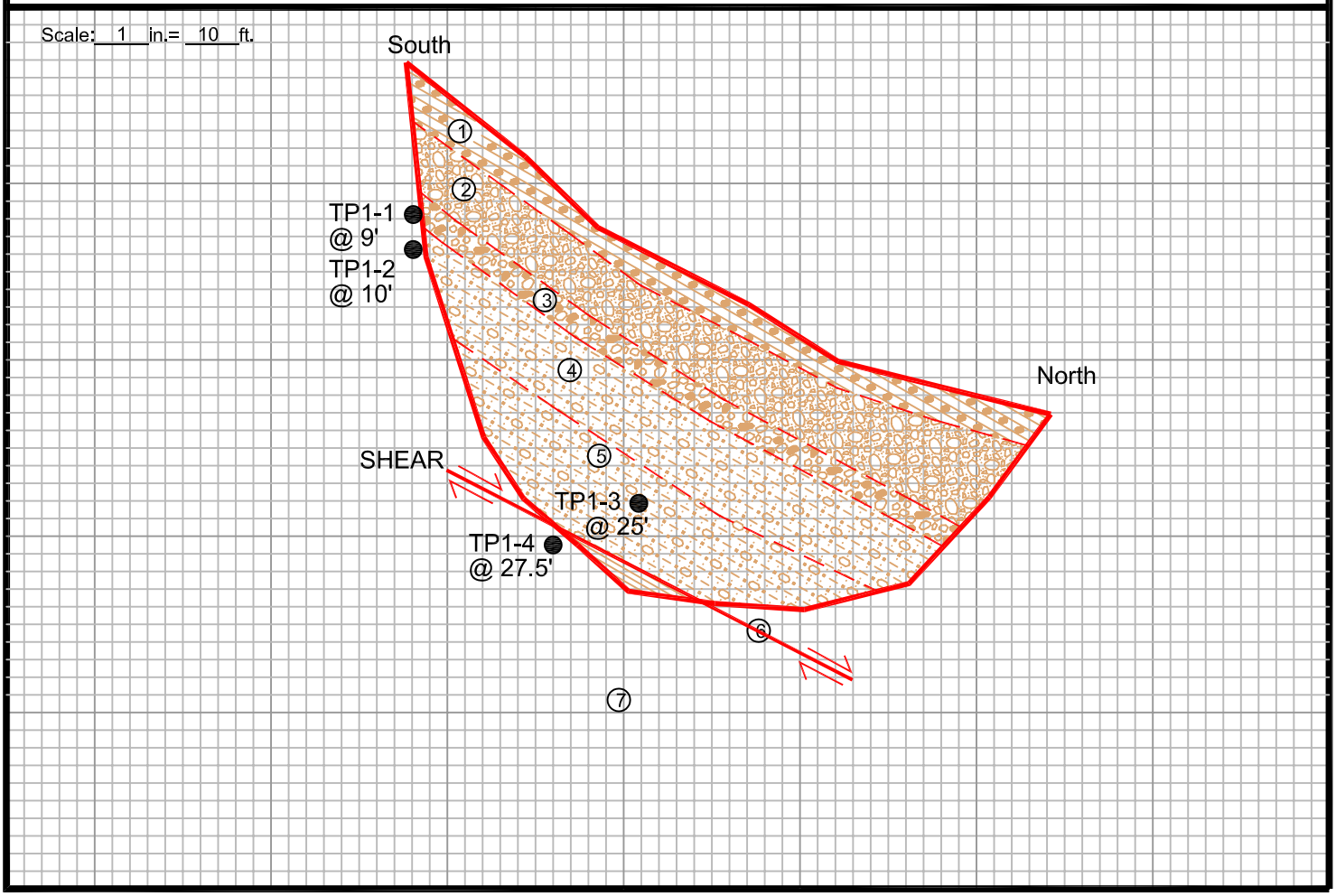
④ Sandy CLAY with gravel and cobble: Slightly moist, olive green, stiff to very stiff, moderately to highly plastic, abundant polished surfaces, irregularly follows silty sandy gravel, cobbles and boulders below contact with material below, varies, ~20% sand, ~15% gravel, ~15% cobble, ~50% sand [LANDSLIDE DEBRIS]

⑤ CLAY and sandy silty GRAVEL and COBBLE: Yellow tan to gray green, intervals of claye and sandy silty gravel and cobbles, few boulders, multiple irregular planar (~bedding) surfaces, angular to subangular boulders up to 2' diameter (mostly limestone), medium dense/very stiff, combination of the olive green sandy clay and the yellow tan silty sandy gravel with clay and cobbles, little consistency with shear orientations, abundant limestone fragments, very irregular contacts [LANDSLIDE DEBRIS]

⑥ CLAY: Pale blue gray, up to 1" thick, soft, moderately plastic, slickensided, dip 30° north [SHEAR ZONE]

⑦ CLAY with sand: Moist, gray, massive, heavily sheared, abundant polished surfaces, highly plastic, darker irregular beds throughout, wavy sheared zone, lots of slickensided surfaces, few coal beds, stiff [LANDSLIDE DEBRIS]

Note: No groundwater observed. Backfilled with spoils. Underlain by stony sandy clay.
Note: Soil Classifications (USCS) based on field descriptions



PROJECT: Town of Jackson, Snow King Water Tank

PIT LOCATION: ~20' northwest of northeast BH-3 (NE 2009)

TEST PIT: TP- 2

Approximate Pit Dimensions (feet): Length: 16 Width: 15 Depth: 12.6

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6711' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① 0.0-1.6ft Clayey sandy GRAVEL and COBBLES: Moist to very moist, medium to dark brown, abundant organics, moderately plastic, angular clasts up to 6" diameter, massive, medium dense [FILL]

② 1.6-2.6ft Sandy CLAY with gravel and cobble: Very moist, dark gray, medium stiff, massive, ~60% clay, ~40% gravel and cobbles up to 6" diameter [TOPSOIL]

③ 2.6-4.8ft Clayey sandy GRAVEL: Very moist, pale brown, medium dense, ~50% fine gravel [COLLUVIUM]

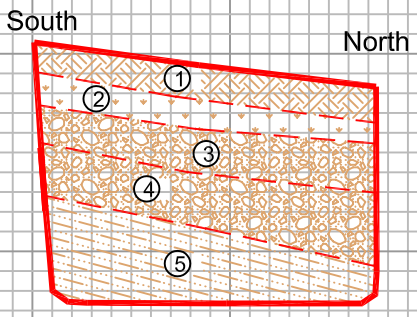
④ 4.8-7.0ft Clayey SAND and GRAVEL: Very moist, pale brown, medium dense, ~50% fine gravel [COLLUVIUM]

⑤ 7.0-12.6ft Sandy CLAY: Moist, green, slightly mottled yellow brown, very stiff, massive, abundant angular to subangular limestone clasts to 1' diameter (most up to 2" diameter) [LANDSLIDE DEBRIS]

Note: No groundwater observed. Backfilled hole with spoils.

Note: Soil Classifications (USCS) based on field descriptions

Scale: 1 in.= 10 ft.



PROJECT: Town of Jackson, Snow King Water Tank

TEST PIT: TP- 3

PIT LOCATION: ~25' east of northeast BH-1 (NE 2009)

Approximate Pit Dimensions (feet): Length: 15 Width: 15 Depth: 11.0

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6762' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① 0.0-1.2ft Silty CLAY with gravel: Moist to very moist, dark brown to blackish brown, abundant organics, highly plastic, soft [TOPSOIL]

② 1.2-3.5ft Gravelly silty CLAY: Buff yellow tan, stiff, ~25-35% gravel to 3" diameter [COLLUVIUM]

③ 3.5-5.0ft Silty CLAY: Moist, greenish brown with yellow mottling, very stiff [LANDSLIDE DEBRIS]

④ 5.0-6.0ft Gravelly silty CLAY: Moist, yellow tan (buff), stiff to very stiff [LANDSLIDE DEBRIS]

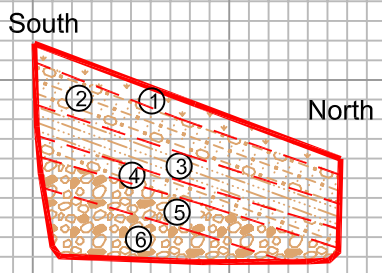
⑤ 6.0-7.5ft Rubble zone: Loose, white precipitates [TALUS]

⑥ 7.5-11.0ft Silty clayey GRAVEL and COBBLE: Yellow brown to red brown, dense, 50-60% clasts up to 8" diameter, oversize [TALUS]

Note: No groundwater observed. Hole standing OK. Backfilled hole with spoils.

Note: Soil Classifications (USCS) based on field descriptions

Scale: 1 in.= 10 ft.





GEOPHYSICAL EVALUATION

SNOW KING - DRAFT

Jackson, Wyoming

PREPARED FOR:

Colter Lane, P.E.
Jorgensen Geotechnical
1315 Highway 89 South, Suite 201
Jackson, Wyoming 83002

PREPARED BY:

Atlas Technical Consultants, LLC
358 South 700 East, Suite B518
Salt Lake City, Utah 84102

December 19, 2023

358 South 700 East
Salt Lake City, UT 84102
(310) 951-1993 | OneAtlas.com

December 19, 2023

Atlas No. 11143 - DRAFT
Report No. 1

MR. COLTER LANE, P.E.
JORGENSEN GEOTECHNICAL
1315 HIGHWAY 89 SOUTH, SUITE 201
JACKSON, WYOMING 83002

Subject: Geophysical Evaluation - DRAFT
Snow King
Jackson, Wyoming

Dear Mr. Lane:

In accordance with your authorization, Atlas Technical Consultants (Atlas) has performed a geophysical evaluation pertaining to a portion of the Snow King project located in Jackson, Wyoming. The primary purpose of our study was to develop subsurface shear-wave velocity profiles and characterize subsurface geologic conditions at select locations of the project site. This was accomplished through the collection of Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Wave (MASW) data. Our services were conducted on October 23rd and 24th, 2023. This report presents our methodology, equipment used, analysis, and findings.

We appreciate the opportunity to be of service on this project. Should you have any questions related to this report, please contact the undersigned at (310) 951-1993.

Respectfully submitted,
Atlas Technical Consultants LLC

Stephan A. Callas
Project Geophysicist

Patrick F. Lehrmann, P.G., P.Gp.
Principal Geologist/Geophysicist

SAC:XXX:XXX:xx

Distribution: Mr. Colter Lane at CLane@JorgEng.com

CONTENTS

1. INTRODUCTION 1
2. SCOPE OF SERVICES 1
3. SITE AND PROJECT DESCRIPTION 1
4. STUDY METHODOLOGY 1
   - 4.1 ReMi 1
   - 4.2 MASW 2
5. RESULTS AND CONCLUSIONS 3
   - 5.1 ReMi 3
   - 5.2 MASW 4
6. LIMITATIONS 4
7. SELECTED REFERENCES 5

FIGURES

Figure 1 Site Location Map
Figure 2 Line Location Map
Figure 3 Site Photographs
Figure 4a ReMi Results (RL-1)
Figure 4b ReMi Results (RL-2)
Figure 5a MASW Profile (ML-1)
Figure 5b MASW Profile (ML-2)

1. INTRODUCTION

In accordance with your authorization, Atlas has performed a geophysical evaluation pertaining to a portion of the Snow King project located in Jackson, Wyoming (Figure 1). The primary purpose of our study was to develop subsurface shear-wave velocity profiles and characterize subsurface geologic conditions at select locations of the project site. This was accomplished through the collection of Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Wave (MASW) data. Our services were conducted on October 23rd and 24th, 2023. This report presents our methodology, equipment used, analysis, and findings.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of two 1-D ReMi profiles (RL-1 & RL-2).
- Performance of two 2-D MASW profiles (ML-1 & ML-2).
- Compilation and geophysical analysis of the collected data.
- Preparation of this illustrated report presenting our methodology and findings.

3. SITE AND PROJECT DESCRIPTION

The project site is generally located just southeast of the Snow King Mountain Resort in Jackson, Wyoming (Figure 1). Specifically, the study area is located on the south side of Snow King Loop Road. The locations of the seismic traverses were generally selected by a representative of your office and adjusted when necessary to account for surface conditions. The study area contained construction material, vehicles, surface obstructions, two graded lots and an access road separating the two lots. The seismic traverses were performed over relatively flat terrain on the east and west sides of the access road. Figure 2 depicts the approximate locations of the seismic traverses while Figure 3 depicts the general site conditions.

4. STUDY METHODOLOGY

As previously indicated, our evaluation included the performance of two ReMi and two MASW transects. The following sections detail the methods and instrumentations used.

4.1 ReMi

The ReMi technique uses recorded surface waves (specifically Rayleigh waves) that are contained in background noise to develop a shear-wave velocity profile of the study area down to a depth, in this case, of approximately 100 feet. The depth of exploration is dependent on the length of the line and the frequency content of the background noise. The results of the ReMi method are displayed as a one-dimensional profile which represents the average condition across the length of the line. The ReMi method does not require an increase of material velocity with depth; therefore, low velocity zones (velocity inversions) are detectable with ReMi.

Our ReMi evaluation included the use of a 24-channel Geometrics Geode seismograph and 24, 4.5-Hz vertical component geophones. Geophones were spaced 10 feet apart for a total line length of 230 feet for each line. A total of 22 records, each 32 seconds in duration, were recorded at each location. 10 records utilized passive data collection of ambient ground vibration noise while 12 utilized an active source. The active source data gathers included generating a seismic signal at both ends of the seismic spread, approximately 10 or 30 feet off the ends of the geophone array. Six active source files were collected at each end of the line. The recorded data was then downloaded to a field computer for post-processing. The data was later processed using Surface Plus 9.1 - Advanced Surface Wave Processing Software (Geogiga Technology Corp., 2020), which uses the refraction microtremor method (Louie, 2001), and other surface wave analysis methods. The program generates phase-velocity dispersion curves for each record and provides an interactive dispersion modeling tool to determine the best fitting model. The result is a one-dimensional shear-wave velocity model of the site with roughly 85 to 95 percent accuracy (Louis 2001). For situations in which the shear wave velocity values are close to the limit between site class boundary values, Geotechnical consultants should consider the site's subsurface geologic stratigraphy and structure, soil mechanics, and ReMi evaluation results when assessing seismic site classification. Figures 2 and 3 depict the general site conditions in the study area.

4.2 MASW

Surface waves (specifically Rayleigh waves) were recorded along lines ML-1 and ML-2 in order to provide S-wave velocity information for portions of the site (Figure 2). The surface waves were generated by a hammer and plate (shot) and recorded using a 24-channel Geometrics Geode seismograph and 24, 4.5-Hz vertical component geophones. The geophones were coupled to the ground surface using a Geostuff Landstreamer with geophones stationed four feet apart and shots conducted off the end of the lines. Prior to the collection of surface wave data, near and far field effects were evaluated for several shot offset distances. The results indicated that an offset shot of 16 feet off the end of the line was optimal for our evaluation.

Three records, each one second long, were recorded at each shot location. After each shot location, the shot location and geophones were moved an integer multiple of the geophone spacing longitudinally along the profile direction and the line was reshot. The number of shots, spread length, and start and end stations are presented in Table 1.

Table 1 – MASW Array Geometry

Line No.	No. of Shots	Total Spread Length (feet)	Profile Length/Start and End Stations (feet)
ML-1	21	252	160/(0-160)
ML-2	25	284	192/(0-192)

The recorded MASW data was processed using SurfSeis® (Kansas Geological Survey, 2019), a MASW software program. One dimensional (1-D) shear-wave (S-wave) velocity (Vs) profiles were

generated for each shot location, which correspond to the middle of the geophone array. A two-dimensional color gradient model was then created from the 1-D models using the SurfSeis® interpolation scheme. It should be emphasized that the 2-D profile represents the area between the midpoint of the first shot location and the midpoint of the last shot location. The actual model section length and start and end stations for the sections are also listed in Table 1.

5. RESULTS AND CONCLUSIONS

As previously indicated, our evaluation consisted of performing two 1-D ReMi profiles (RL-1 & RL-2) and two 2-D MASW profiles (ML-1 & ML-2) at the project site. Figures 4a and 4b present the ReMi results for RL-1 and RL-2, respectively. Figures 5a and 5b present the MASW results for ML-1 and ML-2, respectively. The analysis of each is detailed below.

5.1 ReMi

As previously indicated, the purpose of our ReMi evaluations were to develop shear-wave velocity profiles to be used for design and construction parameters at the project site. Table 2 and Figures 4a and 4b present the results from our ReMi evaluations. It should be noted that the ReMi results represent the average condition across the length of the line. When the 1-D ReMi surface wave velocity results (analogous to shear wave) show an IBC Vs100 velocity value that is close to the "border line" boundary between IBC Site Classes, the project geotechnical consultant of record should be consulted. The geotechnical consultant of record should also consider other existing available site information and whether obtaining additional new geotechnical evaluation data such as boreholes, surface to downhole seismic (ASTM D 7400), crosshole seismic (ASTM D 4428), and/or additional 1-D ReMi data collections would be needed concerning the site's subsurface geologic stratigraphy and structure, soil mechanics and soil modulus, along with the initial 1-D ReMi evaluation results when assessing the "borderline" IBC Vs100 Seismic Site Class.

Table 2 – ReMi Results

Line No.	Depth (feet)	Shear Wave Velocity (feet/second)	Average Shear Wave Velocity (Vs in feet/second)	Site Class (IBC, 2019)
RL-1 (NW-SE)	0-6	618	Vs100' = 1,320 ft/s	C
	6-14	1170		
	14-25	1494		
	25-35	1435		
	35-69	1152		
	69-100	2010		

RL-2 (W-E)	0-9	390	Vs100' = 1,201 ft/s	C
	9-14	799		
	14-25	1361		
	25-69	1446		
	69-100	2052		

5.2 MASW

As previously indicated, two MASW traverses were conducted as part of our study. Figures 5a and 5b present the S-wave velocity models generated from our analysis of lines ML-1 and ML-2, respectively. Based on the results, it appears that the project site is generally underlain by low-velocity materials in the near-surface and higher velocity materials at depth. Distinct vertical and lateral velocity variations are evident within the models. Specifically, ML-1 appears to contain pockets of low and high velocity materials in the near surface, possibly related to landslide deposits. At depth, ML-1 displays a high velocity contact that spans the length of the profile from northwest to southeast. This high velocity contact is generally contained towards the bottom of the profile; however, protrudes closer to the surface between 90 and 120 feet along the x-axis. This high velocity material may represent bedrock contacts. ML-2 displays slightly more homogenous material in the near surface compared to ML-1. At depth, ML-2 displays a moderately high velocity contact that spans the length of the profile from west to east. This moderately high velocity contact is generally contained within 20 and 50 feet below ground surface and may represent weathered bedrock contacts. It should be noted that there were several underground utilities present in the vicinity of ML-1, and possibly ML-2, that could be affecting the results from our evaluation. As a general rule of thumb, the S-wave velocity of a given material might be between approximately 0.4 to 0.6 of the P-wave velocity, depending on the soil/rock type and condition.

6. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Atlas should be

contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

7. SELECTED REFERENCES

Golden Software, Inc., 2022, Surfer, Surface Mapping System: Version 23.2.202.

Iwata, T., Kawase, H., Satoh, T., Kakehi, Y., Irikura, K., Louie, J.N., Abbott, R.E., and Anderson, J.G., 1998, Array Microtremor Measurements at Reno, Nevada, USA (abstract): Eos, Trans. Amer. Geophys. Union, v. 79, suppl. to no. 45, p. F578.

Geogiga Technology Corp., 2020, Surface Plus - Advanced Surface Wave Processing Software: Version 9.1.

Kansas Geological Survey, 2019, SurfSeis© 6 MASW (Multichannel Analysis of Surface Waves): Version 6.5.4.30.

Louie, J.N., 2001, Faster, Better, Shear wave Velocity to 100 Meters Depth from Refraction Microtremor Arrays: Bulletin of the Seismological Society of America, v. 91, p. 347-364.

Mooney, H.M., 1976, Handbook of Engineering Geophysics, dated February.

Saito, M., 1979, Computations of Reflectivity and Surface Wave Dispersion Curves for Layered Media; I, Sound wave and SH wave: Butsuri-Tanko, v. 32, no. 5, p. 15-26.

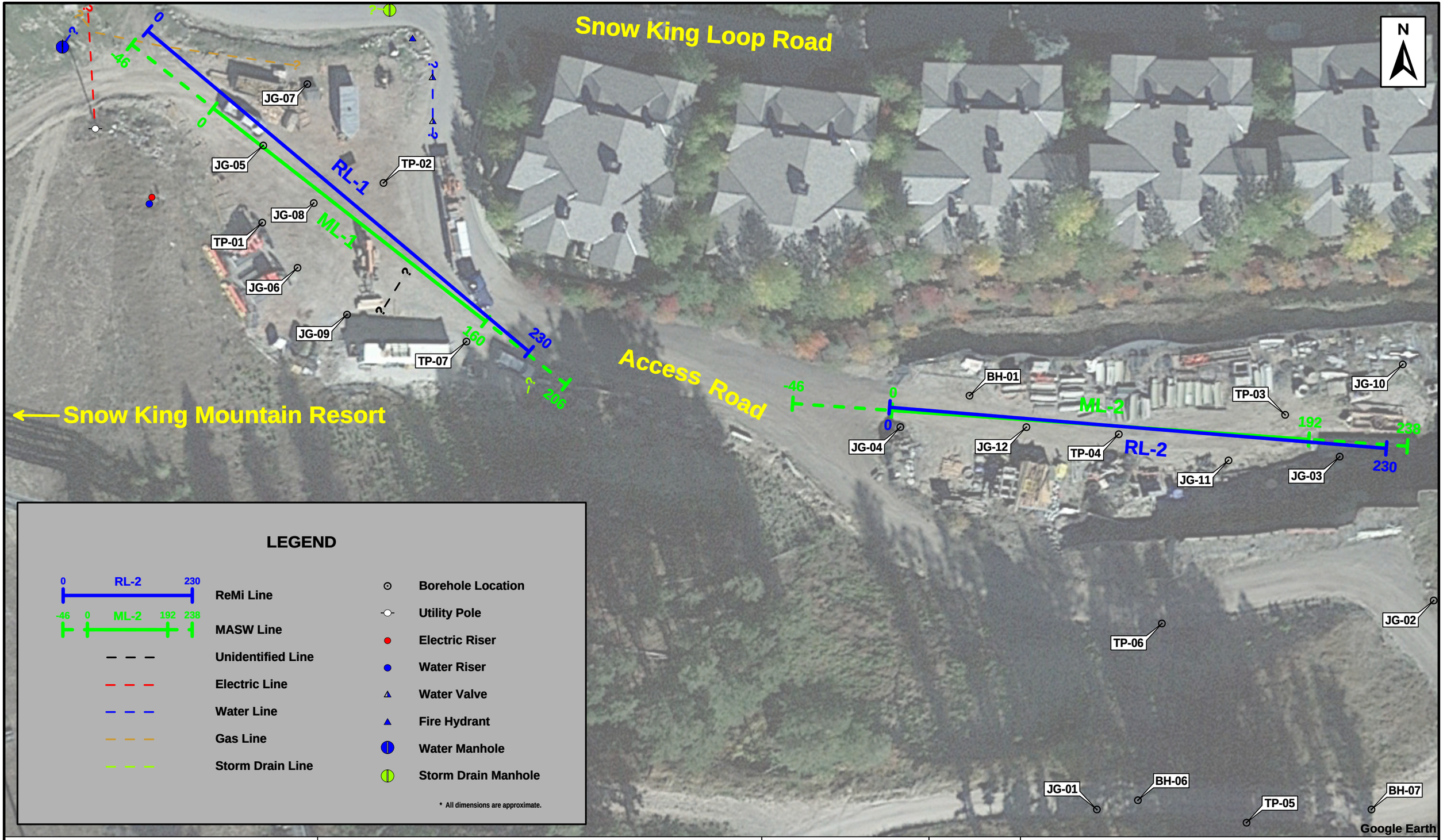
Saito, M., 1988, Compound Matrix Method for the Calculation of Spheroidal Oscillation of the Earth: Seismol. Res. Lett., v. 59, p. 29.

Telford, W.M., Geldart, L.P., Sheriff, R.E., and Keys, D.A., 1976, Applied Geophysics, Cambridge University Press.

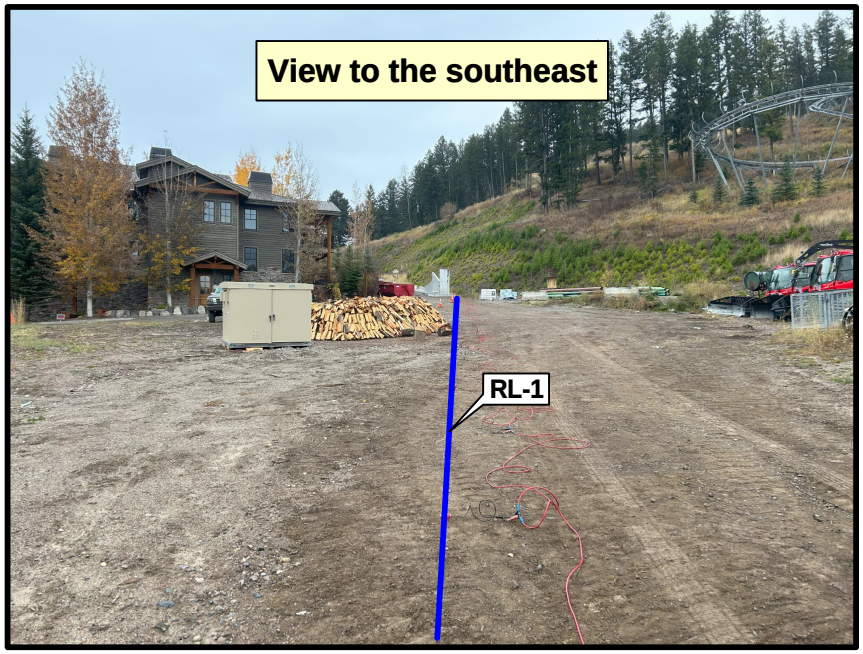
Xia, J., Miller, R.D., and Park, C.B., 1999, Estimation of Near-Surface Shear wave Velocity by Inversion of Rayleigh Wave: Geophysics, v. 64, p. 691-7.

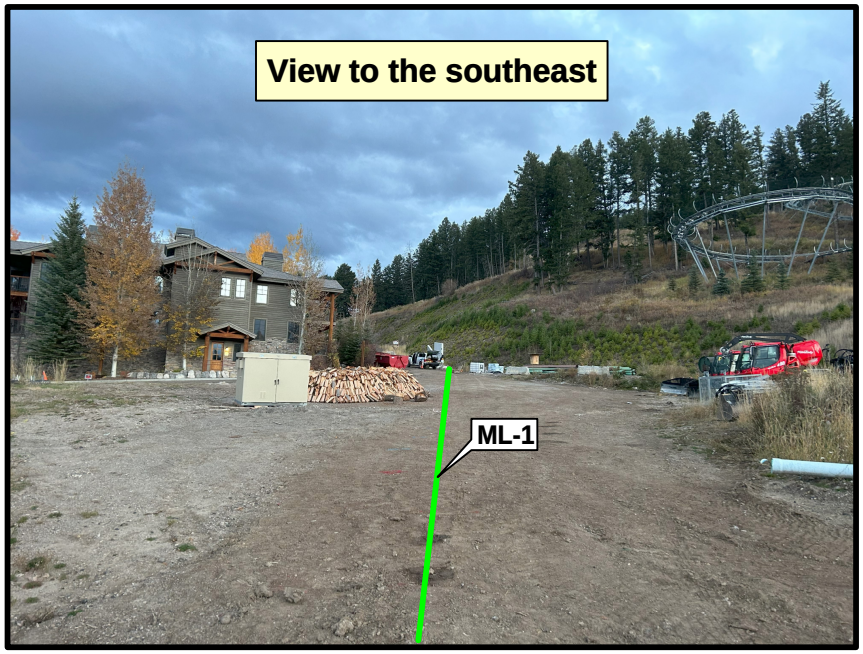


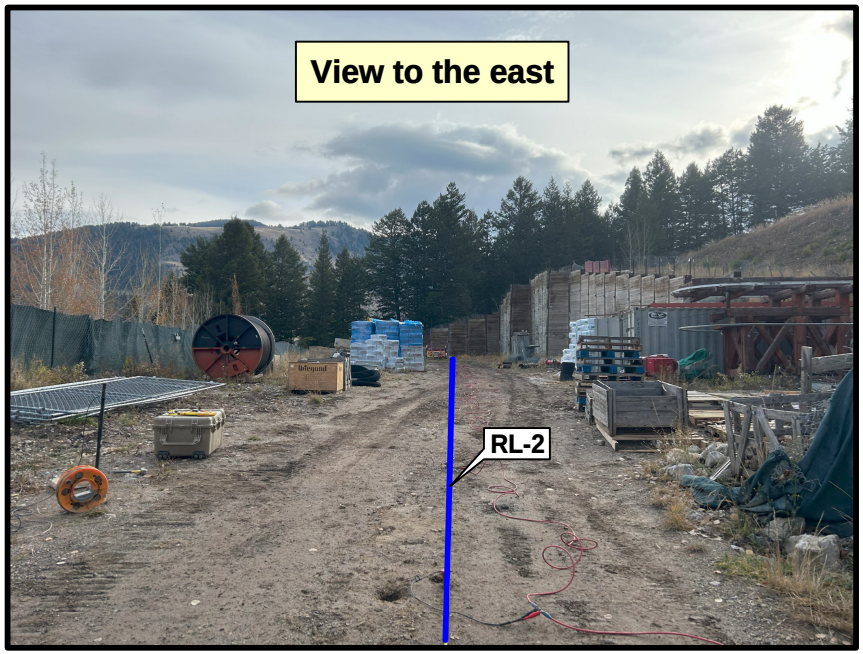
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 1	**SITE LOCATION MAP**

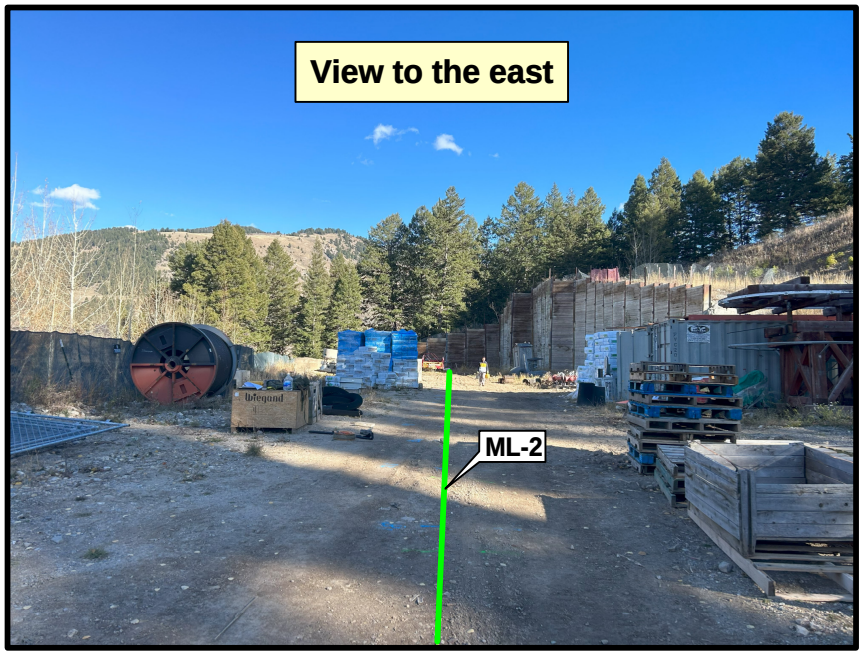


ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 2	**LINE LOCATION MAP**

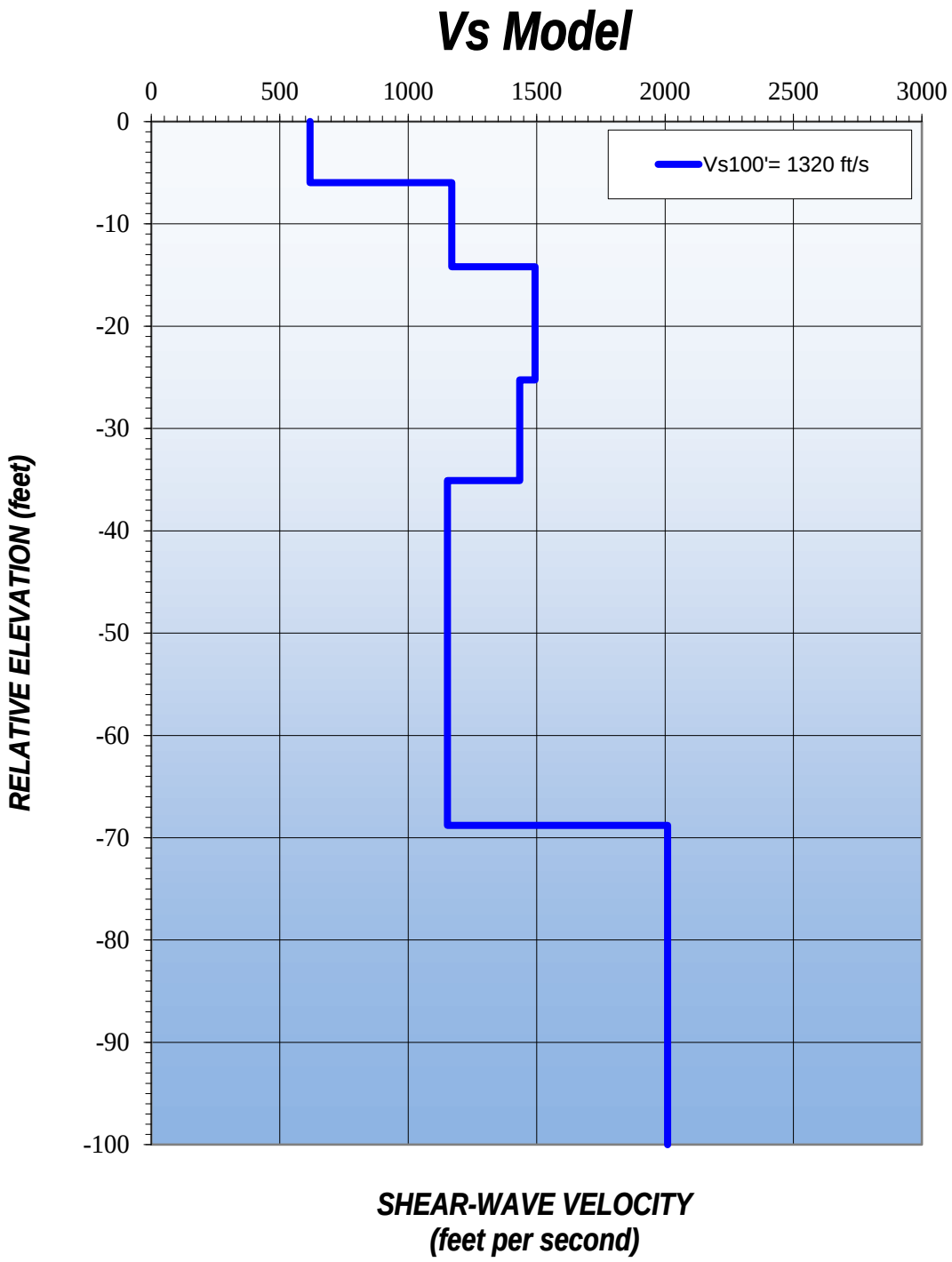






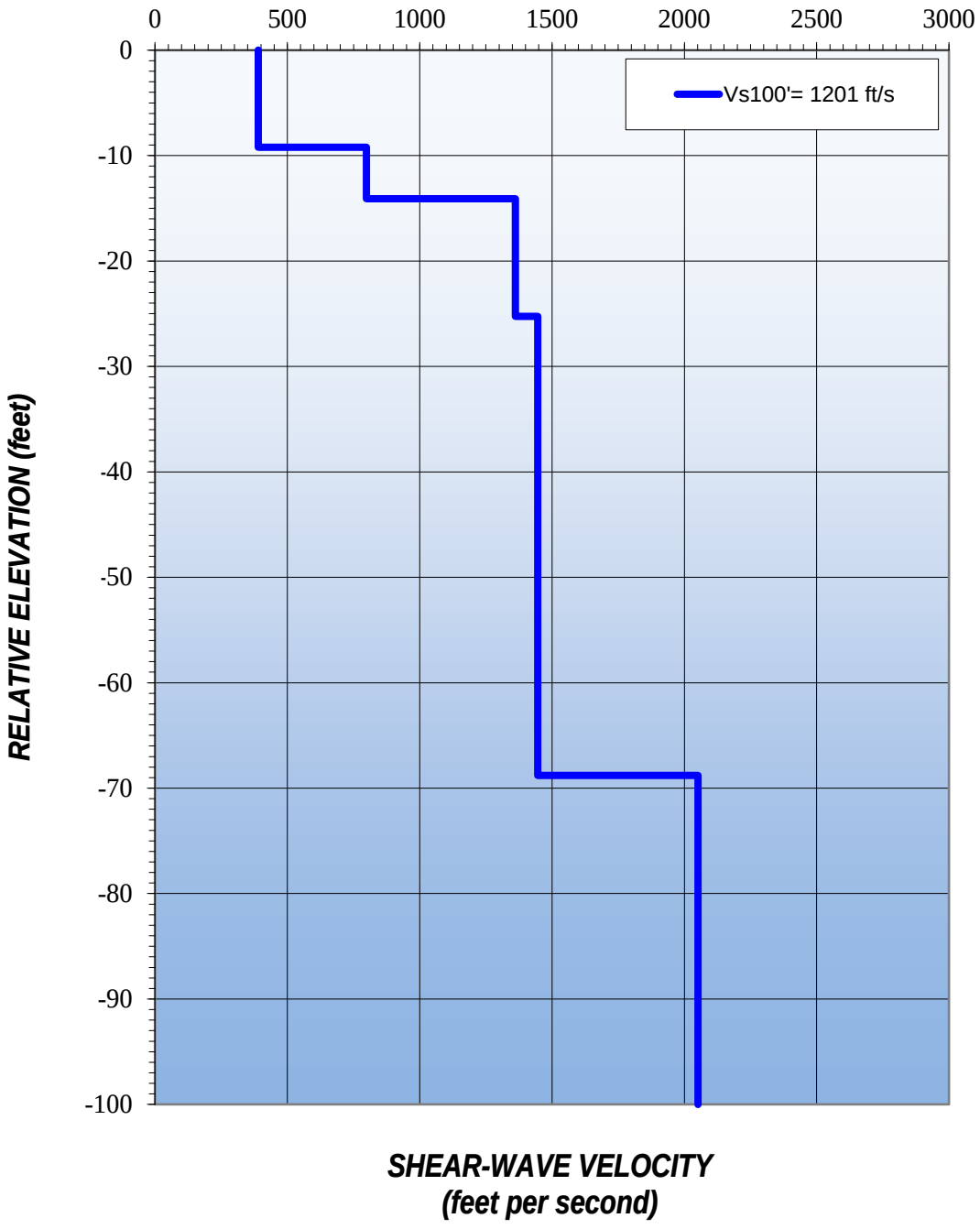


ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 3	**SITE PHOTOGRAPHS**



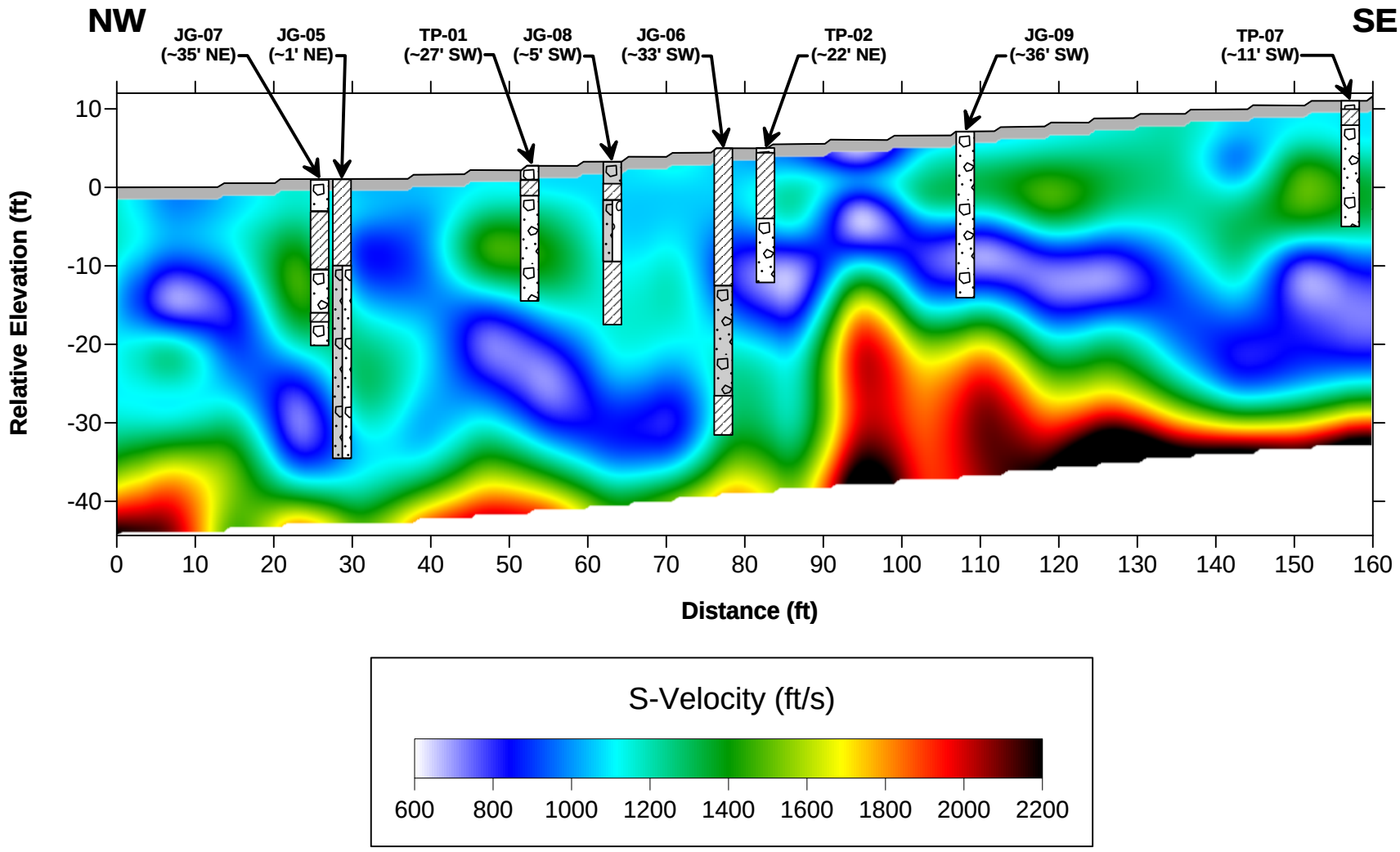
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 4a	**ReMi RESULTS** **RL-1**

Vs Model



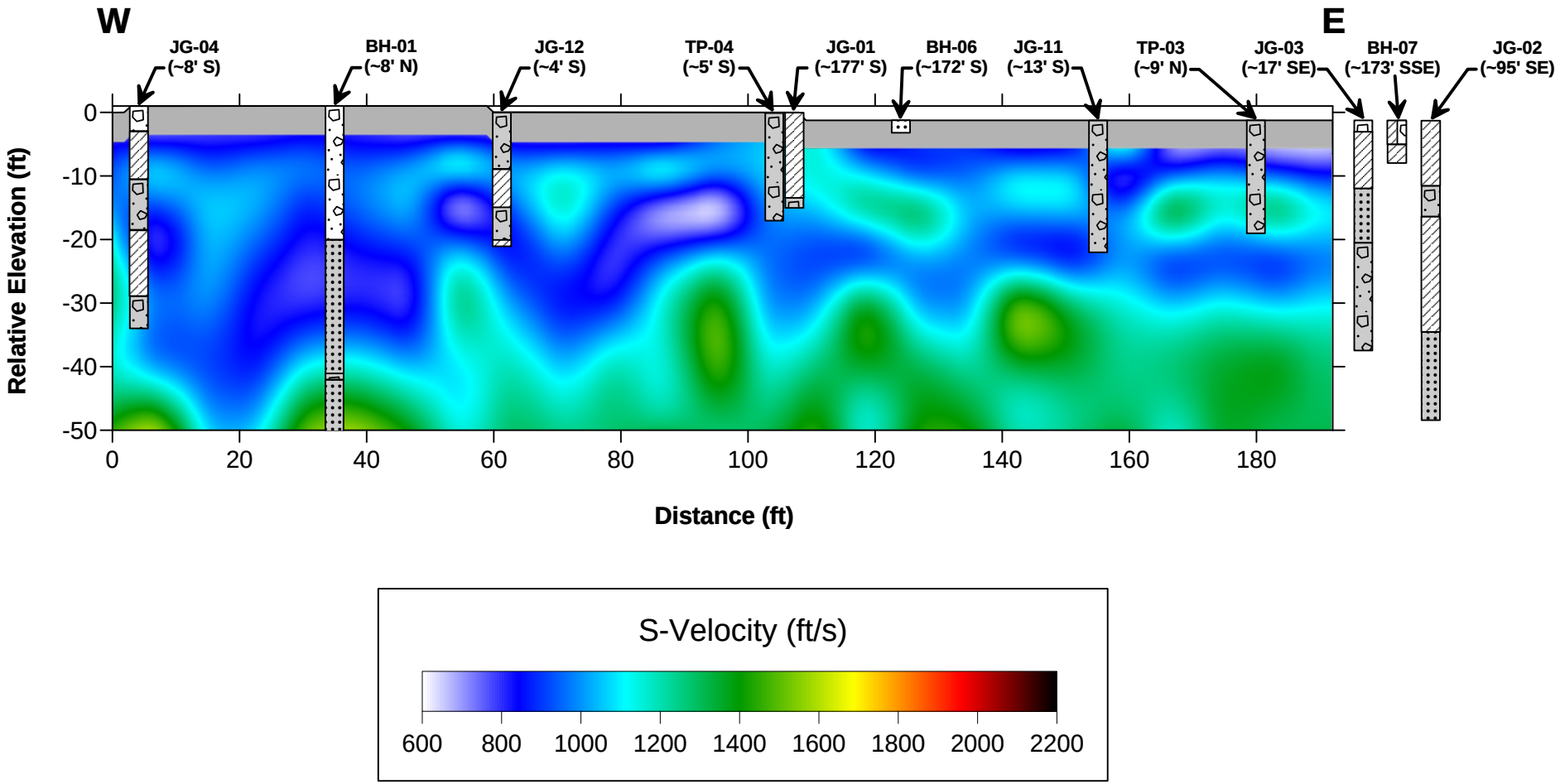
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 4b	**ReMi RESULTS** **RL-2**

MASW PROFILE
ML-1



ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 5a	**MASW PROFILE** **ML-1**

MASW PROFILE
ML-2



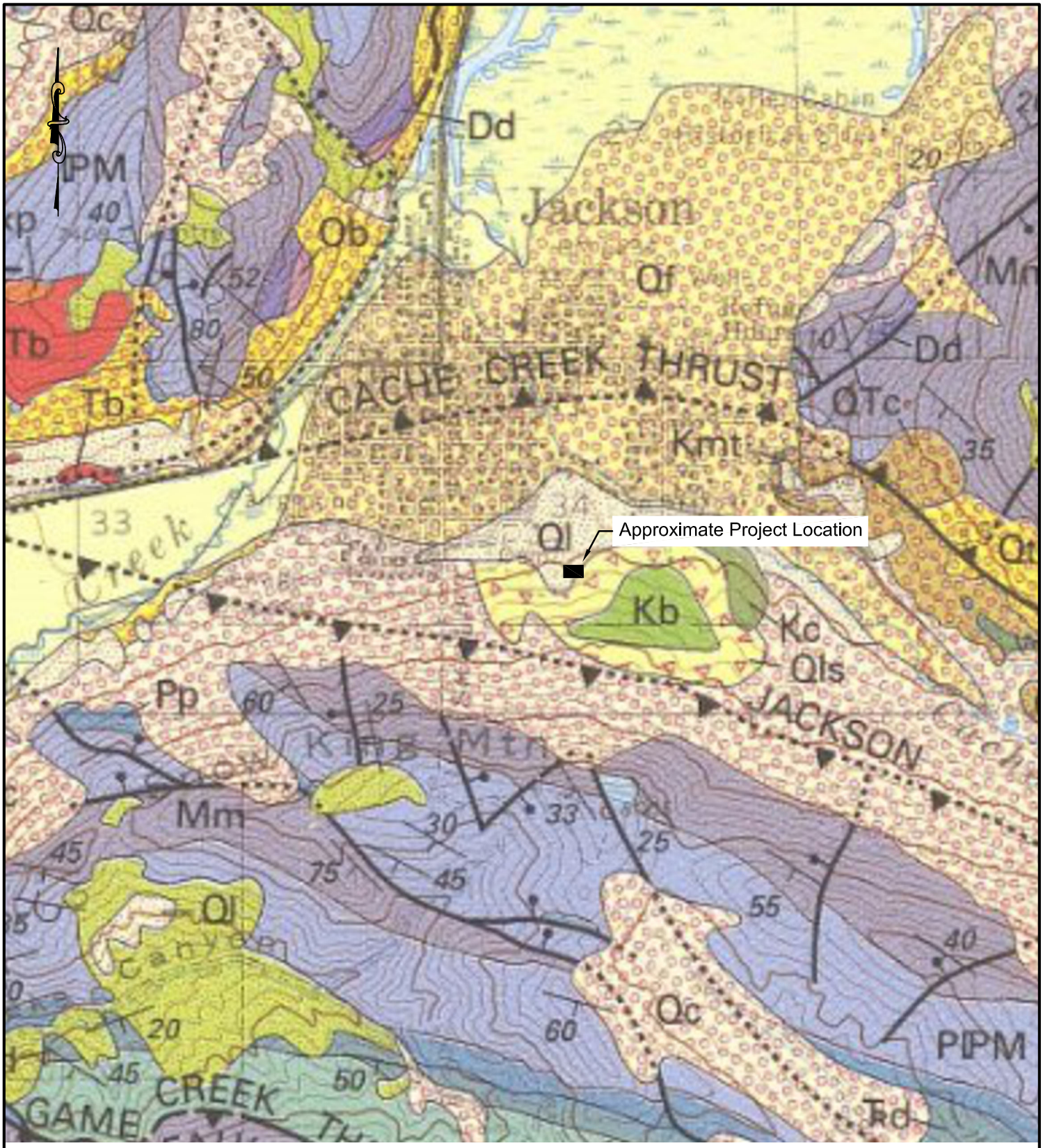
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 5b	**MASW PROFILE** **ML-2**

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX B

Figures



0 2000 4000

SCALE: 1 INCH = 2000 FEET

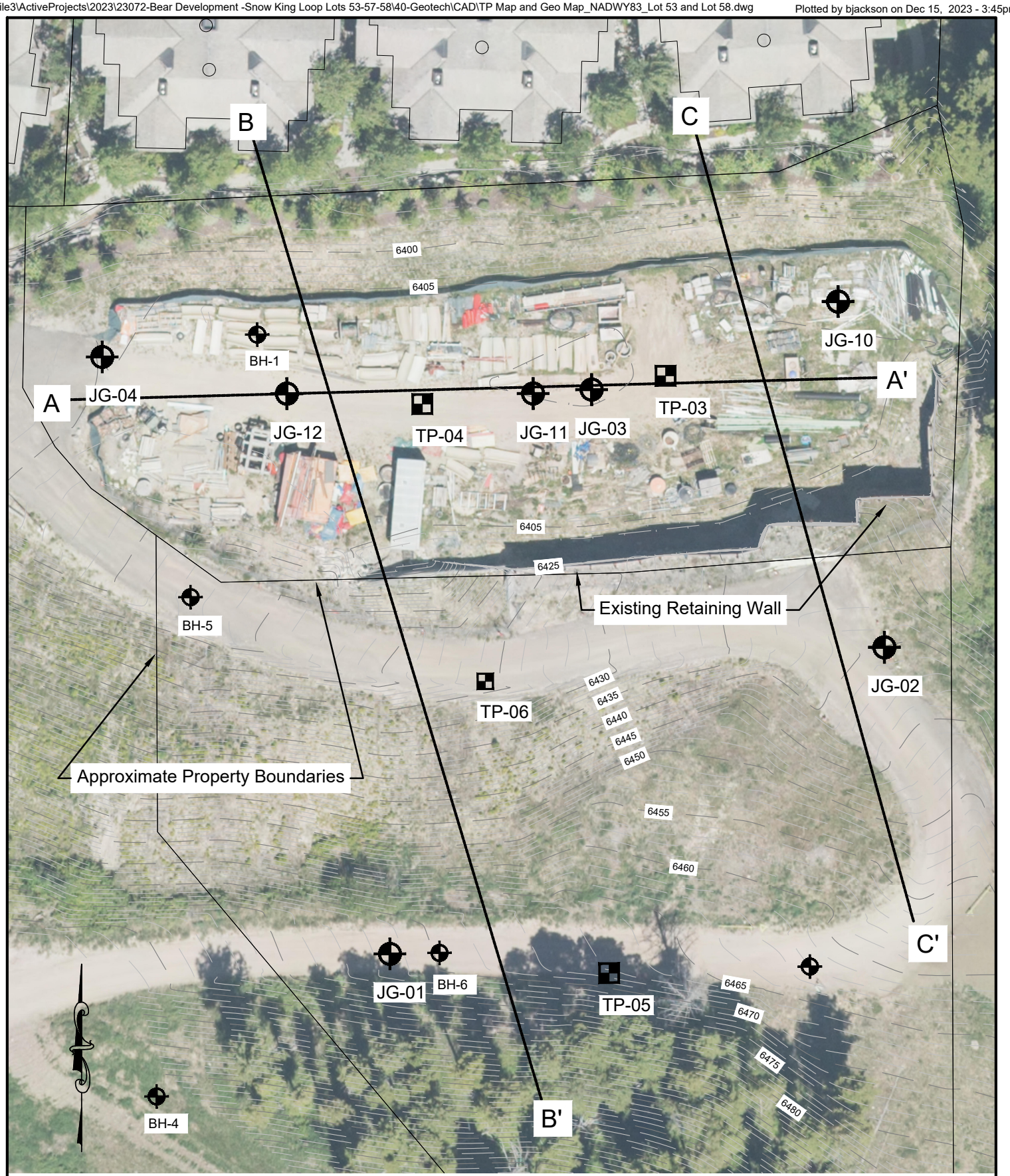
THIS SCALE VALID ONLY FOR 8.5x11 PRINTS

Map symbols:

Ql - Loess
Qls - Landslide Debris
Kb - Bacon Ridge Sandstone (Upper Cretaceous)

From Love et. al, Geologic Map of Grand Teton National Park, 1992

DRAFTED BY: JBJ REVIEWED BY: HC PROJECT NUMBER 23072	SHEET TITLE: Figure 1 Site Location and Geologic Map	PROJECT TITLE: Geotechincal-Engineering Report Bear Development - Lot 53 and Lot 58 Teton County, Wyoming	JORGENSEN GEOTECHNICAL, LLC PO Box 9550 | 1315 HWY 89 S., Ste. 201 Jackson, WY 83002 PH: 307.733.5150 www.jorgeng.com



0 40 80

SCALE: 1 INCH = 40 FEET
THIS SCALE VALID ONLY FOR 8.5x11 PRINTS

Borehole (JG-XX), Historic Nelson Engineering Borehole (BH-X), and test pit (TP-XX) locations are approximate and may be surveyed upon request. Existing ground surface topography provided by Jorgensen Associates, taken from topographiuc survey completed November 1, 2023. Aerial imagery provided by Teton County, 2019.

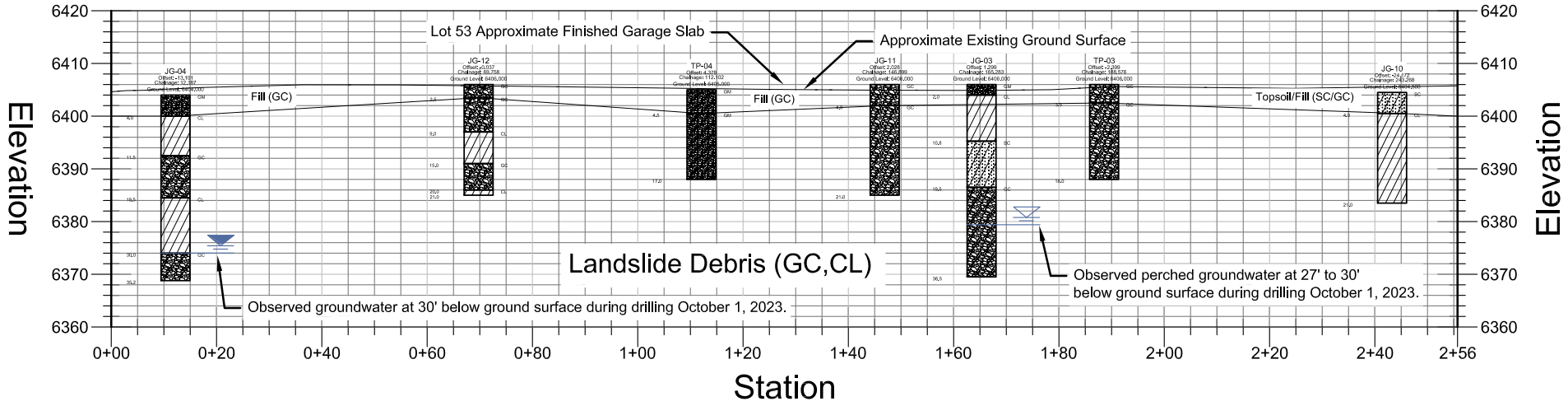
DRAFTED BY:	JBJ
REVIEWED BY:	HC
PROJECT NUMBER	23072

SHEET TITLE:
Figure 2
Borehole, Test Pit and Geologic Cross Section Location Map

PROJECT TITLE:
Geotechnical Engineering Report
Bear Development - Lot 53 and Lot 58
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section A-A'

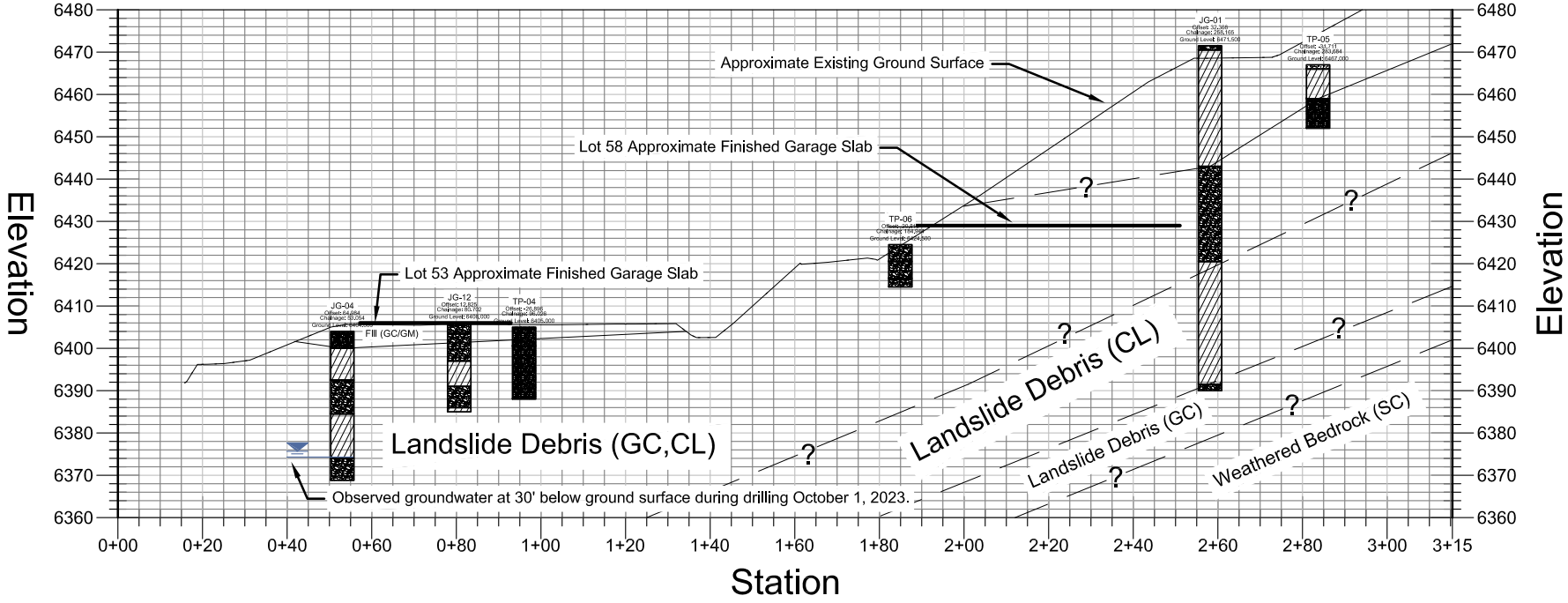


Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

DRAFTED BY: JBJ REVIEWED BY: HC/DB PROJECT NUMBER 23072	SHEET TITLE: Figure 3 Geologic Cross Section A-A'	PROJECT TITLE: Geotechnical-Engineering Report Bear Development - Lot 53 and Lot 58 Teton County, Wyoming	JORGENSEN GEOTECHNICAL, LLC PO Box 9550 | 1315 HWY 89 S., Ste. 201 Jackson, WY 83002 PH: 307.733.5150 www.jorgeng.com

Cross section B-B'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

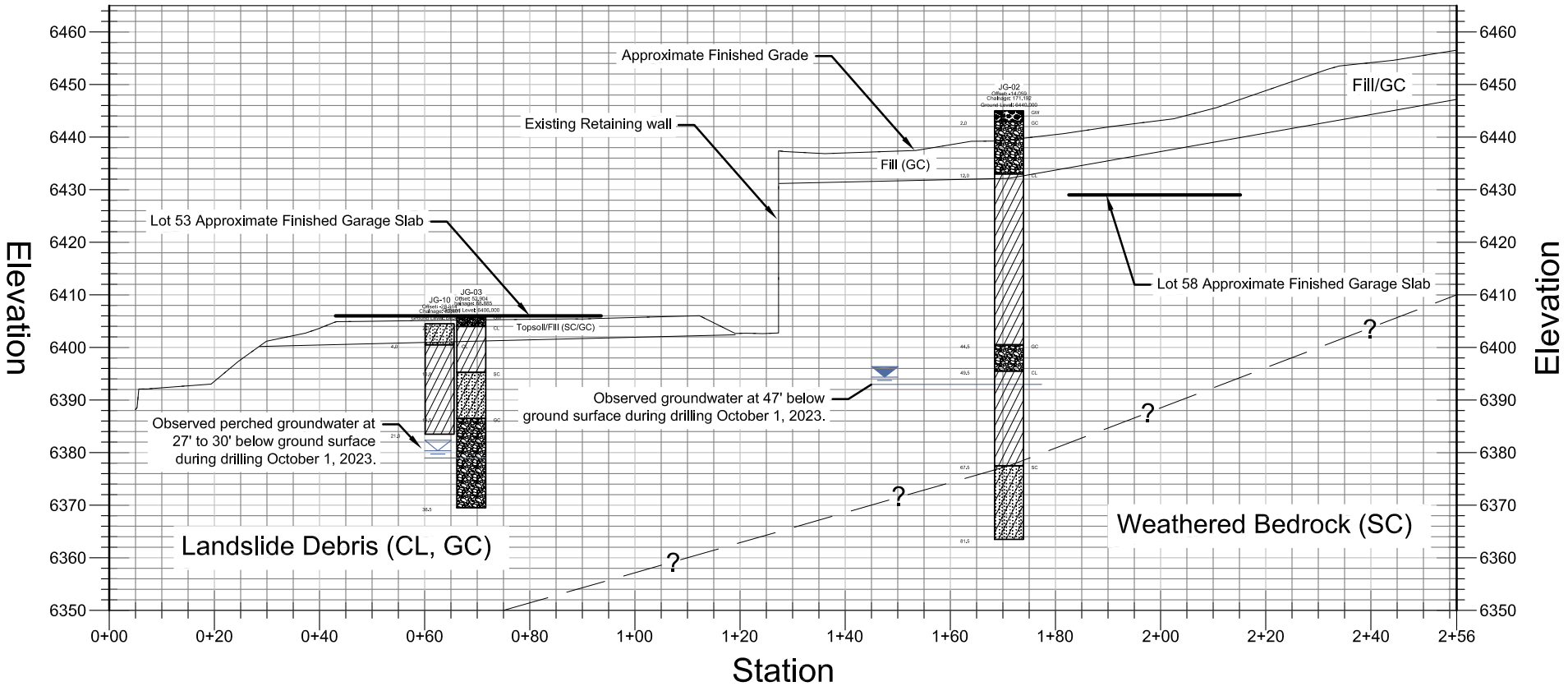
DRAFTED BY:	JBJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 4
Geologic Cross Section B-B'

PROJECT TITLE:
Geotechnical-Engineering Report
Bear Development - Lot 53 and Lot 58
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section C-C'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

DRAFTED BY:	JBJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 5
Geologic Cross Section C-C'

PROJECT TITLE:
Geotechnical-Engineering Report
Bear Development - Lot 53 and Lot 58
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX C

Soils Laboratory Procedures and Results

Laboratory Testing

Laboratory Testing Procedures

Lab samples were submitted for testing at GCI in Salt Lake City, Utah from boreholes JG-01, JG-02, JG-03, JG-04, JG-10, JG-11, and JG-12.

During the October 2023 site exploration for the Development at Lots 53 and 58, JG collected relatively undisturbed (i.e., thin-walled Shelby tubes) and disturbed samples (i.e., split spoon (SPT) samples and sonic drilling grab samples). Of the samples collected, 31 disturbed samples and two relatively undisturbed samples were selected for lab analysis. Laboratory testing included natural moisture content, unit weight, Atterberg limits, grain-size distribution, hydrometer, and consolidation testing.

The laboratory testing program consisted of:

- Twenty Seven (27) Moisture Contents (ASTM D2937/D2216)
- Thirty (30) Atterberg Limits (ASTM D4318)
- Twenty Seven (27) Grain Size Analysis (ASTM D422)
- Four (4) Hydrometer (ASTM D422a)
- Two (2) One Dimension Consolidation (ASTM D2435)

Results are shown on the following pages.

Laboratory Test Results: Detailed Summary

Laboratory testing included index testing for classification per USCS and indirect correlation with engineering parameters, and direct testing of strength. Classification tests – including Atterberg limits and grain-size analysis – have been summarized in table 4-1, with hydrometer tests and consolidation tests summarized in Tables 4-2 and 4-3, respectively. Full laboratory data sheets are attached.

The data herein are provided for informational purposes. Design-build contractors shall be responsible for providing their own analysis of the test results and for development of appropriate design parameters.

Table 4-1: Classification Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	Gravel (%)	Sand (%)	Fines (%)	Moisture Content (%)	Liquid Limit	Plasticity Index
JG-01	D8	18-19	CL	19.0	18.2	62.8	12.3	31	15
JG-01	D12	27-29	CL	27.7	17.1	55.2	11.0	28	12
JG-01	D17	37-38	GC	51.6	22.7	25.7	--	--	--
JG-01	D27	54.5-57	CL	11.9	20.2	67.9	12.6	33	18
JG-01	D32	67-69	CL	20.1	28.0	51.9	10.0	26	10
JG-01	D36	72.5-75	CL	4.5	10.0	85.5	20.7	38	21
JG-02	D4	7-10	GC	--	--	--	--	20	5
JG-02	D8	14.5-16	CL	12.4	20.8	66.8	11.9	31	16
JG-02	D11	22-25	CL	15.6	18.7	65.7	13.3	29	14
JG-02	D16	32-35	CL	13.2	18.2	68.6	14.5	21	5
JG-02	D18	38.5-40	CL	0.0	12.9	87.1	15.5	29	12
JG-02	D22	44.5-47	GC	41.6	27.3	31.1	--	--	--
JG-02	D26	52-55	CL	6.4	31.1	62.5	11.6	16	12
JG-02	D30	60-62	CL	0.2	5.3	94.5	13.7	37	14
JG-02	D32	64.5-67	CL	2.2	94.4	3.4	12.8	31	14
JG-02	D35	69.5-72	SC	--	--	--	--	21	5
JG-03	D3	4.5-7	CL	30.3	19.6	50.1	10.1	33	19
JG-03	D8	14.5-17	SC	28.2	31.4	40.4	8.4	30	15
JG-03	D12	22-25	GC	26.8	26.3	46.9	12.4	35	20
JG-03	D18	30-33	GC	32.7	22.1	45.2	10.8	29	14
JG-04	D4	7-10	CL	15.8	14.6	69.6	21.8	34	18
JG-04	D8	14.5-17	GC	37.4	30.1	32.5	6.8	19	5
JG-04	D12	22-25	CL	3.3	26.8	69.9	16.5	31	14
JG-04	D17	30-33	GC	43.1	15.3	41.6	10.1	33	18
JG-10	D3	7.5-9	CL	--	--	--	--	25	9
JG-10	U1	12.5-14	CL	27.6	21.7	50.7	13.7	39	24
JG-10	D5	15-17	CL	4.7	11.8	83.5	16.1	38	17
JG-10	U2	17.5-19	CL	13.9	19.4	66.7	13.8	32	18
JG-11	D3	7.5-9	GC	33.4	28.0	38.6	7.1	22	7
JG-12	D2	5-6.5	GC	33.9	25.3	40.8	10.2	27	12
JG-12	D4	10-11.5	CL	13.5	32.5	54.0	12.8	27	10
JG-12	D8	20-21.5	CL	23.9	25.5	50.6	10.6	26	12

Table 4-2: Hydrometer Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	Silt Fraction (%)	Clay Fraction (%)
JG-01	D17	37-38	GC	18	7
JG-02	D22	44.5-47	GC	23	8
JG-10	D5	15-17	CL	55	36
JG-11	D4	10-11.5	GC	33	17

Table 4-3: Consolidation Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	C_C
JG-10	U1	12.5-14	CL	0.171
JG-10	U2	17.5-19	CL	0.130

Supplemental Laboratory Data

Select laboratory results presented in a Site Investigation Report for Lots 53 and 58produced by Nelson Engineering dated July 28, 2021, and results presented in a Geotechnical Investigation Report for a project in close proximity to the site produced by Womack and Associates, Inc., dated June 4, 2010 are presented below.

GERHART COLE

PO Box 880
Midvale, Utah 84047
801.849.0055
gerhartcole.com

To:	Mr. Bruce Jackson Jorgensen Engineering 58 South Tyler, PO Box 1519 Pinedale, Wyoming 82941
Project:	Bear Development Snow King Lots 53 and 58
Gerhart Cole Project Number:	23-1725
Client Project Number	23072
Report Date:	November 30, 2023

Attached are the requested laboratory test results. These laboratory results are for the addressee and must be presented in their entirety without alteration, except with permission.

Gerhart Cole's Laboratory is accredited through the AASHTO Accreditation Program. The results provided were tested in general accordance with the referenced standards. Any test methods reported in this document outside the scope of this accreditation are marked with an asterisk in the header of the individual test report.

Gerhart Cole will dispose of samples two (2) weeks after the date above. Please contact us for storage pricing.

Approved By:_____
Zach Gibbs, PE (UT, MI) Laboratory Director

AASHTO ACCREDITED

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]1

Sample Info.	Sample:	**JG-01**	**JG-01**	**JG-01**	**JG-01**	**JG-01**	**JG-02**
	Depth:	**18-19 ft**	**27-29 ft**	**54.5-57 ft**	**67-69 ft**	**72.5-75 ft**	**14.5-16 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**14-Nov-23**	**14-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**
	Laboratory sample description:	**gy - bn clay**	**bn - gy clay**	**gy - dk gy clay**	**dk by - lt bn clay**	**gy - dk gy clay**	**bn - ol bn clay**
Moisture	Wet soil + tare (g)	806.82	1190.54	953.45	847.34	688.39	2264.09
	Dry soil + tare (g)	739.68	1074.24	869.05	788.12	590.77	2068.51
	Tare (g)	195.78	13.84	196.69	195.42	118.16	422.19
	Moisture content, w (%)	12.3	11.0	12.6	10.0	20.7	11.9
Comments							
QC/QA	Tested By:	AT	AT	CML	CML	CML	CML
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]2

Sample Info.	Sample:	**JG-02**	**JG-02**	**JG-02**	**JG-02**	**JG-02**	**JG-02**
	Depth:	**22-25 ft**	**32-35 ft**	**38.5-40 ft**	**52-55 ft**	**60-62 ft**	**64.5-67 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**
	Laboratory sample description:	**bn - ol bn clay**	**bn - dk yl bn clay**	**lt ol bn - ol bn clay**	**gy - ol bn clay**	**lt bn - bn clay**	**lt ol bn - ol bn clay**
Moisture	Wet soil + tare (g)	2104.69	2453.36	448.30	460.49	656.13	566.47
	Dry soil + tare (g)	1908.65	2210.32	405.33	433.20	600.68	516.43
	Tare (g)	438.53	539.41	127.25	197.51	195.80	126.68
	Moisture content, w (%)	13.3	14.5	15.5	11.6	13.7	12.8
Comments							
QC/QA	Tested By:	CML	CML	CML	CML	CML	CML
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]3

Sample Info.	Sample:	JG-03	JG-03	JG-03	JG-03	JG-04	JG-04
	Depth:	4.5-7 ft	14.5-17 ft	22-25 ft	30-33 ft	7-10 ft	14.5-17 ft
	Date Sampled:	-	-	-	-	-	-
	Date tested:	13-Nov-23	13-Nov-23	13-Nov-23	13-Nov-23	13-Nov-23	13-Nov-23
	Laboratory sample description:	lt bn - bn clay	pl ol bn - bn clay	lt ol bn - bn clay	bn - dk bn clay	lt ol bn - bn clay	pl ol bn - lt bn silt
Moisture	Wet soil + tare (g)	1630.20	872.07	1046.88	943.07	653.16	601.88
	Dry soil + tare (g)	1521.39	813.63	947.50	865.02	571.20	571.25
	Tare (g)	440.15	119.03	144.65	144.19	195.92	118.32
	Moisture content, w (%)	10.1	8.4	12.4	10.8	21.8	6.8
Comments							
QC/QA	Tested By:	JCC	JCC	JCC	JCC	JCC	JCC
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]4

Sample Info.	Sample:	**JG-04**	**JG-04**	**JG-10**	**JG-10**	**JG-10**	**JG-11**
	Depth:	**22-25 ft**	**30-33 ft**	**12.5-14 ft**	**15-17 ft**	**17.5-19 ft**	**7.5-9 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**
	Laboratory sample description:	**ol bn - bn silt**	**lt bn - bn clay**	**ol bn - lt bn clay**	**ol bn - y bn clay**	**ol bn - lt bn clay**	**bn - dk bn clay**
Moisture	Wet soil + tare (g)	555.20	1543.36	1129.47	377.19	860.87	758.29
	Dry soil + tare (g)	493.76	1440.63	1044.36	352.11	758.40	721.07
	Tare (g)	120.66	421.65	422.15	196.80	13.83	194.35
	Moisture content, w (%)	16.5	10.1	13.7	16.1	13.8	7.1
Comments							
QC/QA	Tested By:	JCC	JCC	AT	JCC	AT	JCC
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]5

Sample Info.	Sample:	**JG-12**	**JG-12**	**JG-12**			
	Depth:	**5-7 ft**	**10-12 ft**	**20-21 ft**			
	Date Sampled:	**-**	**-**	**-**			
	Date tested:	**14-Nov-23**	**14-Nov-23**	**14-Nov-23**			
	Laboratory sample description:	**lt ol bn - lt bn clay**	**lt ol bn - lt bn silt**	**lt ol bn - lt bn clay**			
Moisture	Wet soil + tare (g)	902.19	566.12	742.99			
	Dry soil + tare (g)	836.69	514.93	683.22			
	Tare (g)	193.61	116.09	117.11			
	Moisture content, w (%)	10.2	12.8	10.6			
Comments							
QC/QA	Tested By:	AT	AT	AT			
	Reduced By:	CML	CML	CML			
	Reviewed By:	AT	AT	AT			

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 18-19 ft

Tested by: JC Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - bn clay
As-received water content(%):	12.3	Approximate maximum particle size:	1.5"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

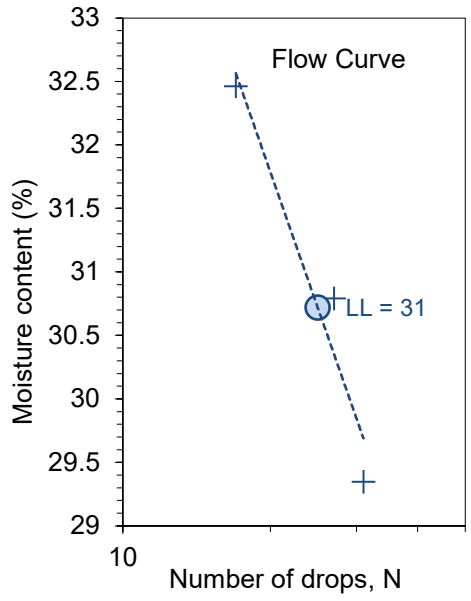
Determination No:	1	2
Wet Soil + Tare (g):	20.94	20.87
Dry Soil + Tare (g):	19.90	19.81
Moisture Loss (g):	1.04	1.06
Tare (g):	13.53	13.42
Dry Soil (g):	6.37	6.39
Moisture Content, w (%):	16.33	16.59

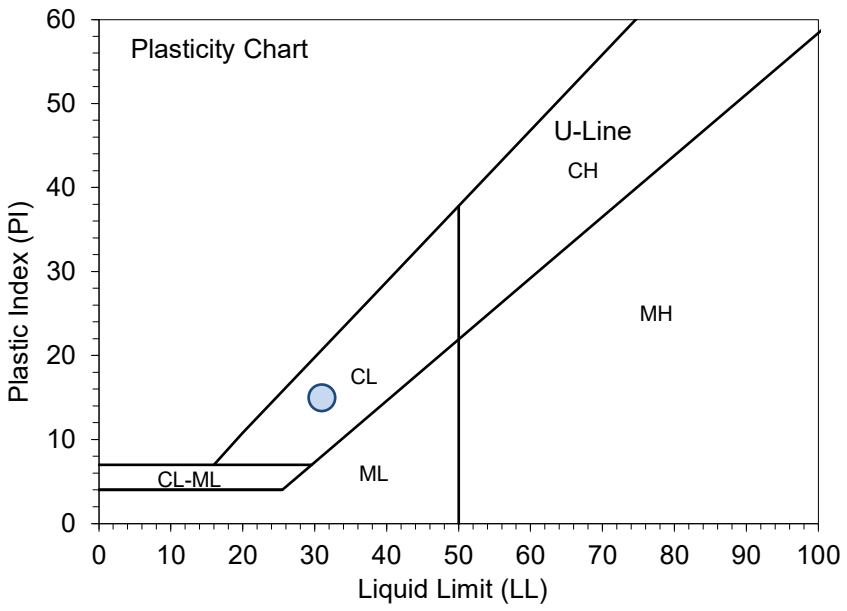
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	27	17
Wet Soil + Tare (g):	23.85	25.34	24.74
Dry Soil + Tare (g):	21.37	22.51	21.75
Moisture Loss (g):	2.48	2.83	2.99
Tare (g):	12.92	13.32	12.54
Dry Soil (g):	8.45	9.19	9.21
Moisture Content, w (%):	29.35	30.79	32.46
One-Point LL:		31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	16
Plasticity Index, PI:	15





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]1

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 27-29 ft

Tested by: JC Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - gy clay
As-received water content(%):	11.0	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

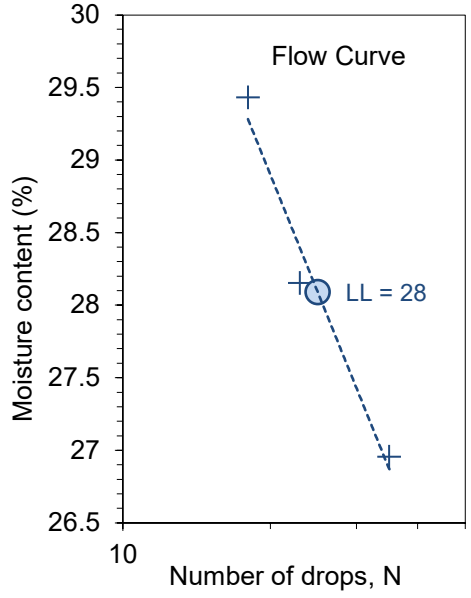
Determination No:	1	2
Wet Soil + Tare (g):	20.76	21.17
Dry Soil + Tare (g):	19.72	20.13
Moisture Loss (g):	1.04	1.04
Tare (g):	13.35	13.69
Dry Soil (g):	6.37	6.44
Moisture Content, w (%):	16.33	16.15

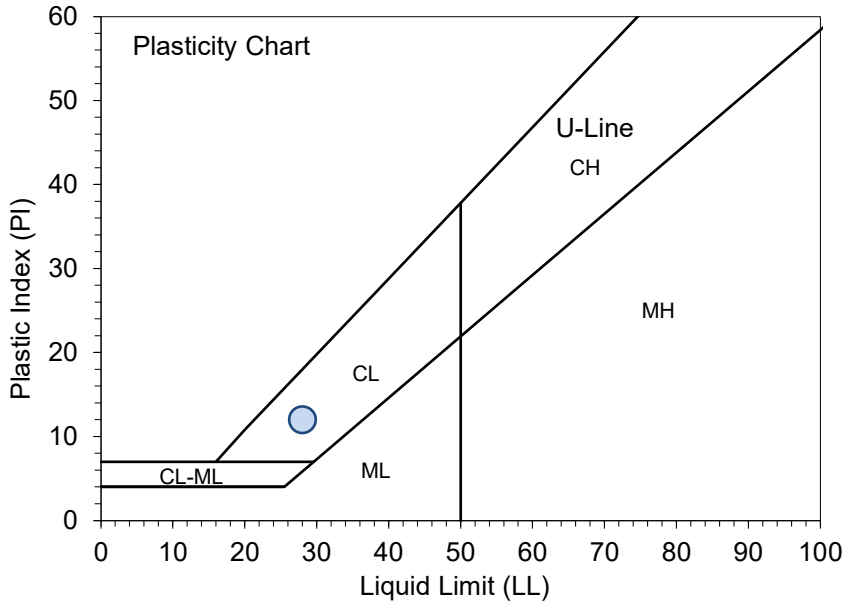
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	23	18
Wet Soil + Tare (g):	25.98	24.87	27.33
Dry Soil + Tare (g):	23.33	22.17	24.16
Moisture Loss (g):	2.65	2.70	3.17
Tare (g):	13.50	12.58	13.39
Dry Soil (g):	9.83	9.59	10.77
Moisture Content, w (%):	26.96	28.15	29.43
One-Point LL:		28	

Results

Liquid Limit, LL:	28
Plastic Limit, PL:	16
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]2

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 54.5-57 ft

Tested by: JC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - dk gy clay
As-received water content(%):	12.5	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

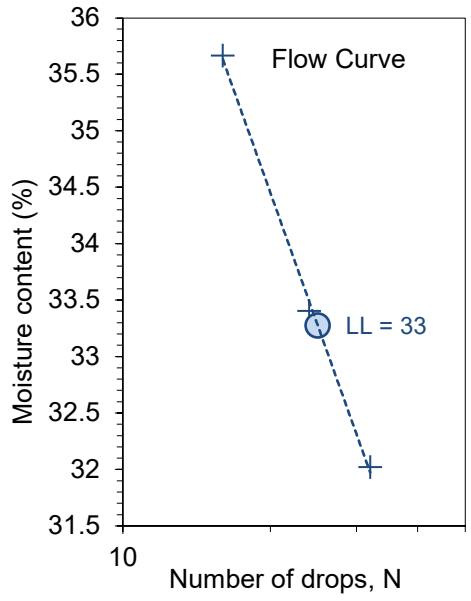
Determination No:	1	2
Wet Soil + Tare (g):	20.65	21.09
Dry Soil + Tare (g):	19.68	20.10
Moisture Loss (g):	0.97	0.99
Tare (g):	13.25	13.55
Dry Soil (g):	6.43	6.55
Moisture Content, w (%):	15.09	15.11

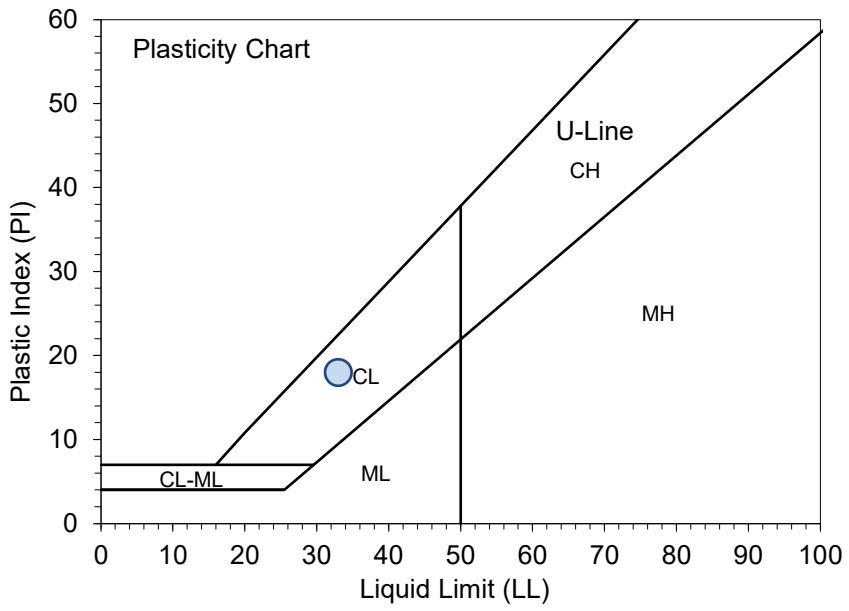
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	32	24	16
Wet Soil + Tare (g):	24.69	24.36	24.92
Dry Soil + Tare (g):	22.00	21.31	21.61
Moisture Loss (g):	2.69	3.05	3.31
Tare (g):	13.60	12.18	12.33
Dry Soil (g):	8.40	9.13	9.28
Moisture Content, w (%):	32.02	33.41	35.67
One-Point LL:		33	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	15
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]3

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 67-69 ft

Tested by: JC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	dk gy - lt bn clay
As-received water content(%):	10.0	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

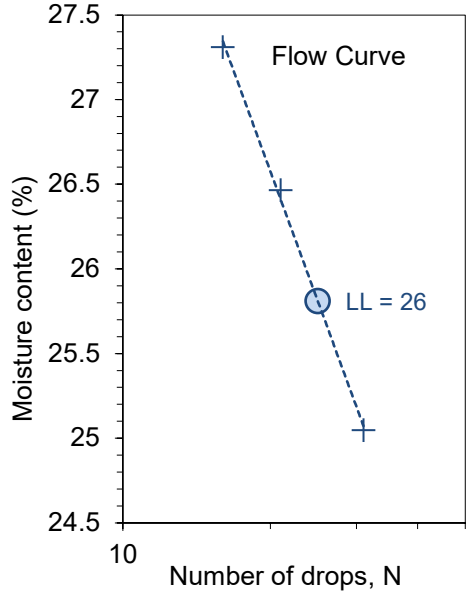
Determination No:	1	2
Wet Soil + Tare (g):	21.01	20.67
Dry Soil + Tare (g):	19.96	19.64
Moisture Loss (g):	1.05	1.03
Tare (g):	13.49	13.07
Dry Soil (g):	6.47	6.57
Moisture Content, w (%):	16.23	15.68

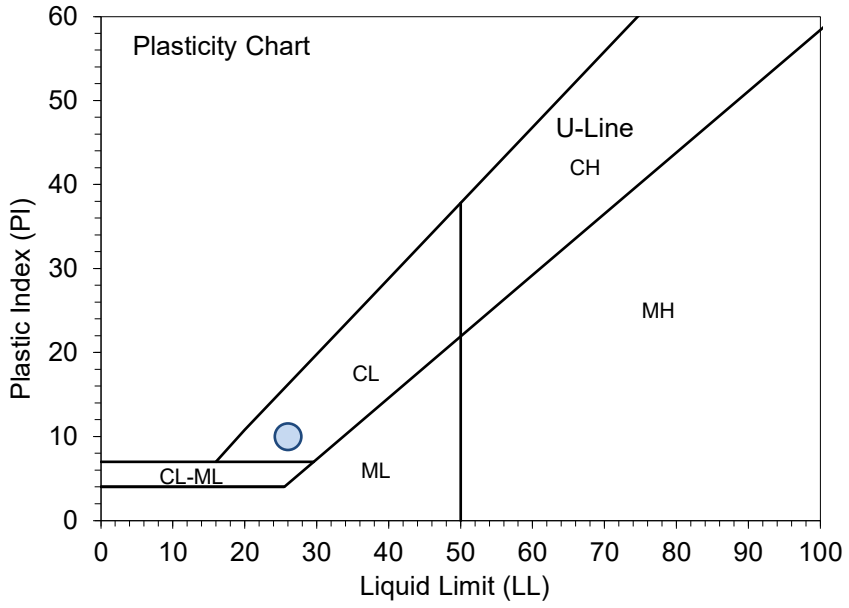
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	21	16
Wet Soil + Tare (g):	26.26	25.37	25.82
Dry Soil + Tare (g):	23.73	22.89	23.22
Moisture Loss (g):	2.53	2.48	2.60
Tare (g):	13.63	13.52	13.70
Dry Soil (g):	10.10	9.37	9.52
Moisture Content, w (%):	25.05	26.47	27.31
One-Point LL:		26	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	16
Plasticity Index, PI:	10





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]4

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 72.5-75 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - dk by clay
As-received water content(%):	20.7	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

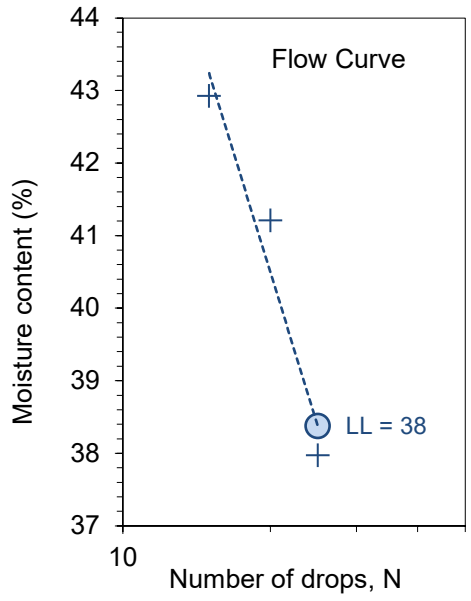
Determination No:	1	2
Wet Soil + Tare (g):	21.19	21.02
Dry Soil + Tare (g):	20.06	19.89
Moisture Loss (g):	1.13	1.13
Tare (g):	13.47	13.48
Dry Soil (g):	6.59	6.41
Moisture Content, w (%):	17.15	17.63

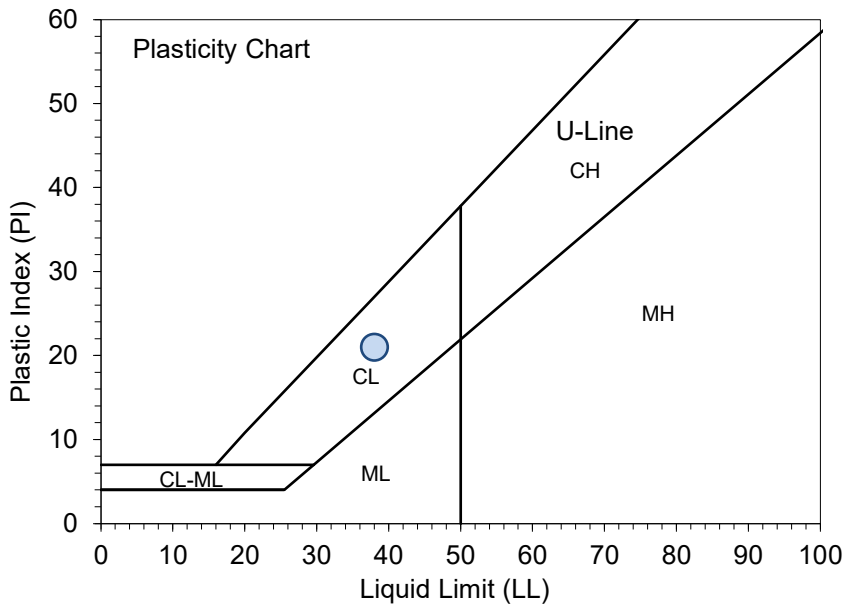
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	25	20	15
Wet Soil + Tare (g):	22.90	24.32	25.41
Dry Soil + Tare (g):	20.31	21.13	21.89
Moisture Loss (g):	2.59	3.19	3.52
Tare (g):	13.49	13.39	13.69
Dry Soil (g):	6.82	7.74	8.20
Moisture Content, w (%):	37.98	41.21	42.93
One-Point LL:	38	40	

Results

Liquid Limit, LL:	38
Plastic Limit, PL:	17
Plasticity Index, PI:	21





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]5

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 7-10 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn gravel
As-received water content(%):	Not Requested	Approximate maximum particle size:	1.5"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

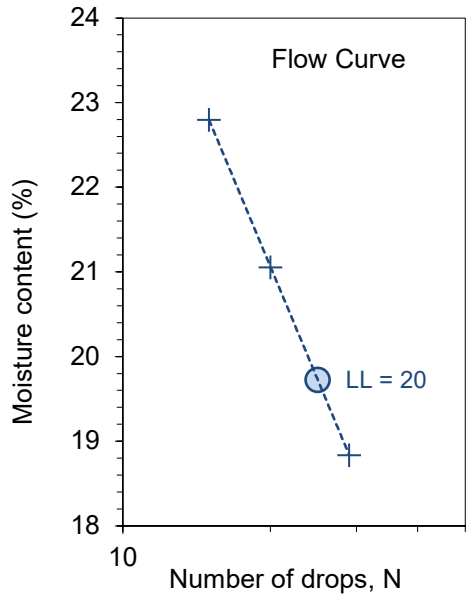
Determination No:	1	2
Wet Soil + Tare (g):	20.22	21.14
Dry Soil + Tare (g):	19.22	20.11
Moisture Loss (g):	1.00	1.03
Tare (g):	12.57	13.32
Dry Soil (g):	6.65	6.79
Moisture Content, w (%):	15.04	15.17

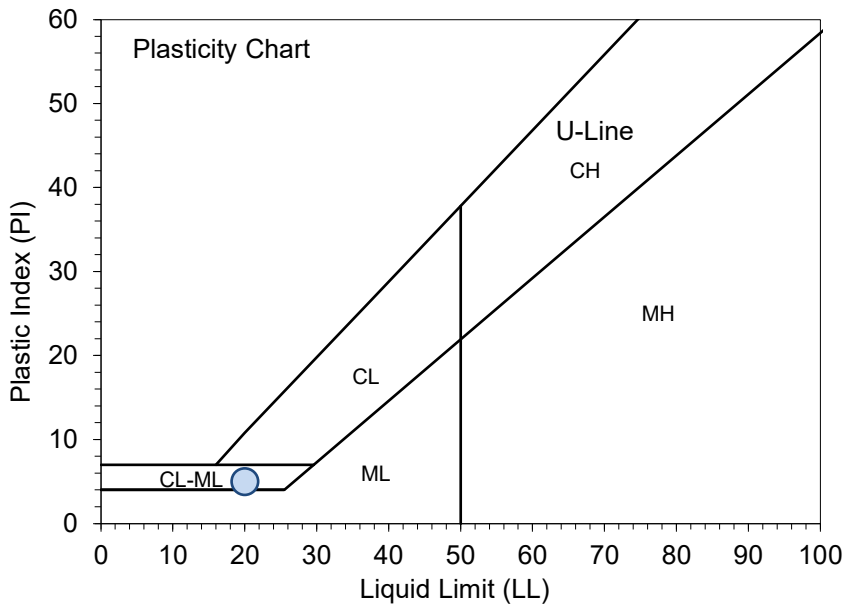
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	20	15
Wet Soil + Tare (g):	26.87	25.20	24.44
Dry Soil + Tare (g):	24.76	23.17	22.29
Moisture Loss (g):	2.11	2.03	2.15
Tare (g):	13.56	13.53	12.86
Dry Soil (g):	11.20	9.64	9.43
Moisture Content, w (%):	18.84	21.06	22.80
One-Point LL:	19	20	

Results

Liquid Limit, LL:	20
Plastic Limit, PL:	15
Plasticity Index, PI:	5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]6

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 14.5-16 ft

Tested by: JC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - ol bn clay
As-received water content(%):	11.9	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

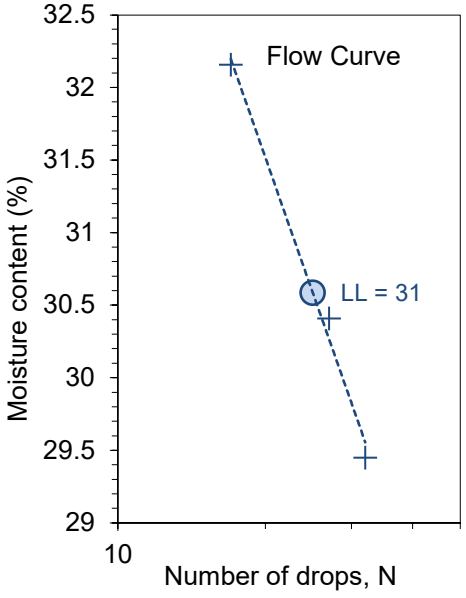
Determination No:	1	2
Wet Soil + Tare (g):	20.91	19.95
Dry Soil + Tare (g):	19.95	19.00
Moisture Loss (g):	0.96	0.95
Tare (g):	13.46	12.46
Dry Soil (g):	6.49	6.54
Moisture Content, w (%):	14.79	14.53

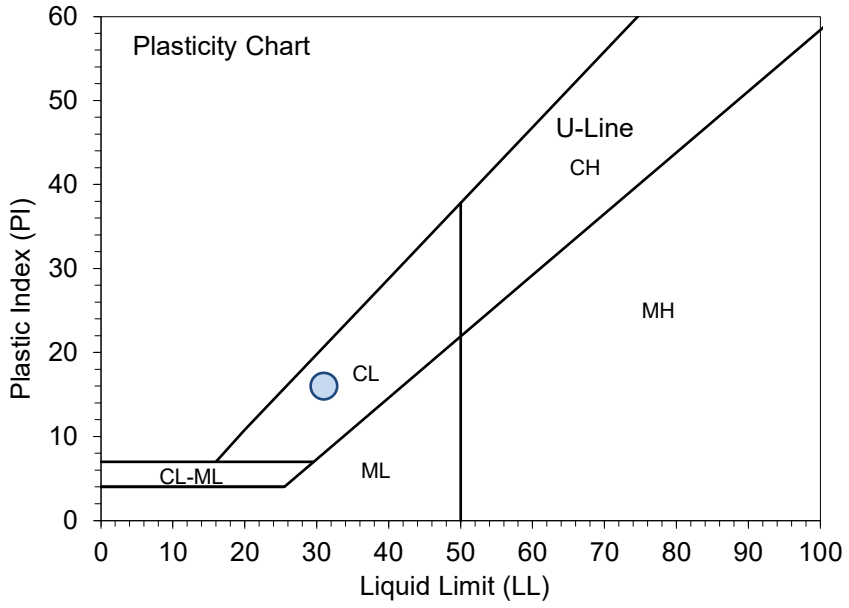
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	32	27	17
Wet Soil + Tare (g):	27.13	25.25	23.71
Dry Soil + Tare (g):	24.02	22.51	20.88
Moisture Loss (g):	3.11	2.74	2.83
Tare (g):	13.46	13.50	12.08
Dry Soil (g):	10.56	9.01	8.80
Moisture Content, w (%):	29.45	30.41	32.16
One-Point LL:		31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	15
Plasticity Index, PI:	16





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]7

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - ol bn clay
As-received water content(%):	13.3	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

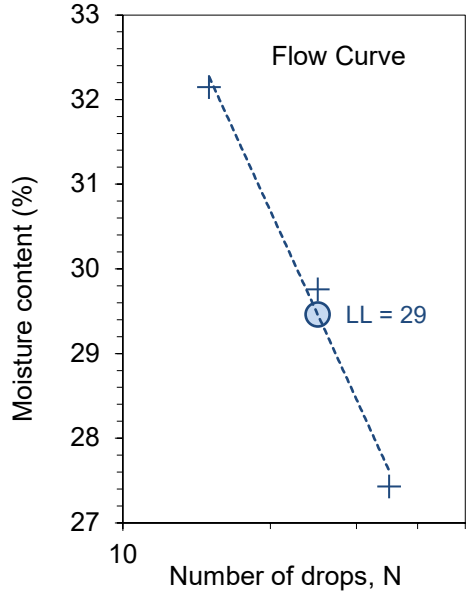
Determination No:	1	2
Wet Soil + Tare (g):	21.43	19.87
Dry Soil + Tare (g):	20.39	18.85
Moisture Loss (g):	1.04	1.02
Tare (g):	13.57	12.08
Dry Soil (g):	6.82	6.77
Moisture Content, w (%):	15.25	15.07

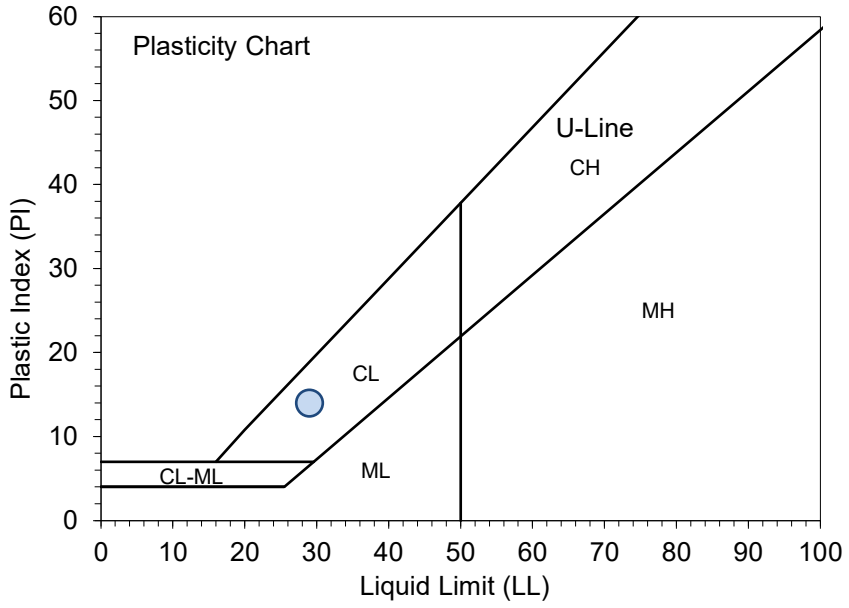
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	25	15
Wet Soil + Tare (g):	22.22	20.57	25.21
Dry Soil + Tare (g):	20.36	18.71	22.22
Moisture Loss (g):	1.86	1.86	2.99
Tare (g):	13.58	12.46	12.92
Dry Soil (g):	6.78	6.25	9.30
Moisture Content, w (%):	27.43	29.76	32.15
One-Point LL:		30	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	15
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]8

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 32-35 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk yl bn clay
As-received water content(%):	14.5	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

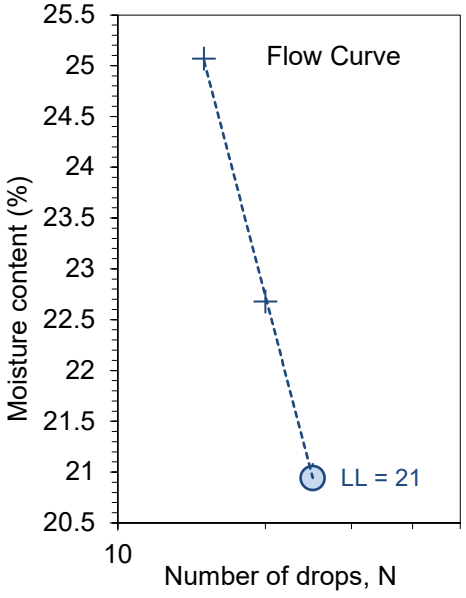
Determination No:	1	2
Wet Soil + Tare (g):	21.05	21.32
Dry Soil + Tare (g):	19.97	20.22
Moisture Loss (g):	1.08	1.10
Tare (g):	13.42	13.54
Dry Soil (g):	6.55	6.68
Moisture Content, w (%):	16.49	16.47

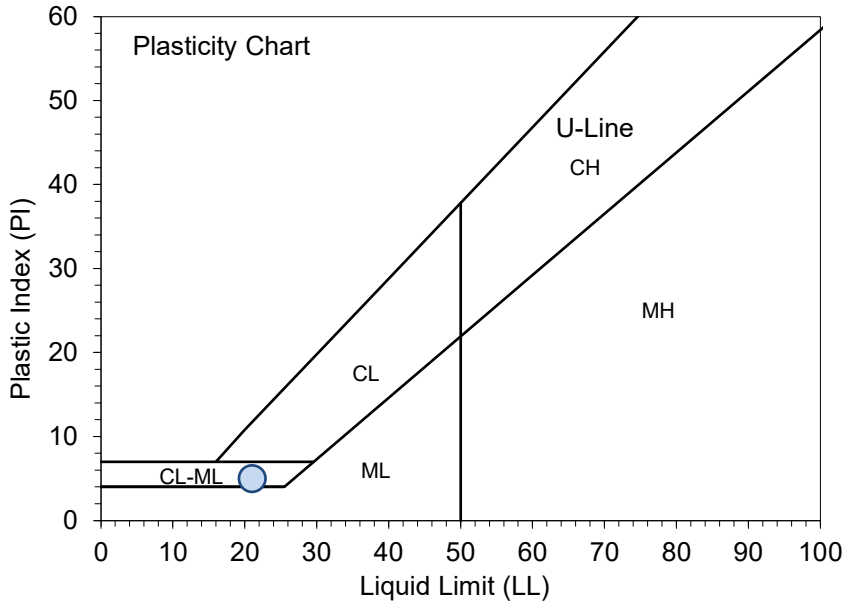
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	25	20	15
Wet Soil + Tare (g):	25.91	24.58	25.44
Dry Soil + Tare (g):	23.76	22.50	22.86
Moisture Loss (g):	2.15	2.08	2.58
Tare (g):	13.51	13.33	12.57
Dry Soil (g):	10.25	9.17	10.29
Moisture Content, w (%):	20.98	22.68	25.07
One-Point LL:	21	22	

Results

Liquid Limit, LL:	21
Plastic Limit, PL:	16
Plasticity Index, PI:	5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]9

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 38.5-40 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - ol bn clay
As-received water content(%):	15.5	Approximate maximum particle size:	No. 10
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

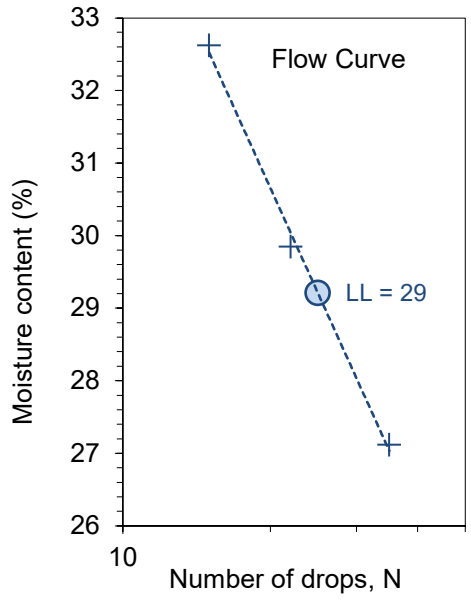
Determination No:	1	2
Wet Soil + Tare (g):	20.84	21.16
Dry Soil + Tare (g):	19.75	20.04
Moisture Loss (g):	1.09	1.12
Tare (g):	13.53	13.60
Dry Soil (g):	6.22	6.44
Moisture Content, w (%):	17.52	17.39

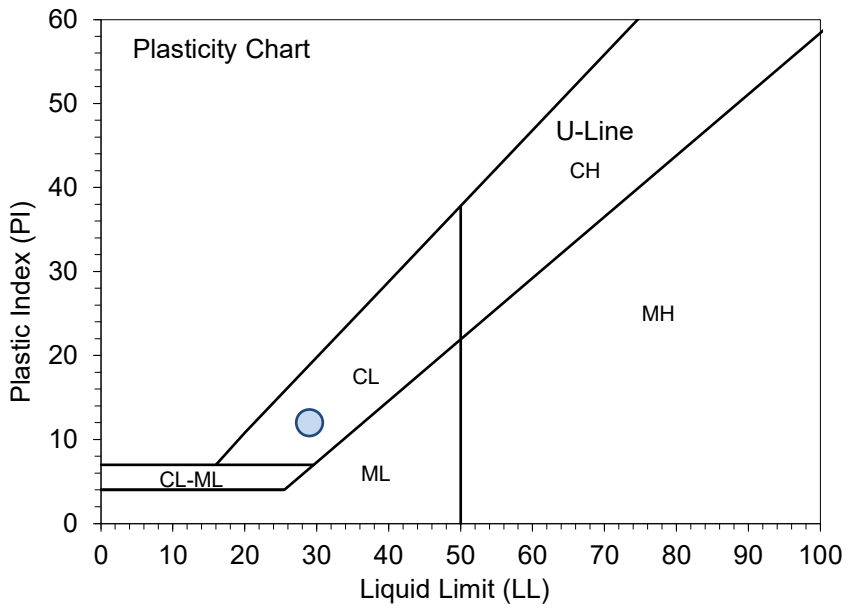
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	22	15
Wet Soil + Tare (g):	24.37	21.89	23.34
Dry Soil + Tare (g):	22.04	19.69	20.88
Moisture Loss (g):	2.33	2.20	2.46
Tare (g):	13.45	12.32	13.34
Dry Soil (g):	8.59	7.37	7.54
Moisture Content, w (%):	27.12	29.85	32.63
One-Point LL:		29	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	17
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]10

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 52-55 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - ol bn clay
As-received water content(%):	11.6	Approximate maximum particle size:	No. 10
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

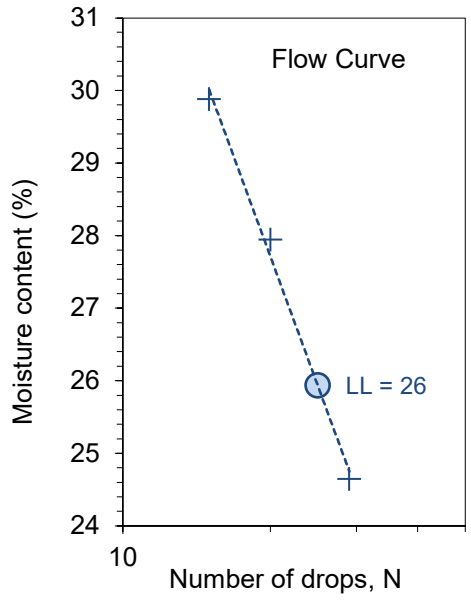
Determination No:	1	2
Wet Soil + Tare (g):	20.78	20.39
Dry Soil + Tare (g):	19.86	19.48
Moisture Loss (g):	0.92	0.91
Tare (g):	13.07	12.86
Dry Soil (g):	6.79	6.62
Moisture Content, w (%):	13.55	13.75

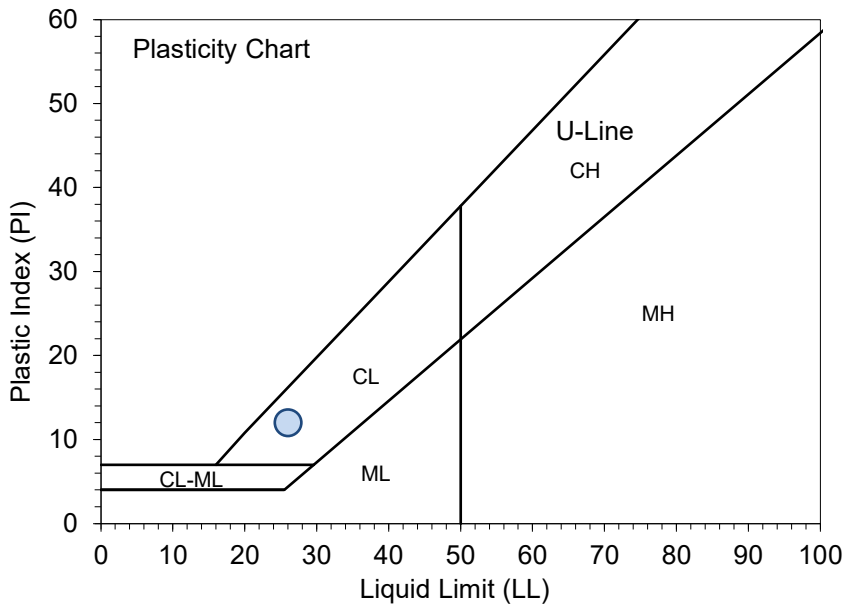
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	20	15
Wet Soil + Tare (g):	26.18	26.47	25.64
Dry Soil + Tare (g):	23.71	23.51	22.84
Moisture Loss (g):	2.47	2.96	2.80
Tare (g):	13.69	12.92	13.47
Dry Soil (g):	10.02	10.59	9.37
Moisture Content, w (%):	24.65	27.95	29.88
One-Point LL:	25	27	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	14
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]11

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 60-62 ft

Tested by: PJF Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	13.7	Approximate maximum particle size:	No. 10
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

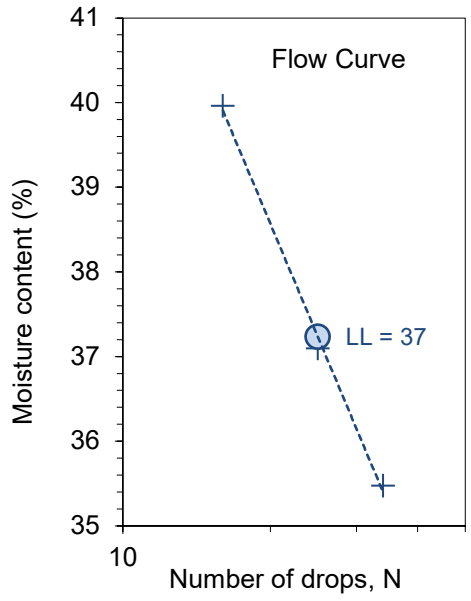
Determination No:	1	2
Wet Soil + Tare (g):	19.85	20.09
Dry Soil + Tare (g):	19.04	19.23
Moisture Loss (g):	0.81	0.86
Tare (g):	13.24	13.20
Dry Soil (g):	5.80	6.03
Moisture Content, w (%):	13.97	14.26

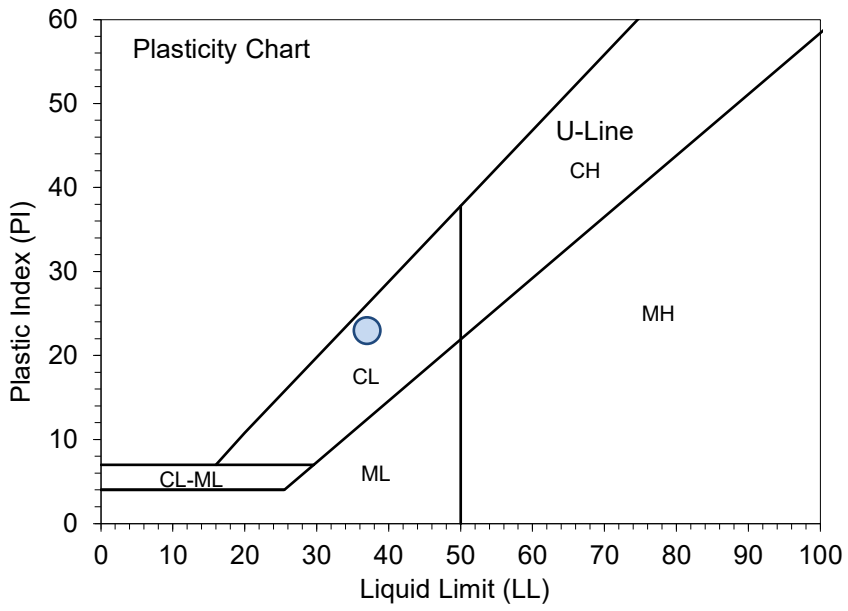
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	34	25	16
Wet Soil + Tare (g):	25.78	25.64	28.95
Dry Soil + Tare (g):	22.31	22.39	24.57
Moisture Loss (g):	3.47	3.25	4.38
Tare (g):	12.53	13.63	13.61
Dry Soil (g):	9.78	8.76	10.96
Moisture Content, w (%):	35.48	37.10	39.96
One-Point LL:		37	

Results

Liquid Limit, LL:	37
Plastic Limit, PL:	14
Plasticity Index, PI:	23





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]12

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 64.5-67 ft

Tested by: PJF Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - ol bn clay
As-received water content(%):	12.8	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

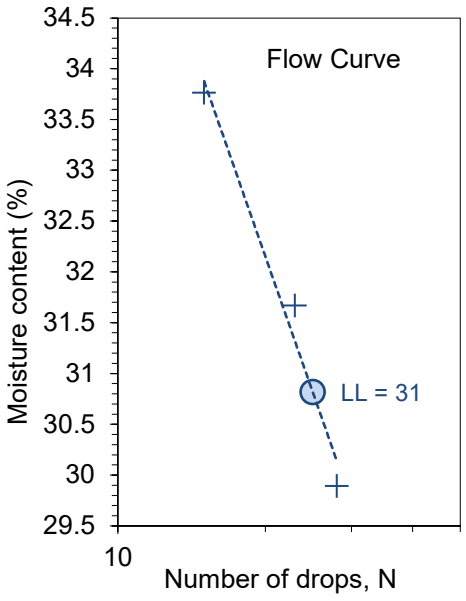
Determination No:	1	2
Wet Soil + Tare (g):	19.92	19.13
Dry Soil + Tare (g):	18.91	18.09
Moisture Loss (g):	1.01	1.04
Tare (g):	12.97	12.20
Dry Soil (g):	5.94	5.89
Moisture Content, w (%):	17.00	17.66

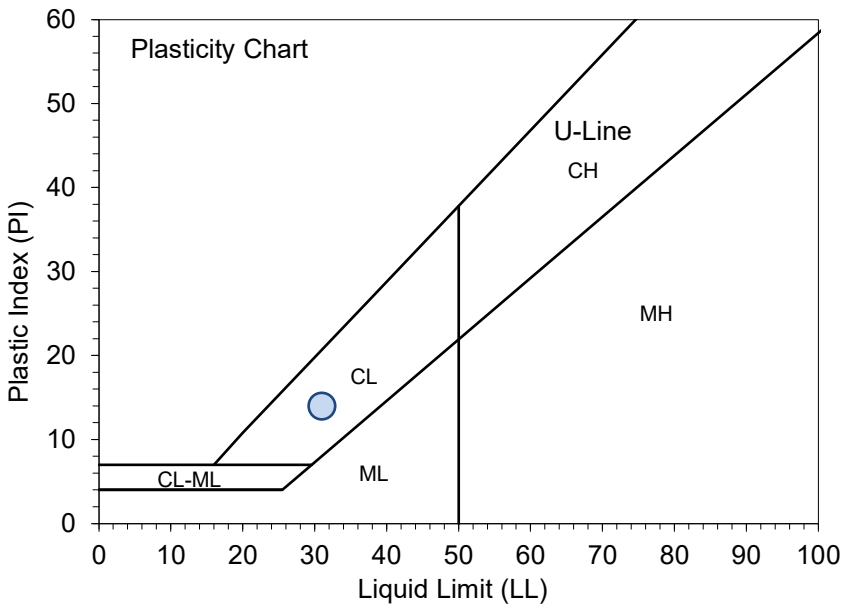
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	28	23	15
Wet Soil + Tare (g):	26.11	26.31	25.75
Dry Soil + Tare (g):	23.21	23.13	22.62
Moisture Loss (g):	2.90	3.18	3.13
Tare (g):	13.51	13.09	13.35
Dry Soil (g):	9.70	10.04	9.27
Moisture Content, w (%):	29.90	31.67	33.76
One-Point LL:	30	31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	17
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]13

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 69.5-72 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn gravel
As-received water content(%):	Not Requested	Approximate maximum particle size:	2"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	75
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

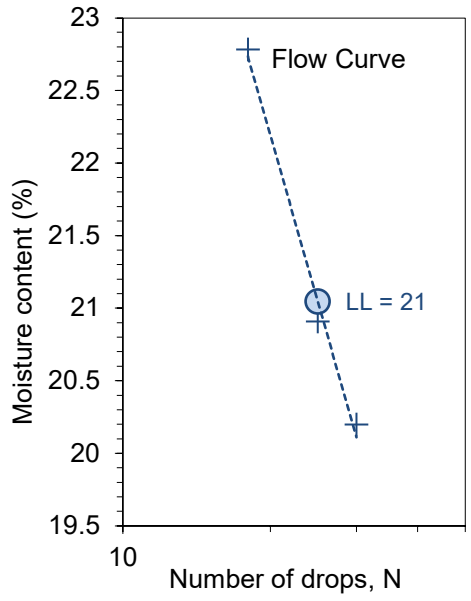
Determination No:	1	2
Wet Soil + Tare (g):	20.46	21.09
Dry Soil + Tare (g):	19.45	20.08
Moisture Loss (g):	1.01	1.01
Tare (g):	12.96	13.57
Dry Soil (g):	6.49	6.51
Moisture Content, w (%):	15.56	15.51

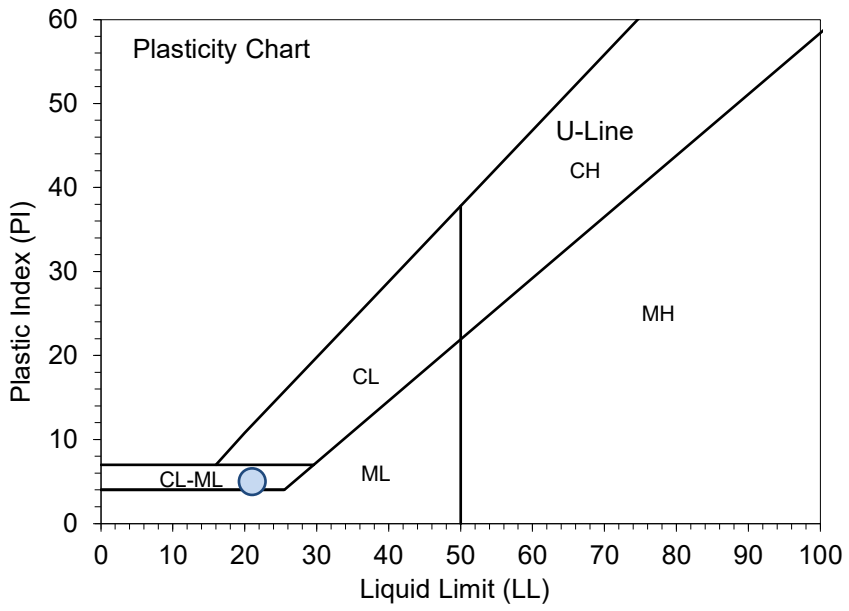
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	25	18
Wet Soil + Tare (g):	24.18	25.29	22.55
Dry Soil + Tare (g):	22.36	23.27	20.75
Moisture Loss (g):	1.82	2.02	1.80
Tare (g):	13.35	13.61	12.85
Dry Soil (g):	9.01	9.66	7.90
Moisture Content, w (%):	20.20	20.91	22.78
One-Point LL:	21	21	

Results

Liquid Limit, LL:	21
Plastic Limit, PL:	16
Plasticity Index, PI:	5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]14

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 4.5-7 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	10.1	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

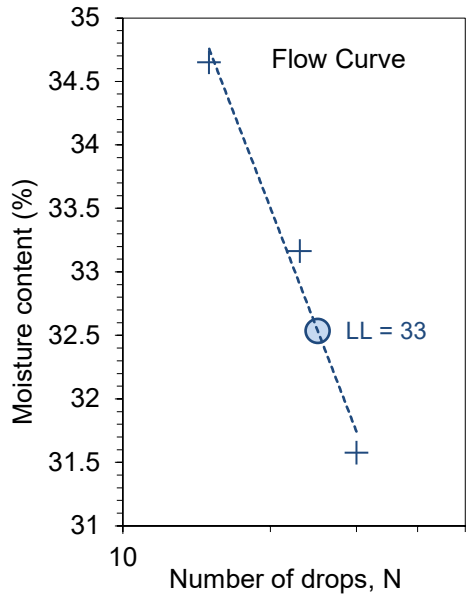
Determination No:	1	2
Wet Soil + Tare (g):	20.63	19.09
Dry Soil + Tare (g):	19.78	18.29
Moisture Loss (g):	0.85	0.80
Tare (g):	13.55	12.54
Dry Soil (g):	6.23	5.75
Moisture Content, w (%):	13.64	13.91

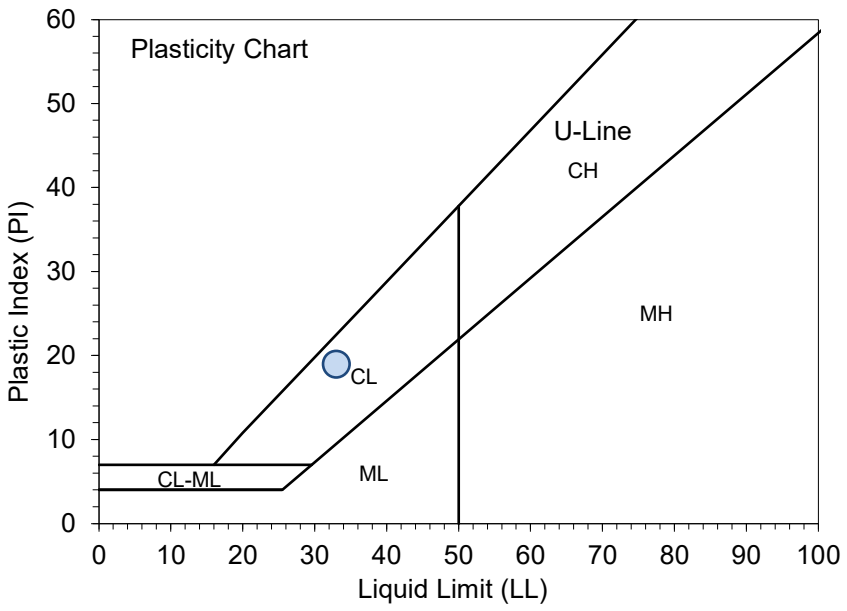
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	23	15
Wet Soil + Tare (g):	27.01	26.81	27.14
Dry Soil + Tare (g):	23.77	23.50	23.64
Moisture Loss (g):	3.24	3.31	3.50
Tare (g):	13.51	13.52	13.54
Dry Soil (g):	10.26	9.98	10.10
Moisture Content, w (%):	31.58	33.17	34.65
One-Point LL:	32	33	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	14
Plasticity Index, PI:	19





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]15

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Tested by: MGS Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	pl ol bn - bn clay
As-received water content(%):	8.4	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

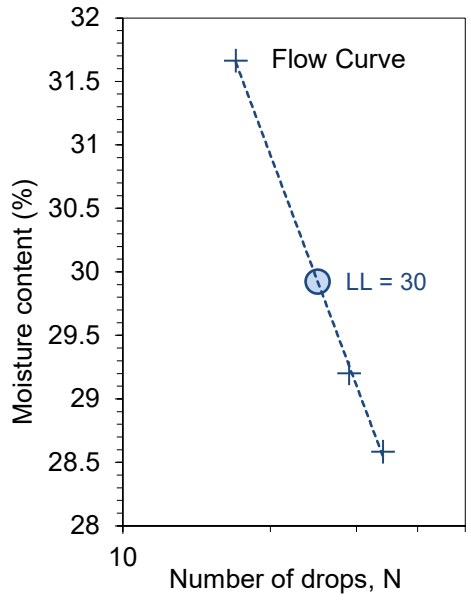
Determination No:	1	2
Wet Soil + Tare (g):	20.68	20.84
Dry Soil + Tare (g):	19.73	19.88
Moisture Loss (g):	0.95	0.96
Tare (g):	13.45	13.56
Dry Soil (g):	6.28	6.32
Moisture Content, w (%):	15.13	15.19

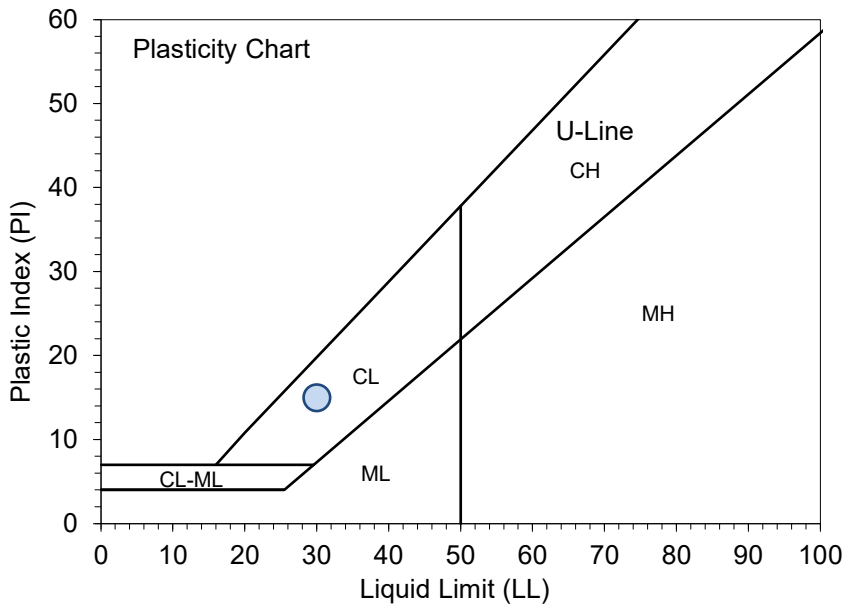
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	34	29	17
Wet Soil + Tare (g):	25.21	28.96	24.78
Dry Soil + Tare (g):	22.32	25.47	22.06
Moisture Loss (g):	2.89	3.49	2.72
Tare (g):	12.21	13.52	13.47
Dry Soil (g):	10.11	11.95	8.59
Moisture Content, w (%):	28.59	29.21	31.66
One-Point LL:		30	

Results

Liquid Limit, LL:	30
Plastic Limit, PL:	15
Plasticity Index, PI:	15





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]16

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - bn clay
As-received water content(%):	12.4	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	20
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

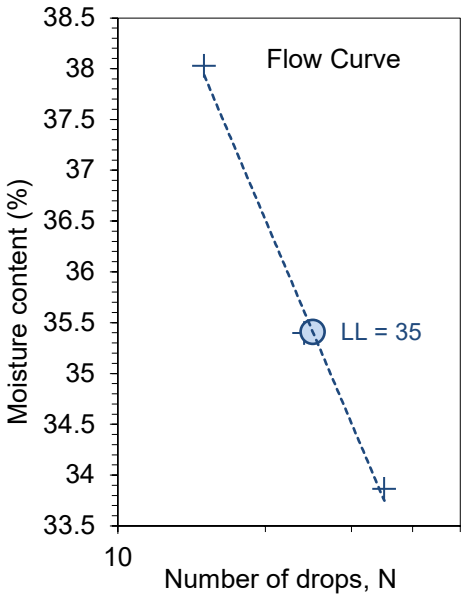
Determination No:	1	2
Wet Soil + Tare (g):	19.21	19.75
Dry Soil + Tare (g):	18.30	18.89
Moisture Loss (g):	0.91	0.86
Tare (g):	12.28	13.22
Dry Soil (g):	6.02	5.67
Moisture Content, w (%):	15.12	15.17

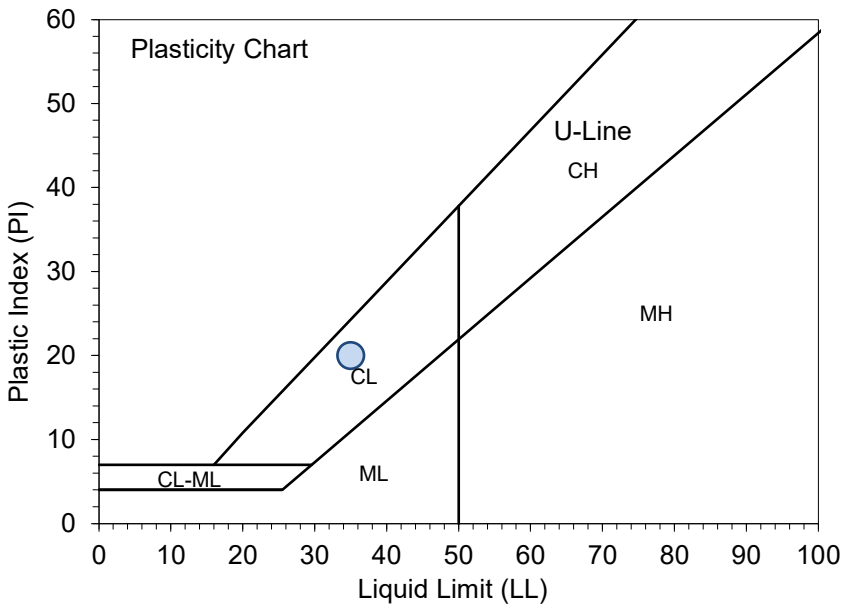
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	24	15
Wet Soil + Tare (g):	26.18	26.09	25.03
Dry Soil + Tare (g):	23.01	22.78	21.90
Moisture Loss (g):	3.17	3.31	3.13
Tare (g):	13.65	13.43	13.67
Dry Soil (g):	9.36	9.35	8.23
Moisture Content, w (%):	33.87	35.40	38.03
One-Point LL:		35	

Results

Liquid Limit, LL:	35
Plastic Limit, PL:	15
Plasticity Index, PI:	20





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]17

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 30-33 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn clay
As-received water content(%):	10.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

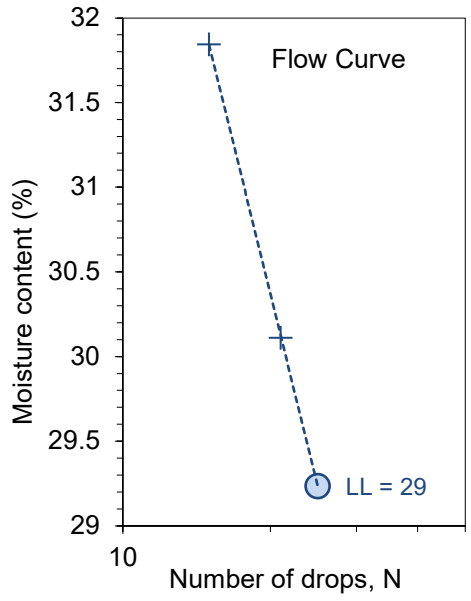
Determination No:	1	2
Wet Soil + Tare (g):	20.40	20.23
Dry Soil + Tare (g):	19.46	19.37
Moisture Loss (g):	0.94	0.86
Tare (g):	13.35	13.51
Dry Soil (g):	6.11	5.86
Moisture Content, w (%):	15.38	14.68

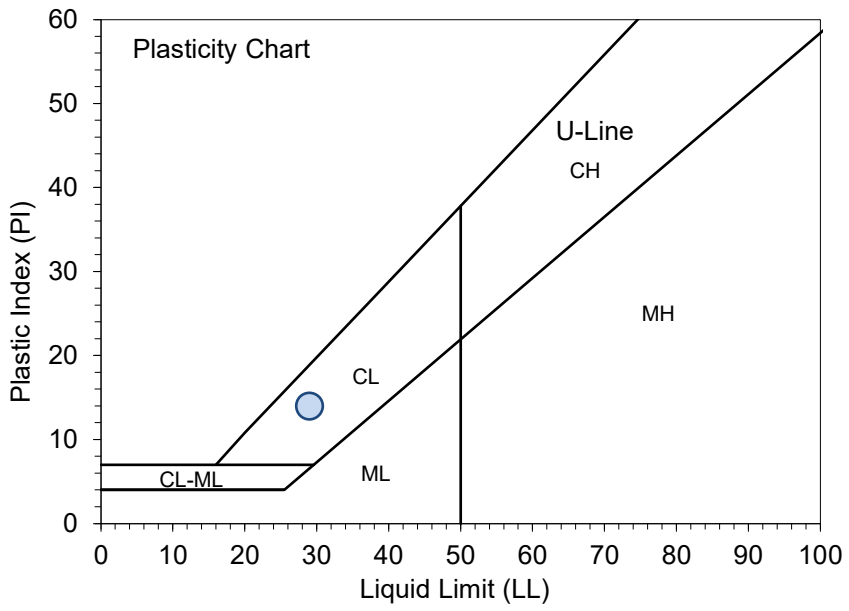
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	25	21	15
Wet Soil + Tare (g):	25.41	25.35	28.60
Dry Soil + Tare (g):	22.55	22.42	24.96
Moisture Loss (g):	2.86	2.93	3.64
Tare (g):	12.77	12.69	13.53
Dry Soil (g):	9.78	9.73	11.43
Moisture Content, w (%):	29.24	30.11	31.85
One-Point LL:	29	29	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	15
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]18

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 7-10 ft

Tested by: MGS Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	It ol bn - bn clay
As-received water content(%):	21.8	Approximate maximum particle size:	No. 4
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

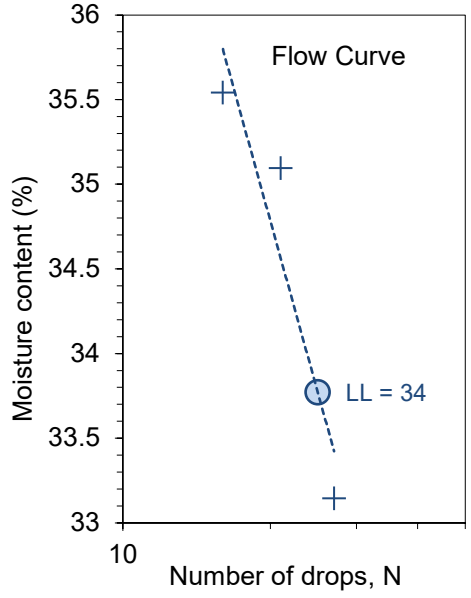
Determination No:	1	2
Wet Soil + Tare (g):	20.44	20.46
Dry Soil + Tare (g):	19.50	19.48
Moisture Loss (g):	0.94	0.98
Tare (g):	13.42	13.24
Dry Soil (g):	6.08	6.24
Moisture Content, w (%):	15.46	15.71

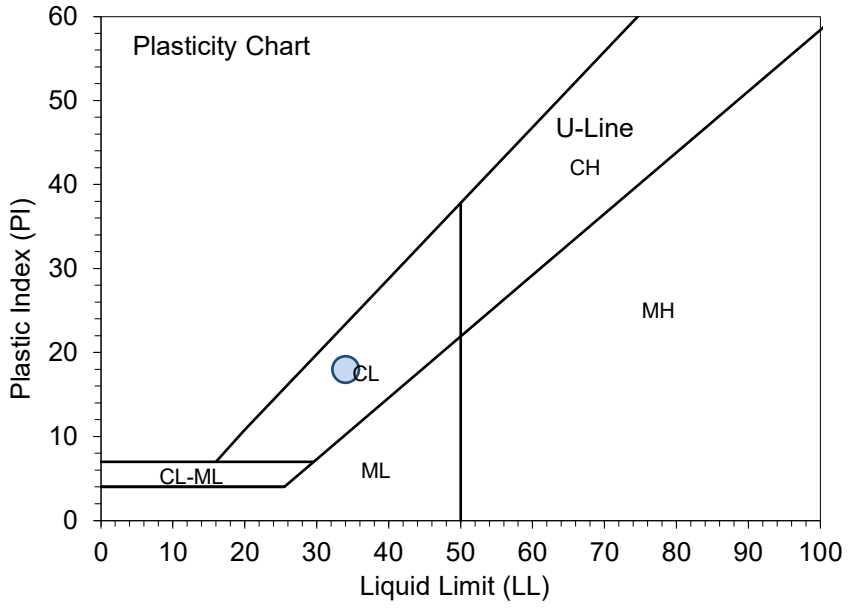
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	27	21	16
Wet Soil + Tare (g):	24.27	26.14	25.99
Dry Soil + Tare (g):	21.30	22.49	22.72
Moisture Loss (g):	2.97	3.65	3.27
Tare (g):	12.34	12.09	13.52
Dry Soil (g):	8.96	10.40	9.20
Moisture Content, w (%):	33.15	35.10	35.54
One-Point LL:	33	34	

Results

Liquid Limit, LL:	34
Plastic Limit, PL:	16
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]19

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Tested by: CML Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	pl ol bn - lt bn silt
As-received water content(%):	6.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

Determination No:	1	2
Wet Soil + Tare (g):	21.13	20.64
Dry Soil + Tare (g):	20.21	19.72
Moisture Loss (g):	0.92	0.92
Tare (g):	13.54	12.92
Dry Soil (g):	6.67	6.80
Moisture Content, w (%):	13.79	13.53

Liquid Limit

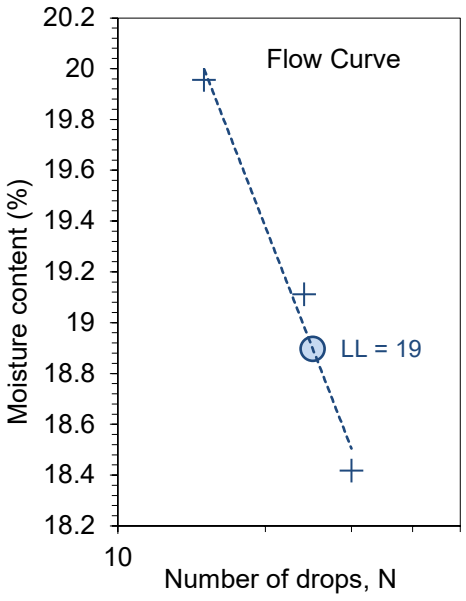
Determination No:	1	2	3
Number of Drops, N:	30	24	15
Wet Soil + Tare (g):	24.37	26.22	24.48
Dry Soil + Tare (g):	22.53	24.15	22.61
Moisture Loss (g):	1.84	2.07	1.87
Tare (g):	12.54	13.32	13.24
Dry Soil (g):	9.99	10.83	9.37
Moisture Content, w (%):	18.42	19.11	19.96
One-Point LL:	19	19	

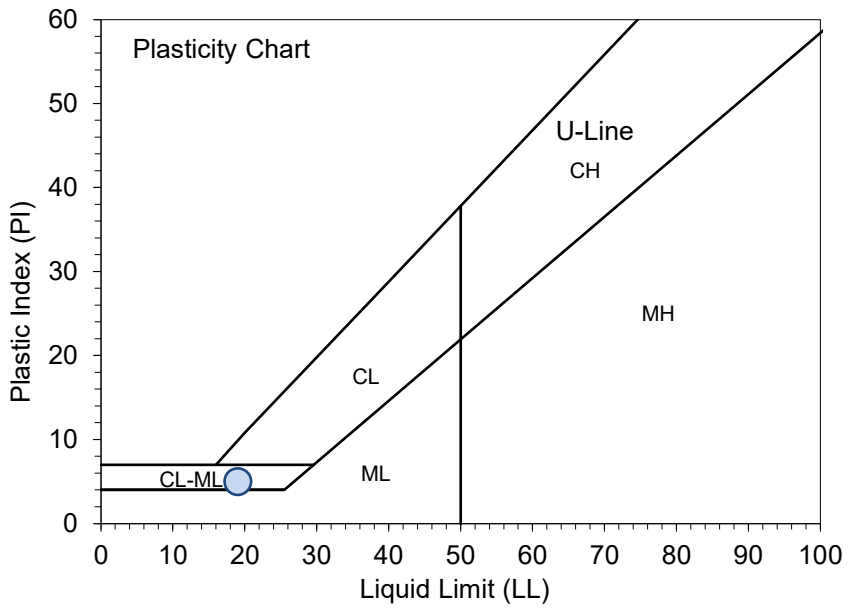
Results

Liquid Limit, LL: 19

Plastic Limit, PL: 14

Plasticity Index, PI: 5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]20

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - bn silt
As-received water content(%):	16.5	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

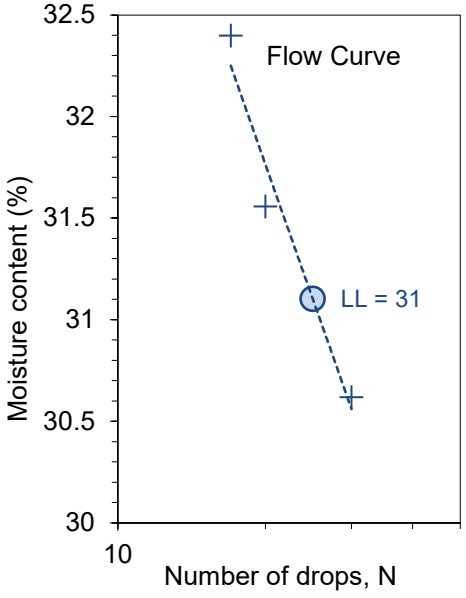
Determination No:	1	2
Wet Soil + Tare (g):	20.25	19.87
Dry Soil + Tare (g):	19.28	18.88
Moisture Loss (g):	0.97	0.99
Tare (g):	13.52	12.94
Dry Soil (g):	5.76	5.94
Moisture Content, w (%):	16.84	16.67

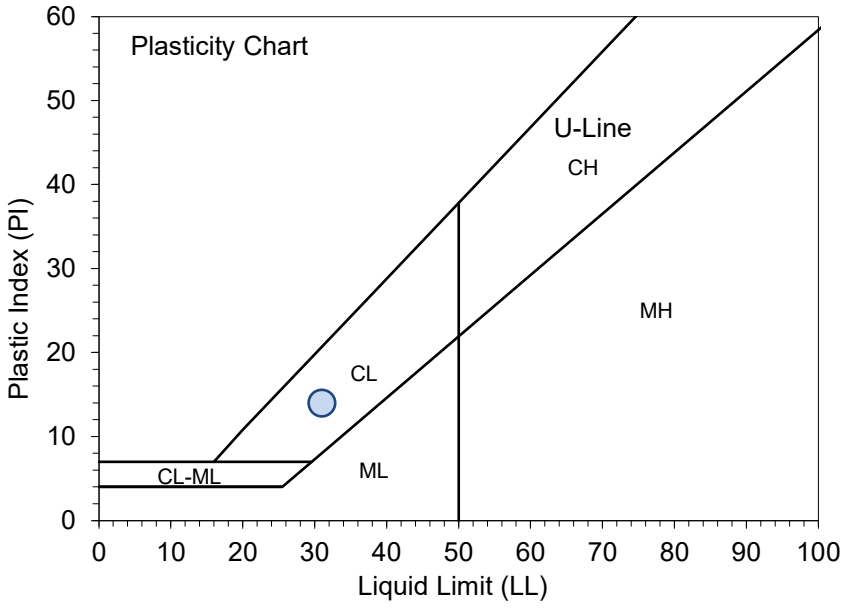
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	20	17
Wet Soil + Tare (g):	26.21	26.45	25.37
Dry Soil + Tare (g):	23.20	23.31	22.48
Moisture Loss (g):	3.01	3.14	2.89
Tare (g):	13.37	13.36	13.56
Dry Soil (g):	9.83	9.95	8.92
Moisture Content, w (%):	30.62	31.56	32.40
One-Point LL:	31	31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	17
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]21

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 30-33 ft

Tested by: CML Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	10.1	Approximate maximum particle size:	2"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	25
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

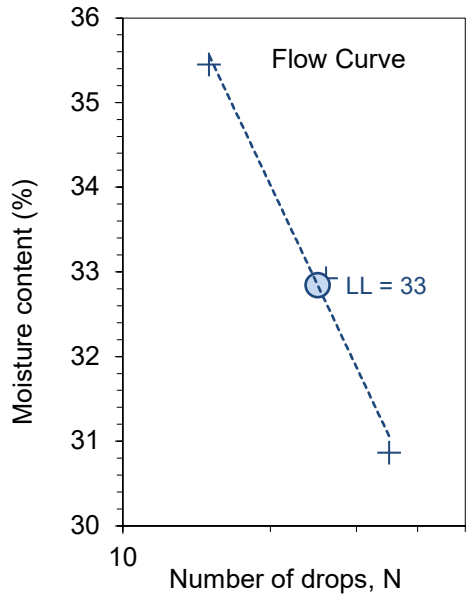
Determination No:	1	2
Wet Soil + Tare (g):	20.99	21.04
Dry Soil + Tare (g):	19.96	20.03
Moisture Loss (g):	1.03	1.01
Tare (g):	13.34	13.41
Dry Soil (g):	6.62	6.62
Moisture Content, w (%):	15.56	15.26

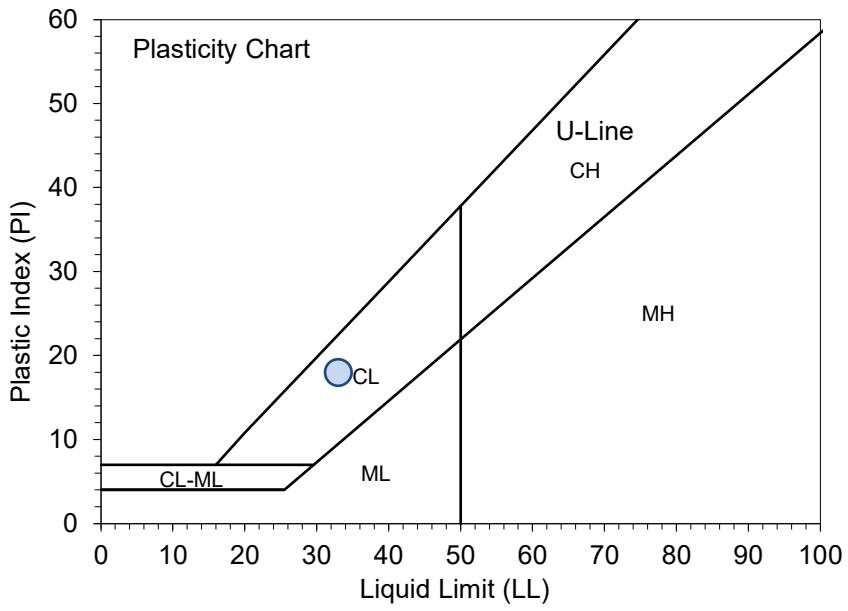
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	26	15
Wet Soil + Tare (g):	25.03	25.76	27.92
Dry Soil + Tare (g):	22.36	22.52	24.13
Moisture Loss (g):	2.67	3.24	3.79
Tare (g):	13.71	12.68	13.44
Dry Soil (g):	8.65	9.84	10.69
Moisture Content, w (%):	30.87	32.93	35.45
One-Point LL:		33	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	15
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]22

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn gravel
As-received water content(%):	Not Requested	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	20
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

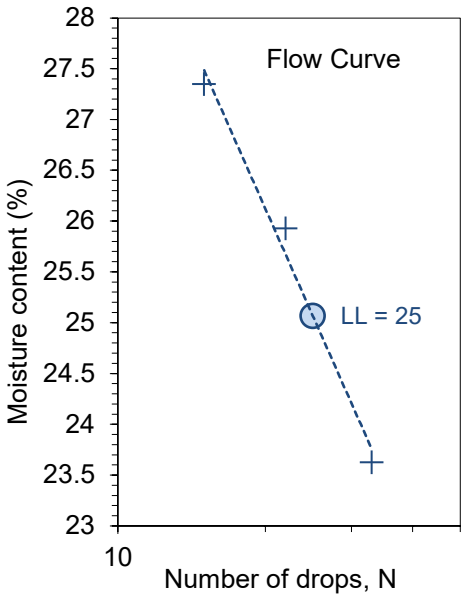
Determination No:	1	2
Wet Soil + Tare (g):	21.15	20.86
Dry Soil + Tare (g):	20.10	19.82
Moisture Loss (g):	1.05	1.04
Tare (g):	13.54	13.35
Dry Soil (g):	6.56	6.47
Moisture Content, w (%):	16.01	16.07

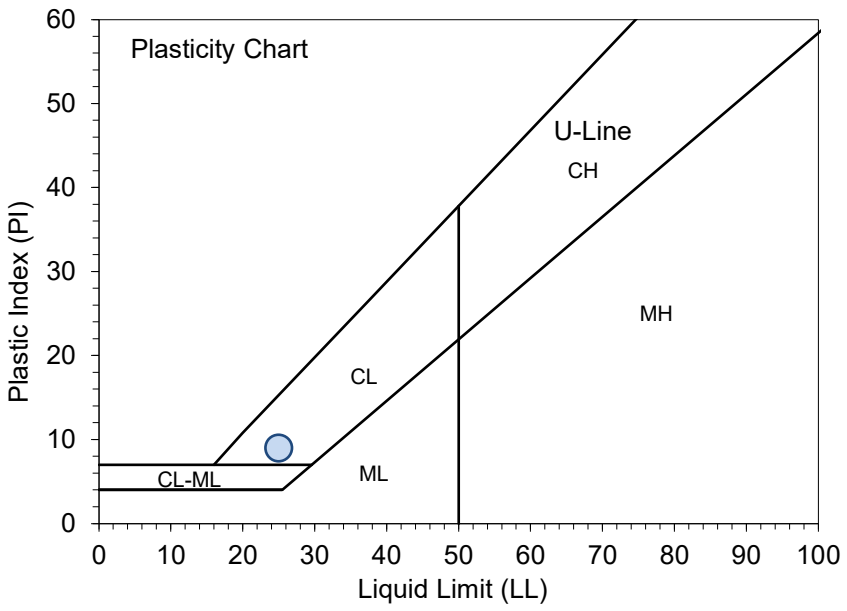
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	33	22	15
Wet Soil + Tare (g):	25.36	27.77	26.44
Dry Soil + Tare (g):	23.03	24.92	23.62
Moisture Loss (g):	2.33	2.85	2.82
Tare (g):	13.17	13.93	13.31
Dry Soil (g):	9.86	10.99	10.31
Moisture Content, w (%):	23.63	25.93	27.35
One-Point LL:		26	

Results

Liquid Limit, LL:	25
Plastic Limit, PL:	16
Plasticity Index, PI:	9





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]23

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Tested by: AT Date: 14-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Oven Dry	Laboratory sample description:	ol bn - lt bn clay
As-received water content(%):	13.7	Approximate maximum particle size:	1.5"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

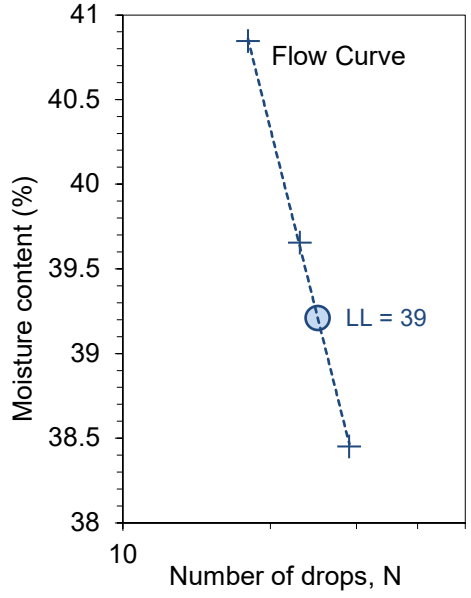
Determination No:	1	2
Wet Soil + Tare (g):	20.12	19.90
Dry Soil + Tare (g):	19.24	19.05
Moisture Loss (g):	0.88	0.85
Tare (g):	13.41	13.55
Dry Soil (g):	5.83	5.50
Moisture Content, w (%):	15.09	15.45

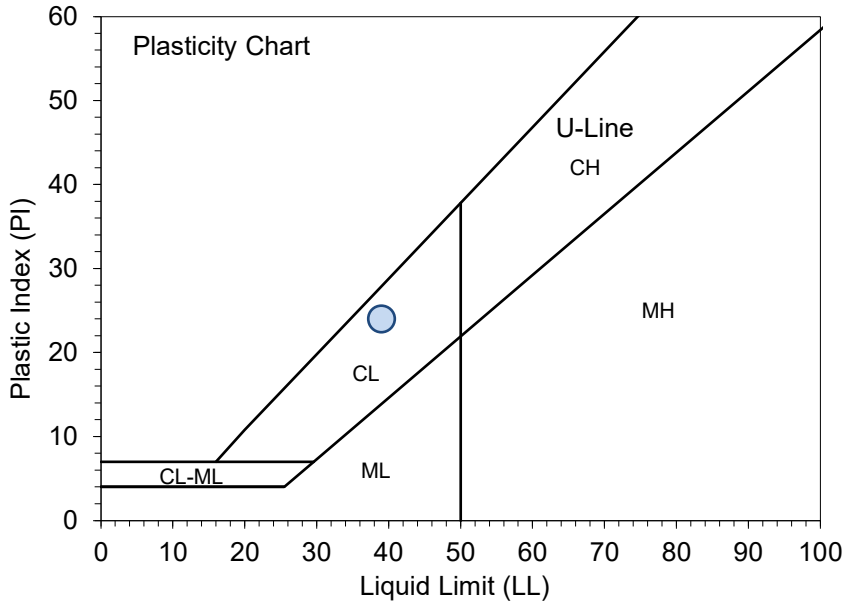
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	23	18
Wet Soil + Tare (g):	25.53	23.25	24.89
Dry Soil + Tare (g):	22.20	20.47	21.61
Moisture Loss (g):	3.33	2.78	3.28
Tare (g):	13.54	13.46	13.58
Dry Soil (g):	8.66	7.01	8.03
Moisture Content, w (%):	38.45	39.66	40.85
One-Point LL:	39	39	

Results

Liquid Limit, LL:	39
Plastic Limit, PL:	15
Plasticity Index, PI:	24





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]24

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 15-17 ft

Tested by: AT Date: 13-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - yl bn clay
As-received water content(%):	16.1	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

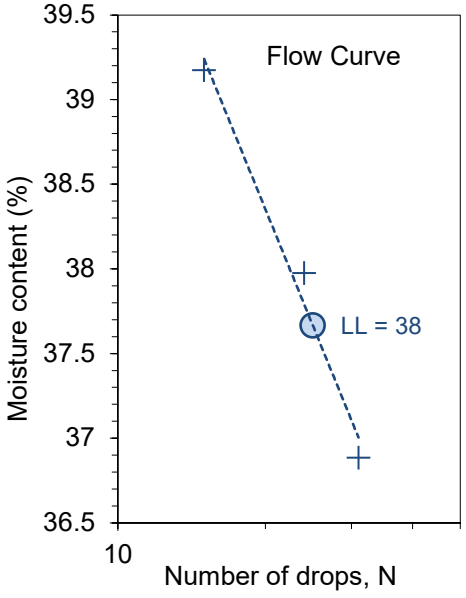
Determination No:	1	2
Wet Soil + Tare (g):	19.43	20.15
Dry Soil + Tare (g):	18.38	18.97
Moisture Loss (g):	1.05	1.18
Tare (g):	13.17	13.33
Dry Soil (g):	5.21	5.64
Moisture Content, w (%):	20.15	20.92

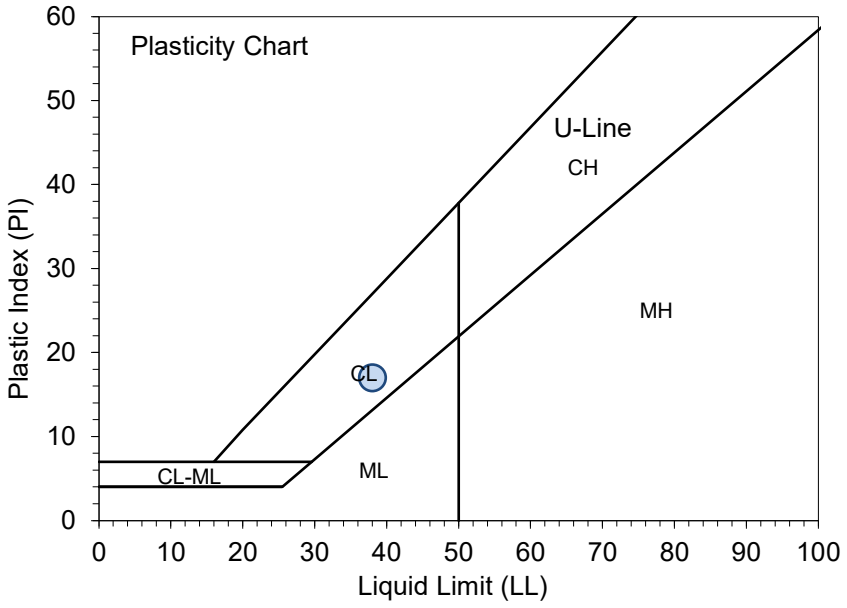
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	24	15
Wet Soil + Tare (g):	24.39	24.09	24.32
Dry Soil + Tare (g):	21.38	21.20	21.28
Moisture Loss (g):	3.01	2.89	3.04
Tare (g):	13.22	13.59	13.52
Dry Soil (g):	8.16	7.61	7.76
Moisture Content, w (%):	36.89	37.98	39.18
One-Point LL:		38	

Results

Liquid Limit, LL:	38
Plastic Limit, PL:	21
Plasticity Index, PI:	17





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]25

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 17.5-19 ft

Tested by: AT Date: 14-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - lt bn clay
As-received water content(%):	13.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

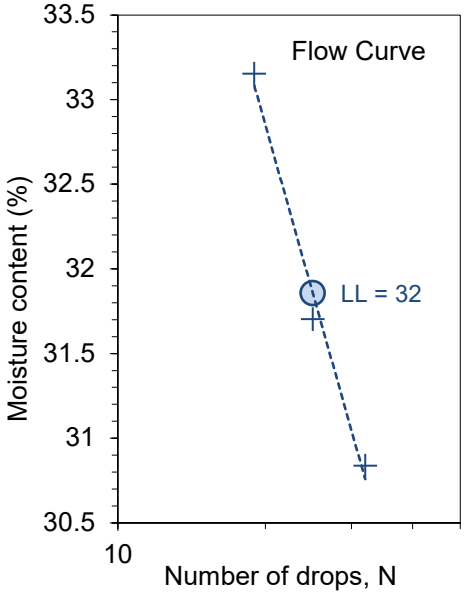
Determination No:	1	2
Wet Soil + Tare (g):	19.95	20.16
Dry Soil + Tare (g):	19.14	19.35
Moisture Loss (g):	0.81	0.81
Tare (g):	13.37	13.72
Dry Soil (g):	5.77	5.63
Moisture Content, w (%):	14.04	14.39

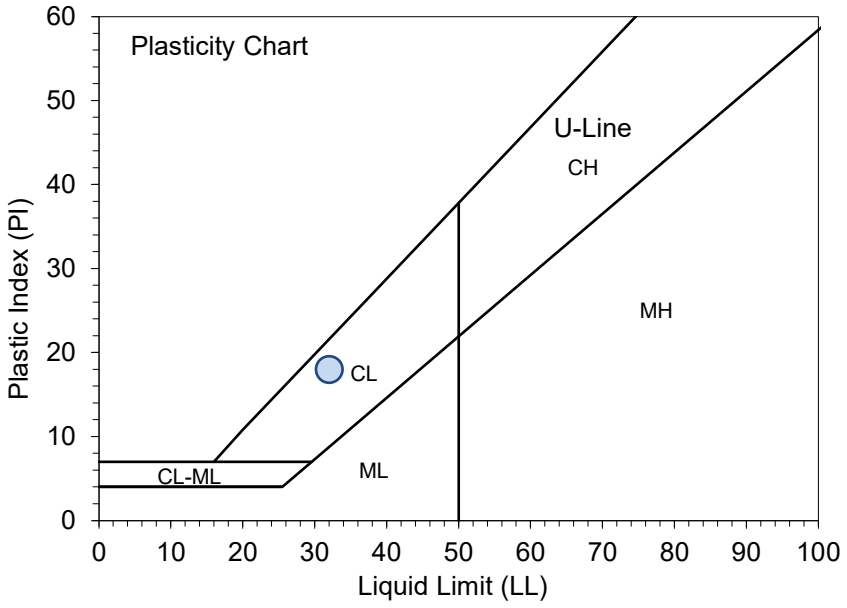
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	32	25	19
Wet Soil + Tare (g):	24.78	24.96	26.04
Dry Soil + Tare (g):	22.10	22.17	22.95
Moisture Loss (g):	2.68	2.79	3.09
Tare (g):	13.41	13.37	13.63
Dry Soil (g):	8.69	8.80	9.32
Moisture Content, w (%):	30.84	31.70	33.15
One-Point LL:		32	

Results

Liquid Limit, LL:	32
Plastic Limit, PL:	14
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]26

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-11

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Tested by: CML Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn clay
As-received water content(%):	7.1	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	30
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

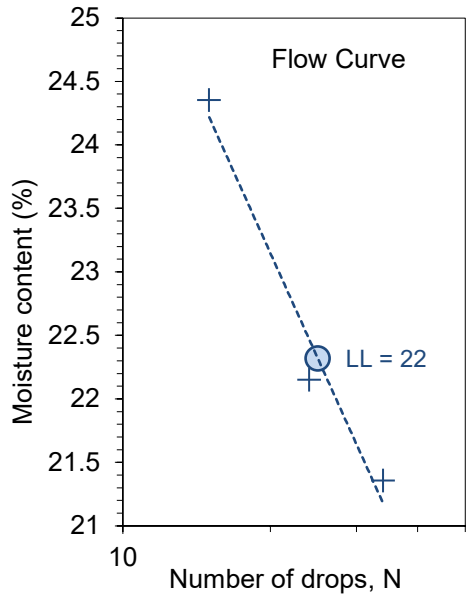
Determination No:	1	2
Wet Soil + Tare (g):	21.19	21.07
Dry Soil + Tare (g):	20.16	20.08
Moisture Loss (g):	1.03	0.99
Tare (g):	13.51	13.52
Dry Soil (g):	6.65	6.56
Moisture Content, w (%):	15.49	15.09

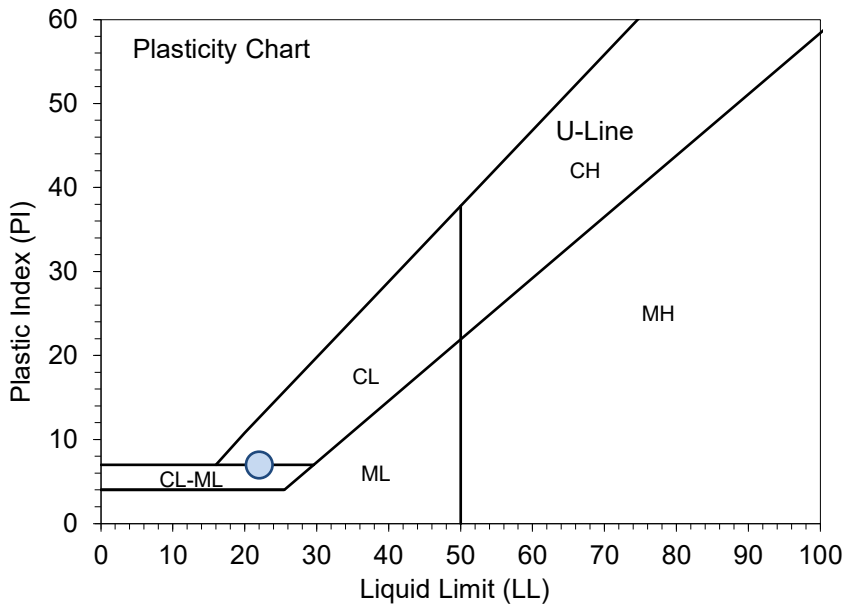
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	34	24	15
Wet Soil + Tare (g):	26.21	23.44	27.01
Dry Soil + Tare (g):	23.95	21.63	24.37
Moisture Loss (g):	2.26	1.81	2.64
Tare (g):	13.37	13.46	13.53
Dry Soil (g):	10.58	8.17	10.84
Moisture Content, w (%):	21.36	22.15	24.35
One-Point LL:		22	

Results

Liquid Limit, LL:	22
Plastic Limit, PL:	15
Plasticity Index, PI:	7





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]27

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 5-7 ft

Tested by: AT Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn clay
As-received water content(%):	10.2	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

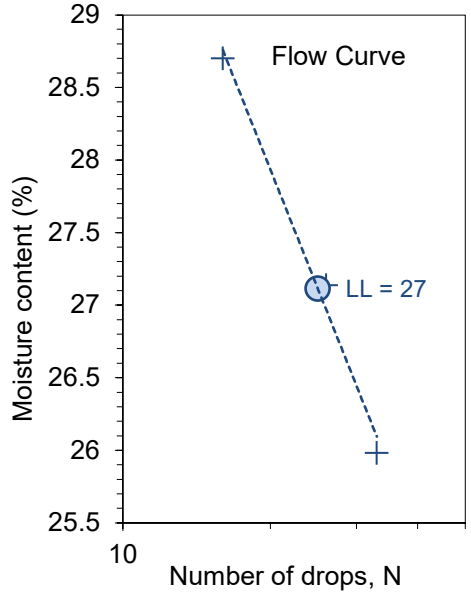
Determination No:	1	2
Wet Soil + Tare (g):	21.43	19.90
Dry Soil + Tare (g):	20.42	18.89
Moisture Loss (g):	1.01	1.01
Tare (g):	13.70	12.28
Dry Soil (g):	6.72	6.61
Moisture Content, w (%):	15.03	15.28

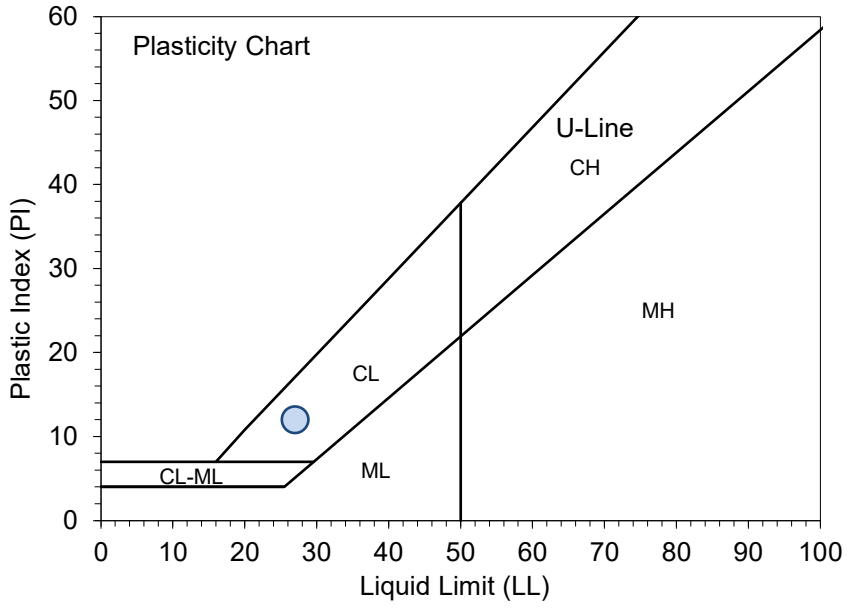
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	33	26	16
Wet Soil + Tare (g):	27.08	27.26	26.22
Dry Soil + Tare (g):	24.24	24.31	23.41
Moisture Loss (g):	2.84	2.95	2.81
Tare (g):	13.31	13.44	13.62
Dry Soil (g):	10.93	10.87	9.79
Moisture Content, w (%):	25.98	27.14	28.70
One-Point LL:		27	

Results

Liquid Limit, LL:	27
Plastic Limit, PL:	15
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]28

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 10-12 ft

Tested by: CML Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn silt
As-received water content(%):	12.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

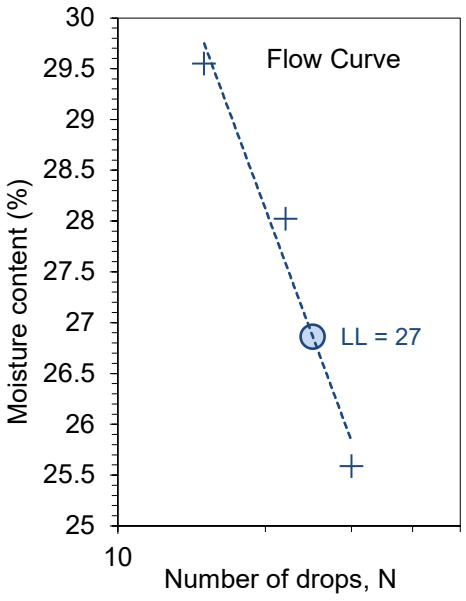
Determination No:	1	2
Wet Soil + Tare (g):	21.25	21.25
Dry Soil + Tare (g):	20.12	20.16
Moisture Loss (g):	1.13	1.09
Tare (g):	13.48	13.69
Dry Soil (g):	6.64	6.47
Moisture Content, w (%):	17.02	16.85

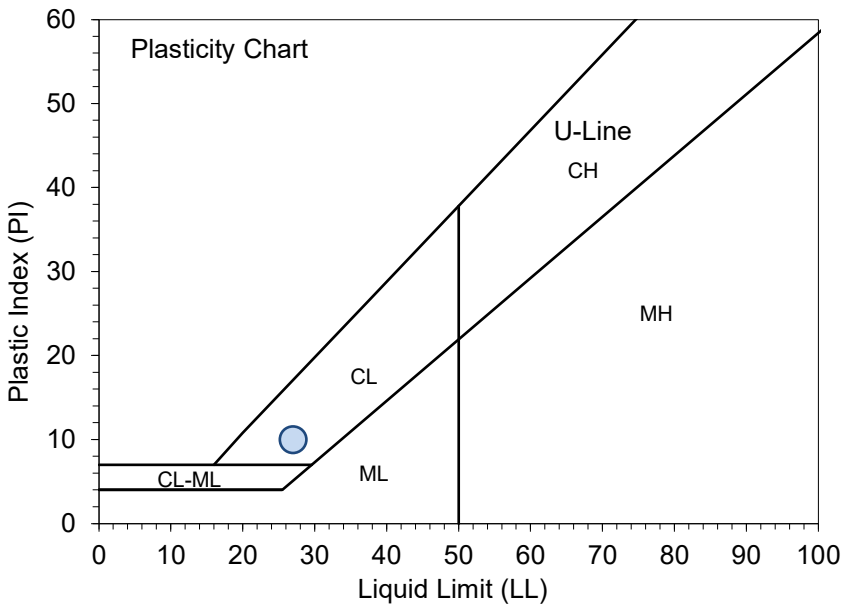
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	22	15
Wet Soil + Tare (g):	26.06	25.37	26.24
Dry Soil + Tare (g):	23.47	22.80	23.27
Moisture Loss (g):	2.59	2.57	2.97
Tare (g):	13.35	13.63	13.22
Dry Soil (g):	10.12	9.17	10.05
Moisture Content, w (%):	25.59	28.03	29.55
One-Point LL:	26	28	

Results

Liquid Limit, LL:	27
Plastic Limit, PL:	17
Plasticity Index, PI:	10





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]29

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 20-21 ft

Tested by: PJF Date: 14-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn clay
As-received water content(%):	10.6	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

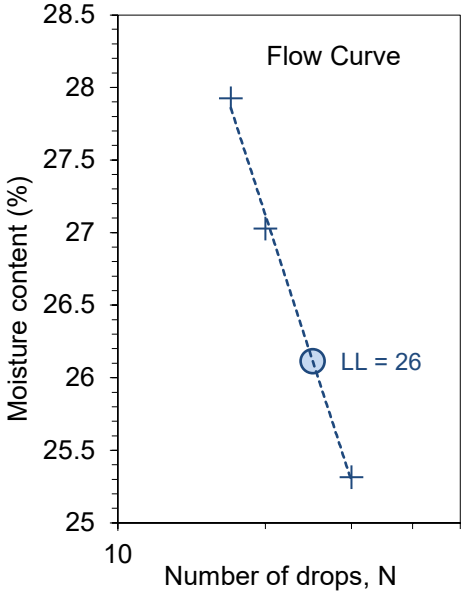
Determination No:	1	2
Wet Soil + Tare (g):	20.36	20.51
Dry Soil + Tare (g):	19.50	19.65
Moisture Loss (g):	0.86	0.86
Tare (g):	13.51	13.56
Dry Soil (g):	5.99	6.09
Moisture Content, w (%):	14.36	14.12

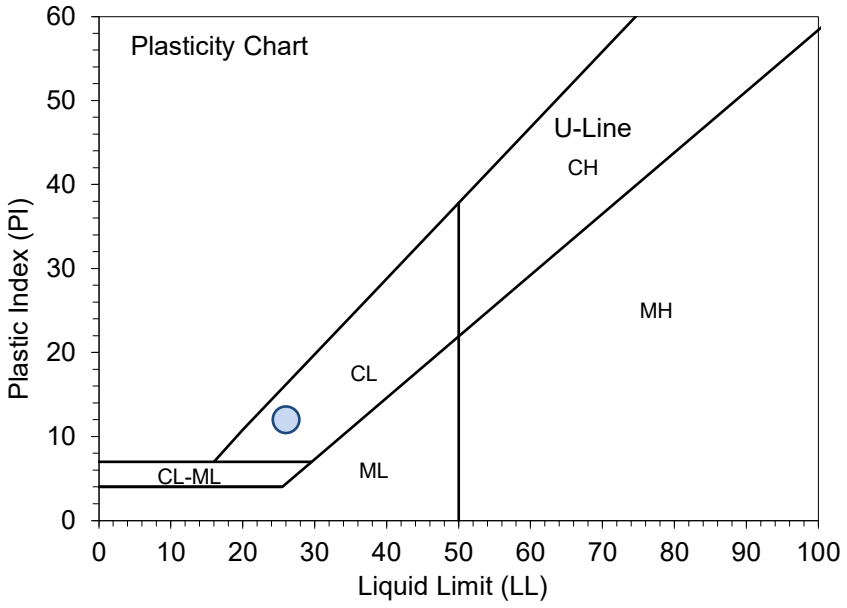
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	20	17
Wet Soil + Tare (g):	27.36	25.95	26.13
Dry Soil + Tare (g):	24.56	23.02	23.34
Moisture Loss (g):	2.80	2.93	2.79
Tare (g):	13.50	12.18	13.35
Dry Soil (g):	11.06	10.84	9.99
Moisture Content, w (%):	25.32	27.03	27.93
One-Point LL:	26	26	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	14
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]30

Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 18-19 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: gy - bn clay

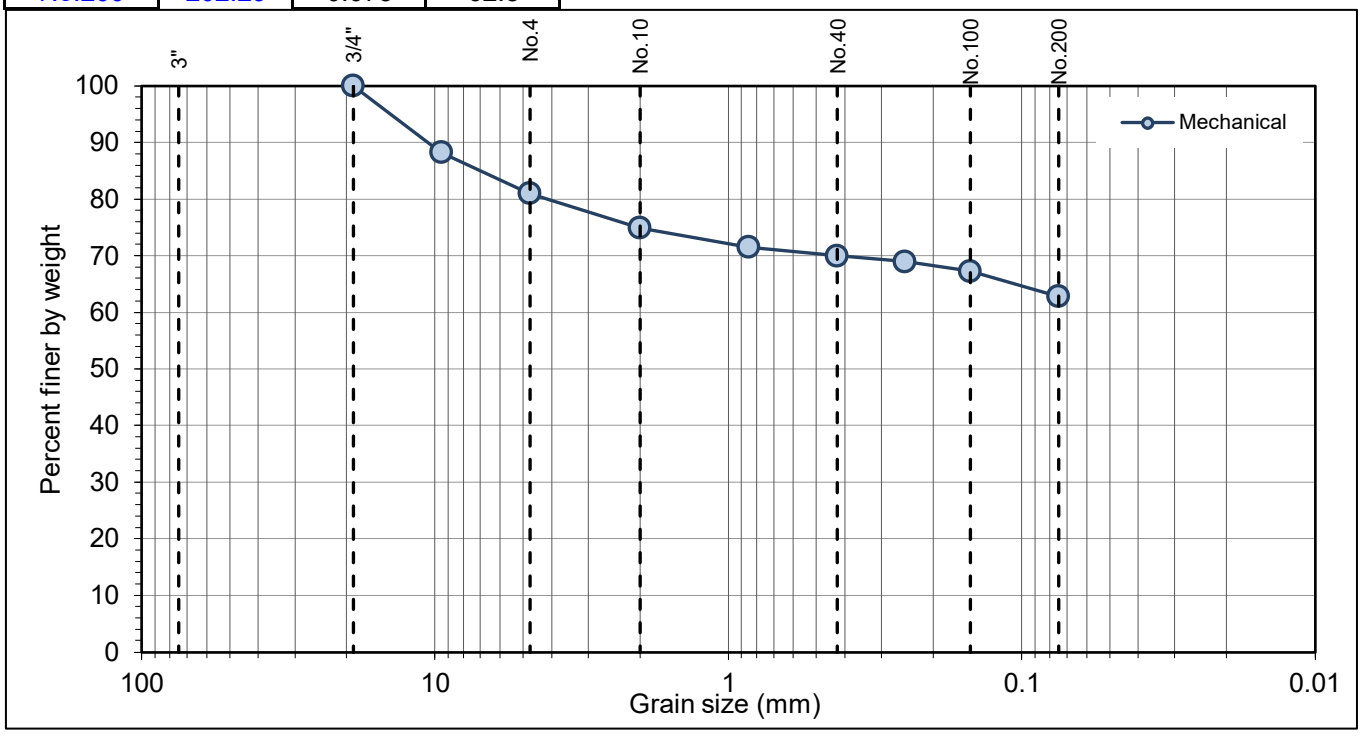
Reduced by: AT Comments: 1.5" rock not included in curve (274.56 g).

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	611.04	543.90
	-	
	611.04	543.90
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	806.82
Dry soil + tare (g):	-	739.68
Tare (g):	-	195.78
Moisture content (%):	0.0	12.3

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	63.83	9.5	88.3
No.4	103.44	4.75	81.0
No.10	136.66	2	74.9
No.20	154.83	0.85	71.5
No.40	163.20	0.425	70.0
No.60	168.87	0.25	69.0
No.100	177.88	0.15	67.3
No.200	202.29	0.075	62.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 27-29 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: bn - gy clay

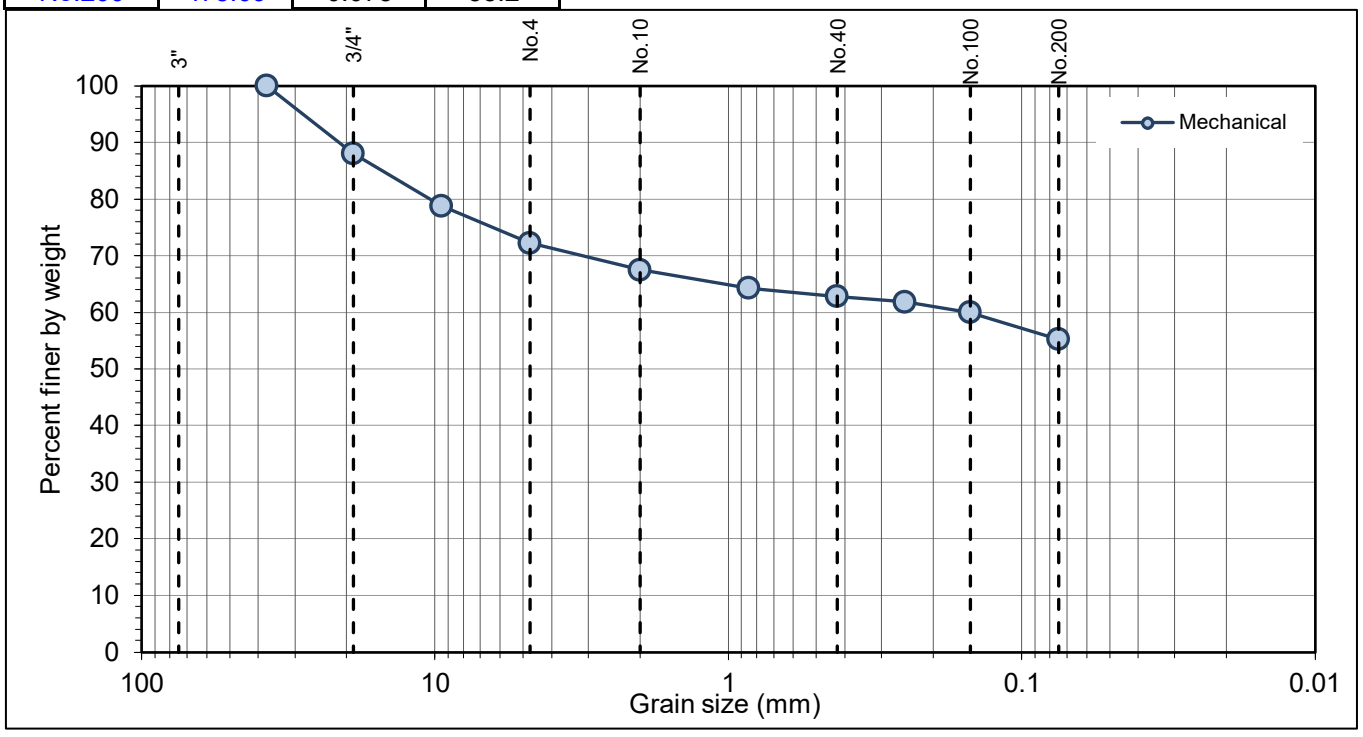
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1176.70	1060.40
	-	
	1176.70	1060.40
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1190.54
Dry soil + tare (g):	-	1074.24
Tare (g):	-	13.84
Moisture content (%):	0.0	11.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	126.52	19	88.1
3/8"	224.74	9.5	78.8
No.4	294.18	4.75	72.3
No.10	344.98	2	67.5
No.20	378.88	0.85	64.3
No.40	394.65	0.425	62.8
No.60	404.46	0.25	61.9
No.100	424.49	0.15	60.0
No.200	475.09	0.075	55.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 54.5-57 ft

Date: 16-Nov-23 Location: -

Tested by: DBW Lab soil description: gy - dk gy clay

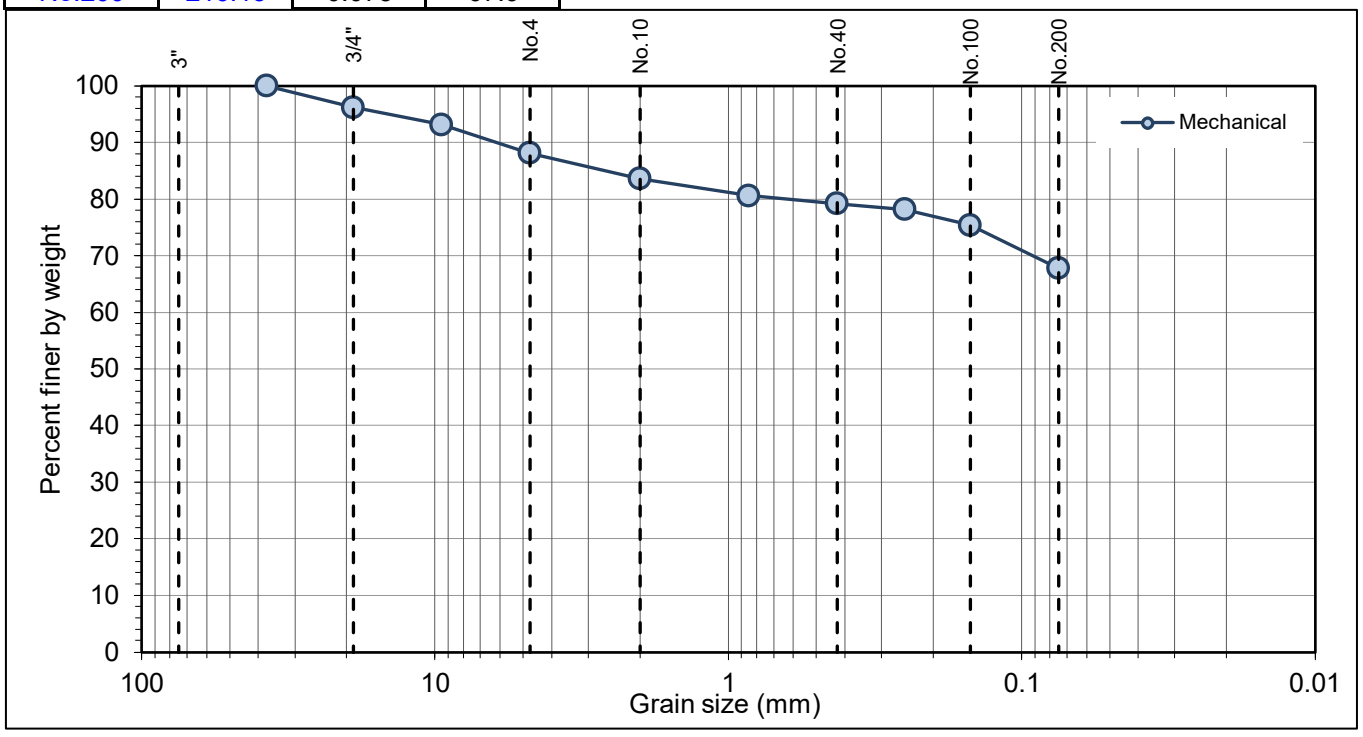
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	756.76	672.36
	-	
	756.76	672.36
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	953.45
Dry soil + tare (g):	-	869.05
Tare (g):	-	196.69
Moisture content (%):	0.0	12.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	25.43	19	96.2
3/8"	45.79	9.5	93.2
No.4	79.85	4.75	88.1
No.10	110.12	2	83.6
No.20	130.27	0.85	80.6
No.40	139.92	0.425	79.2
No.60	146.52	0.25	78.2
No.100	165.51	0.15	75.4
No.200	216.13	0.075	67.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 67-69 ft

Date: 16-Nov-23 Location: -

Tested by: DBW Lab soil description: dk gy - lt bn clay

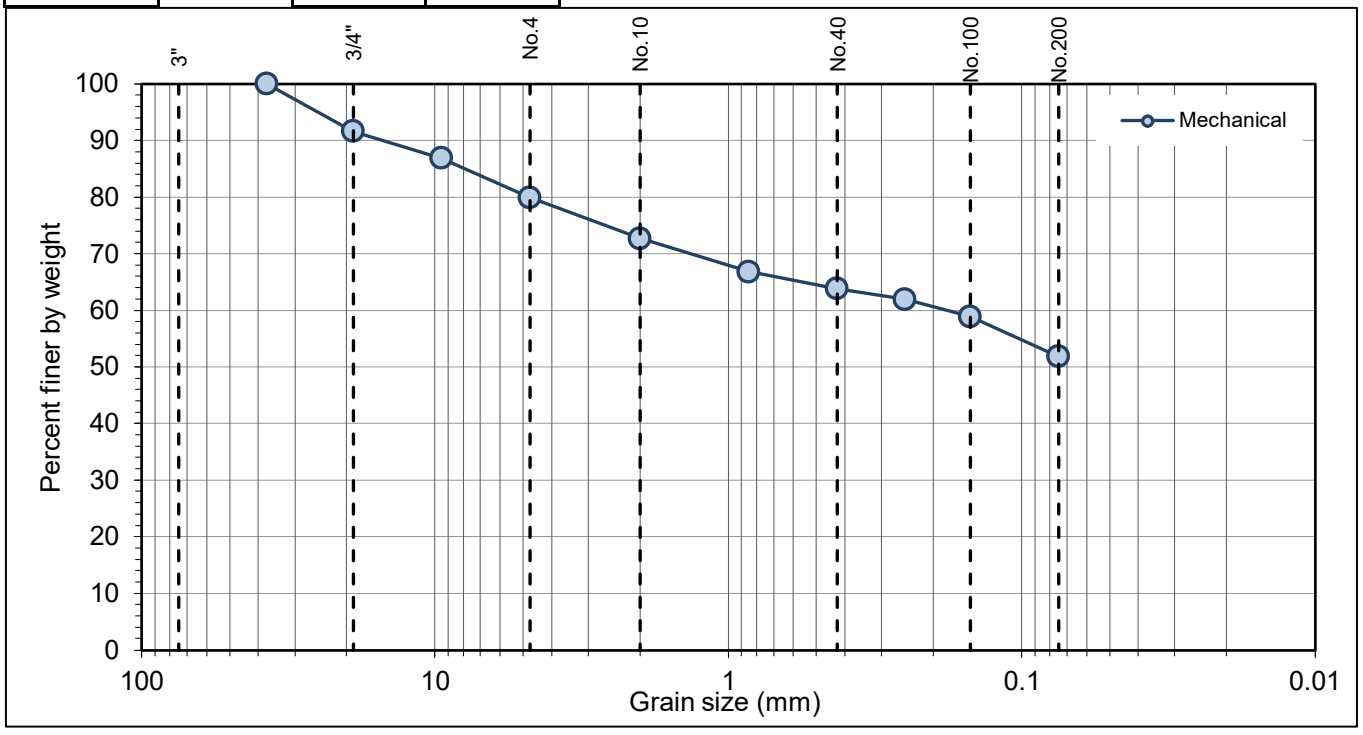
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	651.92	592.70
	-	
	651.92	592.70
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	847.34
Dry soil + tare (g):	-	788.12
Tare (g):	-	195.42
Moisture content (%):	0.0	10.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	49.64	19	91.6
3/8"	77.83	9.5	86.9
No.4	119.04	4.75	79.9
No.10	161.80	2	72.7
No.20	196.75	0.85	66.8
No.40	214.54	0.425	63.8
No.60	225.55	0.25	61.9
No.100	243.72	0.15	58.9
No.200	285.30	0.075	51.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 72.5-75 ft

Date: 16-Nov-23 Location: -

Tested by: DBW Lab soil description: gy - dk gy clay

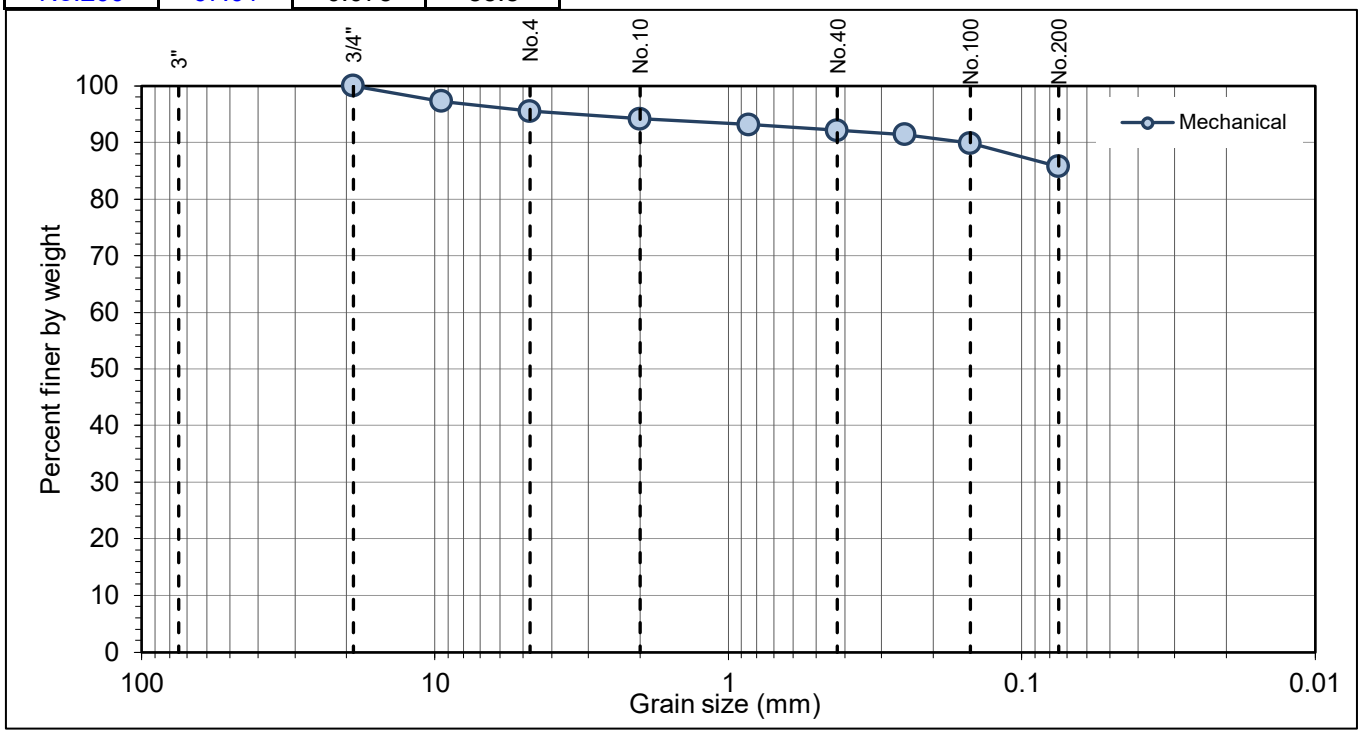
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	570.23	472.61
	-	
	570.23	472.61
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	688.39
Dry soil + tare (g):	-	590.77
Tare (g):	-	118.16
Moisture content (%):	0.0	20.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	12.74	9.5	97.3
No.4	21.18	4.75	95.5
No.10	27.46	2	94.2
No.20	32.38	0.85	93.1
No.40	36.99	0.425	92.2
No.60	40.67	0.25	91.4
No.100	47.81	0.15	89.9
No.200	67.01	0.075	85.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 14.5-16 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: bn - ol bn clay

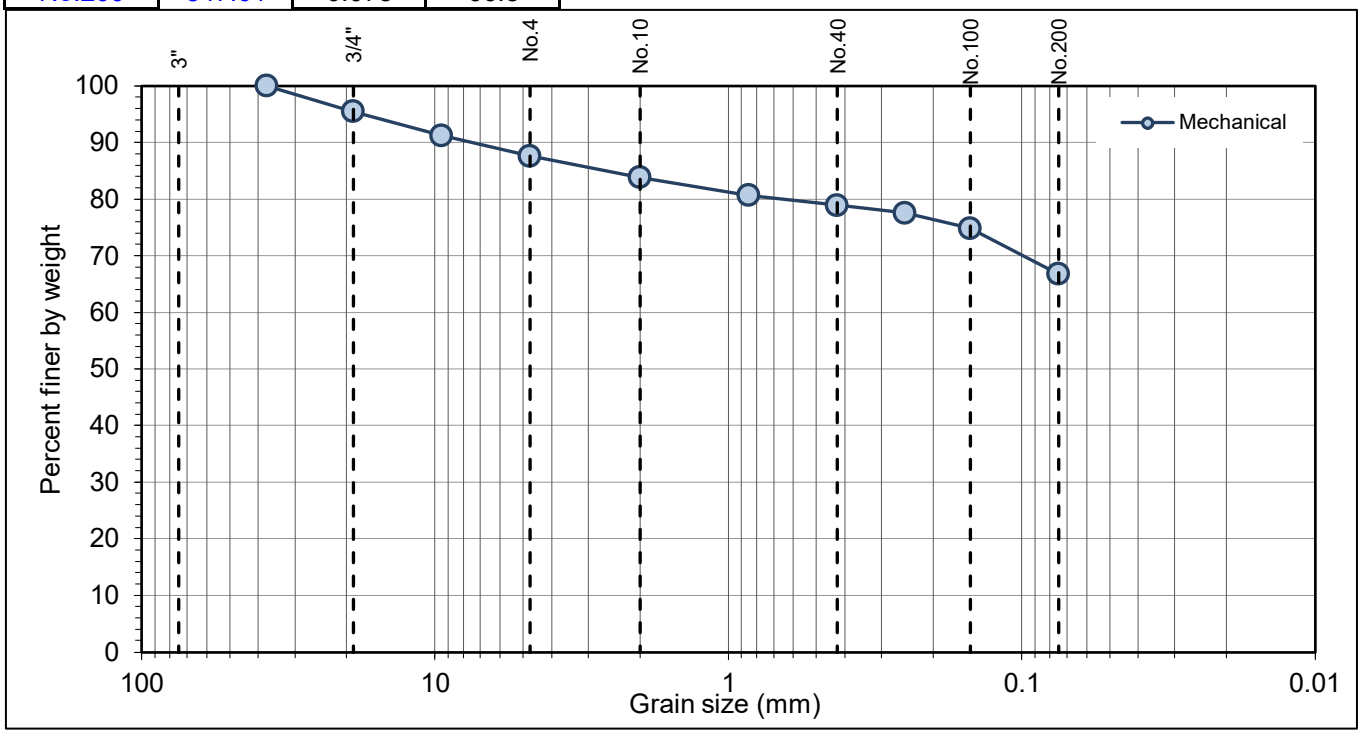
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1841.90	1646.32
	-	
	1841.90	1646.32
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	2264.09
Dry soil + tare (g):	-	2068.51
Tare (g):	-	422.19
Moisture content (%):	0.0	11.9

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	74.19	19	95.5
3/8"	144.60	9.5	91.2
No.4	203.84	4.75	87.6
No.10	266.51	2	83.8
No.20	318.13	0.85	80.7
No.40	347.49	0.425	78.9
No.60	369.50	0.25	77.6
No.100	413.96	0.15	74.9
No.200	547.01	0.075	66.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: bn - ol bn clay

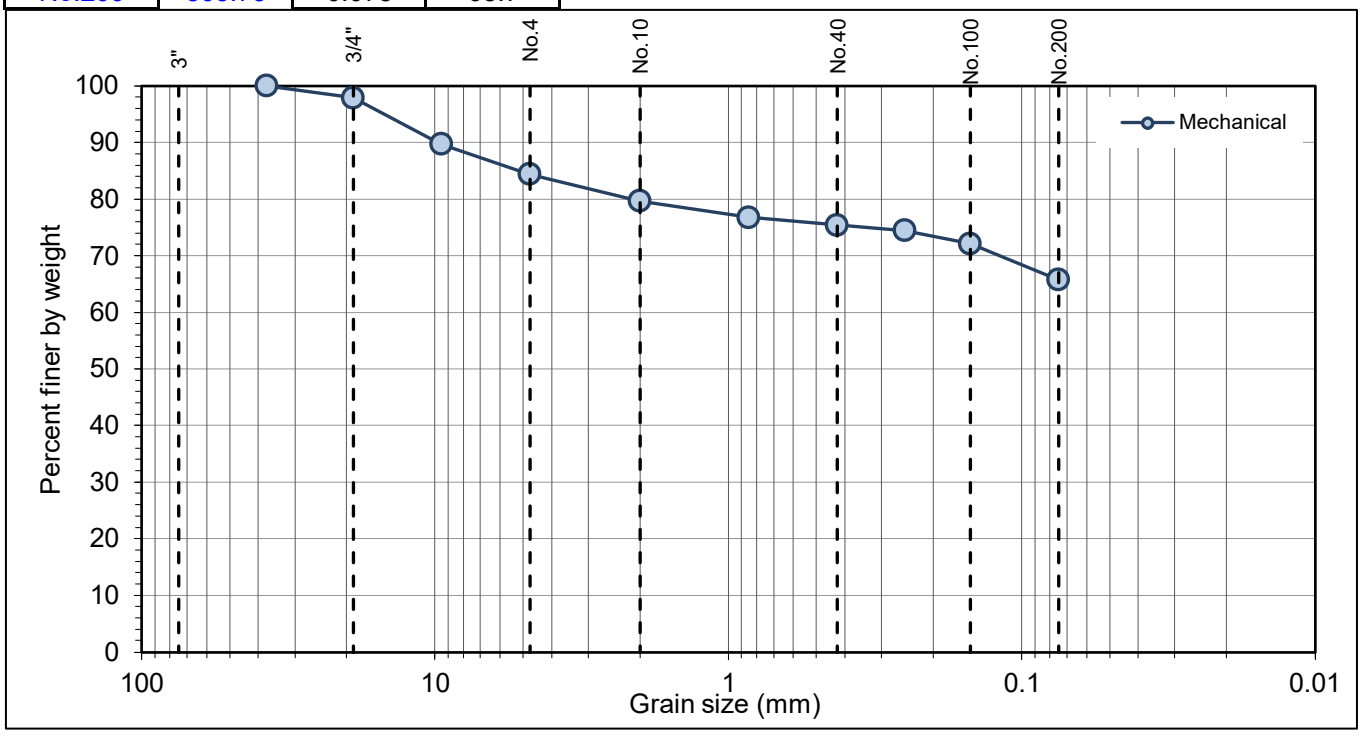
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1666.16	1470.26
	-	
	1666.16	1470.26
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	2104.69
Dry soil + tare (g):	-	1908.79
Tare (g):	-	438.53
Moisture content (%):	0.0	13.3

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	30.28	19	97.9
3/8"	150.96	9.5	89.7
No.4	229.44	4.75	84.4
No.10	298.96	2	79.7
No.20	341.90	0.85	76.7
No.40	361.85	0.425	75.4
No.60	375.86	0.25	74.4
No.100	409.90	0.15	72.1
No.200	503.73	0.075	65.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 32-35 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: bn - dk yl bn clay

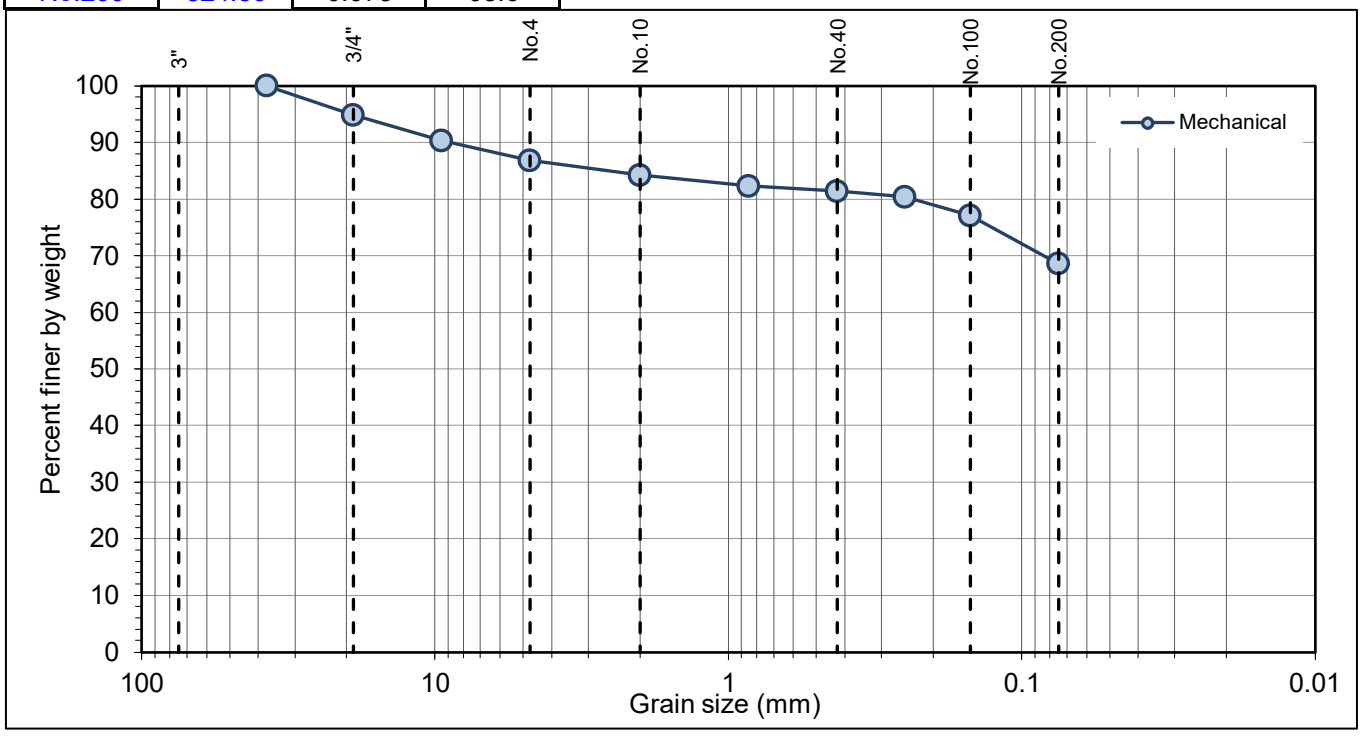
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1913.95	1670.91
	-	
	1913.95	1670.91
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	2453.36
Dry soil + tare (g):	-	2210.32
Tare (g):	-	539.41
Moisture content (%):	0.0	14.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	85.48	19	94.9
3/8"	161.21	9.5	90.4
No.4	219.81	4.75	86.8
No.10	263.64	2	84.2
No.20	295.15	0.85	82.3
No.40	311.17	0.425	81.4
No.60	327.50	0.25	80.4
No.100	382.33	0.15	77.1
No.200	524.86	0.075	68.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 38.5-40 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: lt ol bn - ol bn clay

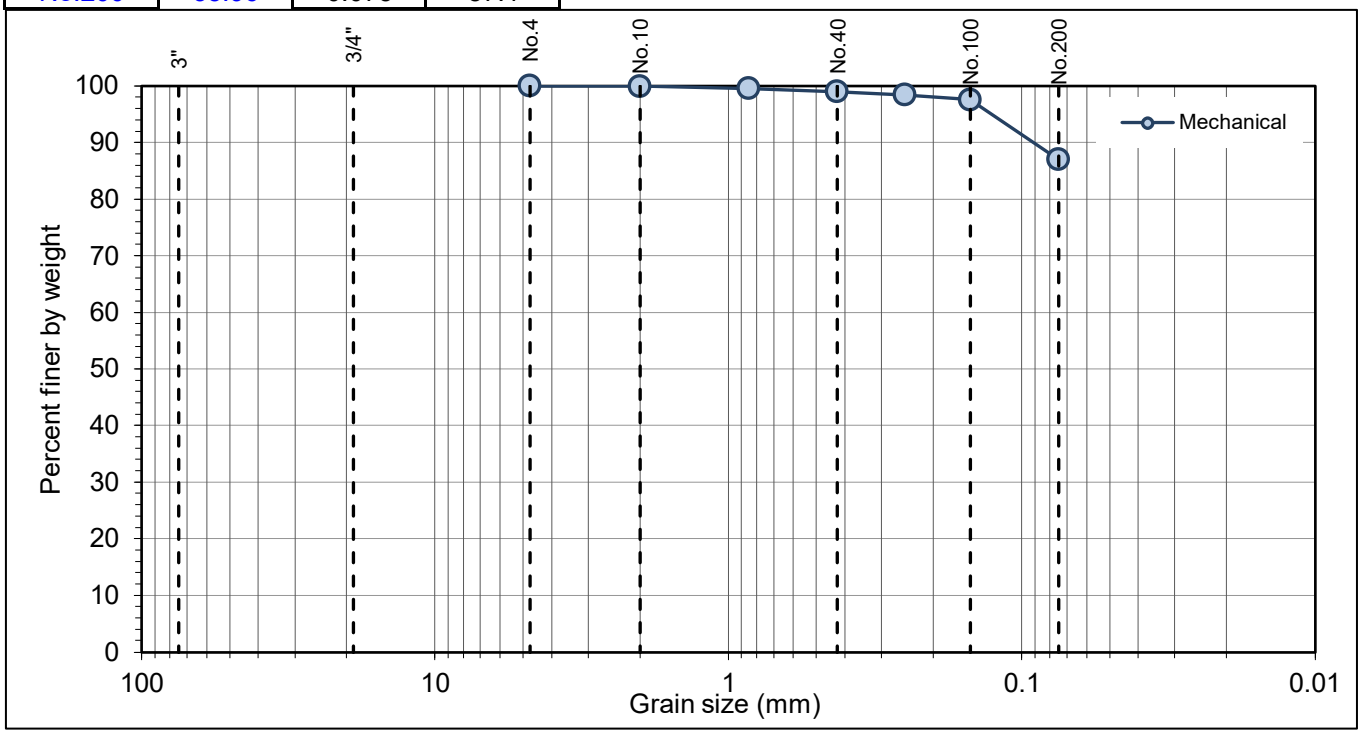
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	321.05	278.08
	-	
	321.05	278.08
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	448.30
Dry soil + tare (g):	-	405.33
Tare (g):	-	127.25
Moisture content (%):	0.0	15.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	-
No.4	-	4.75	100.0
No.10	0.15	2	99.9
No.20	1.17	0.85	99.6
No.40	2.85	0.425	99.0
No.60	4.46	0.25	98.4
No.100	6.75	0.15	97.6
No.200	35.96	0.075	87.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 52-55 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: gy - ol bn clay

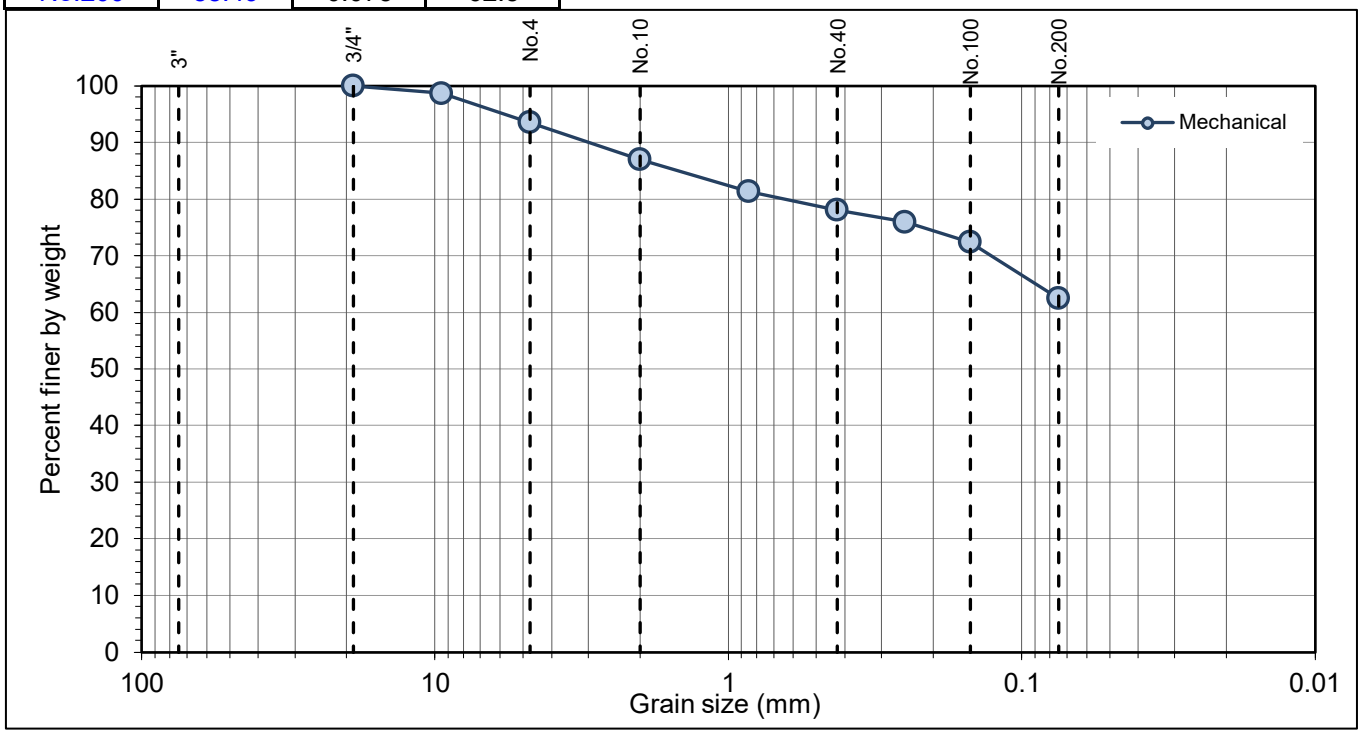
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	262.98	235.69
	-	
	262.98	235.69
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	460.49
Dry soil + tare (g):	-	433.20
Tare (g):	-	197.51
Moisture content (%):	0.0	11.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	3.09	9.5	98.7
No.4	15.18	4.75	93.6
No.10	30.60	2	87.0
No.20	44.01	0.85	81.3
No.40	51.69	0.425	78.1
No.60	56.57	0.25	76.0
No.100	65.04	0.15	72.4
No.200	88.49	0.075	62.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 60-62 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: lt bn - bn clay

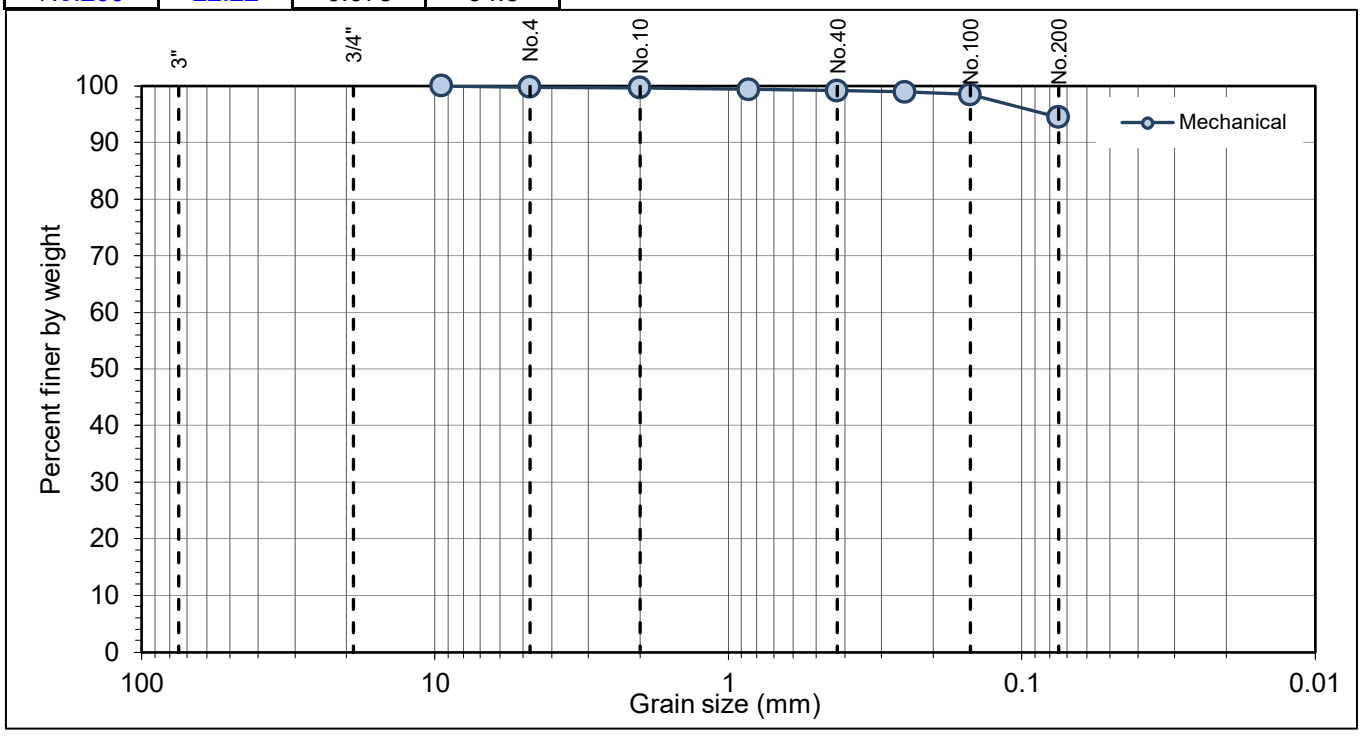
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	460.33	404.88
	-	
	460.33	404.88
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	656.13
Dry soil + tare (g):	-	600.68
Tare (g):	-	195.80
Moisture content (%):	0.0	13.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	100.0
No.4	0.93	4.75	99.8
No.10	1.29	2	99.7
No.20	2.54	0.85	99.4
No.40	3.42	0.425	99.2
No.60	4.29	0.25	98.9
No.100	6.05	0.15	98.5
No.200	22.22	0.075	94.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 64.5-67 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: lt ol bn - ol bn clay

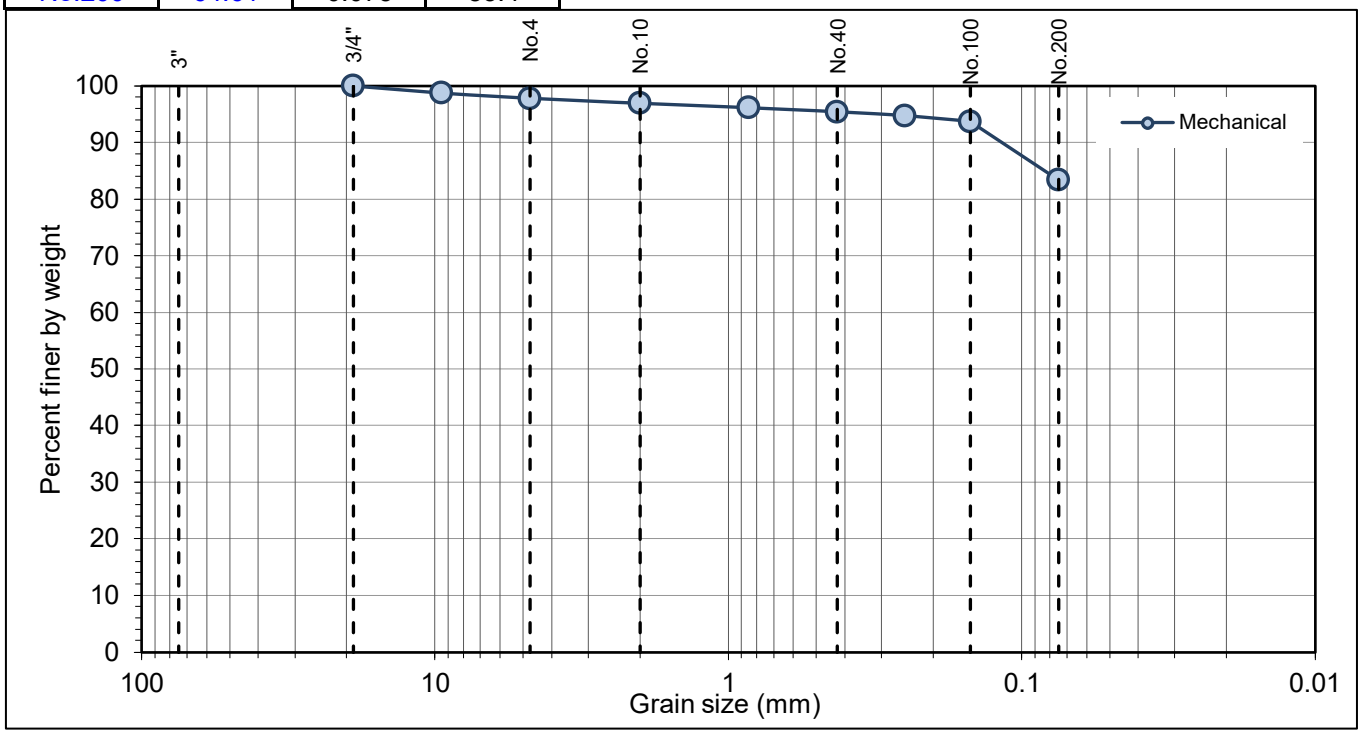
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	439.79	389.75
	-	
	439.79	389.75
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	566.47
Dry soil + tare (g):	-	516.43
Tare (g):	-	126.68
Moisture content (%):	0.0	12.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	4.88	9.5	98.7
No.4	8.54	4.75	97.8
No.10	11.97	2	96.9
No.20	14.92	0.85	96.2
No.40	17.72	0.425	95.5
No.60	20.42	0.25	94.8
No.100	24.38	0.15	93.7
No.200	64.61	0.075	83.4



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 4.5-7 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: lt bn - bn clay

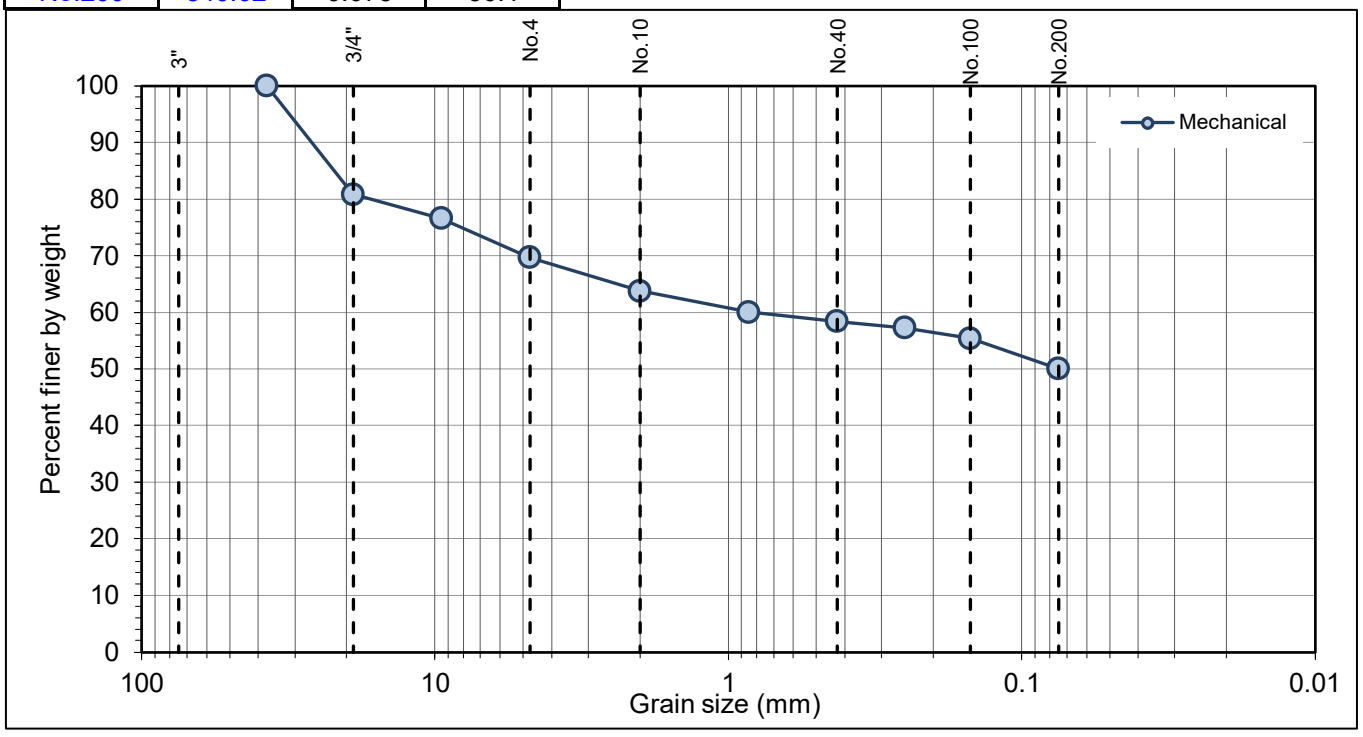
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1190.05	1081.24
	-	
	1190.05	1081.24
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1630.20
Dry soil + tare (g):	-	1521.39
Tare (g):	-	440.15
Moisture content (%):	0.0	10.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	207.44	19	80.8
3/8"	253.12	9.5	76.6
No.4	327.87	4.75	69.7
No.10	391.94	2	63.8
No.20	432.35	0.85	60.0
No.40	450.20	0.425	58.4
No.60	461.91	0.25	57.3
No.100	482.07	0.15	55.4
No.200	540.02	0.075	50.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: pl ol bn - bn clay

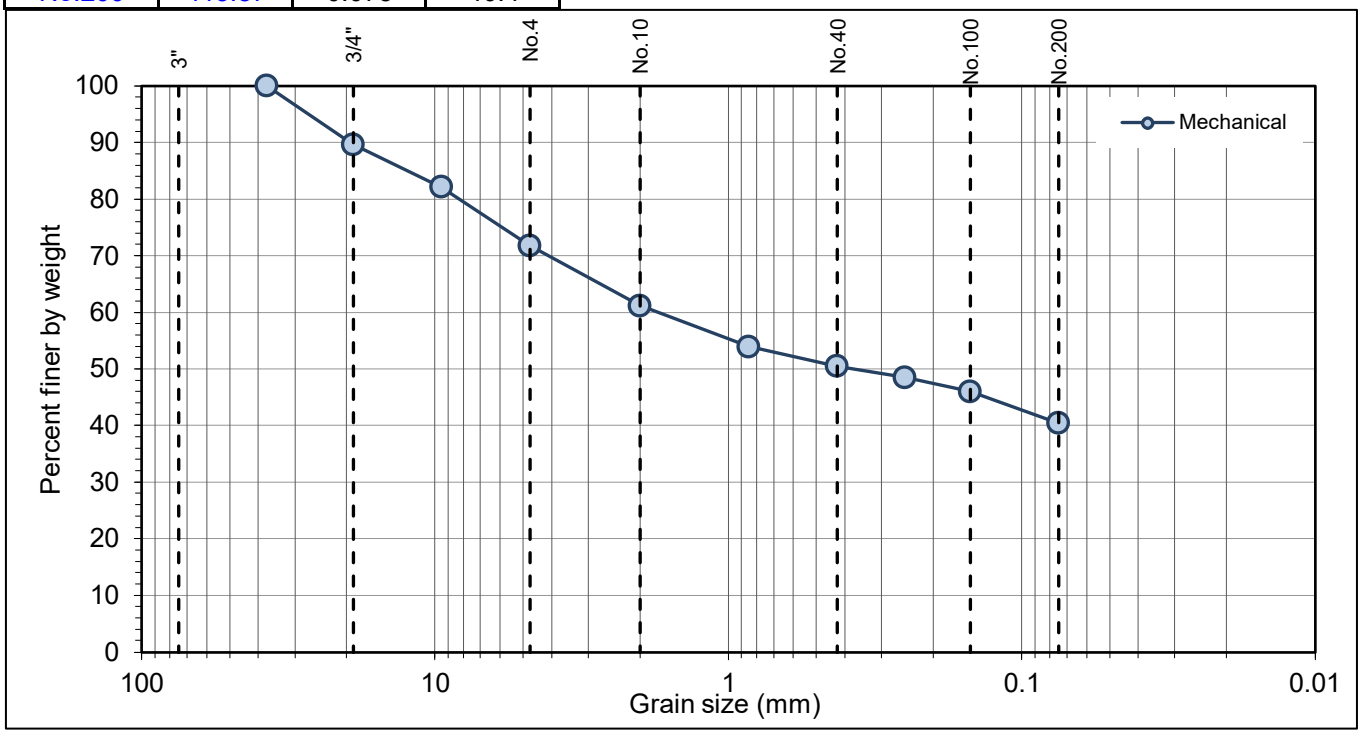
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	753.04	694.60
	-	
	753.04	694.60
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	872.07
Dry soil + tare (g):	-	813.63
Tare (g):	-	119.03
Moisture content (%):	0.0	8.4

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	71.73	19	89.7
3/8"	124.07	9.5	82.1
No.4	195.76	4.75	71.8
No.10	269.78	2	61.2
No.20	320.16	0.85	53.9
No.40	343.81	0.425	50.5
No.60	357.58	0.25	48.5
No.100	374.88	0.15	46.0
No.200	413.87	0.075	40.4



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - bn clay

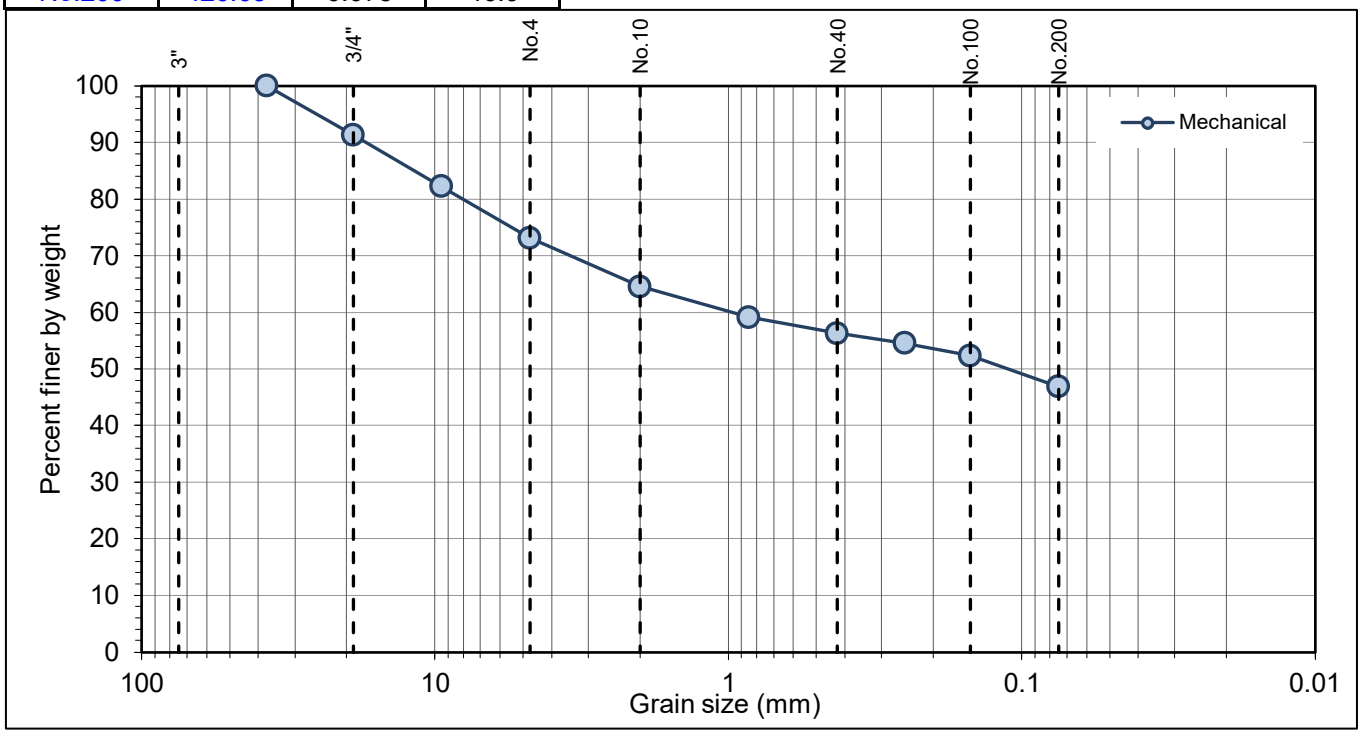
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	902.23	802.85
	-	
	902.23	802.85
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1046.88
Dry soil + tare (g):	-	947.50
Tare (g):	-	144.65
Moisture content (%):	0.0	12.4

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	69.23	19	91.4
3/8"	142.35	9.5	82.3
No.4	215.38	4.75	73.2
No.10	284.76	2	64.5
No.20	328.36	0.85	59.1
No.40	350.76	0.425	56.3
No.60	364.76	0.25	54.6
No.100	382.68	0.15	52.3
No.200	426.63	0.075	46.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 30-33 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: bn - dk bn clay

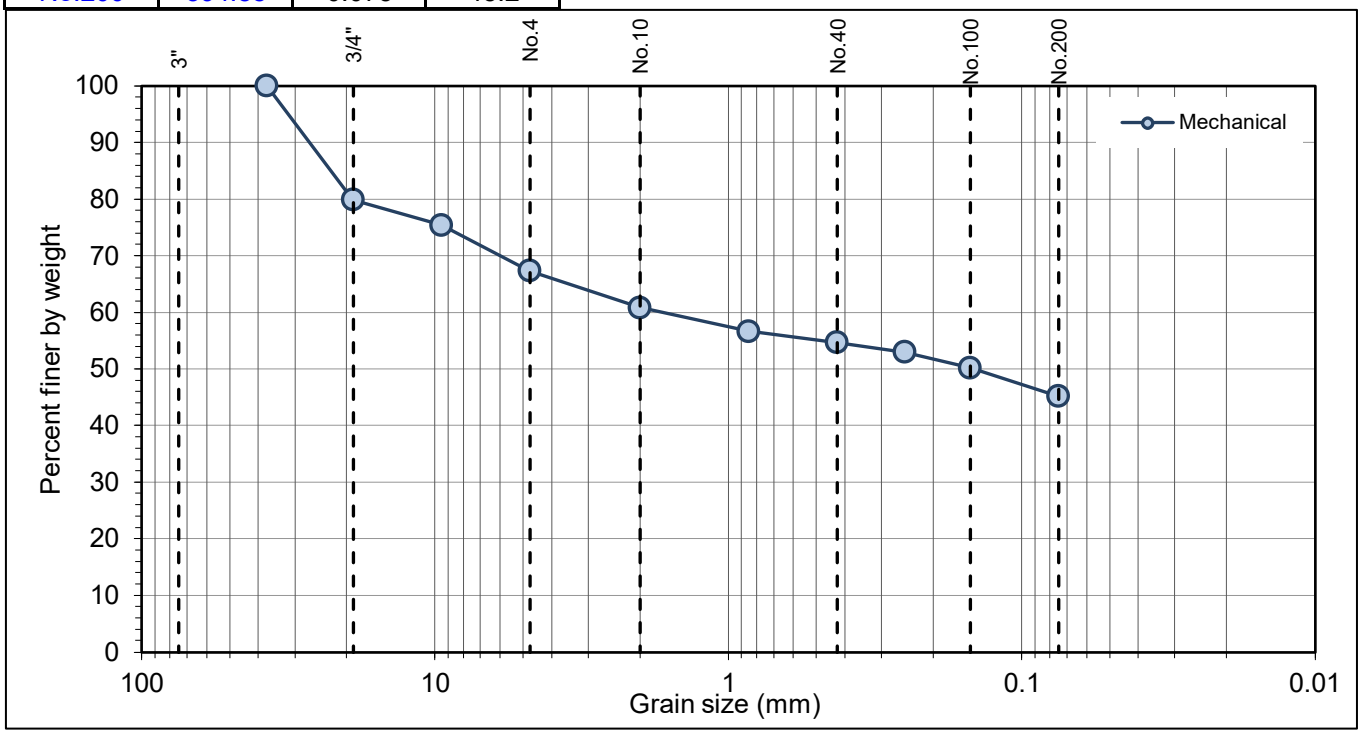
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	798.88	720.83
	-	-
	798.88	720.83
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	943.07
Dry soil + tare (g):	-	865.02
Tare (g):	-	144.19
Moisture content (%):	0.0	10.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	144.91	19	79.9
3/8"	177.22	9.5	75.4
No.4	235.48	4.75	67.3
No.10	282.48	2	60.8
No.20	312.47	0.85	56.7
No.40	326.73	0.425	54.7
No.60	339.06	0.25	53.0
No.100	359.09	0.15	50.2
No.200	394.88	0.075	45.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 7-10 ft

Date: 13-Nov-23 Location: -

Tested by: MGS Lab soil description: lt ol bn - bn clay

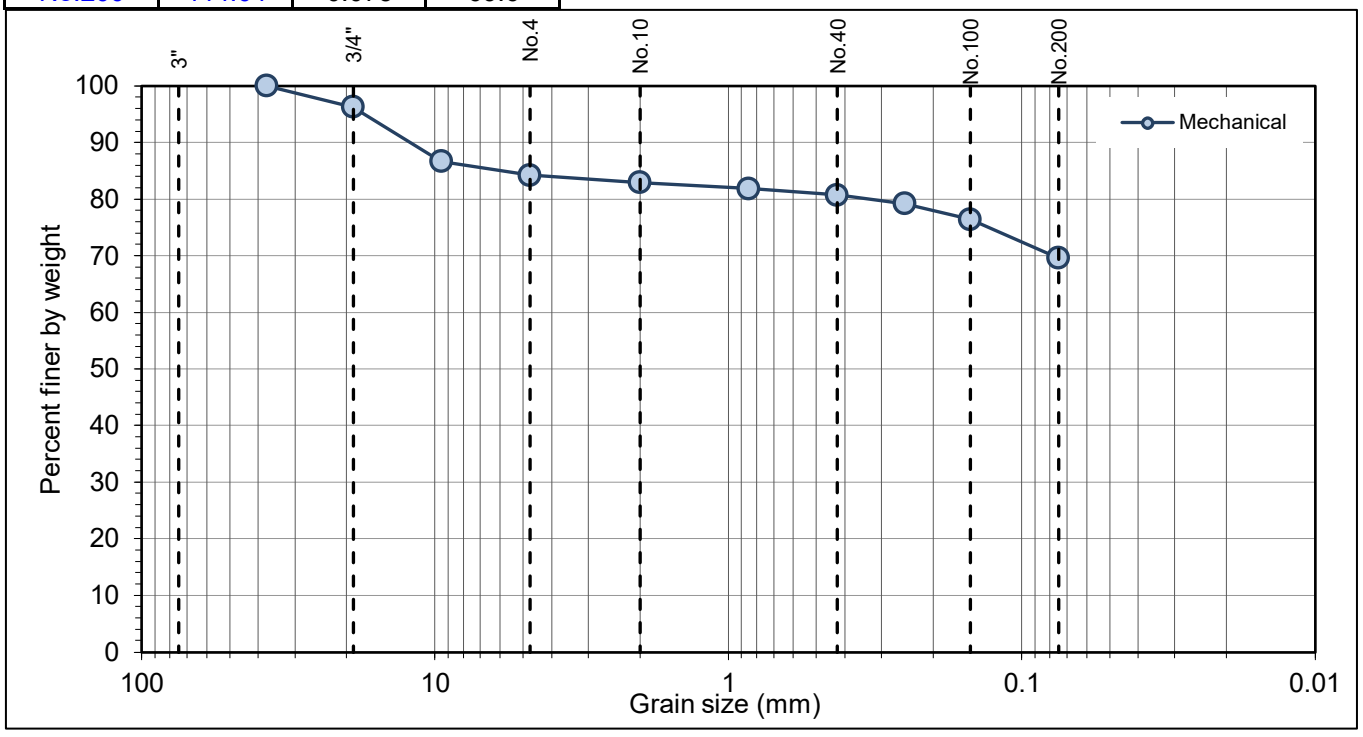
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	457.24	375.28
	-	
	457.24	375.28
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	653.16
Dry soil + tare (g):	-	571.20
Tare (g):	-	195.92
Moisture content (%):	0.0	21.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	13.96	19	96.3
3/8"	50.13	9.5	86.6
No.4	59.19	4.75	84.2
No.10	64.15	2	82.9
No.20	68.10	0.85	81.9
No.40	72.24	0.425	80.8
No.60	78.10	0.25	79.2
No.100	88.55	0.15	76.4
No.200	114.04	0.075	69.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: pl ol bn - lt bn silt

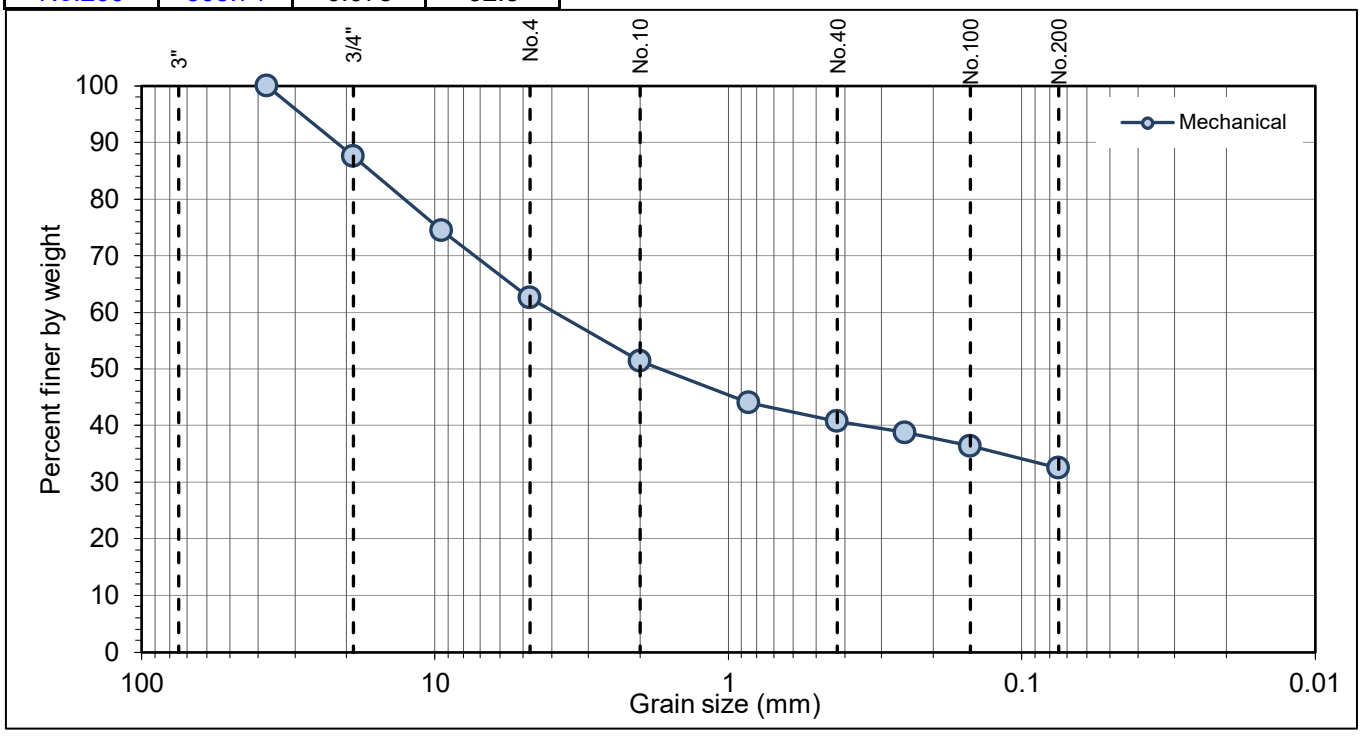
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	483.56	452.93
	-	
	483.56	452.93
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	601.88
Dry soil + tare (g):	-	571.25
Tare (g):	-	118.32
Moisture content (%):	0.0	6.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	56.10	19	87.6
3/8"	115.44	9.5	74.5
No.4	169.54	4.75	62.6
No.10	220.10	2	51.4
No.20	253.53	0.85	44.0
No.40	268.38	0.425	40.7
No.60	277.44	0.25	38.7
No.100	288.21	0.15	36.4
No.200	305.71	0.075	32.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: ol bn - bn silt

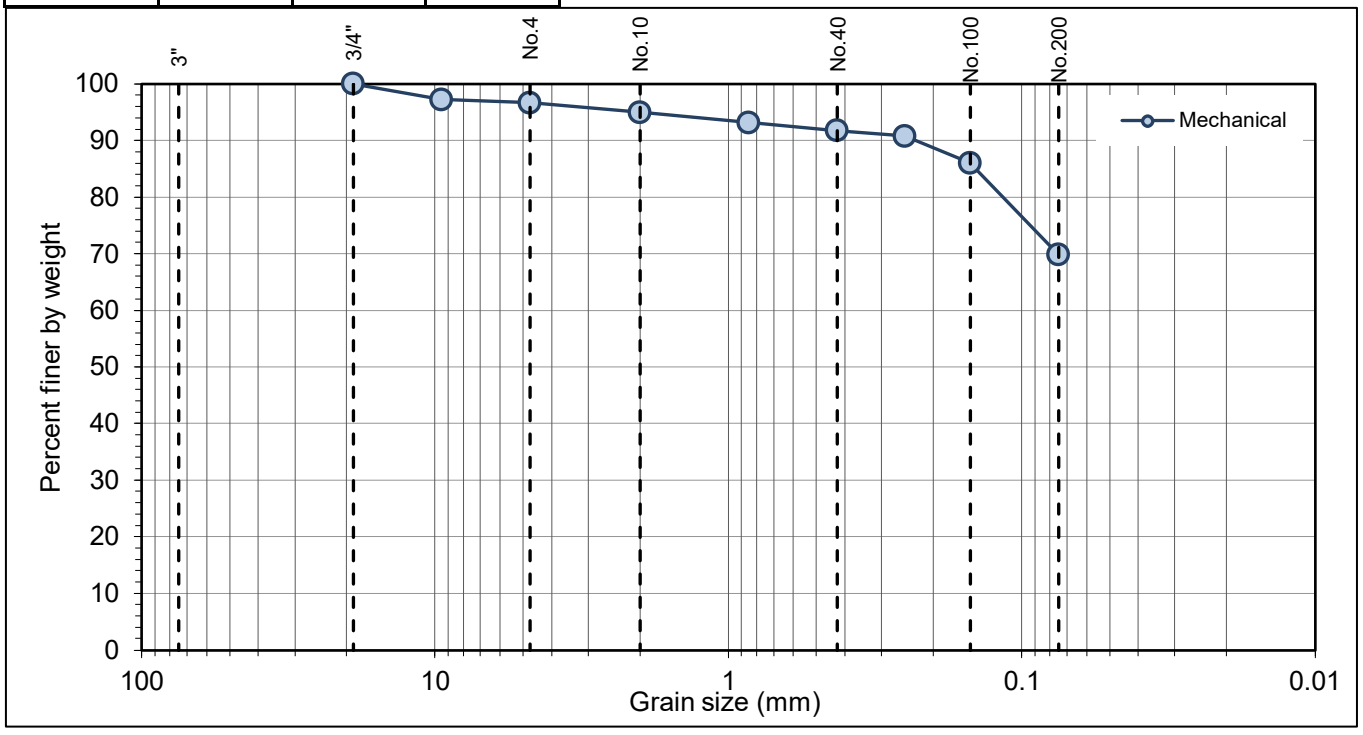
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	434.54	373.10
		-
	434.54	373.10
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	555.20
Dry soil + tare (g):	-	493.76
Tare (g):	-	120.66
Moisture content (%):	0.0	16.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	10.30	9.5	97.2
No.4	12.34	4.75	96.7
No.10	18.72	2	95.0
No.20	25.54	0.85	93.2
No.40	30.76	0.425	91.8
No.60	34.37	0.25	90.8
No.100	52.13	0.15	86.0
No.200	112.39	0.075	69.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 30-33 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: lt bn - bn clay

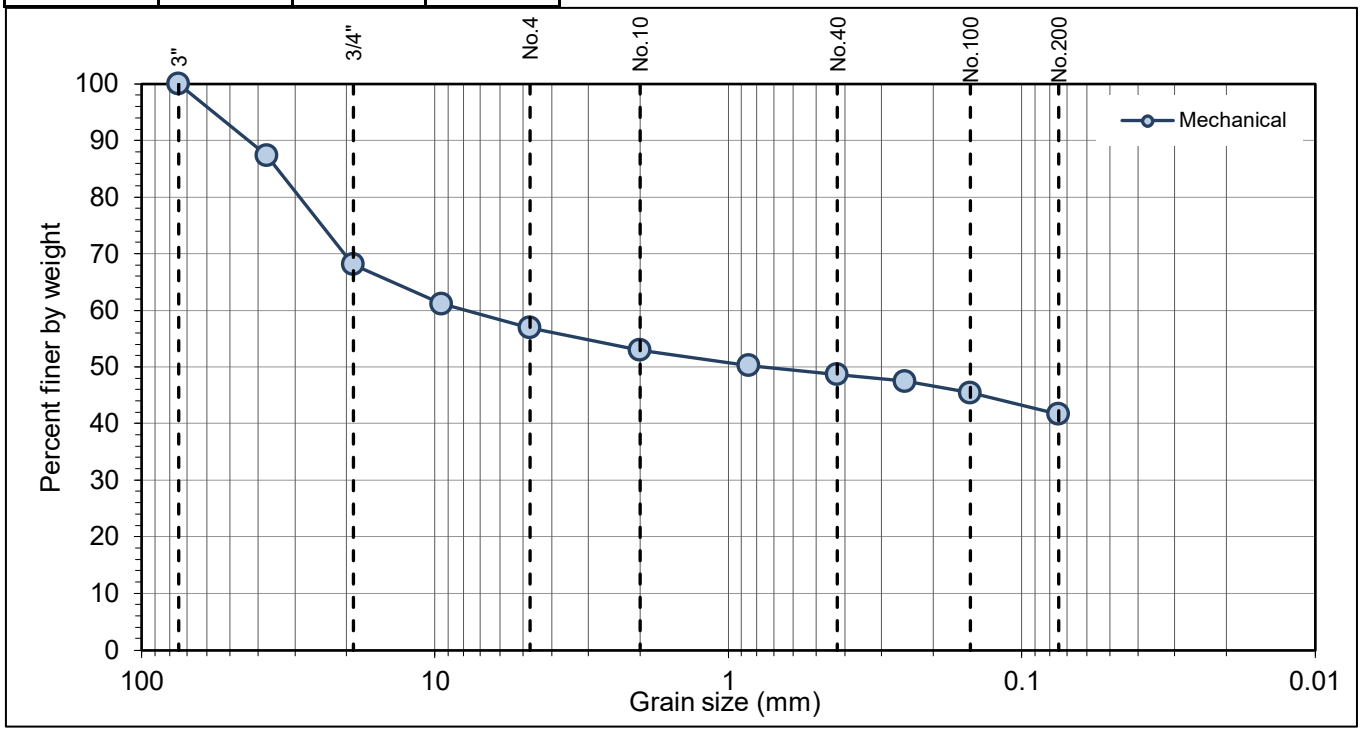
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1120.71	1018.98
	-	
	1120.71	1018.98
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1542.36
Dry soil + tare (g):	-	1440.63
Tare (g):	-	421.65
Moisture content (%):	0.0	10.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	100.0
1.5"	128.32	37.5	87.4
3/4"	325.14	19	68.1
3/8"	396.01	9.5	61.1
No.4	438.75	4.75	56.9
No.10	479.25	2	53.0
No.20	507.10	0.85	50.2
No.40	523.12	0.425	48.7
No.60	535.09	0.25	47.5
No.100	555.98	0.15	45.4
No.200	594.76	0.075	41.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Date: 14-Nov-23 Location: -

Tested by: MGS Lab soil description: ol bn - lt bn clay

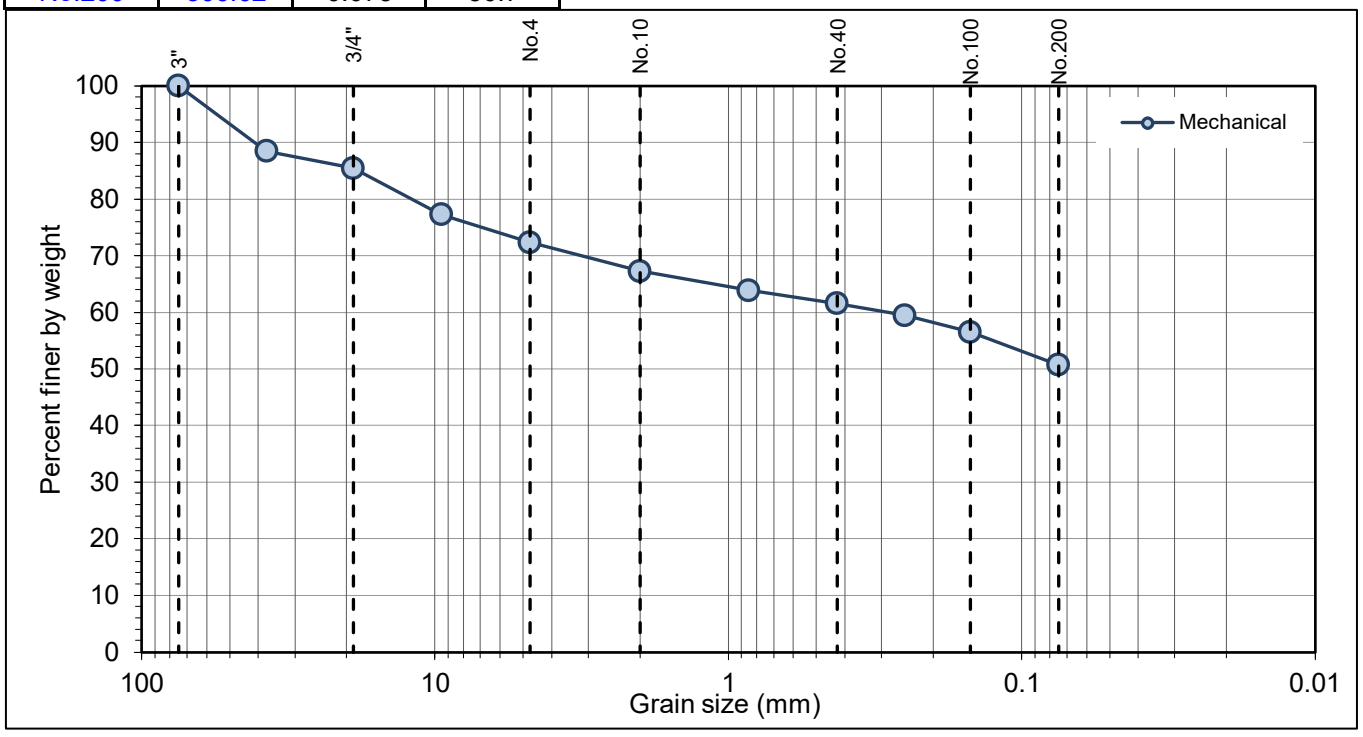
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	707.32	622.21
	-	
	707.32	622.21
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1129.47
Dry soil + tare (g):	-	1044.36
Tare (g):	-	422.15
Moisture content (%):	0.0	13.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	100.0
1.5"	71.56	37.5	88.5
3/4"	90.43	19	85.5
3/8"	141.32	9.5	77.3
No.4	172.00	4.75	72.4
No.10	203.64	2	67.3
No.20	224.65	0.85	63.9
No.40	239.11	0.425	61.6
No.60	252.04	0.25	59.5
No.100	270.48	0.15	56.5
No.200	306.62	0.075	50.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 15-17 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: ol bn - yl bn clay

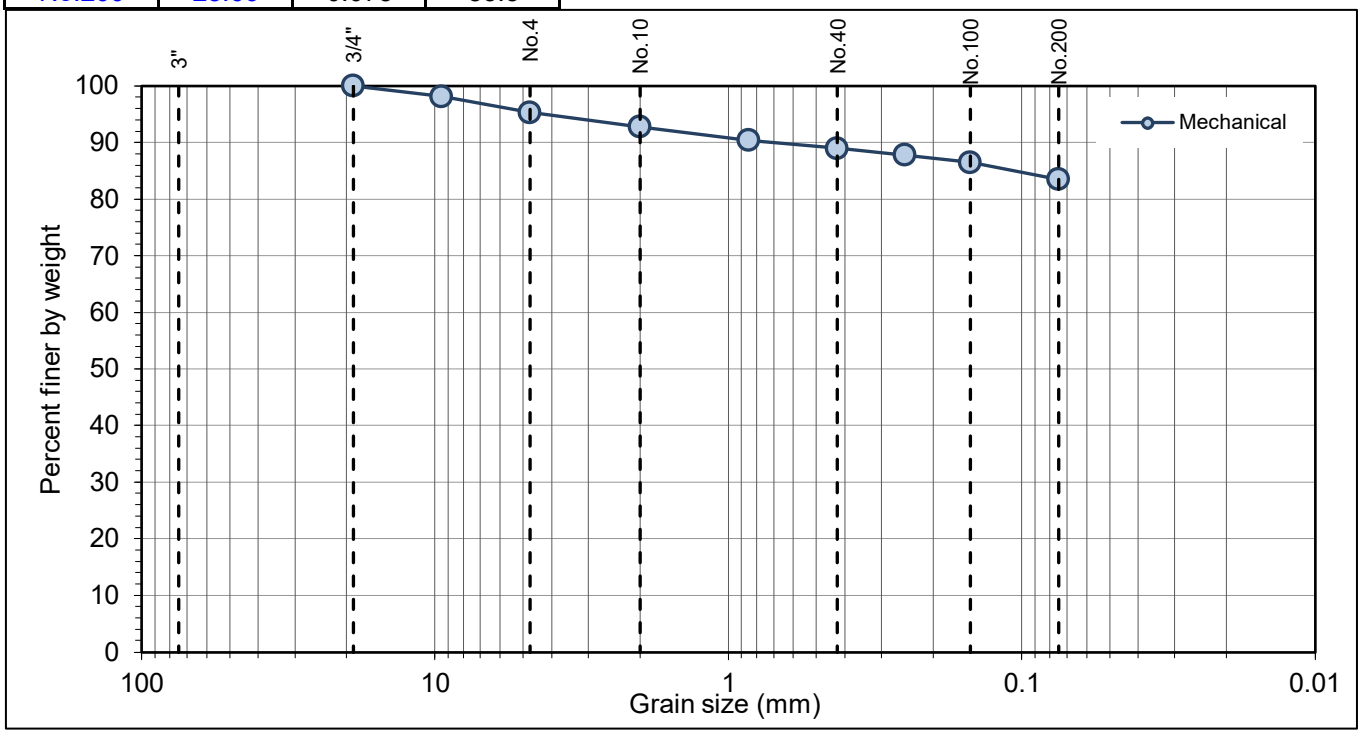
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	180.39	155.31
	-	
	180.39	155.31
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	377.19
Dry soil + tare (g):	-	352.11
Tare (g):	-	196.80
Moisture content (%):	0.0	16.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	2.89	9.5	98.1
No.4	7.30	4.75	95.3
No.10	11.23	2	92.8
No.20	14.96	0.85	90.4
No.40	17.13	0.425	89.0
No.60	18.94	0.25	87.8
No.100	20.99	0.15	86.5
No.200	25.66	0.075	83.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 17.5-19 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: ol bn - lt bn clay

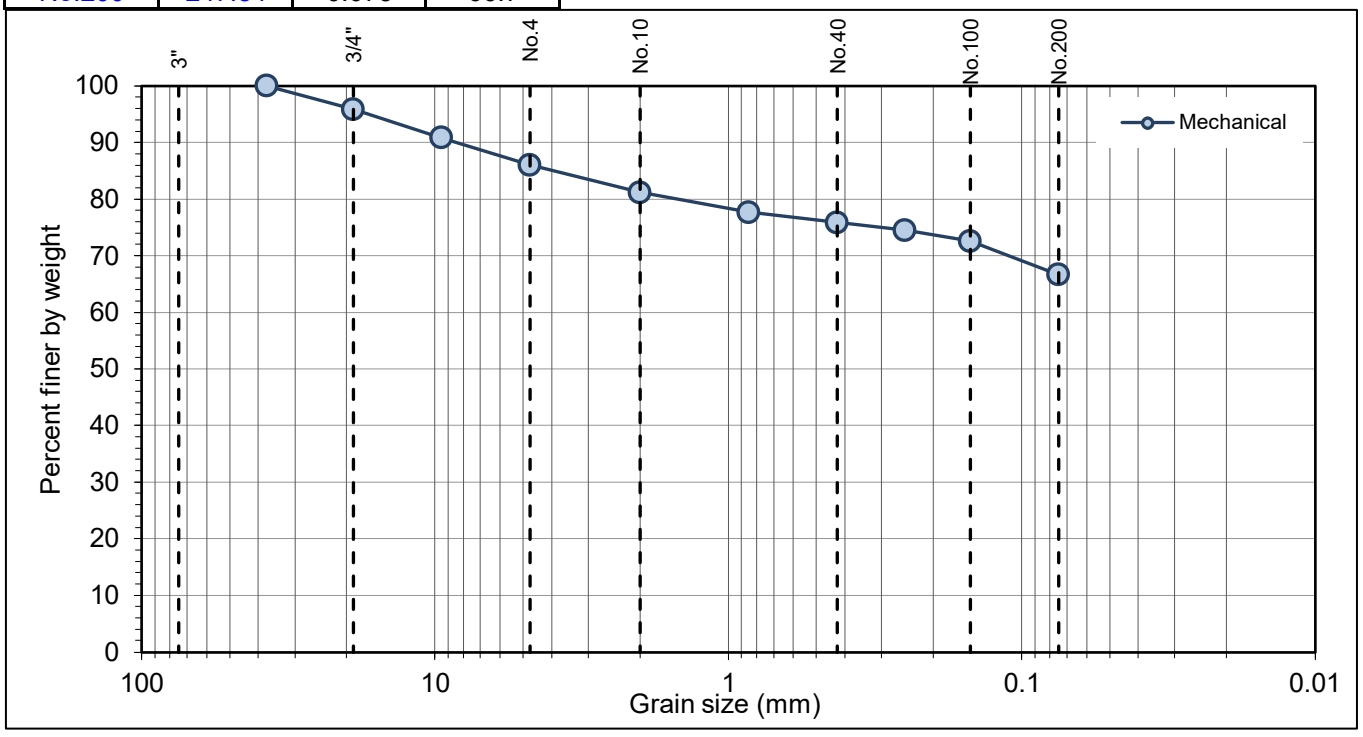
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	847.04	744.57
	-	
	847.04	744.57
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	860.87
Dry soil + tare (g):	-	758.40
Tare (g):	-	13.83
Moisture content (%):	0.0	13.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	30.57	19	95.9
3/8"	68.26	9.5	90.8
No.4	103.76	4.75	86.1
No.10	140.26	2	81.2
No.20	166.43	0.85	77.6
No.40	179.81	0.425	75.9
No.60	189.87	0.25	74.5
No.100	204.29	0.15	72.6
No.200	247.84	0.075	66.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-11

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: bn - dk bn clay

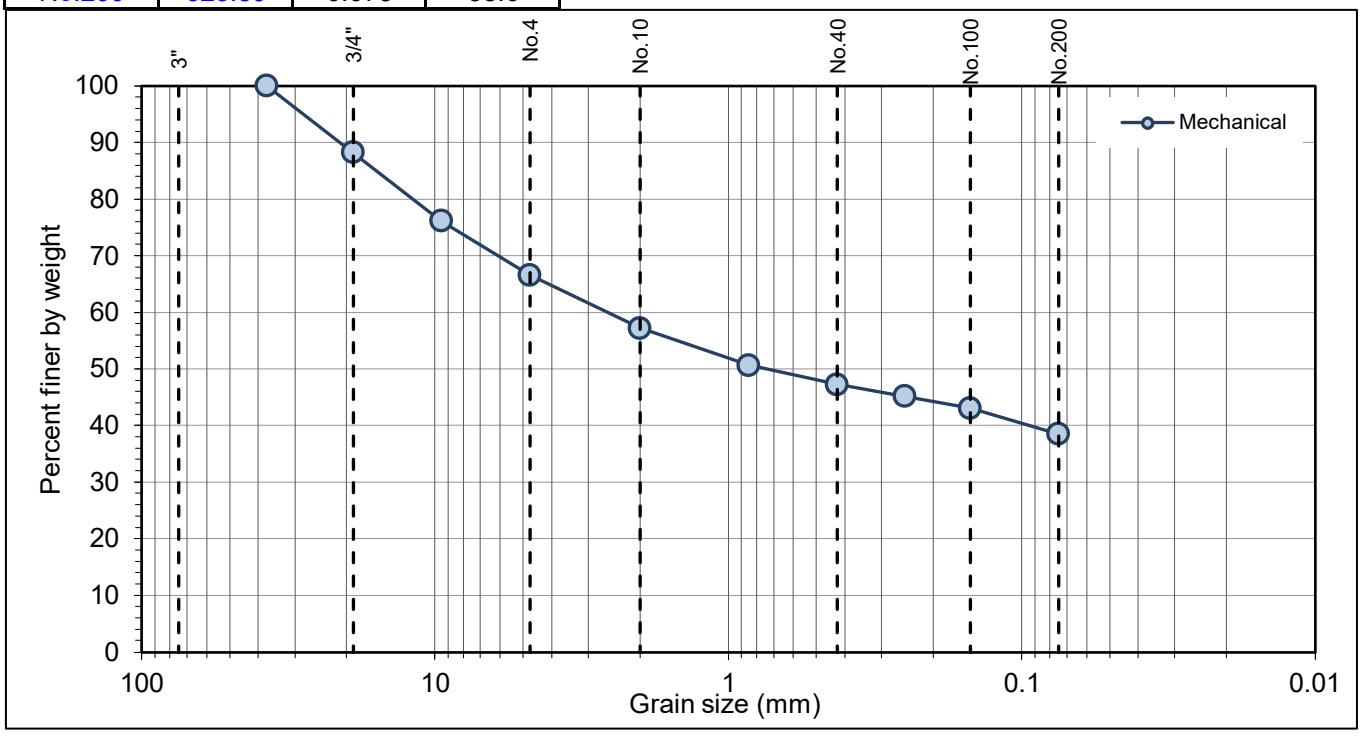
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	563.94	526.72
	-	
	563.94	526.72
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	758.29
Dry soil + tare (g):	-	721.07
Tare (g):	-	194.35
Moisture content (%):	0.0	7.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	61.88	19	88.3
3/8"	125.78	9.5	76.1
No.4	175.93	4.75	66.6
No.10	225.46	2	57.2
No.20	259.93	0.85	50.7
No.40	277.80	0.425	47.3
No.60	288.84	0.25	45.2
No.100	299.98	0.15	43.0
No.200	323.59	0.075	38.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 5-7 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - lt bn clay

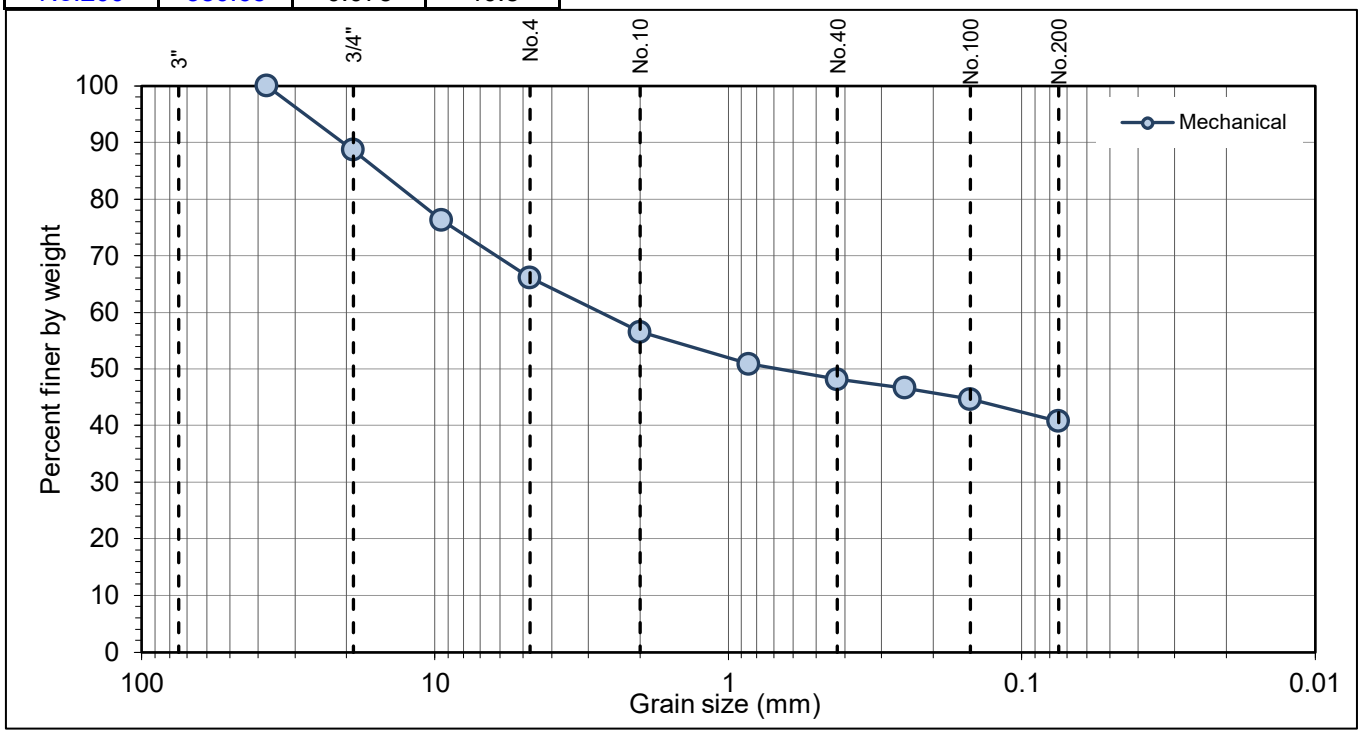
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	708.58	643.08
	-	
	708.58	643.08
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	902.19
Dry soil + tare (g):	-	836.69
Tare (g):	-	193.61
Moisture content (%):	0.0	10.2

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	72.52	19	88.7
3/8"	152.37	9.5	76.3
No.4	217.84	4.75	66.1
No.10	279.58	2	56.5
No.20	316.07	0.85	50.9
No.40	333.42	0.425	48.2
No.60	343.28	0.25	46.6
No.100	355.83	0.15	44.7
No.200	380.65	0.075	40.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 10-12 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - lt bn silt

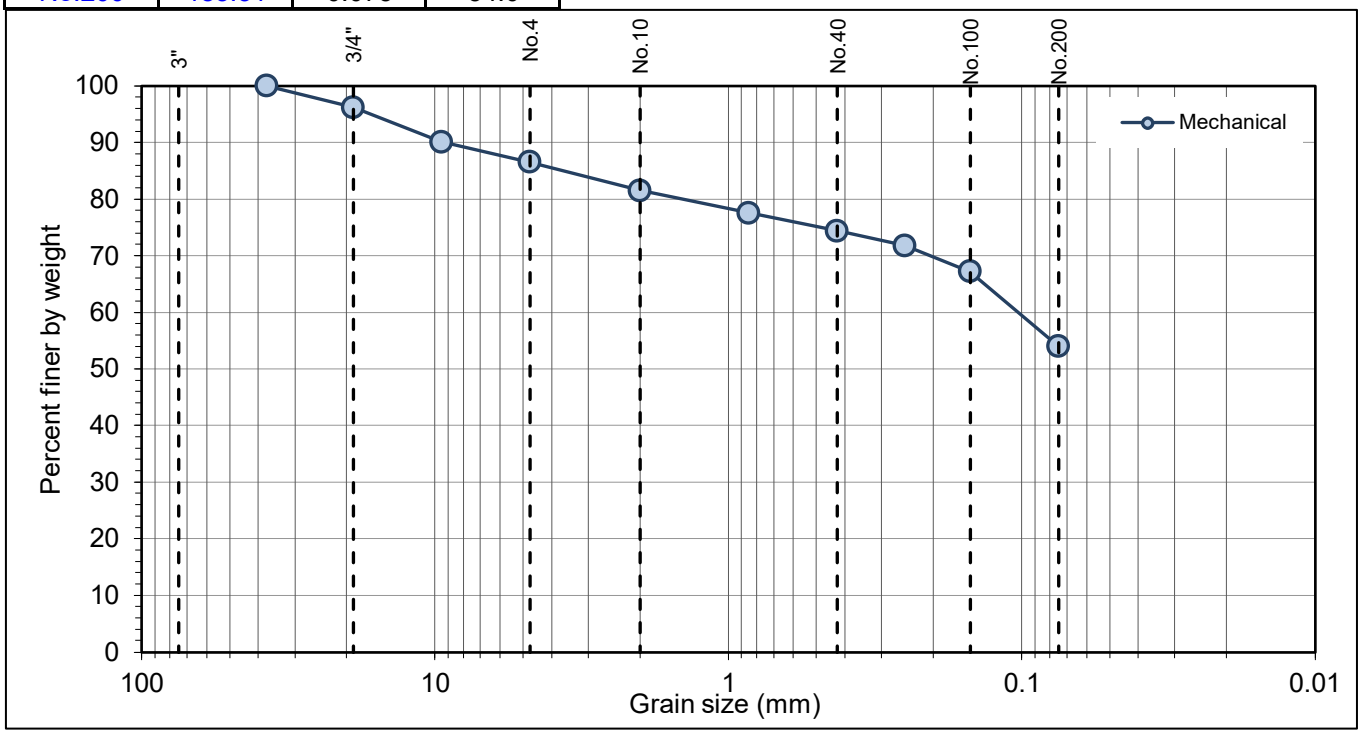
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	450.03	398.84
	-	
	450.03	398.84
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	566.12
Dry soil + tare (g):	-	514.93
Tare (g):	-	116.09
Moisture content (%):	0.0	12.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	15.06	19	96.2
3/8"	39.46	9.5	90.1
No.4	53.76	4.75	86.5
No.10	73.83	2	81.5
No.20	89.44	0.85	77.6
No.40	102.08	0.425	74.4
No.60	112.55	0.25	71.8
No.100	130.86	0.15	67.2
No.200	183.31	0.075	54.0



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 20-21 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - lt bn clay

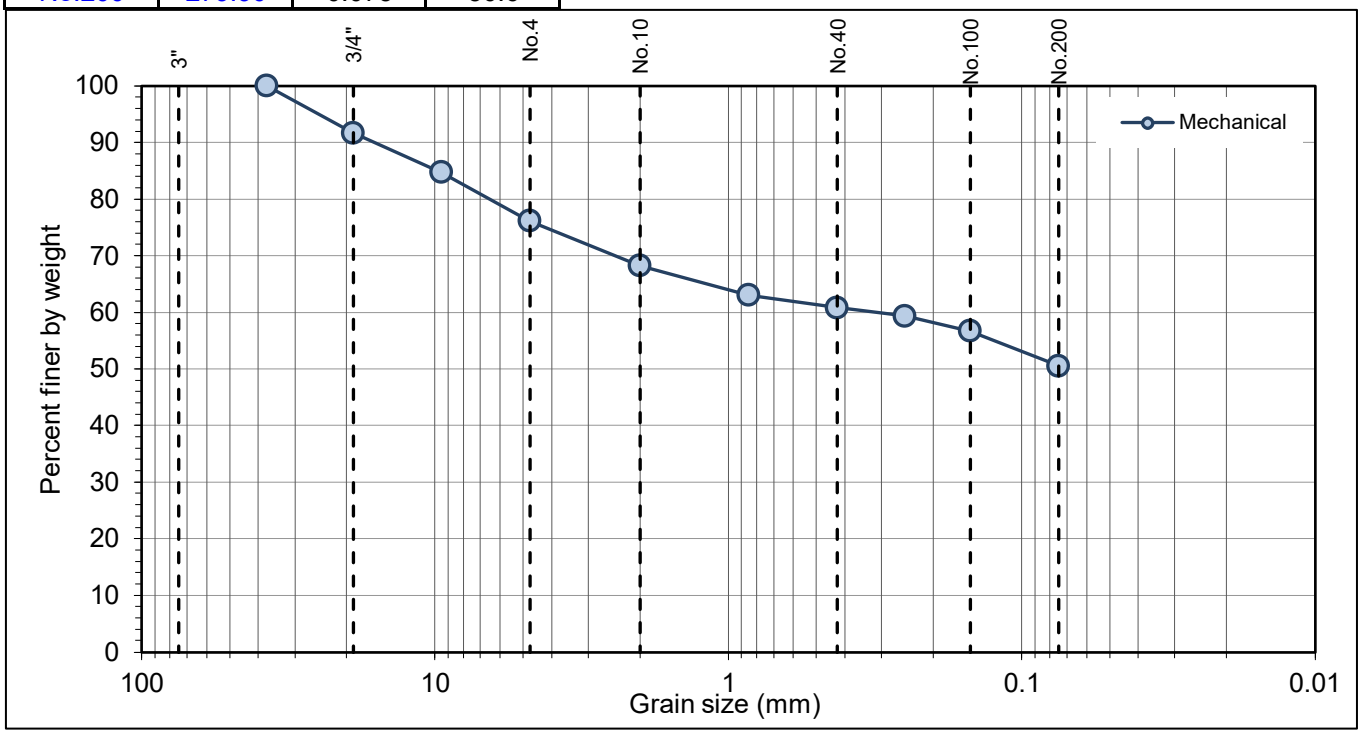
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	625.88	566.11
	-	
	625.88	566.11
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	742.99
Dry soil + tare (g):	-	683.22
Tare (g):	-	117.11
Moisture content (%):	0.0	10.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	47.10	19	91.7
3/8"	86.55	9.5	84.7
No.4	135.05	4.75	76.1
No.10	179.77	2	68.2
No.20	209.38	0.85	63.0
No.40	221.94	0.425	60.8
No.60	230.21	0.25	59.3
No.100	245.14	0.15	56.7
No.200	279.90	0.075	50.6



Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 37-39 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: gy - lt gy gravel

Reduced by: AT Comments:

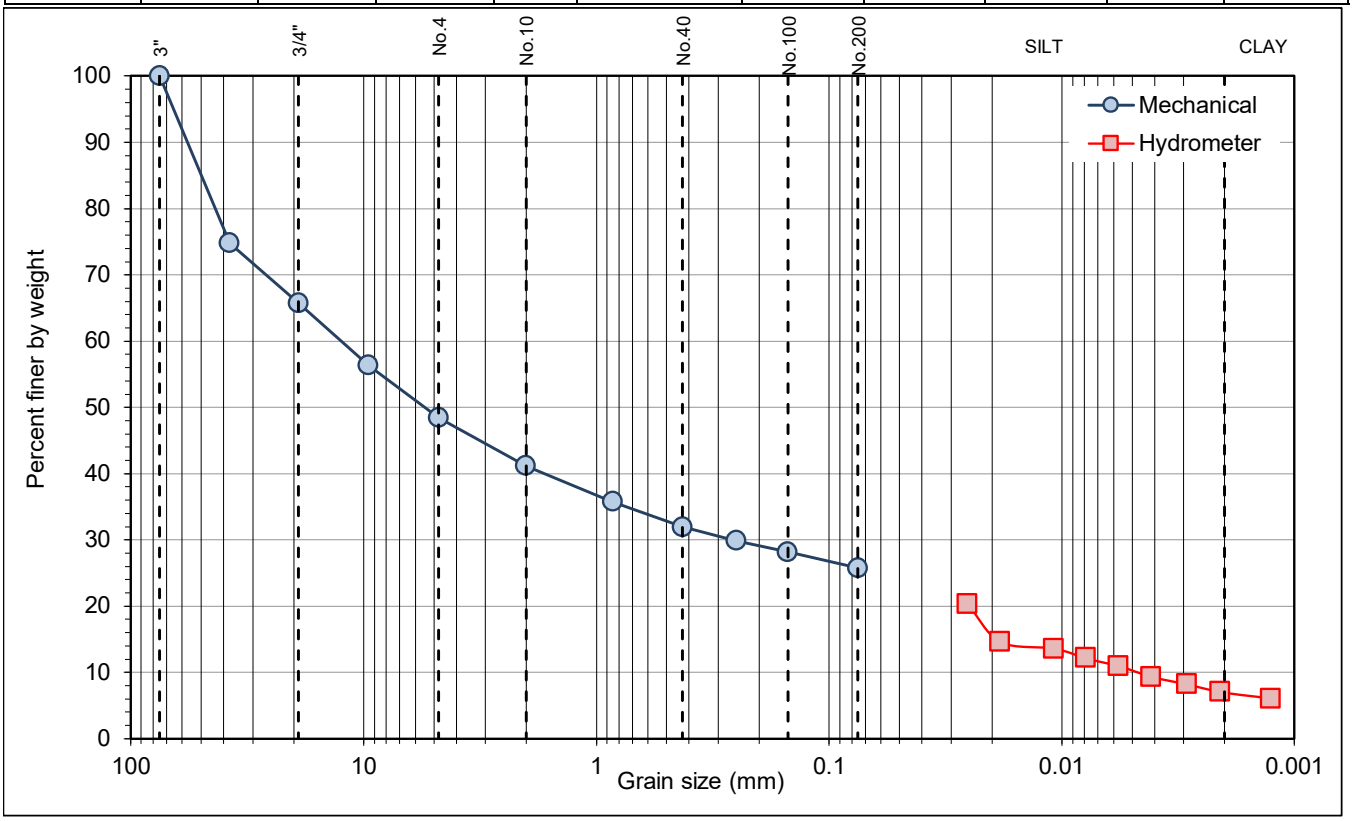
Reviewed by: JC

Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	1237.63	1179.38
+3" Coarse fraction (g):		
-3" Split fraction (g):	1237.63	1179.38
Hydrometer fraction (g):	100.02	99.95
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	1382.61	224.79
Dry soil + tare (g):	-	1324.36	224.77
Tare (g):	-	144.98	196.59
Moisture content (%):	0.00	4.94	0.07

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	41.14
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer		Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
12"	300	-	-		2	21.0	55	5.2	0.02534	20.28
8"	200	-	-		5	21.0	41	5.2	0.01838	14.58
6"	150	-	-		15	21.0	38.5	5.2	0.01084	13.57
4"	100	-	-		30	20.9	35	5.2	0.00789	12.13
3"	75	-	100.0	<=Split	60	21.0	32	5.2	0.00570	10.92
1.5"	37.5	298.03	74.7		120	21.2	28	5.1	0.00414	9.32
3/4"	19	404.72	65.7		250	22.0	25	4.9	0.00290	8.19
3/8"	9.5	515.59	56.3		500	22.5	22	4.7	0.00208	7.02
No.4	4.75	608.62	48.4		1440	20.9	20	5.2	0.00126	6.02
No.10	2	694.22	41.1	<=Split hyd.						
No.20	0.85	13.07	35.8							
No.40	0.425	22.42	31.9							
No.60	0.25	27.41	29.9							
No.100	0.15	31.53	28.2							
No.200	0.075	37.39	25.7							



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]1

Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 44.5-47 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: lt bn - bn gravel

Reduced by: AT Comments:

Reviewed by: JC

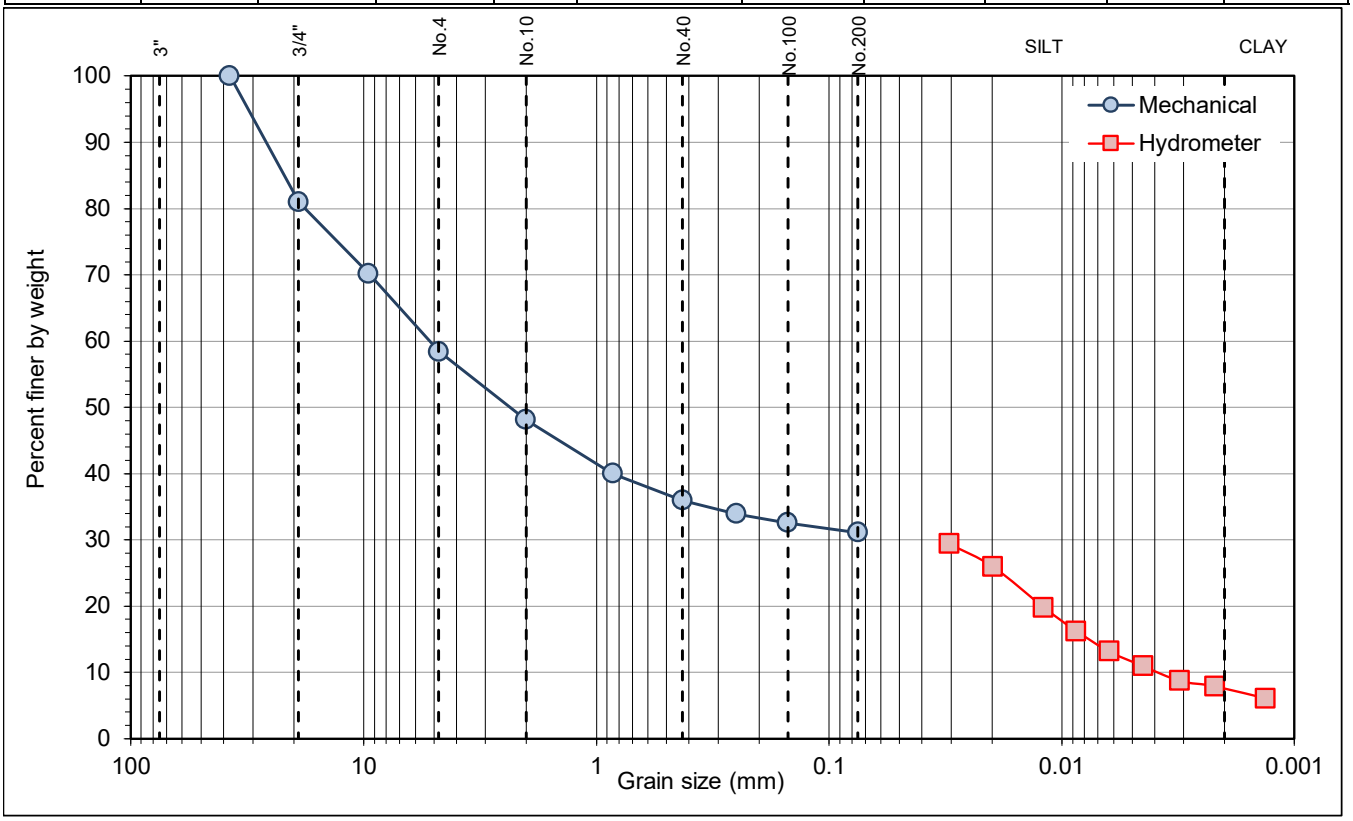
Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	446.03	423.48
+3" Coarse fraction (g):		
-3" Split fraction (g):	446.03	423.48
Hydrometer fraction (g):	50.04	50.01
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	572.96	229.12
Dry soil + tare (g):	-	550.41	229.10
Tare (g):	-	126.93	195.70
Moisture content (%):	0.00	5.32	0.06

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	48.08
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer
12"	300	-	-
8"	200	-	-
6"	150	-	-
4"	100	-	-
3"	75	-	-
1.5"	37.5	-	100.0
3/4"	19	80.60	81.0
3/8"	9.5	126.26	70.2
No.4	4.75	176.21	58.4
No.10	2	219.86	48.1
No.20	0.85	8.39	40.0
No.40	0.425	12.64	35.9
No.60	0.25	14.77	33.9
No.100	0.15	16.16	32.5
No.200	0.075	17.67	31.1

	Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
	2	20.8	36.1	5.2	0.03034	29.35
	5	20.8	32.5	5.2	0.01973	25.93
	15	20.8	26	5.2	0.01193	19.75
	30	20.8	22.25	5.2	0.00865	16.19
<=Split	60	20.9	19	5.2	0.00623	13.12
	120	21.4	16.5	5.1	0.00445	10.88
	250	22.1	14	4.9	0.00310	8.69
	500	22.6	13	4.7	0.00219	7.88
	1448	20.9	11.5	5.2	0.00133	5.99
<=Split hyd.						



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]2

Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 15-17 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: ol bn - yl bn clay

Reduced by: AT Comments:

Reviewed by: JC

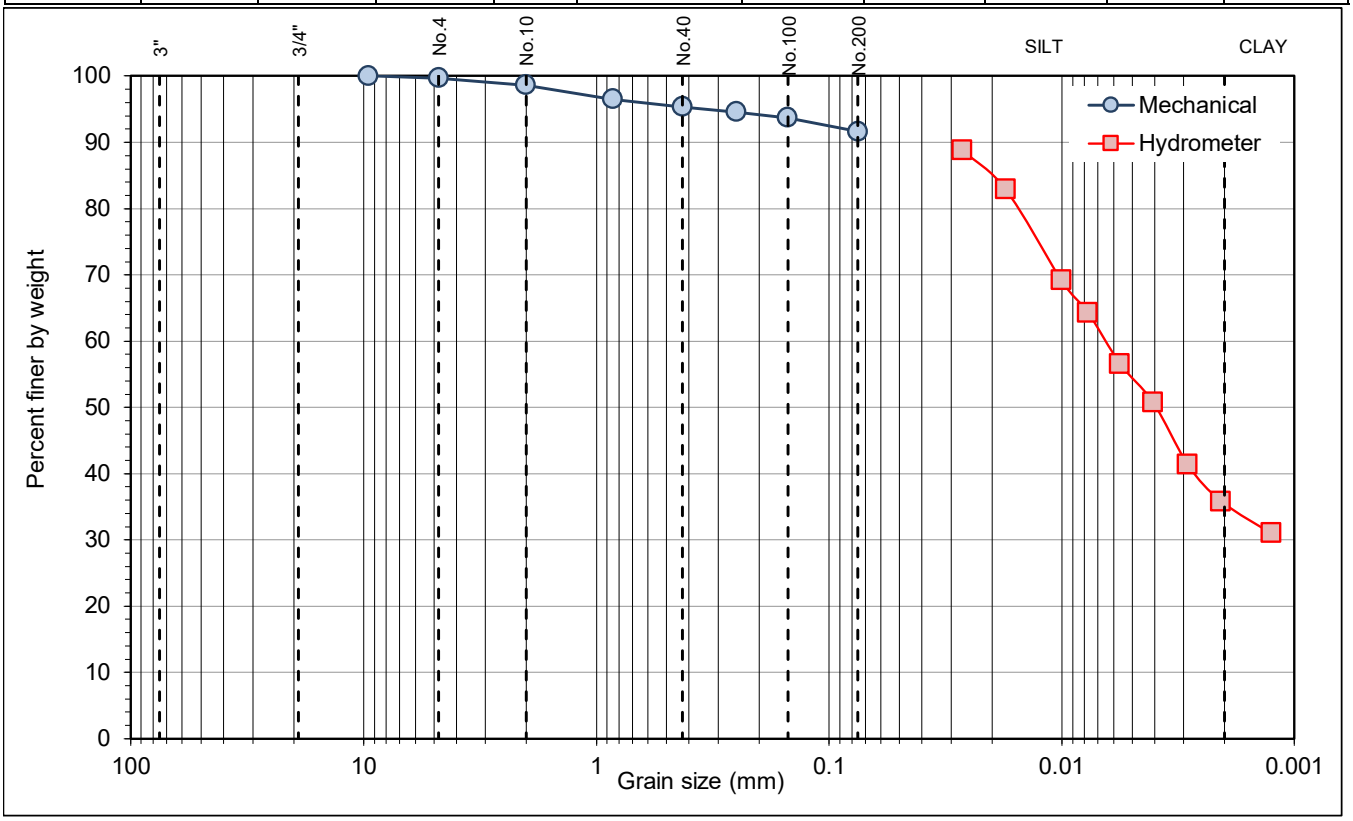
Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	133.83	114.98
+3" Coarse fraction (g):		
-3" Split fraction (g):	133.83	114.98
Hydrometer fraction (g):	50.01	49.74
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	250.79	239.17
Dry soil + tare (g):	-	231.94	238.94
Tare (g):	-	116.96	196.69
Moisture content (%):	0.00	16.39	0.54

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	98.62
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer
12"	300	-	-
8"	200	-	-
6"	150	-	-
4"	100	-	-
3"	75	-	-
1.5"	37.5	-	-
3/4"	19	-	-
3/8"	9.5	-	100.0
No.4	4.75	0.38	99.7
No.10	2	1.59	98.6
No.20	0.85	1.06	96.5
No.40	0.425	1.66	95.3
No.60	0.25	2.04	94.6
No.100	0.15	2.49	93.7
No.200	0.075	3.54	91.6

	Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
	2	20.8	50.5	5.2	0.02667	88.77
	5	20.8	47.5	5.2	0.01737	82.88
	17	20.8	40.5	5.2	0.01004	69.16
	30	20.8	38	5.2	0.00772	64.26
<=Split	60	21.0	34	5.2	0.00562	56.53
	120	21.2	31	5.1	0.00405	50.76
	250	22.0	26	4.9	0.00288	41.40
	500	22.5	23	4.7	0.00206	35.79
	1444	20.9	21	5.2	0.00125	30.98
<=Split hyd.						



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]3

Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-11

No: 23072 (23-1725) **Depth:** 10-12 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: lt ol bn - ol bn clay

Reduced by: AT Comments:

Reviewed by: JC

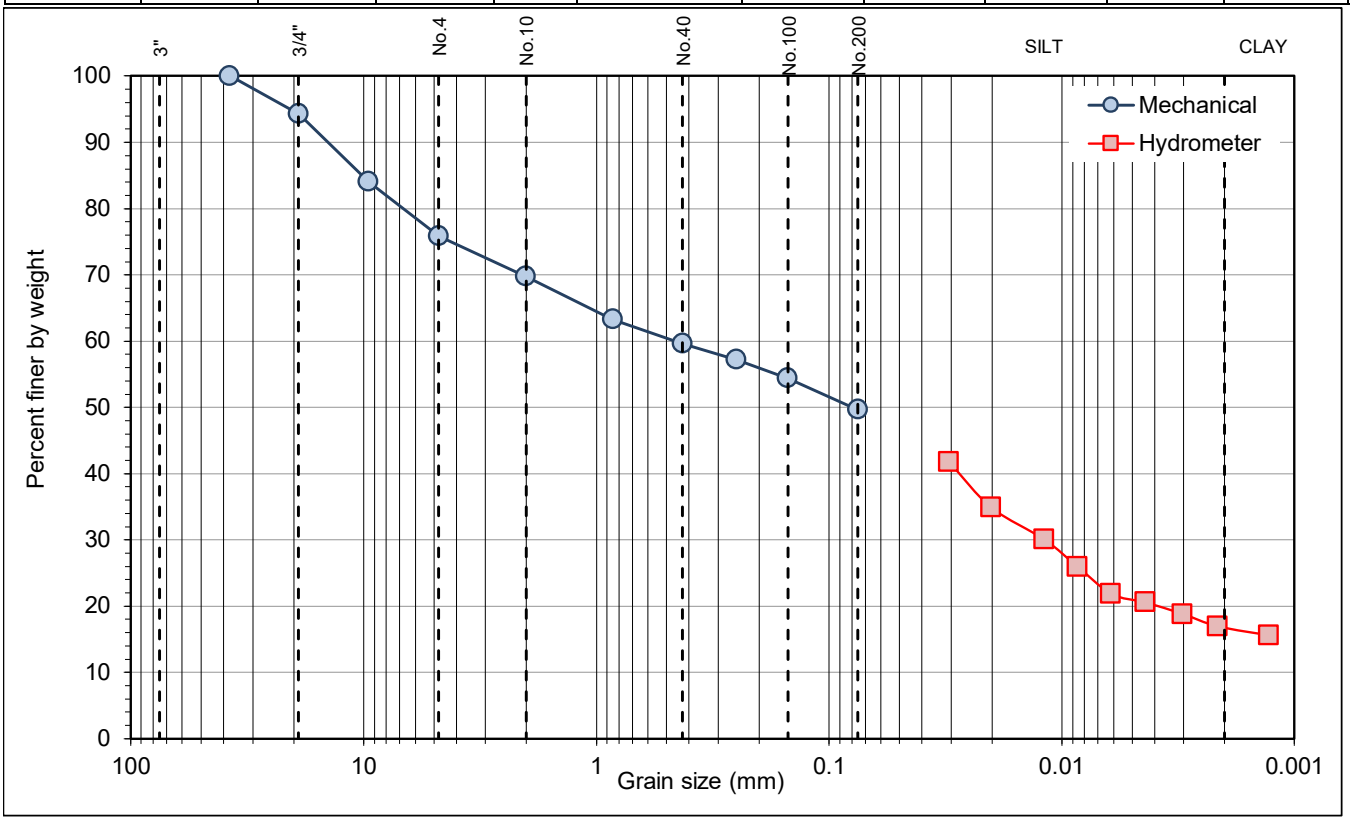
Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	621.27	566.27
+3" Coarse fraction (g):		
-3" Split fraction (g):	621.27	566.27
Hydrometer fraction (g):	50.09	50.00
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	766.77	150.52
Dry soil + tare (g):	-	711.77	150.46
Tare (g):	-	145.50	117.79
Moisture content (%):	0.00	9.71	0.18

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	69.77
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer
12"	300	-	-
8"	200	-	-
6"	150	-	-
4"	100	-	-
3"	75	-	-
1.5"	37.5	-	100.0
3/4"	19	32.39	94.3
3/8"	9.5	90.42	84.0
No.4	4.75	136.85	75.8
No.10	2	171.18	69.8
No.20	0.85	4.67	63.3
No.40	0.425	7.27	59.6
No.60	0.25	9.04	57.2
No.100	0.15	11.05	54.4
No.200	0.075	14.44	49.6

	Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
	2	20.7	35.5	5.3	0.03051	41.74
	5	20.7	30.5	5.3	0.02004	34.84
	15	20.7	27	5.3	0.01186	30.01
	30	20.8	24	5.2	0.00855	25.91
<=Split	60	21.0	21	5.2	0.00615	21.85
	120	21.2	20	5.1	0.00436	20.54
	250	22.0	18.5	4.9	0.00302	18.79
	500	22.6	17	4.7	0.00214	16.95
	1446	20.9	16.5	5.2	0.00129	15.60
<=Split hyd.						



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]4

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project:	**Bear Development Snow King Lot 53 and 58**	**TH/TP/Sample:**	**JG-10**
No:	**23072 (23-1725)**	**Depth:**	**12.5-14 ft**
Location:	-	Laboratory sample description:	ol bn - lt bn clay
Date:	14-Nov-23	USCS classification:	not requested
Tested by:	AT	Sample type:	Rel. undisturbed, Shelby Tube
Reduced by:	AT	Inundation stress (psf):	100, completion
Checked by:	JC	Swell pressure (psf):	408
Comments:	Gravel up to 1.5" in sample.	Test method:	B
		Preparation procedure:	trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.995	-
	90°	1.002	-
	180°	0.999	-
	270°	1.003	-
Avg Height, Havg (in)		1.000	0.887
Height, H (cm)		2.539	2.253
Dia., D (in)	0°	2.494	-
	90°	2.495	-
Avg Dia., Davg (in)		2.495	2.495
Dia., D (cm)		6.336	6.336
Wt. rings + wet soil (g)		373.54	369.19
Wt. rings (g)		216.21	216.21
Wet soil + tare (g)		1129.47	350.66
Dry soil + tare (g)		1044.36	324.68
Tare (g)		422.15	198.47
Moisture cont., w (%)		13.7	20.6
Gs, assumed		2.70	2.70
Mass total (g)		157.3	153.0
Mass of solids (g)		138.4	138.4
Volume (cm^3)		80.1	71.0
Vol. of water (cm^3)		18.9	14.6
Vol. of solids (cm^3)		51.3	51.3
Vol. of voids (cm^3)		28.8	19.8
Vol. of air (cm^3)		9.9	5.2
Area, A (cm^2)		31.5	31.5
Ht. solids, Hs (cm)		1.626	1.626
Void ratio, e		0.562	0.386
Porosity, n		0.360	0.278
Vol.moisture, T		0.236	0.205
Saturation, S (%)		66	74
Dry density (gm/cm^3)		1.729	1.949
Wet unit wt., gm (pcf)		122.7	146.7
Dry unit wt., gd (pcf)		107.9	121.6

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9998	0.0000	0.5620	0
408	0.0000	0.9997	0.0000	0.5620	120
800	0.0034	0.9964	0.0034	0.5568	131
1,600	0.0108	0.9890	0.0108	0.5452	207
3,200	0.0278	0.9719	0.0278	0.5185	480
6,400	0.0528	0.9470	0.0528	0.4796	369
12,800	0.0843	0.9154	0.0843	0.4303	269
25,600	0.1173	0.8825	0.1173	0.3787	334
51,200	0.1513	0.8484	0.1514	0.3255	480
25,600	0.1474	0.8523	0.1475	0.3316	120
6,400	0.1325	0.8672	0.1326	0.3550	240
1,600	0.1129	0.8869	0.1129	0.3856	343

C'c

(0.1514-0.0528)/[Log(51200)-Log(6400)]

0.0986/(4.71-3.81)

C'c= 0.1096

C'c = Cc/(1+e0)

0.1096 = Cc/(1+0.562)

Cc = 0.171

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

To be determined by the Geotechnical Engineer

Notes:

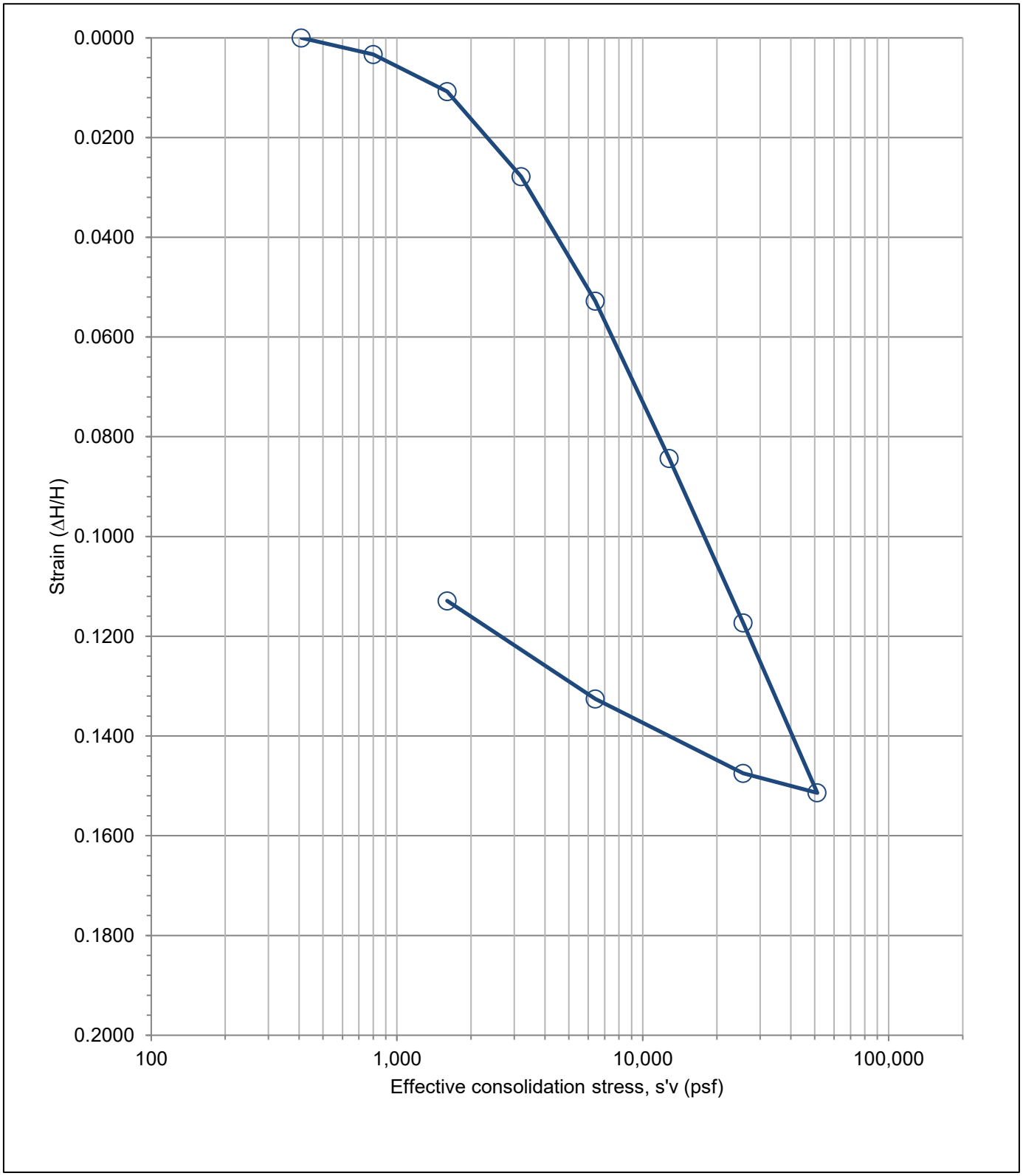
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation

[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10
No: 23072 (23-1725) **Depth:** 12.5-14 ft



One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 | **TH/TP/Sample:** JG-10
No: 23072 (23-1725) | **Depth:** 17.5-19 ft
Location: - | Laboratory sample description: ol bn - lt bn clay
Date: 14-Nov-23 | USCS classification: not requested

Tested by: AT | Sample type: Rel. undisturbed, Shelby Tube
Reduced by: AT | Inundation stress (psf): 100, completion
Checked by: JC | Swell pressure (psf): <100
Comments: | Test method: B
Preparation procedure: trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.985	-
	90°	0.987	-
	180°	0.988	-
	270°	0.989	-
Avg Height, Havg (in)		0.987	0.884
Height, H (cm)		2.508	2.245
Dia., D (in)	0°	2.487	-
	90°	2.496	-
Avg Dia., Davg (in)		2.492	2.492
Dia., D (cm)		6.328	6.328
Wt. rings + wet soil (g)		384.09	380.81
Wt. rings (g)		214.28	214.28
Wet soil + tare (g)		860.87	285.37
Dry soil + tare (g)		758.40	266.49
Tare (g)		13.83	119.06
Moisture cont., w (%)		13.8	12.8
Gs, assumed		2.70	2.70
Mass total (g)		169.8	166.5
Mass of solids (g)		149.3	149.3
Volume (cm^3)		78.9	70.6
Vol. of water (cm^3)		20.5	17.3
Vol. of solids (cm^3)		55.3	55.3
Vol. of voids (cm^3)		23.6	15.3
Vol. of air (cm^3)		3.0	-1.9
Area, A (cm^2)		31.5	31.5
Ht. solids, Hs (cm)		1.758	1.758
Void ratio, e		0.427	0.278
Porosity, n		0.299	0.217
Vol.moisture, T		0.260	0.244
Saturation, S (%)		87	113
Dry density (gm/cm^3)		1.892	2.113
Wet unit wt., gm (pcf)		134.4	148.8
Dry unit wt., gd (pcf)		118.1	131.9

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9873	0.0000	0.4267	0
100	0.0000	0.9872	0.0000	0.4267	108
200	0.0029	0.9844	0.0029	0.4225	123
400	0.0060	0.9813	0.0061	0.4181	210
800	0.0111	0.9761	0.0113	0.4106	96
1,600	0.0185	0.9687	0.0188	0.3999	176
3,200	0.0296	0.9576	0.0300	0.3839	480
6,400	0.0512	0.9360	0.0519	0.3527	89
12,800	0.0722	0.9150	0.0732	0.3223	123
25,600	0.0998	0.8875	0.1010	0.2826	155
51,200	0.1267	0.8605	0.1284	0.2436	315
25,600	0.1236	0.8637	0.1251	0.2482	120
6,400	0.1163	0.8709	0.1178	0.2586	210
1,600	0.1032	0.8840	0.1046	0.2775	980

C'c

(0.1284-0.0732)/[Log(51200)-Log(12800)]

0.0552/(4.71-4.1072)

C'c= 0.091

C'c = Cc/(1+e0)

0.091 = Cc/(1+0.427)

Cc = 0.13

Check:

Cc=(change in void ratio)/(Log change in pressure)

Cc=(0.2436-0.3223)/[Log(51200)-Log(12800)]

Cc=-0.0787/0.6028

Cc=-0.13

~~WHY DOES IT CALCULATE A NEGATIVE VALUE?~~

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

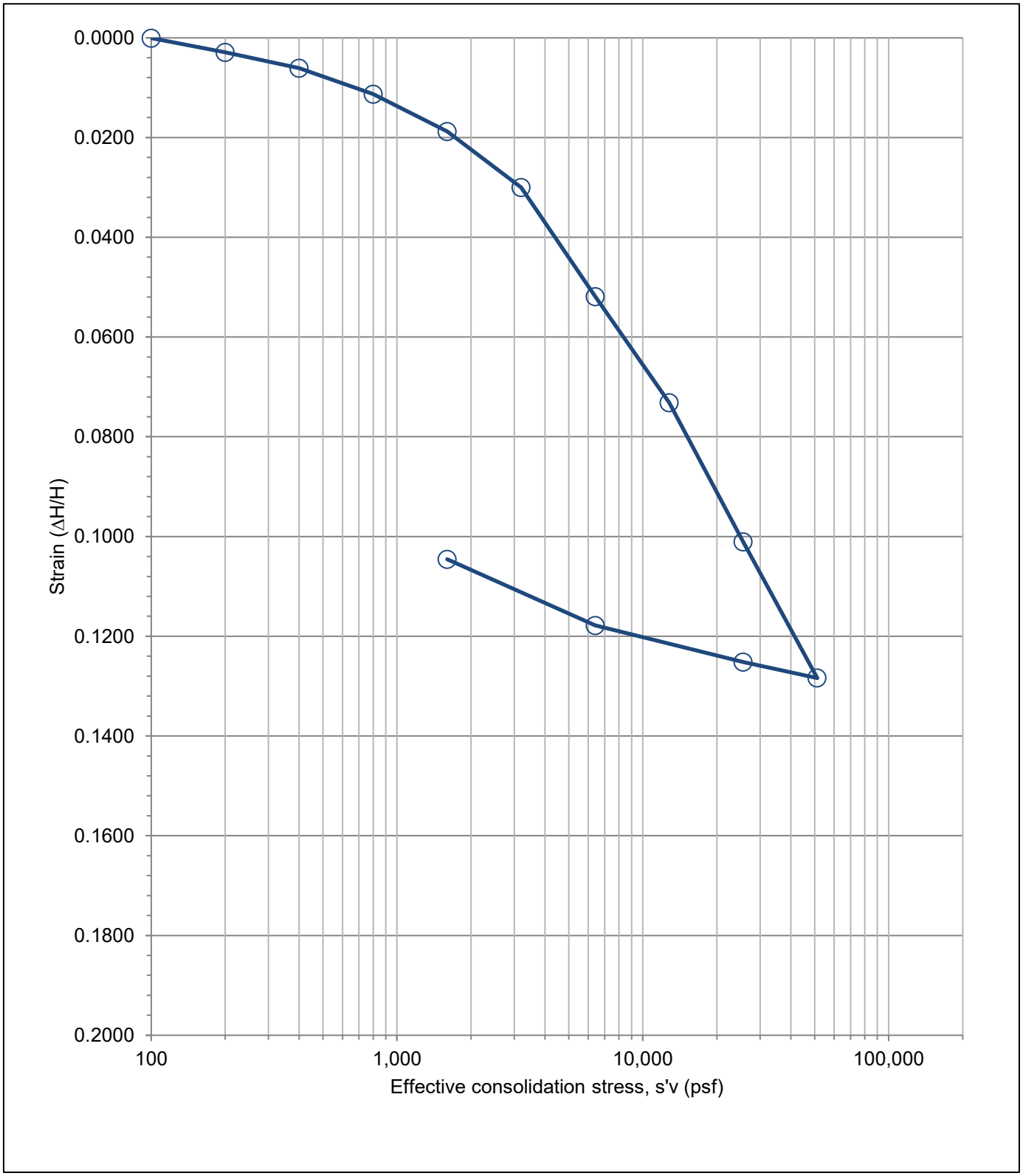
To be determined by the Geotechnical Engineer

Notes:
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation
[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10
No: 23072 (23-1725) **Depth:** 17.5-19 ft



Direct Shear of Soils Under Consolidated Drained Conditions, ASTM D3080

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson # 21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

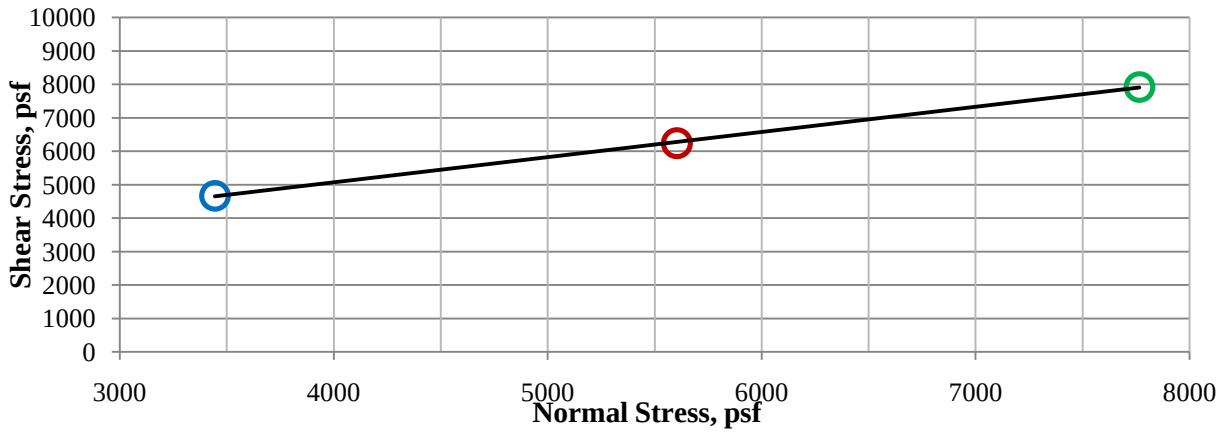
Sample Data:

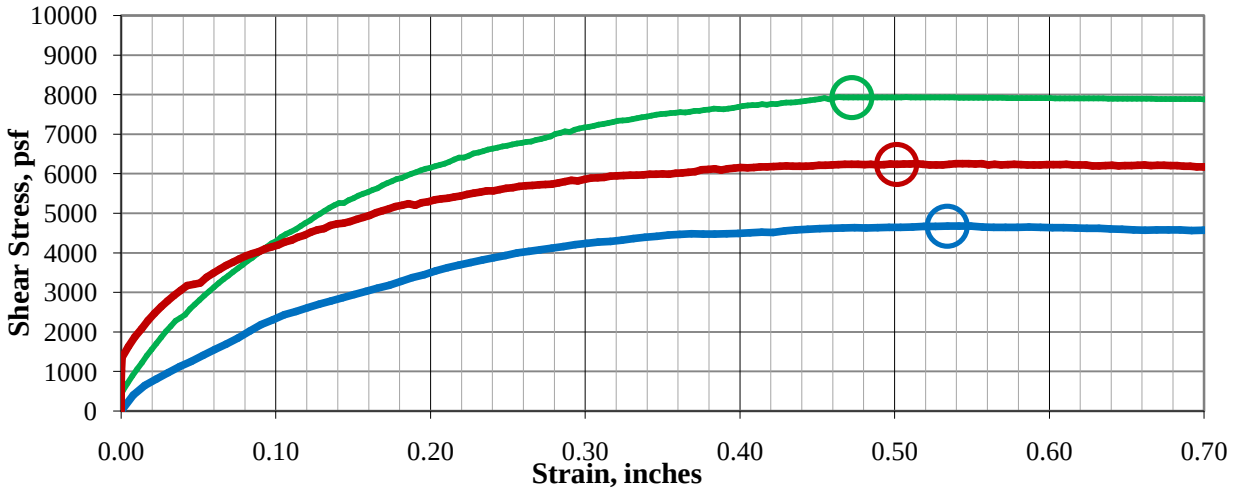
Boring: BH6-11 **Depth:** 52.5'-53' **Density:** 137.7 pcf moist

Description: Sandy Lean Clay, CL

Normal Stress, psf	Initial Moisture,%	Final Moisture,%	Consol + Collapse,%	Final Wet Density, pcf	Final Dry Density, pcf	Max Shear Stress, psf	Failure Strain,%
3444	14.4	16.2	2.2	143.1	123.1	**4673**	**22.1**
5604	14.4	15.6	3.0	143.5	124.1	**6234**	**20.7**
7764	14.4	14.7	3.8	143.6	125.2	**7924**	**19.5**

Peak Angle, ϕ° **37.0** Peak Cohesion, C, psf **2059** Strain rate, %/hour **4.1**





Remarks: Friction angle and cohesion in practice are sensitive to several other material properties, and conditions, in the field and lab. No individual lab property of a material can substitute for overall best practices in geotechnical design, construction, and field testing by qualified professionals.

Direct Shear of Soils Under Consolidated Drained Conditions, ASTM D3080

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson # 21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

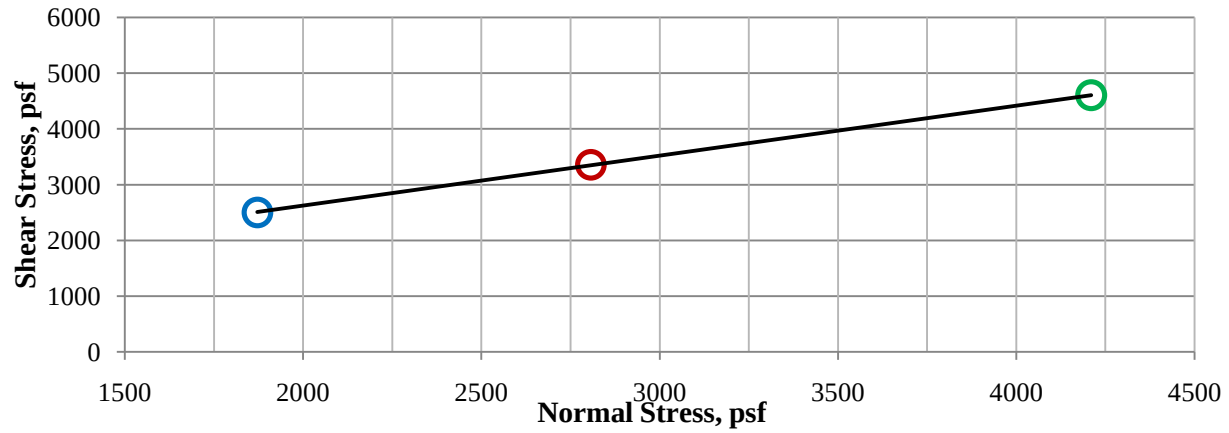
Sample Data:

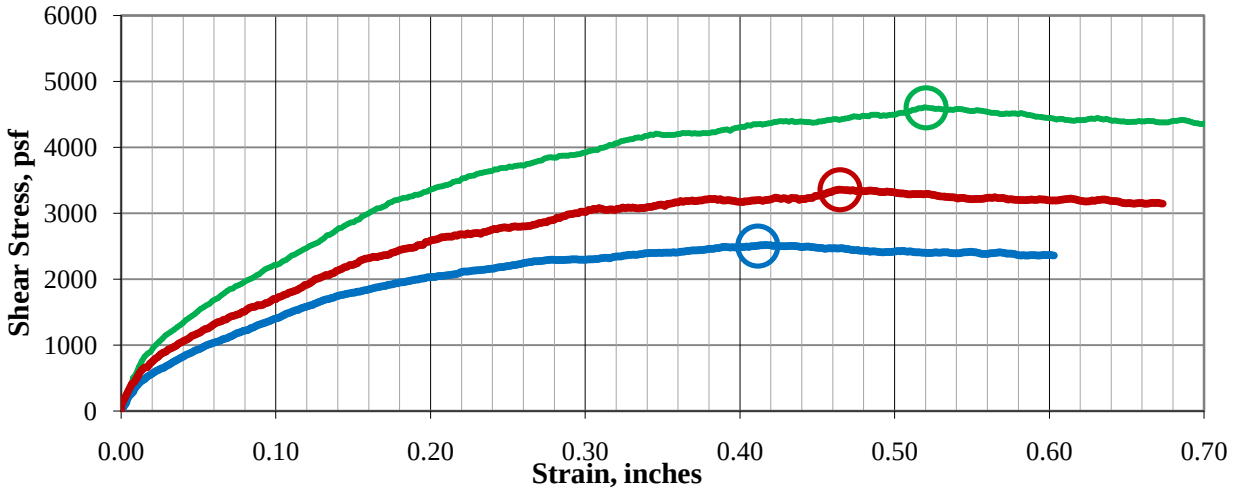
Boring: BH7-4 **Depth:** 19.5'-20' **Density:** 135.1 pcf moist

Description: Sandy Lean Clay, CL

Normal Stress, psf	Initial Moisture,%	Final Moisture,%	Consol + Collapse,%	Final Wet Density, pcf	Final Dry Density, pcf	Max Shear Stress, psf	Failure Strain,%
1871	15.5	19.5	1.5	141.9	118.7	**2505**	**17.0**
2806	15.5	17.6	2.6	141.2	120.1	**3358**	**19.2**
4210	15.5	15.8	3.6	140.5	121.3	**4602**	**21.5**

Peak Angle, ϕ° **41.9** Peak Cohesion, C, psf **835** Strain rate, %/hour **4.1**





Remarks: Friction angle and cohesion in practice are sensitive to several other material properties, and conditions, in the field and lab. No individual lab property of a material can substitute for overall best practices in geotechnical design, construction, and field testing by qualified professionals.

2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

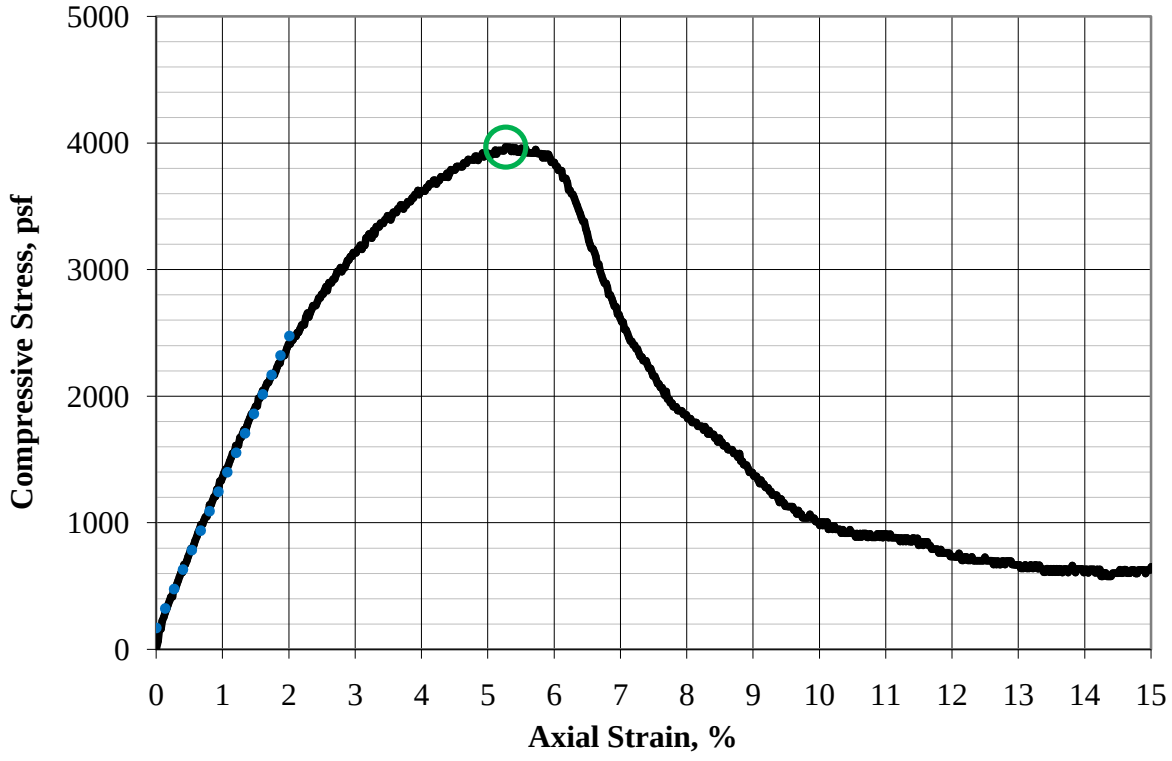
Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

Sample Data:

Boring: BH6-4B
Depth: 22.5' - 23'
Description: Lean Clay, CL

Specimen Properties:	
Average Diameter, in.	2.395
Average Height, in.	5.186
Height/Diameter (L/D)	2.17
Moisture, %	18.6
Wet density, pcf	128.5
Dry density, pcf	108.3

Undrained Unconfined Strength Properties:	
Compressive strength, psf	3968
Shear strength, psf	1984
Axial elastic modulus, psi	798
Failure strain, %	5.3
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

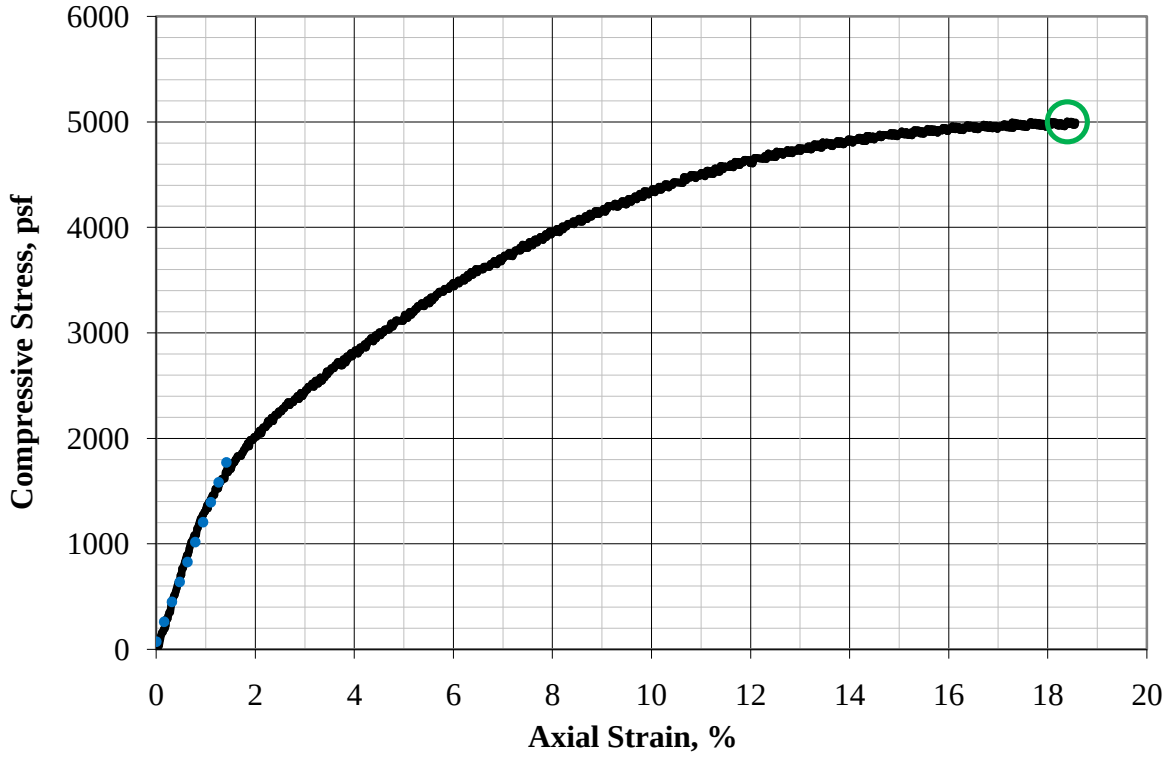
Sample Data:

Boring: BH7-6 Depth: 26' - 26.5'

Description: Lean Clay w/Sand, CL

Specimen Properties:	
Average Diameter, in.	2.389
Average Height, in.	6.044
Height/Diameter (L/D)	2.53
Moisture, %	25.6
Wet density, pcf	126.6
Dry density, pcf	100.8

Undrained Unconfined Strength Properties:	
Compressive strength, psf	5002
Shear strength, psf	2501
Axial elastic modulus, psi	834
Failure strain, %	18.4
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

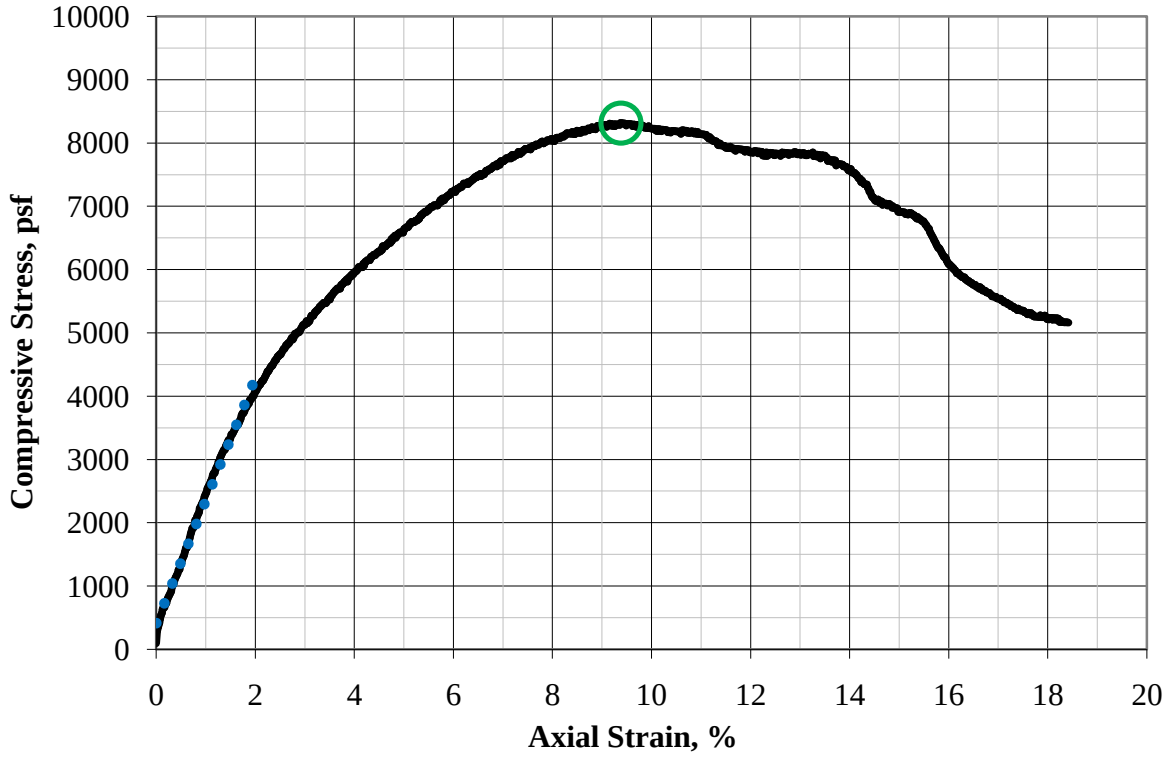
Sample Data:

Boring: BH7-13 Depth: 59.5' - 60'

Description: Sandy Lean Clay, CL

Specimen Properties:	
Average Diameter, in.	2.407
Average Height, in.	5.987
Height/Diameter (L/D)	2.49
Moisture, %	17.1
Wet density, pcf	133.3
Dry density, pcf	113.8

Undrained Unconfined Strength Properties:	
Compressive strength, psf	8315
Shear strength, psf	4158
Axial elastic modulus, psi	1346
Failure strain, %	9.4
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH1-4 Depth (ft): 29.75'-31.75'

Unified Soils Classification
SC (Clayey Sand with Gravel)

Gravel	22%
Sand	56%
Fines	23%

Liquid Limit:	27
Plastic Limit:	12
Plasticity Index:	15

In-Situ Moisture Content	10.2%

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	115.1	115.1	0.0	0%	100%
1"	25	115.1	115.1	0.0	0%	100%
3/4"	18.75	115.1	143.7	28.6	7%	93%
#4	4.75	115.1	174.2	59.1	22%	78%
#10	2.00	115.1	130.4	15.3	25%	75%
#40	0.425	115.1	131.8	16.7	29%	71%
#200	0.075	115.1	310.1	195.0	77%	23%
Pan	0	115.1	208.2	93.1	100%	0%
		Total Weight of Sample (g)		407.8		

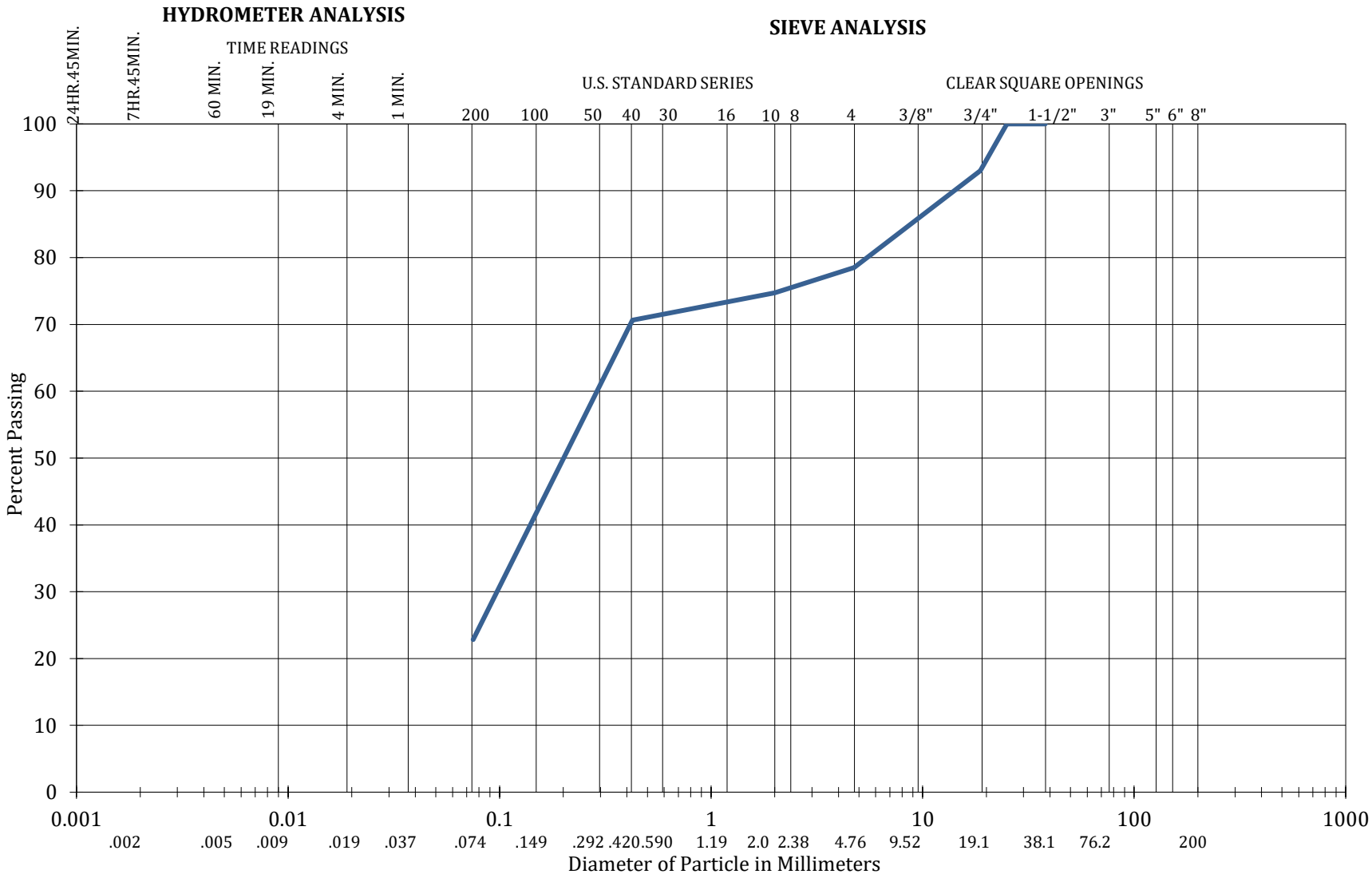
Moisture Content	
Wet Wt + Tare (g)	563.0
Dry Wt. + Tare (g)	521.6
Wt of Water (g)	41.4
Tare Wt. (g)	113.8
Dry Wt. (g)	407.8
Moisture Content	10.2%
Wash	
Wet Wt. + Tare (g)	563.0
Pre Wash Dry (g)	407.8
Post Wash Dry (g)	314.7
Tare Wt. (g)	113.8
Wt.Of Minus #200 =	93.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Brown Clayey Sand w/Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	12/7/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH1-4

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH1-5 Depth (ft): 40'-42'

Unified Soils Classification
SC (Clayey Sand)

Gravel	14%
Sand	57%
Fines	28%

Liquid Limit:	19
Plastic Limit:	4
Plasticity Index:	15

In-Situ Moisture Content	11.6%

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	115.1	115.1	0.0	0%	100%
1"	25	115.1	115.1	0.0	0%	100%
3/4"	18.75	115.1	127.5	12.4	2%	98%
#4	4.75	115.1	186.5	71.4	14%	86%
#10	2.00	115.1	144.7	29.6	19%	81%
#40	0.425	115.1	127.2	12.1	21%	79%
#200	0.075	115.1	411.2	296.1	72%	28%
Pan	0	115.1	282.0	166.9	100%	0%
		Total Weight of Sample (g)		588.5		

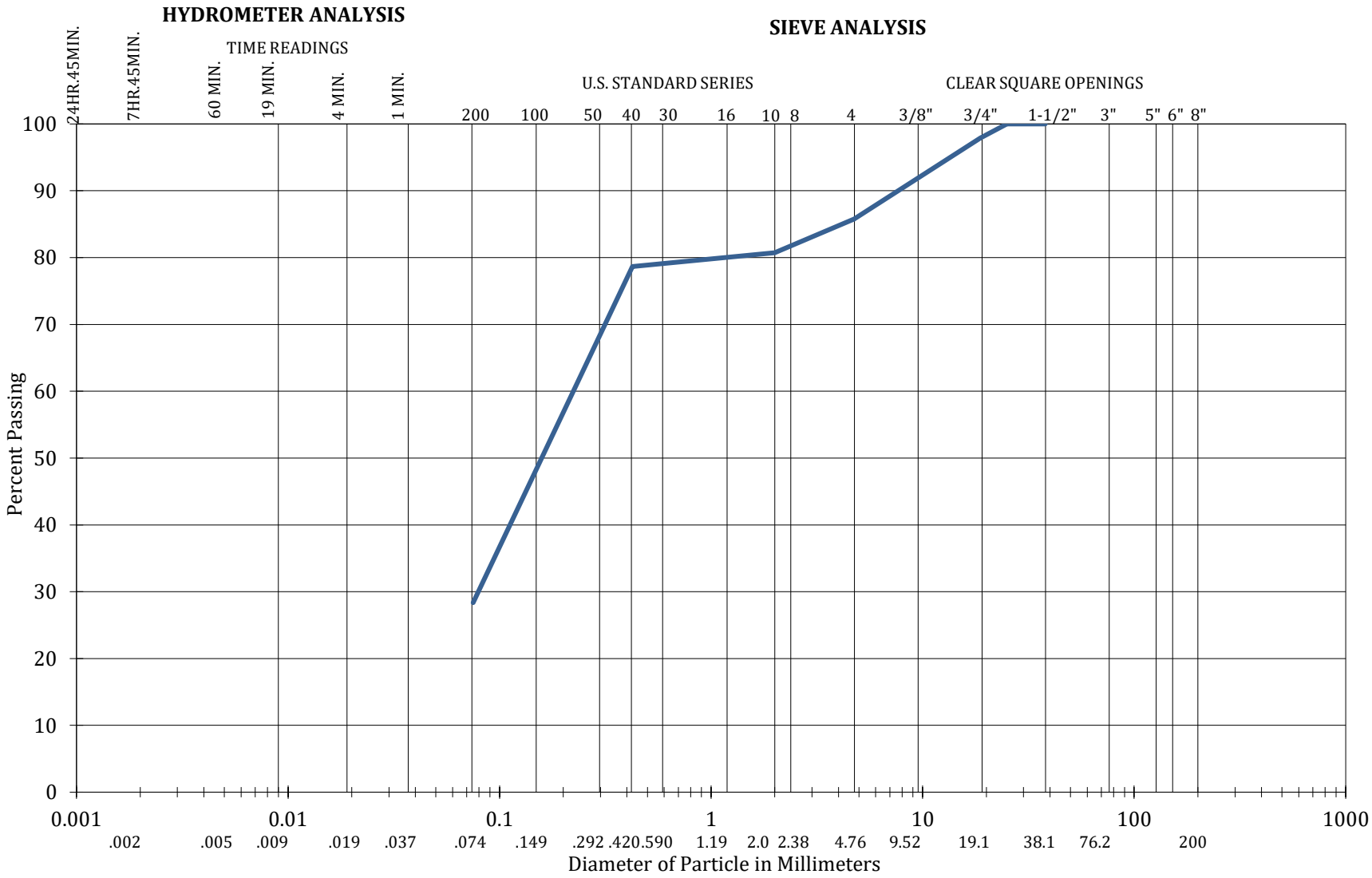
Moisture Content	
Wet Wt + Tare (g)	770.5
Dry Wt. + Tare (g)	702.3
Wt of Water (g)	68.2
Tare Wt. (g)	113.8
Dry Wt. (g)	588.5
Moisture Content	11.6%
Wash	
Wet Wt. + Tare (g)	770.5
Pre Wash Dry (g)	588.5
Post Wash Dry (g)	421.6
Tare Wt. (g)	113.8
Wt.Of Minus #200 =	166.9

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Brown Sandy Clay

Sampled By:	PG
Date:	
Tested By:	AP
Date:	12/7/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH1-5

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH1-6 Depth (ft): 45'-47'

Unified Soils Classification
SC (Clayey Sand)

Gravel	0%
Sand	66%
Fines	34%

Liquid Limit:	30
Plastic Limit:	6
Plasticity Index:	24

In-Situ Moisture Content	19.3%

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.7	110.7	0.0	0%	100%
1"	25	110.7	110.7	0.0	0%	100%
3/4"	18.75	110.7	110.7	0.0	0%	100%
#4	4.75	110.7	110.7	0.0	0%	100%
#10	2.00	110.7	110.7	0.0	0%	100%
#40	0.425	110.7	129.9	19.2	2%	98%
#200	0.075	110.7	622.1	511.4	66%	34%
Pan	0	110.7	382.8	272.1	100%	0%
		Total Weight of Sample (g)		802.7		

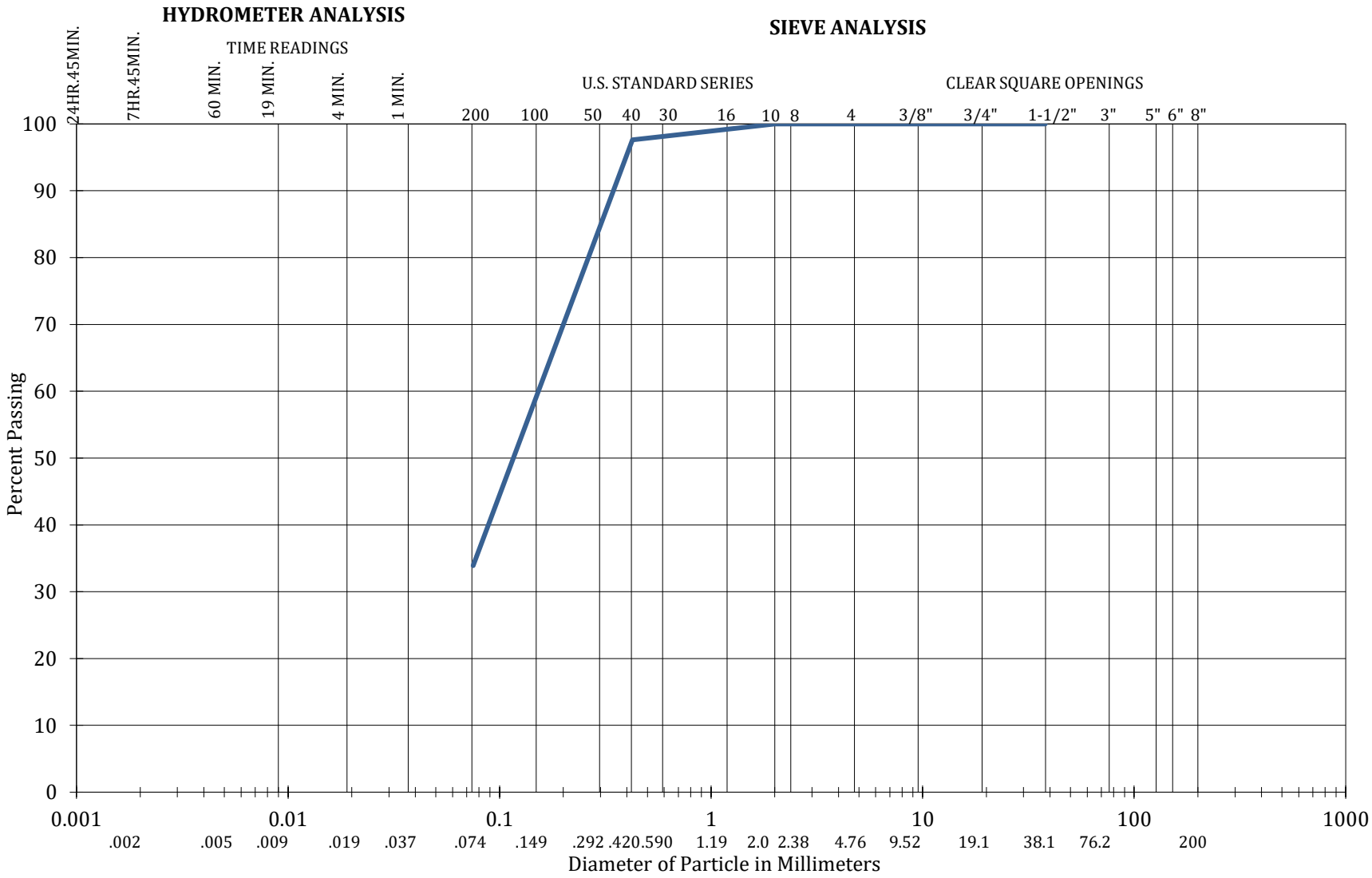
Moisture Content	
Wet Wt + Tare (g)	1067.4
Dry Wt. + Tare (g)	912.6
Wt of Water (g)	154.8
Tare Wt. (g)	109.9
Dry Wt. (g)	802.7
Moisture Content	19.3%
Wash	
Wet Wt. + Tare (g)	1067.4
Pre Wash Dry (g)	802.7
Post Wash Dry (g)	530.6
Tare Wt. (g)	109.9
Wt.Of Minus #200 =	272.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Brown Clayey Sand

Sampled By:	PG
Date:	
Tested By:	AP
Date:	12/7/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH1-6

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH5 @ 23'-28' Depth (ft): 23'-28'

Unified Soils Classification
SC (Clayey Sand)

Gravel	7%
Sand	55%
Fines	38%

Liquid Limit:	29
Plastic Limit:	4
Plasticity Index:	25

In-Situ Moisture Content	N/A

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.1	110.1	0.0	0%	100%
1"	25	110.1	110.1	0.0	0%	100%
3/4"	18.75	110.1	110.1	0.0	0%	100%
#4	4.75	110.1	147.1	37.0	7%	93%
#10	2.00	110.1	134.6	24.5	11%	89%
#40	0.425	110.1	145.4	35.3	18%	82%
#200	0.075	110.1	343.2	233.1	62%	38%
Pan	0	110.1	316.3	206.2	100%	0%
		Total Weight of Sample (g)		536.1		

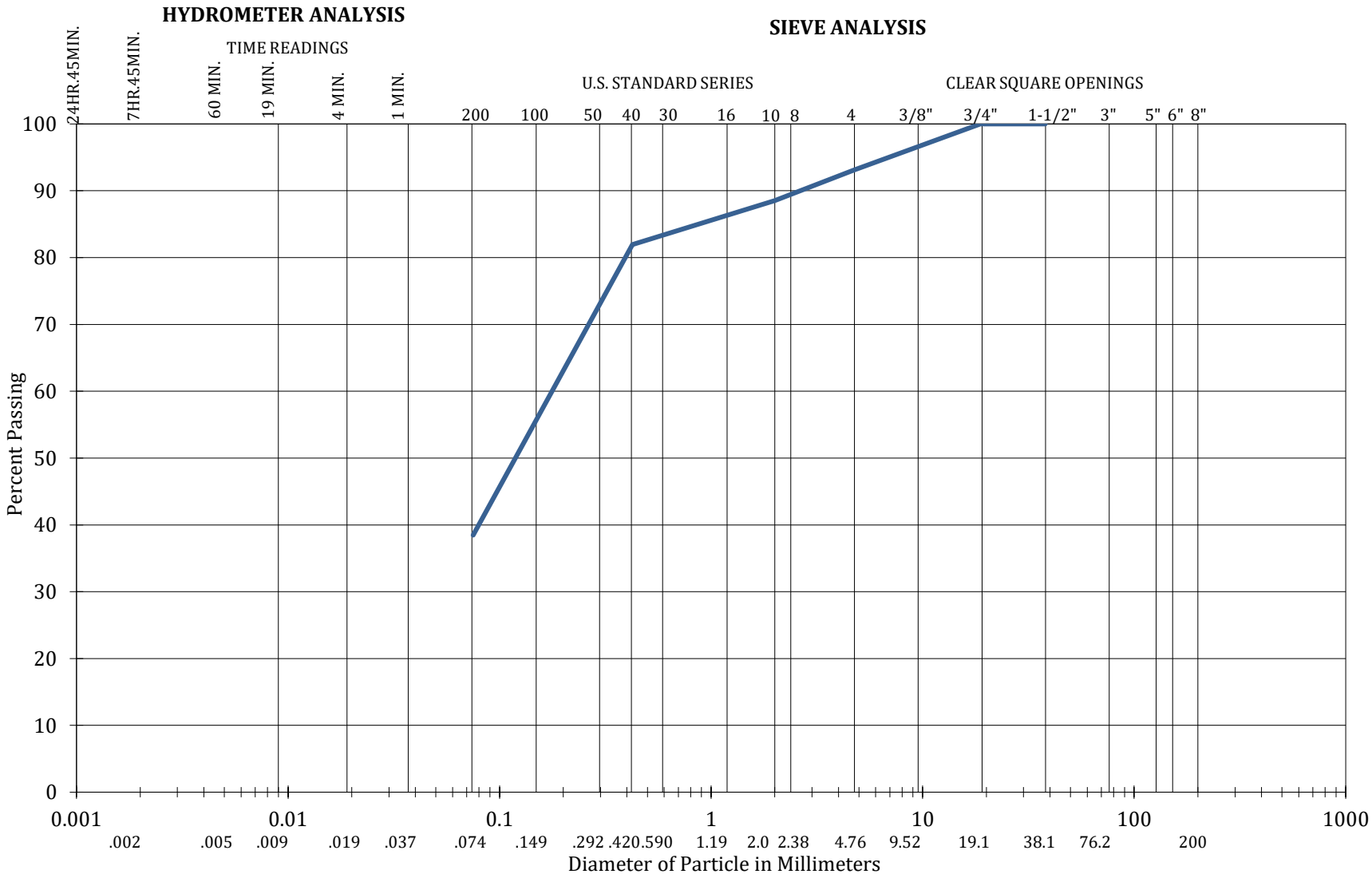
Moisture Content	
Wet Wt + Tare (g)	-
Dry Wt. + Tare (g)	-
Wt of Water (g)	-
Tare Wt. (g)	-
Dry Wt. (g)	-
Moisture Content	-
Wash	
Wet Wt. + Tare (g)	
Pre Wash Dry (g)	536.1
Post Wash Dry (g)	329.9
Tare Wt. (g)	109.9
Wt.Of Minus #200 =	206.2

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Tan Clayey Sand with Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	1/8/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH5 @ 23'-28'

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH5 @ 37'-41' Depth (ft): 37'-41'

Unified Soils Classification
SC (Clayey Sand)

Gravel	7%
Sand	68%
Fines	25%

Liquid Limit:	28
Plastic Limit:	12
Plasticity Index:	16

In-Situ Moisture Content	N/A

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.1	110.1	0.0	0%	100%
1"	25	110.1	110.1	0.0	0%	100%
3/4"	18.75	110.1	110.1	0.0	0%	100%
#4	4.75	110.1	163.8	53.7	7%	93%
#10	2.00	110.1	139.7	29.6	11%	89%
#40	0.425	110.1	196.8	86.7	23%	77%
#200	0.075	110.1	502.4	392.3	75%	25%
Pan	0	110.1	298.2	188.1	100%	0%
		Total Weight of Sample (g)		750.4		

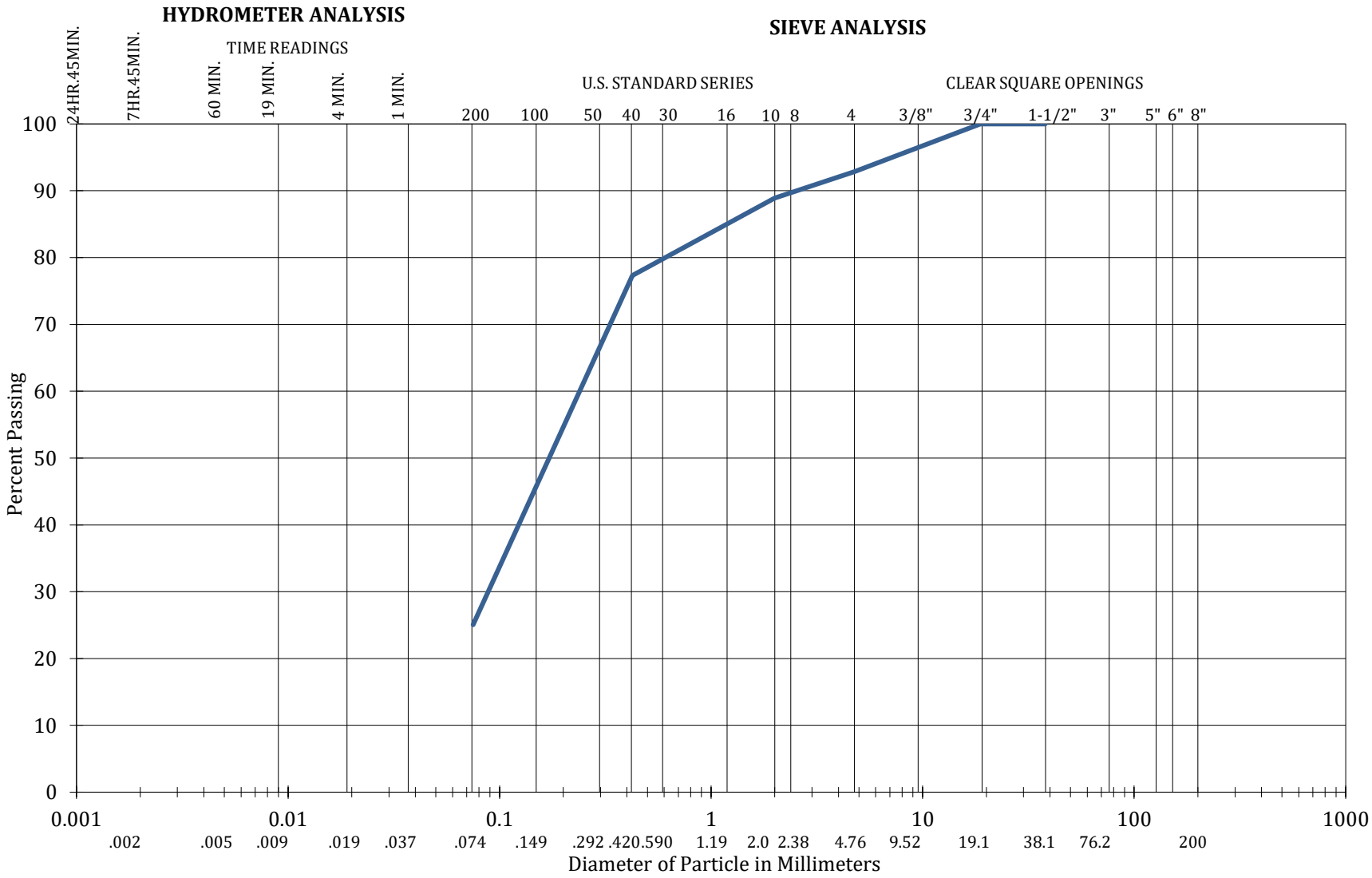
Moisture Content	
Wet Wt + Tare (g)	-
Dry Wt. + Tare (g)	-
Wt of Water (g)	-
Tare Wt. (g)	-
Dry Wt. (g)	-
Moisture Content	-
Wash	
Wet Wt. + Tare (g)	
Pre Wash Dry (g)	750.4
Post Wash Dry (g)	562.3
Tare Wt. (g)	114.3
Wt.Of Minus #200 =	188.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Gray Clayey Sand with Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	1/8/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH5 @ 37'-41'

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH6-4B Depth (ft): 22'-23'

Unified Soils Classification
Lean Clay, CL

Gravel	**0%**
Sand	**12%**
Fines	**87%**

Liquid Limit:	**33**
Plastic Limit:	**15**
Plasticity Index:	**18**

In-Situ Moisture Content	**17.5%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.2	292.2	0.0	0%	100%
1"	25	292.2	292.2	0.0	0%	100%
3/4"	18.75	292.2	292.2	0.0	0%	100%
3/8"	9.5	292.2	292.2	0.0	0%	100%
#4	4.75	292.2	293.3	1.0	0%	100%
#10	2.00	292.2	293.3	1.1	1%	99%
#40	0.425	292.2	304.0	11.8	5%	95%
#100	0.15	292.2	301.3	9.1	9%	91%
#200	0.075	292.2	303.4	11.2	13%	87%
Pan	0	292.2	527.4	235.2	100%	0%
		Total Weight of Sample (g)		**269.3**		

Moisture Content	
Wet Wt + Tare (g)	940.7
Dry Wt. + Tare (g)	825.9
Wt of Water (g)	114.8
Tare Wt. (g)	170.9
Dry Wt. (g)	654.9
Moisture Content	17.5%
Wash	
Wet Wt. + Tare (g)	940.7
Pre Wash Dry (g)	269.3
Post Wash Dry (g)	34.2
Tare Wt. (g)	292.2
Wt.Of Minus #200 =	235.2

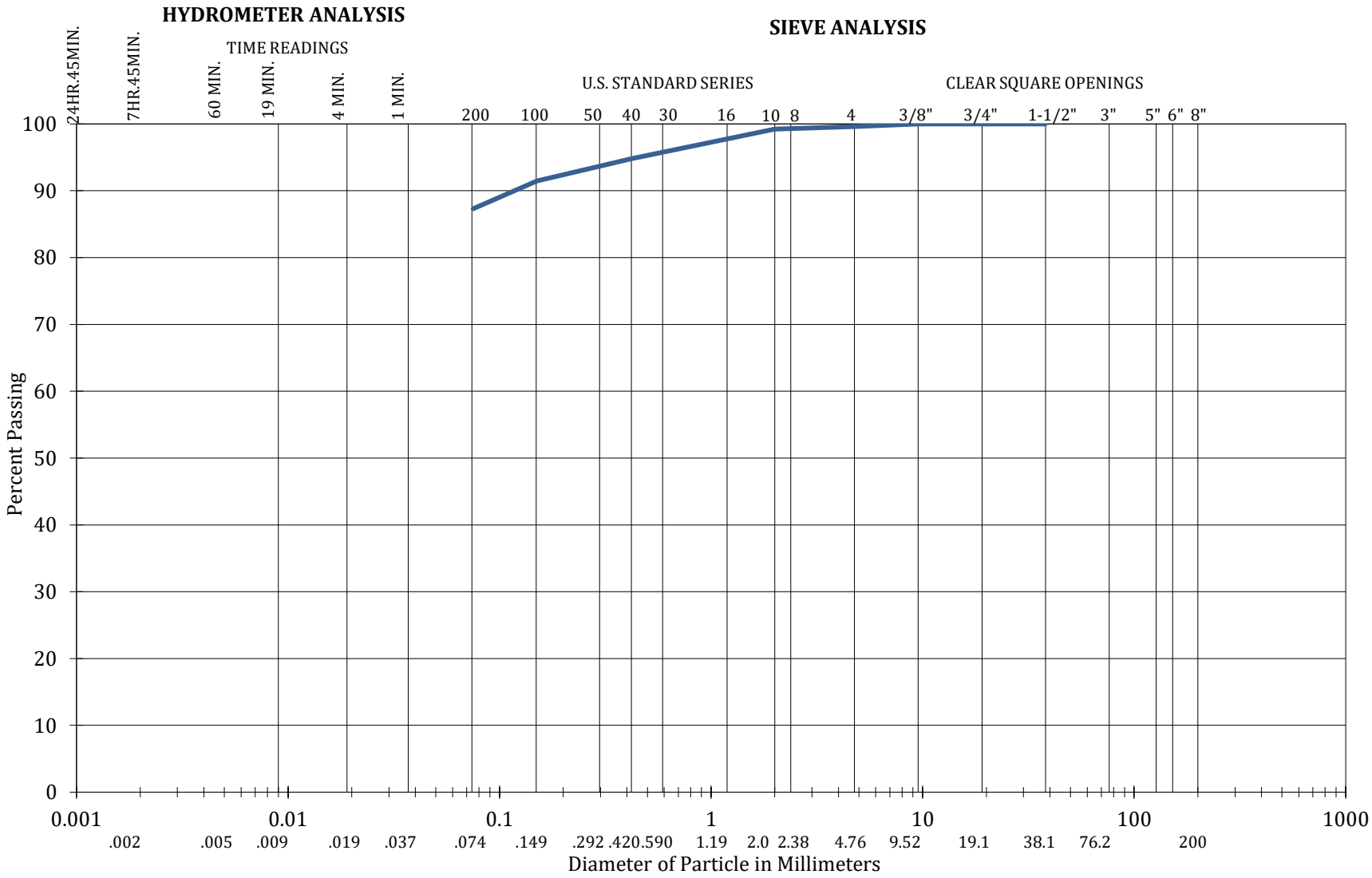
Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Olive Green Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/2/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION SIEVE CHART

WWW.NELSONENGINEERING.NET



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH6-4B

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH6-11 Depth (ft): 52'-53'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**9%**
Sand	**25%**
Fines	**66%**

Liquid Limit:	**25**
Plastic Limit:	**11**
Plasticity Index:	**14**

In-Situ Moisture Content	**16.5%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	171.0	171.0	0.0	0%	100%
1"	25	171.0	171.0	0.0	0%	100%
3/4"	18.75	171.0	171.0	0.0	0%	100%
3/8"	9.5	171.0	205.5	34.5	5%	95%
#4	4.75	171.0	206.3	35.3	9%	91%
#10	2.00	171.0	231.4	60.4	17%	83%
#40	0.425	171.0	226.7	55.7	25%	75%
#100	0.15	171.0	200.2	29.2	29%	71%
#200	0.075	171.0	213.6	42.7	34%	66%
Pan	0	171.0	661.8	490.9	100%	0%
		Total Weight of Sample (g)		**748.7**		

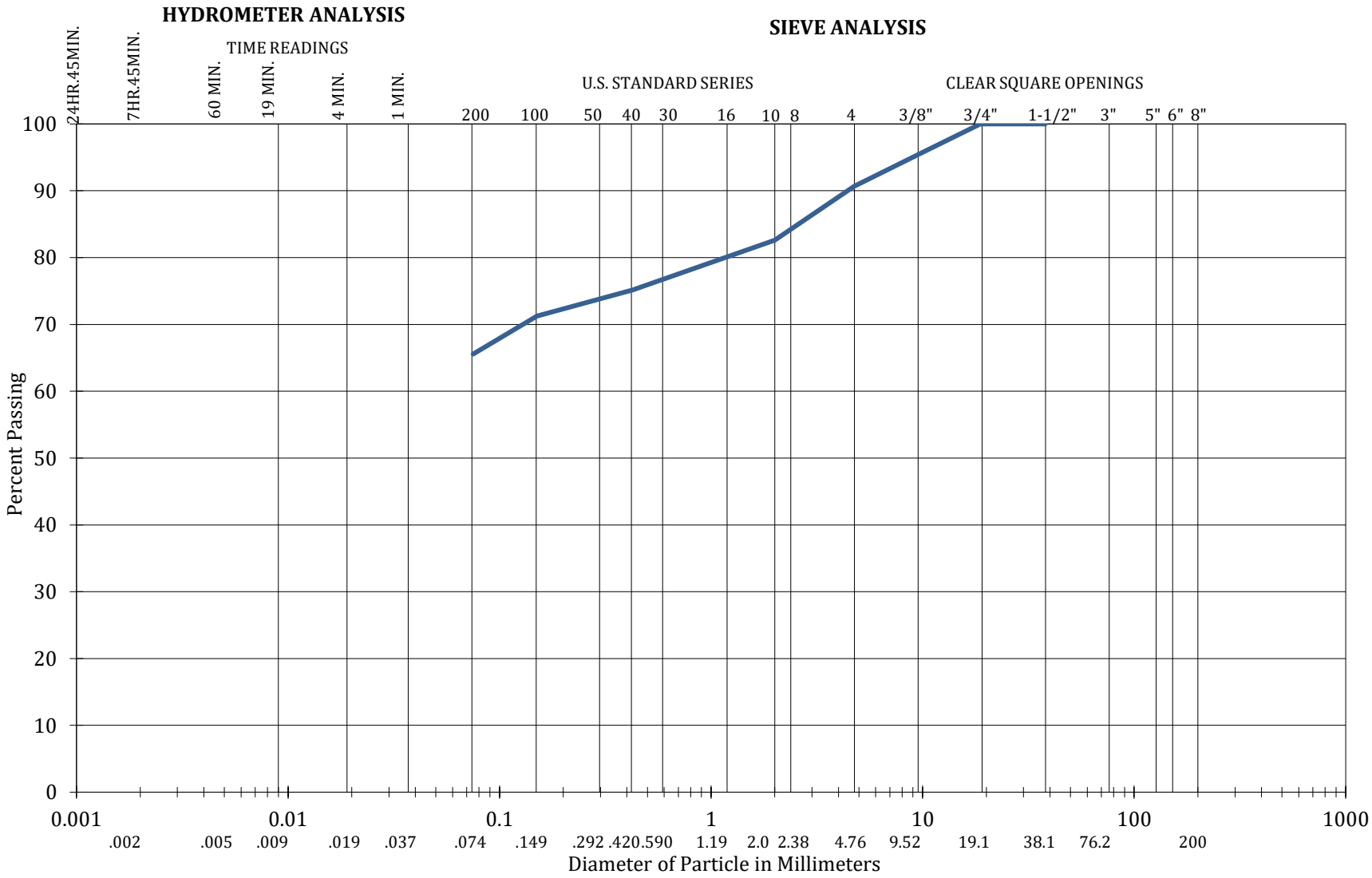
Moisture Content	
Wet Wt + Tare (g)	851.2
Dry Wt. + Tare (g)	754.8
Wt of Water (g)	96.4
Tare Wt. (g)	170.8
Dry Wt. (g)	584.0
Moisture Content	16.5%
Wash	
Wet Wt. + Tare (g)	851.2
Pre Wash Dry (g)	748.7
Post Wash Dry (g)	257.8
Tare Wt. (g)	170.4
Wt.Of Minus #200 =	490.9

Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Sandy Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/7/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH6-11

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH7-4 Depth (ft): 19'-20'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**9%**
Sand	**27%**
Fines	**64%**

Liquid Limit:	**25**
Plastic Limit:	**14**
Plasticity Index:	**11**

In-Situ Moisture Content	**13.2%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.3	292.3	0.0	0%	100%
1"	25	292.3	292.3	0.0	0%	100%
3/4"	18.75	292.3	292.3	0.0	0%	100%
3/8"	9.5	292.3	301.7	9.5	3%	97%
#4	4.75	292.3	307.6	15.4	9%	91%
#10	2.00	292.3	310.8	18.5	16%	84%
#40	0.425	292.3	311.2	18.9	23%	77%
#100	0.15	292.3	306.4	14.1	28%	72%
#200	0.075	292.3	313.4	21.1	36%	64%
Pan	0	292.3	467.0	174.8	100%	0%
		Total Weight of Sample (g)		**272.2**		

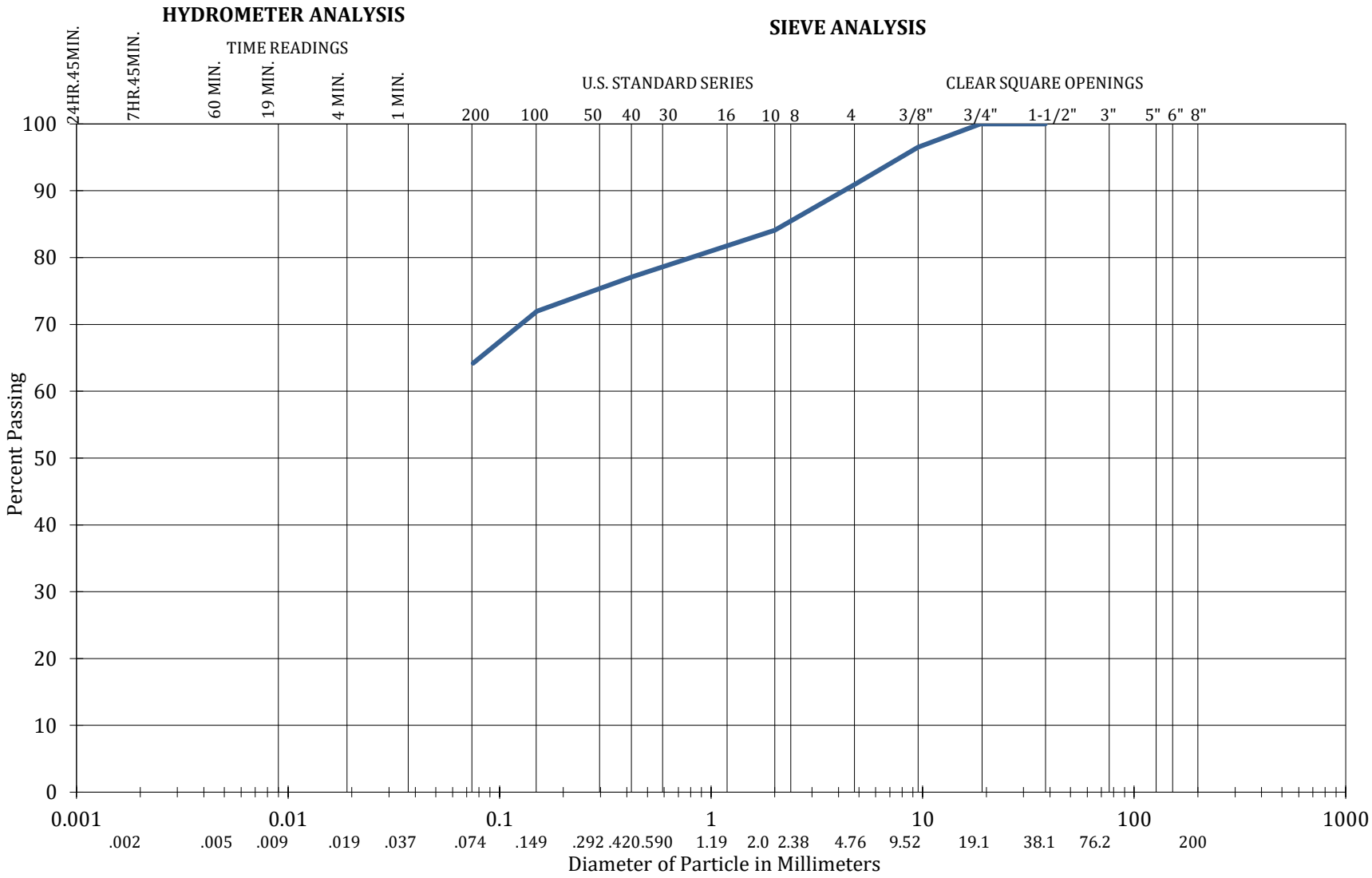
Moisture Content	
Wet Wt + Tare (g)	1193.5
Dry Wt. + Tare (g)	1074.5
Wt of Water (g)	118.9
Tare Wt. (g)	170.9
Dry Wt. (g)	903.7
Moisture Content	13.2%
Wash	
Wet Wt. + Tare (g)	1193.5
Pre Wash Dry (g)	272.2
Post Wash Dry (g)	97.5
Tare Wt. (g)	292.3
Wt.Of Minus #200 =	174.8

Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Sandy Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/2/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH7-4

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH7-6 Depth (ft): 25.5'-26.5'

Unified Soils Classification

Lean Clay with Sand, CL

Gravel	**4%**
Sand	**15%**
Fines	**81%**

Liquid Limit:	**35**
Plastic Limit:	**17**
Plasticity Index:	**18**

In-Situ Moisture Content	**20.6%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.3	292.3	0.0	0%	100%
1"	25	292.3	292.3	0.0	0%	100%
3/4"	18.75	292.3	292.3	0.0	0%	100%
3/8"	9.5	292.3	298.7	6.4	2%	98%
#4	4.75	292.3	297.1	4.8	4%	96%
#10	2.00	292.3	296.7	4.4	5%	95%
#40	0.425	292.3	300.0	7.7	8%	92%
#100	0.15	292.3	302.7	10.4	12%	88%
#200	0.075	292.3	312.9	20.6	19%	81%
Pan	0	292.3	531.7	239.4	100%	0%
		Total Weight of Sample (g)		**293.8**		

Moisture Content	
Wet Wt + Tare (g)	1304.2
Dry Wt. + Tare (g)	1110.3
Wt of Water (g)	193.9
Tare Wt. (g)	170.6
Dry Wt. (g)	939.7
Moisture Content	20.6%
Wash	
Wet Wt. + Tare (g)	1304.2
Pre Wash Dry (g)	293.8
Post Wash Dry (g)	54.4
Tare Wt. (g)	292.3
Wt.Of Minus #200 =	239.4

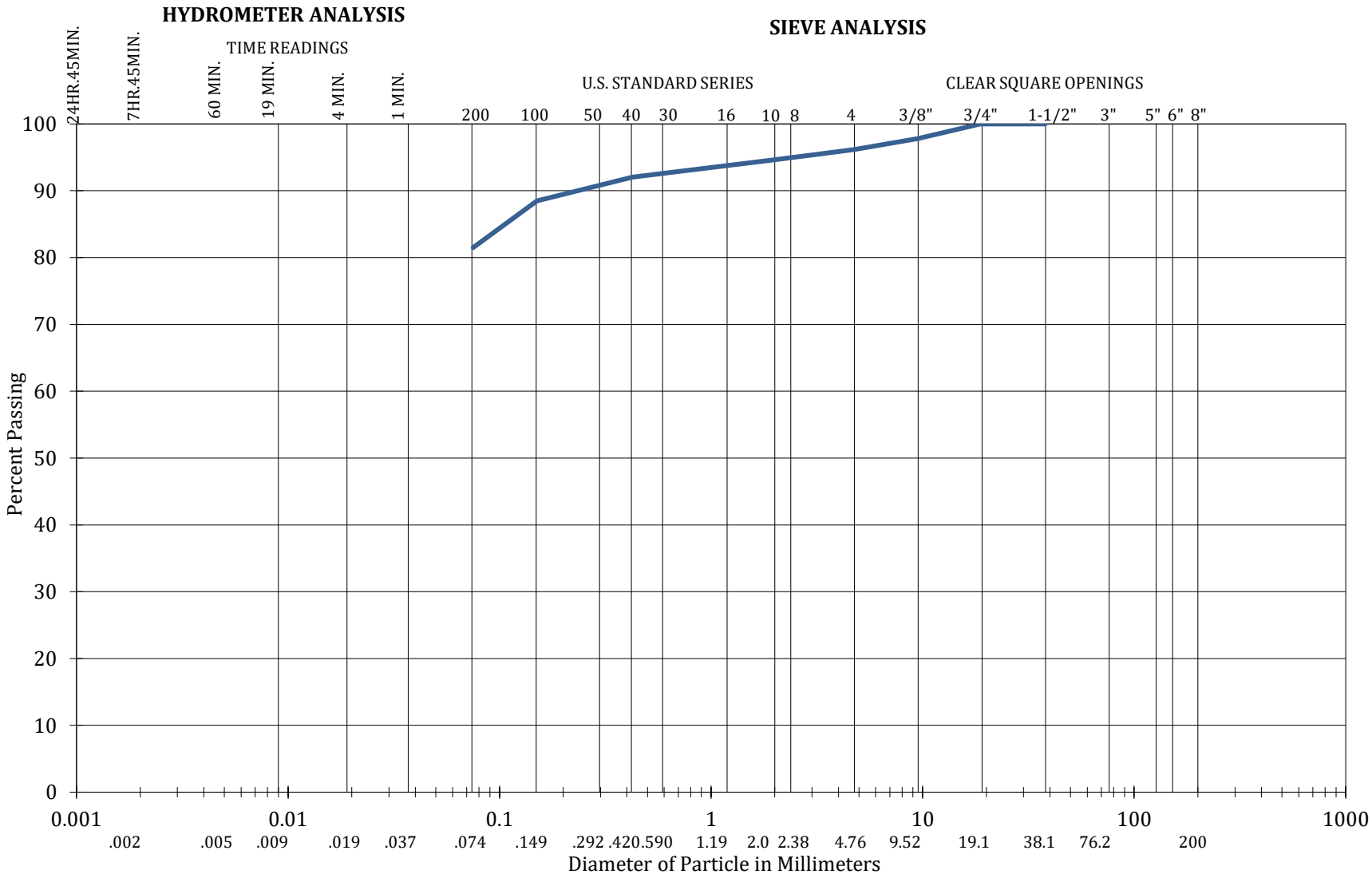
Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/1/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION SIEVE CHART

WWW.NELSONENGINEERING.NET



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH7-6

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH7-13 Depth (ft): 59'-60'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**11%**
Sand	**22%**
Fines	**67%**

Liquid Limit:	**29**
Plastic Limit:	**15**
Plasticity Index:	**14**

In-Situ Moisture Content	**17.9%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.2	292.2	0.0	0%	100%
1"	25	292.2	332.0	39.8	6%	94%
3/4"	18.75	292.2	292.2	0.0	6%	94%
3/8"	9.5	292.2	306.5	14.2	8%	92%
#4	4.75	292.2	311.7	19.4	11%	89%
#10	2.00	292.2	325.3	33.1	16%	84%
#40	0.425	292.2	327.0	34.8	21%	79%
#100	0.15	292.2	319.8	27.6	25%	75%
#200	0.075	292.2	344.3	52.0	33%	67%
Pan	0	292.2	748.9	456.6	100%	0%
		Total Weight of Sample (g)		**677.5**		

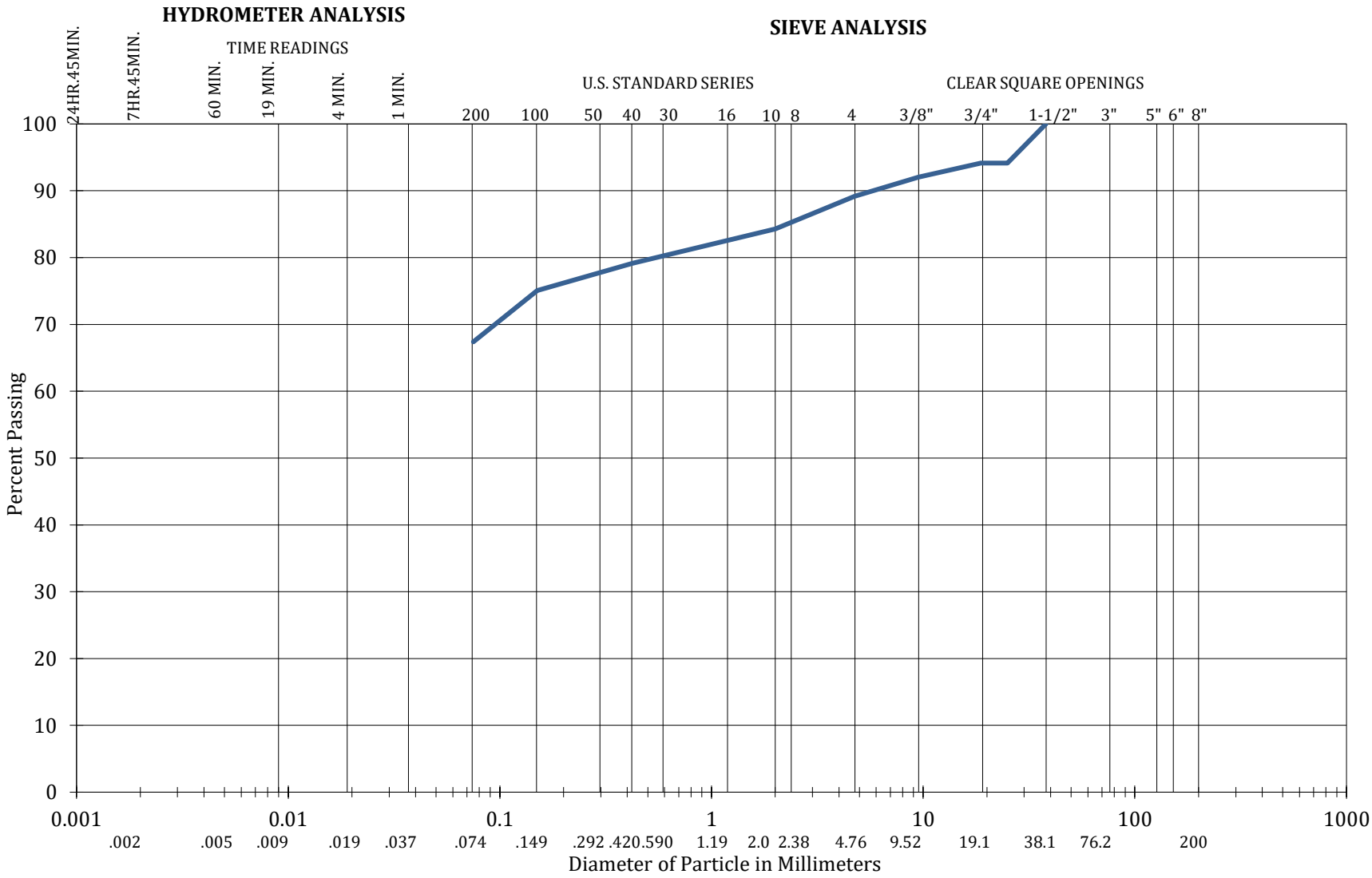
Moisture Content	
Wet Wt + Tare (g)	1000.2
Dry Wt. + Tare (g)	873.8
Wt of Water (g)	126.4
Tare Wt. (g)	169.7
Dry Wt. (g)	704.2
Moisture Content	17.9%
Wash	
Wet Wt. + Tare (g)	1000.2
Pre Wash Dry (g)	677.5
Post Wash Dry (g)	220.9
Tare Wt. (g)	169.7
Wt.Of Minus #200 =	456.6

Project:	Lot 58 Gand View Lodges
Job Number	21-222-02
Visual ID:	Gray Lean Clay with Sand

Sampled By:	AP
Date:	6/25/2021
Tested By:	AE
Date:	7/1/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

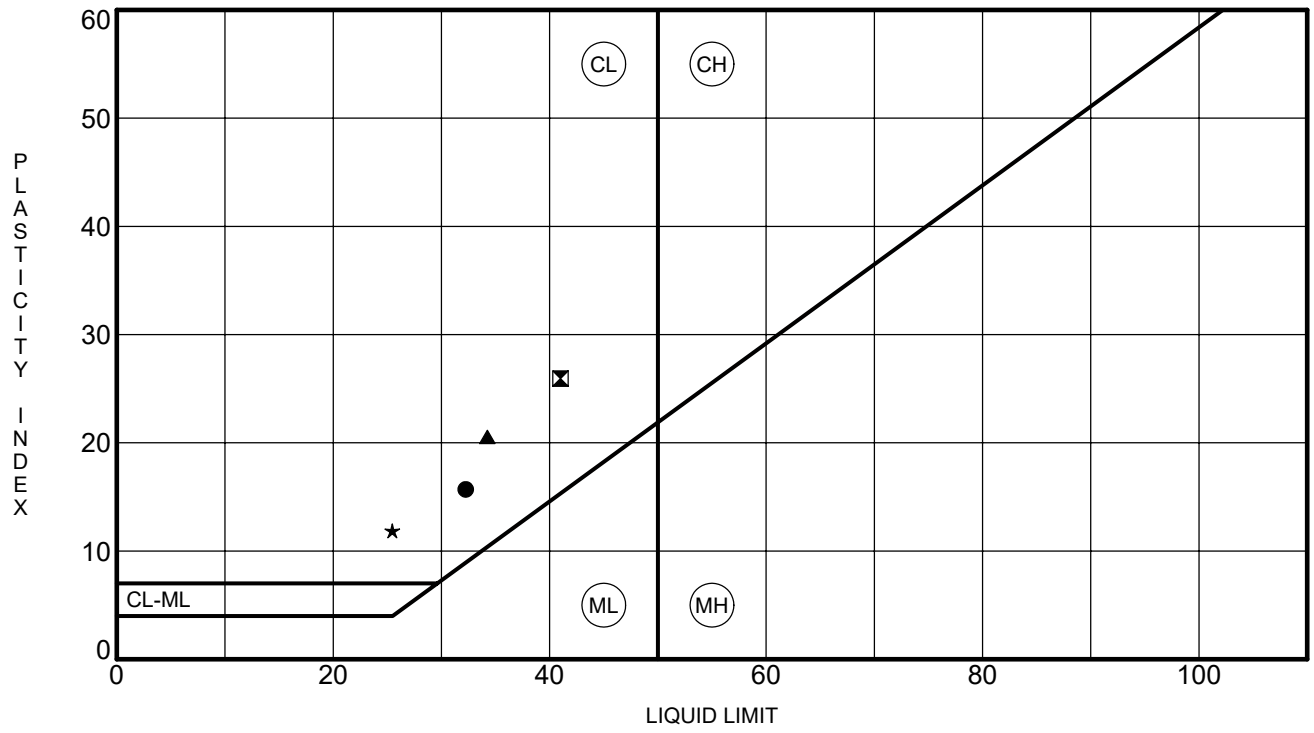
USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH7-13

Lot 58 Grand View Lodges



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**TP-1**	**9.0**	**32**	**17**	**15**		
⊠	**TP-1**	**10.0**	**41**	**15**	**26**		
▲	**TP-1**	**25.0**	**34**	**14**	**20**		
★	**TP-1**	**27.5**	**25**	**14**	**11**		

Womack & Associates, Inc.
P.O. Box 12650
Jackson, WY 83002
Telephone: (307)733-7209
Fax:

ATTERBERG LIMITS' RESULTS

Project: TOJ - Snow King Water Tank

Location: Jackson, Wyoming

Number:

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX D

Soil-Engineering Parameters

Engineering parameters for site soils were evaluated based on a variety of methods, including:

- direct laboratory testing (shear strength and consolidation),
- correlations with index tests,
- empirical relationships between SPT N-values and shear strength, and
- visual classification and empirical estimates.

Due to the chaotic and random nature of the soils (i.e., mixture of fine-grained and coarse-grained soils), collecting relatively undisturbed shelby tube samples of fine-grained soil layers during the drilling effort to perform shear tests and consolidation tests on was difficult. Therefore, very limited soil parameters for soil unit weight, consolidation values, and shear strength values were directly determined from their respective tests. Most of the samples that underwent lab testing were disturbed samples collected during SPT sampling and sonic drilling, of which their results were used to estimate the soil parameters based on correlations. Jorgensen Geotechnical (JG) was able to submit two relatively undisturbed Shelby tube samples to undergo consolidation testing, while the 2021 Nelson Engineering Report presented shear testing results from five relatively undisturbed Shelby tube samples, which were reviewed.

A discussion regarding the selection of soils parameters is found below.

Soil Unit Weight

Two consolidation tests were performed which produced dry unit weights, while five shear test results presented in the Nelson Engineering report produced dry unit weights. These direct unit weight measurements, SPT blow counts, and observations made in the open test pits were used to estimate the in-situ unit weight of the soils. Estimated unit weights are presented below in Table D-1.

Table D-1: Estimated Soil Unit Weight Values

Soil Layer	Unit Weight (Pounds per cubic foot)
CL – Lean Clay	115
SC – Clayey Sand	120
GC – Clayey Gravel	125
SC – Weathered Bedrock	140

Consolidation Parameters

Two consolidation tests were performed on samples collected during the drilling effort performed by JG. No consolidation tests were presented in the Nelson Engineering or Womack and Associates, reports. Coefficients of consolidation, C_c, were calculated based on the direct consolidated test results, as well as methods recommended by Skempton (1944), Nagaraj and Murthy (1985), Wroth and Wood (1978), and Kulhawy and Mayne (1990). These calculation methods use index properties such as the Liquid Limit and the Plasticity Index to estimate the coefficients of consolidation. The results presented below are the average of all C_c, values calculated from the direct results and correlation calculations.

Table D-2: Estimated Coefficients of Consolidation

Soil Layer	Coefficient of Consolidation
CL – Clay	0.20
SC – Clayey Sand	0.18
GC – Clayey Gravel	0.16

Strength Parameters

Internal Friction Angle (phi)

Strength parameters used in the slope stability model were selected by examining direct shear results, calculations based on SPT blow count values, as recommended by Hatanaka and Uchida (1996) and Schmertmann (1975), and calculated based on index properties as recommended by Duncan (1989). Minimum, maximum, and average internal friction angles (phi) are summarized in the table below.

Table D-3: Estimated Internal Friction Values (Degrees)

	Minimum	Maximum	Average	Standard Deviation	Selected phi[1]
CL – Clay	30.0	56.3	37.3	7.2	35
SC – Clayey Sand	27.5	54.2	37.9	9.4	37
GC – Clayey Gravel	29.0	63.3	47.5	9.7	40
SC – Weathered Bedrock	--	--	--	--	60

1. Dashes indicate a refusal condition was met during SPT samples, therefore phi value was estimated

As summarized in the table above, the minimum and maximum calculated internal friction angles for a single soil layer sometimes varied by over 20-degrees. Therefore, internal friction angles were selected by reviewing all calculated values, as well as reviewing suggested values in Chapter 9 of the Pit Slope Manual (1982).

Soils that have undergone movement are assumed to be in a residual strength state; i.e., weaker than the strength of the soils prior to the movement. Though the published geologic maps and our observations in the field classified the origin of the soils as landslide debris, no direct shear zones were observed and no signs of previous shearing (i.e., slickensides) were observed. Additionally, loess, typically formed from windblown glacial silt, was observed overlying the landslide deposit, therefore it is assumed the landslide occurred prior to or during the Pinedale Glaciation approximately 10 to 30 thousand years ago. If the soils observed in the boreholes and test pits were once in a residual state following failure, it is assumed since their mobilization in the failure event, they have been naturally consolidating and therefore regaining strength. Therefore, residual shear strengths were not used for the slope stability model and peak shear strengths were used.

Cohesion

Cohesion was added to the material models in the slope stability model to avoid selecting slip surfaces representing the “infinite slope” solution. Cohesion values used in the slope stability models can be found in Appendix F.

Compression Index (C_c) Calculation Spreadsheet

							Skempton	*Nagaraj*	*Wroth*	*Kulhawy*				
Project	**BH**	**Depth**	**LL**	**PL**	**PI**	**Consol Results**	**Compression Index (Cc)**				**Average**	**Median**	**Std Dev**	**Classification**
Bear Development - Snow King Loop Lots 53 and 58	JG-10	12.5-14.0	39	15	24	0.17	*0.26*	*0.24*	*0.32*	*0.32*	0.29	0.29	0.04	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-10	17.5-19.0	32	14	18	0.13	*0.20*	*0.20*	*0.24*	*0.24*	0.22	0.22	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	18-19	31	16	15		*0.19*	*0.19*	*0.20*	*0.20*	0.20	0.20	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	27-29	28	16	12		*0.16*	*0.18*	*0.16*	*0.16*	0.17	0.16	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	54.5-57	33	15	18		*0.21*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	67-69	26	16	10		*0.14*	*0.16*	*0.14*	*0.14*	0.14	0.14	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	72.5-75	38	17	21		*0.25*	*0.24*	*0.28*	*0.28*	0.26	0.27	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	7-8.5	20	15	5		*0.09*	*0.13*	*0.07*	*0.07*	0.09	0.08	0.03	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-02	14.5-16	31	15	16		*0.19*	*0.19*	*0.22*	*0.22*	0.20	0.21	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	22-25	29	15	14		*0.17*	*0.18*	*0.19*	*0.19*	0.18	0.19	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	32-35	21	16	5		*0.10*	*0.13*	*0.07*	*0.07*	0.09	0.08	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	38.5-40	29	17	12		*0.17*	*0.18*	*0.16*	*0.16*	0.17	0.17	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	52-55	16	4	12		*0.05*	*0.10*	*0.16*	*0.16*	0.12	0.13	0.05	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	60-62	37	23	14		*0.24*	*0.23*	*0.19*	*0.19*	0.21	0.21	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	64.5-67	31	17	14		*0.19*	*0.19*	*0.19*	*0.19*	0.19	0.19	0.00	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	69.5-72	21	16	5		*0.10*	*0.13*	*0.07*	*0.07*	0.09	0.08	0.03	SC
Bear Development - Snow King Loop Lots 53 and 58	JG-03	4.5-7	33	14	19		*0.21*	*0.21*	*0.26*	*0.26*	0.23	0.23	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-03	14.5-17	30	15	15		*0.18*	*0.19*	*0.20*	*0.20*	0.19	0.20	0.01	SC
Bear Development - Snow King Loop Lots 53 and 58	JG-03	22-25	35	15	20		*0.23*	*0.22*	*0.27*	*0.27*	0.25	0.25	0.03	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-03	30-33	29	15	14		*0.17*	*0.18*	*0.19*	*0.19*	0.18	0.19	0.01	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-04	7-8.5	34	16	18		*0.22*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-04	14.5-17	19	14	5		*0.08*	*0.12*	*0.07*	*0.07*	0.08	0.07	0.02	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-04	22-25	31	17	14		*0.19*	*0.19*	*0.19*	*0.19*	0.19	0.19	0.00	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-04	30-33	33	15	18		*0.21*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-10	7.5-9	25	16	9		*0.14*	*0.16*	*0.12*	*0.12*	0.13	0.13	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-10	15-17	38	21	17		*0.25*	*0.24*	*0.23*	*0.23*	0.24	0.23	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-11	7.5-9	22	15	7		*0.11*	*0.14*	*0.09*	*0.09*	0.11	0.10	0.02	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-12	5-6.5	27	15	12		*0.15*	*0.17*	*0.16*	*0.16*	0.16	0.16	0.01	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-12	10-11.5	27	17	10		*0.15*	*0.17*	*0.14*	*0.14*	0.15	0.14	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-12	20-21.5	26	14	12		*0.14*	*0.16*	*0.16*	*0.16*	0.16	0.16	0.01	SC
Nelson 53&58	BH1	29.75	27	12	15		*0.15*	*0.17*	*0.20*	*0.20*	0.18	0.19	0.02	SC
Nelson 53&58	BH1	40	19	4	15		*0.08*	*0.12*	*0.20*	*0.20*	0.15	0.16	0.06	SC
Nelson 53&58	BH1	45	30	6	24		*0.18*	*0.19*	*0.32*	*0.32*	0.25	0.26	0.08	SC
Nelson 53&58	BH5	23	29	4	25		*0.17*	*0.18*	*0.34*	*0.34*	0.26	0.26	0.09	SC
Nelson 53&58	BH5	37	18	2	16		*0.07*	*0.11*	*0.22*	*0.22*	0.15	0.16	0.07	SC
Nelson 53&58	BH6	22	33	15	18		*0.21*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	CL
Nelson 53&58	BH6	52	25	11	14		*0.14*	*0.16*	*0.19*	*0.19*	0.17	0.17	0.03	CL
Nelson 53&58	BH7	19	25	14	11		*0.14*	*0.16*	*0.15*	*0.15*	0.15	0.15	0.01	CL
Nelson 53&58	BH7	25.5	35	17	18		*0.23*	*0.22*	*0.24*	*0.24*	0.23	0.23	0.01	CL
Nelson 53&58	BH7	59	29	15	14		*0.17*	*0.18*	*0.19*	*0.19*	0.18	0.19	0.01	CL
Womack Water Tank	TP-1	9	32	17	15		*0.20*	*0.20*	*0.20*	*0.20*	0.20	0.20	0.00	CL
Womack Water Tank	TP-1	10	41	15	26		*0.28*	*0.26*	*0.35*	*0.35*	0.31	0.32	0.05	CL
Womack Water Tank	TP-1	25	34	14	20		*0.22*	*0.21*	*0.27*	*0.27*	0.24	0.24	0.03	CL
Womack Water Tank	TP-1	27.5	25	14	11		*0.14*	*0.16*	*0.15*	*0.15*	0.15	0.15	0.01	CL

Phi Calculation Spreadsheet

Shear Strength Correlation Summary - Peak Friction Angle

					Hatanaka and Uchida (1996)	*Schmertmann (1975)*							Duncan, 1989							
Project	**BH**	**Sample**	**Depth (ft)**	**(N1)60**	**Peak Phi (N160)**	**Peak Phi (N160)**	**Phi (Direct Shear)**	**LL**	**PI**	**Overburden**	**% Clay**	**Peak Phi**	**Classification**	**Unit Weight (pcf)**	**Cohesion**	**Min**	**Max**	**Average**	**Std Dev**
Bear Dev - 53&58	JG-01	D-8	18	--	--	--		31	15			34	CL	115	0	24.0	26.0	25.0	1.4
Bear Dev - 53&58	JG-01	D-12	27	38	47	53		28	12			35	CL	115	0				
Bear Dev - 53&58	JG-01	D-17	37	94	63	60				4300	7		GC	120	0	31.0	32.0	31.5	0.7
Bear Dev - 53&58	JG-01	D-26	47	84	61	59							GC	120	0				
Bear Dev - 53&58	JG-01	D-27	54.5	--	-	-		33	18			32	CL	115	0				
Bear Dev - 53&58	JG-01	D-31	67	56	53	54							CL	115	0	21.0	27.0	23.7	3.1
Bear Dev - 53&58	JG-01	D-32	67	--	-	-		26	10			36	CL	115	0				
Bear Dev - 53&58	JG-01	D-36	72.5	--	-	-		38	21			31	CL	115	0				
Bear Dev - 53&58	JG-01	D-39	80	35	47	48							GC	120	0				
Bear Dev - 53&58	JG-02	D4	7	-	-	-		20	5			37	GC	120	0	31.0	31.0	31.0	
Bear Dev - 53&58	JG-02	D8	14.5	-	-	-		31	16			32	CL	115	0				
Bear Dev - 53&58	JG-02	D9	17	6	31	31							CL	110	0				
Bear Dev - 53&58	JG-02	D11	22	-	-	-		29	14			30	CL	110	0	23.0	31.0	26.0	3.6
Bear Dev - 53&58	JG-02	D13	27	24	42	47							CL	110	0				
Bear Dev - 53&58	JG-02	D16	32	-	-	-		21	5			37	CL	110	0				
Bear Dev - 53&58	JG-02	D18	37	24	42	46		29	12			35	CL	110	0				
Bear Dev - 53&58	JG-02	D22	44.5	-	-	-				5500	8		GC	125	0	31.0	32.0	31.5	0.7
Bear Dev - 53&58	JG-02	D23	47	45	50	52							GC	125	0				
Bear Dev - 53&58	JG-02	D26	52	-	-	-		16	12			35	CL	110	0				
Bear Dev - 53&58	JG-02	D28	57	45	50	52							CL	125	0				
Bear Dev - 53&58	JG-02	D30	60	-	-	-		37	14			30	CL	125	0	23.0	26.0	24.0	1.7
Bear Dev - 53&58	JG-02	D32	64.5	-	-	-		31	14			30	CL	125	0				
Bear Dev - 53&58	JG-02	D33	67	66	56	56							CL	125	0				
Bear Dev - 53&58	JG-02	D35	69.5	-	-	-		21	5			37	SC	125	0	31.0	31.0	31.0	
Bear Dev - 53&58	JG-02	D40	80	59	54	54							SC	125	0				
Bear Dev - 53&58	JG-03	D3	4.5	-	-	-		33	19				CL	110	0	21.0	21.0	21.0	
Bear Dev - 53&58	JG-03	D4	7	7	31	33							CL	110	0				
Bear Dev - 53&58	JG-03	D8	14.5	-	-	-		30	15			34	SC	120	0	24.0	24.0	24.0	
Bear Dev - 53&58	JG-03	D9	17	33	46	51							SC	120	0				
Bear Dev - 53&58	JG-03	D12	22	-	-	-		35	20			31	GC	120	0				
Bear Dev - 53&58	JG-03	D14	27	22	41	45							GC	120	0	23.0	21.0	22.0	1.4
Bear Dev - 53&58	JG-03	D19	35	17	38	40		29	14			30	GC	120	0				
Bear Dev - 53&58	JG-04	D4	7	8	33	35		34	18			32	CL	110	0	23.0	23.0	23.0	
Bear Dev - 53&58	JG-04	D8	14.5	-	-	-		19	5			37	GC	125	0	31.0	31.0	31.0	
Bear Dev - 53&58	JG-04	D9	17	49	51	55							GC	125	0				
Bear Dev - 53&58	JG-04	D12	2	-	-	-		31	14			30	CL	115	0	23.0	23.0	23.0	
Bear Dev - 53&58	JG-04	D14	27	21	40	44							CL	115	0				
Bear Dev - 53&58	JG-04	D17	30	-	-	-		33	18			32	GC	125	0	23.0	23.0	23.0	
Bear Dev - 53&58	JG-04	D19	35	83	61	59							GC	125	0				
Bear Dev - 53&58	JG-10	D-1	2.5	4	29	28		25	9			36	SC	110	0	26.0	26.0	26.0	
Bear Dev - 53&58	JG-10	D-2	5	11	35	38							CL	110	0				
Bear Dev - 53&58	JG-10	D-3	7.5	9	33	34							CL	110	0				
Bear Dev - 53&58	JG-10	D-4	10	18	39	43							CL	115	0				
Bear Dev - 53&58	JG-10	U1	12.5	-	-	-		39	24			31	CL	110	0	18.0	24.5	21.8	2.4
Bear Dev - 53&58	JG-10	D-5	15	11	35	37		38	17	4200	36	33	CL	110	0				
Bear Dev - 53&58	JG-10	U2	17.5	-	-	-		32	18			32	CL	110	0				
Bear Dev - 53&58	JG-10	D-6	20	14	37	38							CL	110	0				
Bear Dev - 53&58	JG-11	D-1	2.5	16	43	49							GC	115	0				
Bear Dev - 53&58	JG-11	D-2	5	50	52	56							GC	125	0				
Bear Dev - 53&58	JG-11	D-3	7.5	20	40	45		22	7			37	GC	115	0				
Bear Dev - 53&58	JG-11	D-4	10	16	38	41				3600	17		GC	115	0	31.0	27.0	29.7	2.3
Bear Dev - 53&58	JG-11	D-5	12.5	33	46	50							GC	125	0				
Bear Dev - 53&58	JG-11	D-6	15	31	45	49							GC	120	0				
Bear Dev - 53&58	JG-11	D-7	17.5	79	60	59							GC	125	0				
Bear Dev - 53&58	JG-11	D-8	19	77	59	59							GC	125	0				
Bear Dev - 53&58	JG-12	D-1	2.5	5	30	29							GC	110	0				
Bear Dev - 53&58	JG-12	D-2	5	55	53	57		27	12			35	GC	125	0	26.0	26.0	26.0	
Bear Dev - 53&58	JG-12	D-3	7.5	78	59	59							GC	125	0				
Bear Dev - 53&58	JG-12	D-4	10	15	37	40		27	10			36	CL	115	0	27.0	27.0	27.0	
Bear Dev - 53&58	JG-12	D-5	12.5	17	39	42							CL	115	0				
Bear Dev - 53&58	JG-12	D-6	15	41	49	53							GC	120	0	26.0	26.0	26.0	
Bear Dev - 53&58	JG-12	D-7	17.5	45	50	53							GC	120	0				
Bear Dev - 53&58	JG-12	D-8	20	20	40	43		26	12			35	GC	120	0				
Nelson 53&58	BH1	4	29.75	10	32			27	15			34	SC	115					
Nelson 53&58	BH1	5	40	30	38			19	15			34	SC	125					
Nelson 53&58	BH1	6	45	16	33			30	24			31	SC	120		20	32	26.8333	
Nelson 53&58	BH5	-	23	-	-			29	25			30	SC	120					
Nelson 53&58	BH5	-	37	-	-			18	16			32	SC	120		20	32	26.5	
Nelson 53&58	BH6	4	22	15	32			33	18			32	CL	108.3					
Nelson 53&58	BH6	11	52	-	-		37	25	14			30	CL	115		22	30	26.5	
Nelson 53&58	BH7	4	19	-	-		41.9	25	11			36	CL	100					
Nelson 53&58	BH7	6	25.5	21	35			35	18			32	CL	100.8					
Nelson 53&58	BH7	13	59	21	35			29	14			30	CL	113.8		23	31	27.3333	
Womack Water Tank	TP-1		9					32	15			34	CL	110					
Womack Water Tank	TP-1		10					41	26			30	CL	110					
Womack Water Tank	TP-1		25					34	20			31	CL	110					
Womack Water Tank	TP-1		27.5					25	11			36	CL	110		20	30	25.625	

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX E

Calculations

Settlement Methodology

The settlement calculations assume the soil layer of concern comprises 100% compressible soil by volume. Though, some soils at the site only partially comprise the fine-grained soils by mass, as described in the borehole logs. Based on lab testing and visual classification, the clayey sand soils contain a maximum of 45% fines by mass. To convert the assumed mass to volume, we have used a scaling factor of 1.25, resulting in an assumed percent fines by volume of 55%.

Because the settlement is anticipated to only occur in the potentially compressible, fine-grained soils, the total settlement calculation was reduced by 55%.

Lateral Pressures Methodology

Seismic coefficients were calculated based on recommendation from NCHRP Report 611 “Seismic Analysis and Desing of Retaining Walls, Buried Structures, Slopes and Embankments” and FHWA NHI Course No 130094 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, as described below and illustrated in the equations. For our calculations, we used an average wall height of 30’ to account for the retaining wall at the site, and since the retaining wall is considered a brittle system with negligible allowable displacement, we used an r value of 1 (FHWA, 2011). In summary, the seismic coefficient (ks) is determined by applying a scaling factor (α) to the modified peak ground acceleration (PGAm).

Settlement Calculation Spreadsheet

Project: Bear Development
Project Number: 23072
Engineer: HC
Soil Sample: Average Cc value CL
Scenario: Direclty on poor soil

Settlement analysis of in-situ soil (only analyzing a maximum of 2B worth of soil below footing)

Key:

Manual Input
Calculation

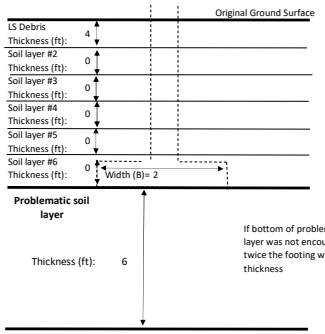
Step 1:

In-Situ Soil Properties of Problematic Soil			
	Soil Description: Lean Clay AF		
	Source of Soil Properties: SK Lab tests		
	Dry unit Weight:	15	pcf
	Moisture Content:	10.0%	
	Moist unit weight:	16.5	pcf
(Avergae 0.4 to 0.7)	Initial Void Ratio (e_0):	0.427	Vv/Vs
(Average 0.2 to 0.5)	Coefficient of Consol. (C_c):	0.2	

Step 2:

Original Overburden Pressure on Soil Element Identified in Step #1			
Soil Layer #1	Unit Weight	135	**PCF**
LS Debris	Thickness	4	**Ft.**
Soil Layer #2	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #3	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #4	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #5	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #6	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Problematic Soil Layer	Unit Weight	125	**PCF**
Below Footing	Thickess (H_0)	6	**Ft.**
Total Original Overburdern Pressure on Soil Element:		915	**PSF**

Pre-construction status. Footing is superimposed.



If bottom of problematic soil layer was not encountered, use twice the footing width for thickness

Step 3:

Foundation Characteristics		
Footing load:	3,000	psf
Estimated Footing Width (B):	2	ft
Footing Depth (D_f):	3	ft
Applied footing load applied to soil element (assuming 2V:1H)	1200	PSF

Step 4:

Backfill Soil Properties		
Dry Unit Weight:	120	pcf
Moisture Content:	12.0%	
Moist Unit Weight:	134.4	pcf
Backfill Depth:	3	ft

Step 5:

Settlement Calculation at Soil Element Identified in Step #2		
Thickness of Problematic Soil Layer (H_0):	6	ft
Depth to soil element below **OG**:	7	ft
Depth to soil element below footing:	3	ft
Original Overburden (σv_0):	915.0	psf
Applied foundation load at soil element :	1200.0	psf
Post Construction pressure at soil element (σv):	1978.2	
Change in presure at soils element:	1063	psf
$(\sigma v_f)/(\sigma v_0)$	2.162	
$Log[(\sigma v_f)/(\sigma v_0)]$	0.335	
$1+e_0$	1.427	
$H_0/(1+e_0)$	4.205	
Inches per foot:	12	
Settlement:	3.38	inches

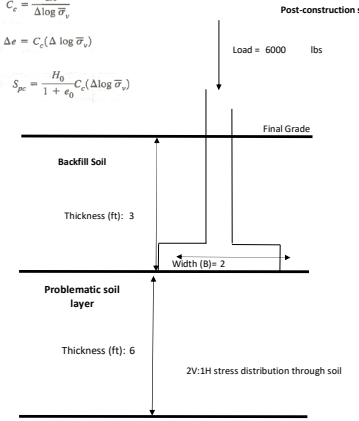
Settlement: $\text{Settlement} = S_{pc} = H_0\left(\frac{\Delta e}{1+e_0}\right)$

Compression Index: $C_c = \frac{\Delta e}{\Delta \log \overline{\sigma}_v}$

Rearranging gives: $\Delta e = C_c(\Delta \log \overline{\sigma}_v)$

Subistituting in gives: $S_{pc} = \frac{H_0}{1+e_0} C_c(\Delta \log \overline{\sigma}_v)$

Post-construction status



This formula is only valid for footings PLACED DIRECTLY ON PROBLEMATIC SOIL LAYER

$$S_{pc} = \frac{H_0}{1+e_0} C_c(\log \overline{\sigma}_{v_f} - \log \overline{\sigma}_{v_o}) = \frac{H_0}{1+e_0}(C_c)\log(\overline{\sigma}_{v_f}/\overline{\sigma}_{v_o})$$

Settlement Calculation Spreadsheet

Project: Bear Development
Project Number: 23072
Engineer: HC
Soil Sample: Average Cc value SC
Scenario: Direclty on poor soil

Settlement analysis of in-situ soil (only analyzing a maximum of 2B worth of soil below footing)

Key:

Manual Input
Calculation

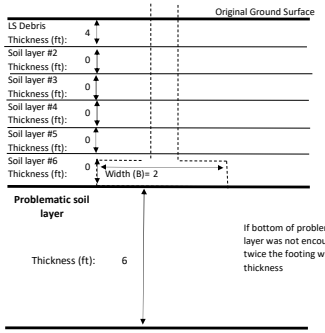
Step 1:

In-Situ Soil Properties of Problematic Soil			
	Soil Description: Lean Clay AF		
	Source of Soil Properties: SK Lab tests		
	Dry unit Weight:	15	pcf
	Moisture Content:	10.0%	
	Moist unit weight:	16.5	pcf
(Avergae 0.4 to 0.7)	Initial Void Ratio (e_0):	0.427	Vv/Vs
(Average 0.2 to 0.5)	Coefficient of Consol. (C_c):	0.18	

Step 2:

Original Overburden Pressure on Soil Element Identified in Step #1			
Soil Layer #1	Unit Weight	135	**PCF**
LS Debris	Thickness	4	**Ft.**
Soil Layer #2	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #3	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #4	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #5	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #6	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Problematic Soil Layer	Unit Weight	125	**PCF**
Below Footing	Thickess (H_0)	6	**Ft.**
Total Original Overburdern Pressure on Soil Element:		915	**PSF**

Pre-construction status. Footing is superimposed.



If bottom of problematic soil layer was not encountered, use twice the footing width for thickness

Step 3:

Foundation Characteristics		
Footing load:	3,000	psf
Estimated Footing Width (B):	2	ft
Footing Depth (D_f):	3	ft
Applied footing load applied to soil element (assuming 2V:1H)	1200	PSF

Step 4:

Backfill Soil Properties		
Dry Unit Weight:	120	pcf
Moisture Content:	12.0%	
Moist Unit Weight:	134.4	pcf
Backfill Depth:	3	ft

Step 5:

Settlement Calculation at Soil Element Identified in Step #2		
Thickness of Problematic Soil Layer (H_0):	6	ft
Depth to soil element below **OG**:	7	ft
Depth to soil element below footing:	3	ft
Original Overburden (σv_0):	915.0	psf
Applied foundation load at soil element :	1200.0	psf
Post Construction pressure at soil element (σv):	1978.2	
Change in presure at soils element:	1063	psf
$(\sigma v_f)/(\sigma v_0)$	2.162	
$Log[(\sigma v_f)/(\sigma v_0)]$	0.335	
$1+e_0$	1.427	
$H_0/(1+e_0)$	4.205	
Inches per foot:	12	
Settlement:	3.04	inches

Note: Maximum % fines by mass 45%. Scaling factor of 1.25 used to assume volume of fines, resulting in 55%.

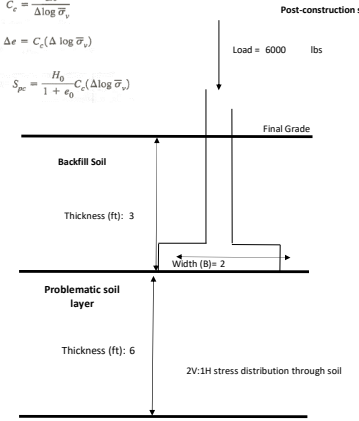
Settlement: $\text{Settlement} = S_{pc} = H_0\left(\frac{\Delta e}{1+e_0}\right)$

Compression Index: $C_c = \frac{\Delta e}{\Delta \log \bar{\sigma}_v}$

Rearranging gives: $\Delta e = C_c(\Delta \log \bar{\sigma}_v)$

Subistituting in gives: $S_{pc} = \frac{H_0}{1+e_0} C_c(\Delta \log \bar{\sigma}_v)$

Post-construction status



This formula is only valid for footings PLACED DIRECTLY ON PROBLEMATIC SOIL LAYER

$$S_{pc} = \frac{H_0}{1+e_0} C_c(\log \bar{\sigma}_{v_f} - \log \bar{\sigma}_{v_o}) = \frac{H_0}{1+e_0}(C_c)\log\left(\bar{\sigma}_{v_f}/\bar{\sigma}_{v_o}\right)$$

JORGENSEN
It's About People, Trust and Know How

Project Bear Dev | Project No. 23072
Calculated By JBJ | Date 12/20/2023
Sheet 1 of 1

Known:
$F_v = 1.5$
$S_1 = 0.336$
$k_{max} = 0.545$
$H = 30'$
$PGA = 0.454$
$r = 1.0$
$f_a = 1.2$

$\beta = (F_v S_1) / k_{max}$

$\alpha = 1 + 0.01 H [(0.5\beta) - 1]$

$k_s = r PGA \alpha$

$\beta = (1.5)(0.336) / 0.545$

$\boxed{\beta = 0.92}$

$\alpha = 1 + 0.01(30)[(0.5)(0.92) - 1]$

$\boxed{\alpha = 0.838}$

$k_s = (1.0)(0.454)(0.838)$

$k_s = 0.38$

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX F

Slope-Stability Analysis

Slope-Stability Analysis

Methodology

1. **Analyses:** Slope stability analyses were performed using the SLOPE/W stability module of GeoStudio 2023.1.2 version 23.1.2.11, produced by Bentley Systems. The Morgenstern-Price limit equilibrium method, which takes into consideration moment and force equilibrium, was used to analyze slope stability.

   Based on the existing and proposed geometry of the project and the mapped geology, we determined the project area may be subject to potential failure. Therefore, we evaluated each cross-section for existing conditions, proposed conditions, and seismic proposed conditions scenarios.

2. **Geometry:** Two cross-sections for the project were analyzed: Cross sections B-B' and C-C' (Figure 4 and Figure 5). Cross section locations are shown in Figure 2. The Cross Section B-B' Proposed Conditions model includes foundation loads for each housing unit because the applied loads from the buildings foundation elements and the change in geometry were identified as potential items that can affect the factor of safety (FS). The Cross Section C-C' Proposed Conditions also includes foundation loads for each housing unit, as well as the existing retaining wall on Lot 53. We based the external existing geometry on topographic data collected by Jorgensen Associates, Inc., proposed finished grade elevations were taken for the preliminary design documents provided by Hoyt Architects, and we based the internal geometry (material boundaries within the slope) on the results of the subsurface exploration (i.e., borehole and test pit logs), statistical correlations based on published literature, geologic conditions, and our experience with similar soils in the area.

   Subsurface conditions at the site were dominated by chaotically deposited landslide debris consisting of fine-grained Lean Clay (CL) and coarse-grained Clayey Gravels (GC) and Clayey Sands (SC). Often, soil layers identified in the SPT samples didn't correspond to similar soil layers at similar depths in the other boreholes indicating the soil layers were not continuous. To create a subsurface soil model with continuous soil layers, the discrete soil samples were interpolated and often combined between boreholes. Where discrete soil samples of different soil types were combined, an average phi value of the combined samples was applied to the entire soil layer.

3. **Materials:** We estimated the shear strength parameters used in the analyses based on correlation to index tests and direct shear testing from the previous Geotechnical Investigation Report from July 2021, provided by Nelson Engineering. See the discussion in Appendix D regarding development of the soil-engineering parameters. Final parameters used in the stability analysis are summarized below in Table F-1.

   Where two separate soil classifications were combined to one layer (i.e., GC/CL), a unit weight and phi angle were selected using a "weighted average" approach; the boreholes shown on figures 4 and 5 were reviewed and depending on the soil shown in each borehole, a weighted average value was selected.

   We used a Mohr-Coulomb strength model to define the soil parameters. Two parameters are used to describe this strength model: cohesion (c) and friction angle (φ). Cohesion is the soil's shear strength at zero overburden stress, and the friction angle expresses the relationship between overburden stress and shear stress. Mathematically, the shear strength is defined by the equation: $\tau = c + \sigma_n \tan(\varphi)$, where τ is the shear strength and σ_n represents the overburden stress. We used effective stress parameters as the soils are anticipated to drain well.

Table F-1: Soil Parameters Used for Slope Stability Analysis B-B'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (CL)	115	100[1]	35
Landslide Debris (GC)	125	50[2]	40
Landslide Debris (GC/CL)	120	100[2]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

Table F-2: Soil Parameters Used for Slope Stability Analysis C-C'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (GC/CL)	120	100[1]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

4. **Phreatic Surface:** Groundwater was encountered during the subsurface exploration in borehole JG-02, JG-03, and JG-04 during the subsurface exploration and are summarized below in Table F-2. Groundwater conditions encountered in the field were used in the slope stability model. It is important to note, the subsurface exploration occurred during a time of year when peak groundwater conditions are assumed to have already occurred, implying potential peak groundwater conditions are *not* shown in the model and are unknown.

Table F-3: Groundwater Conditions

Borehole	Date	Depth BGS (ft)	Approximate Elevation (ft)
JG-02	October 1 and 2, 2023	47	6,393
JG-03	October 2, 2023	27 to 30	6379 to 6376
JG-04	October 2, 2023	30	6374

5. **Seismicity:** Each post-construction scenario was evaluated in a seismic condition. Based on the ReMi and MASW results provided by Atlas Geophysics and direct shear testing data in the previous Nelson Engineering Site Investigation Report, the site is categorized as Site Class C – Very Dense Soil and Soft Rock. Seismicity was incorporated into the model using a pseudo-static limit equilibrium analysis approach where inertial forces from seismic accelerations were applied statically to the model. Seismic loads have been applied to the critical slip surface determined by static analysis for each post construction cross section, as it is assumed to be the most stressed region within the slope (Abramson et al., 2002). A seismic coefficient (k_s) of 0.163 was applied to cross section B-B' and a seismic coefficient of 0.169 was applied to cross section C-C'.

Seismic coefficients were calculated based on recommendation from NCHRP Report 611 "Seismic Analysis and Desing of Retaining Walls, Buried Structures, Slopes and Embankments" and FHWA NHI Course No 130094 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, as described below and illustrated in the equations. In summary, the seismic coefficient (k_s) is determined by applying a scaling factor (α) to the modified peak ground acceleration (PGA_m). Additionally, a seismic FS of 1.1 was used because it is assumed the system is ductile and an allowable total permanent seismic deformation of 2.0-inches is acceptable.

$$\beta=F_v \cdot S_1/PGA_m$$

$$\alpha=1+0.01H[(0.5\beta)-1]$$

$$k_s = r^* PGA_m * \alpha$$

Where:

- β = 0.92
- F_v = 1.5
- S_1 = 0.336
- PGA_m = 0.545
- α is equal to 0.595 for the B-B' seismic model, and α is equal to 0.623 for the C-C' seismic model.
- *H* is equal to the height of the critical slip surface; we used conservative values of 75' for the B-B' seismic model, and 70' for the C-C' seismic model
- r = 0.5. A value of 0.5 is used in calculating k_s when dealing with ductile systems (i.e., soils with no rigid structures) with allowable permanent seismic deformation of up to 2-inches.
- PGA is equal to 0.454, taken from ASCE 7-16 seismic design tool.

Our calculations can be found attached to this Appendix.

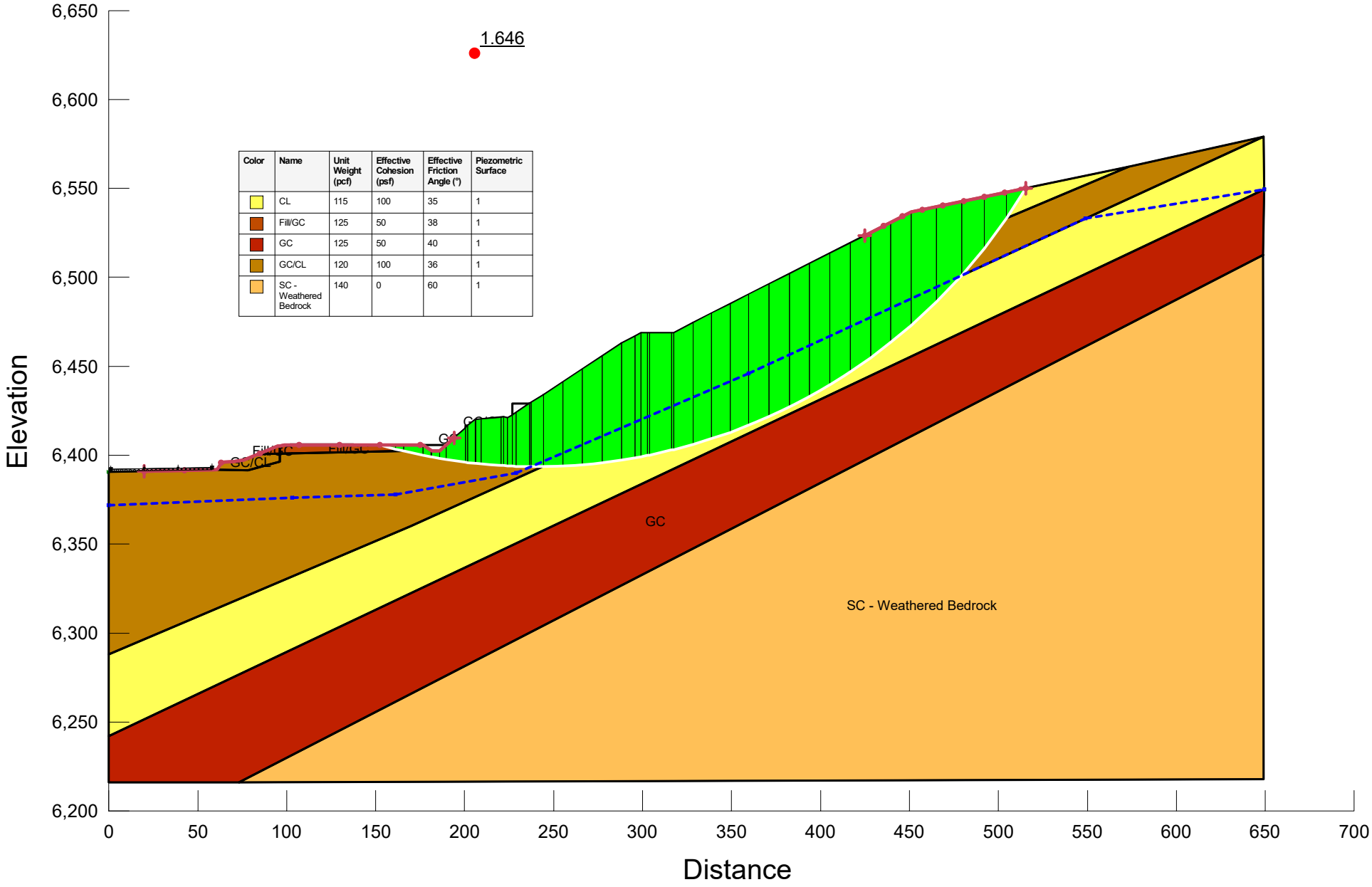
Surcharge Loads and Retaining Wall: Typical foundation loads were incorporated into the model, based on data in Section 1806 of the IBC, 2021. We use a distribution surcharge load of 2000 psf to account for the weight of any structures within the model.

The retaining wall on Lot 53 was also included in the geometry of the models. For the length of the soil nails, spacing and batter we used the Grand View, Building 53 Jackson, Wyoming Permanent Soldier Pile Wall and Temporary Soil Nail Wall Construction Drawings. Although the construction drawings show a slight variation in soil nail lengths, spacing and batter, we used the values applicable to the highest number of soil nails. In our model we used 48' soil nails, vertically spaced 9 feet, and battered -15 degrees.

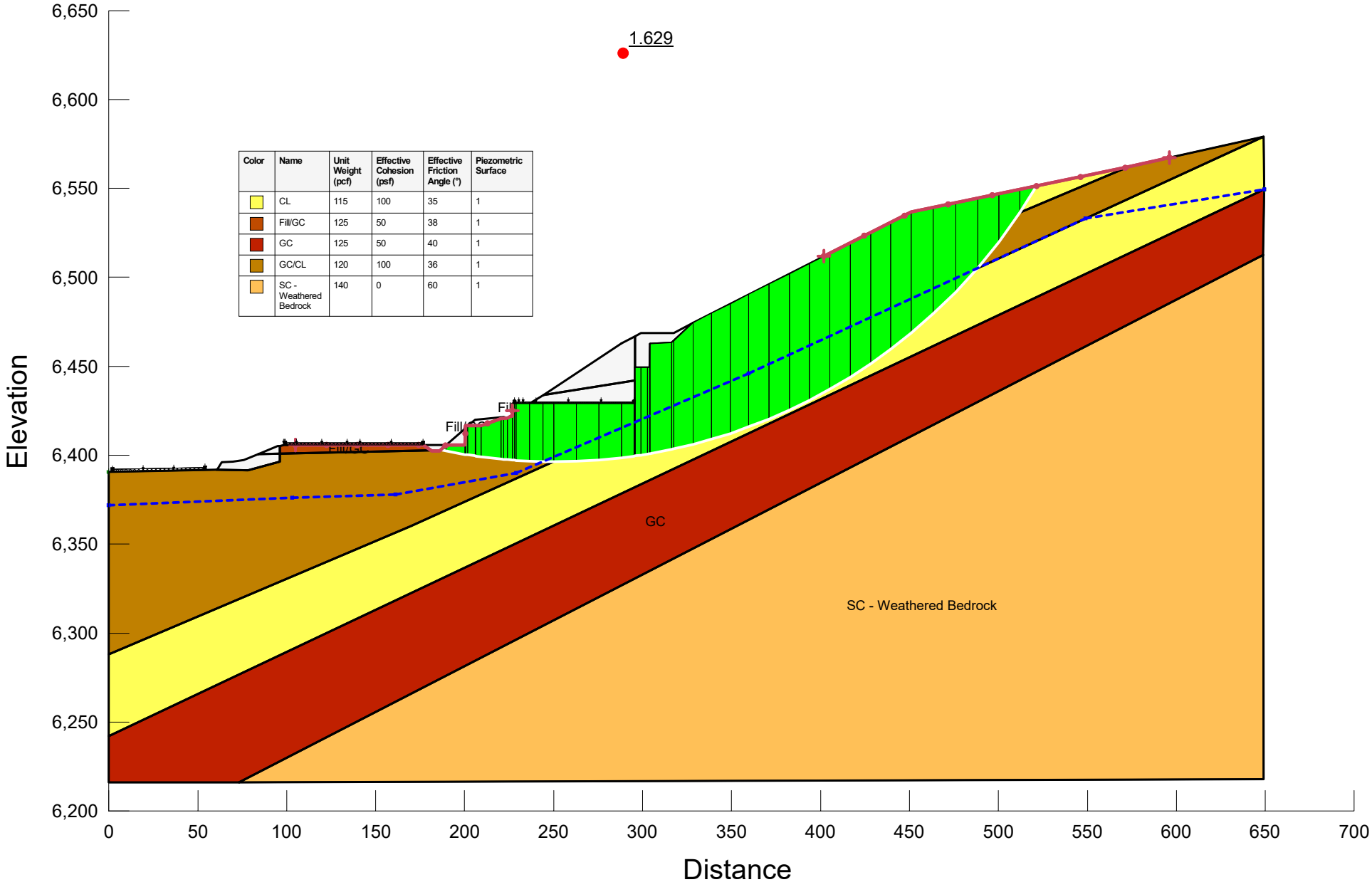
Results

We summarize factor of safety (FS) results for each cross section and analysis in Section 5.1.2 of the Report. The figures that follow are the output from each analysis. The critical slip surface and factor of safety are shown. Output files, reports, convergence data, or other data from Geostudio may be made available upon request.

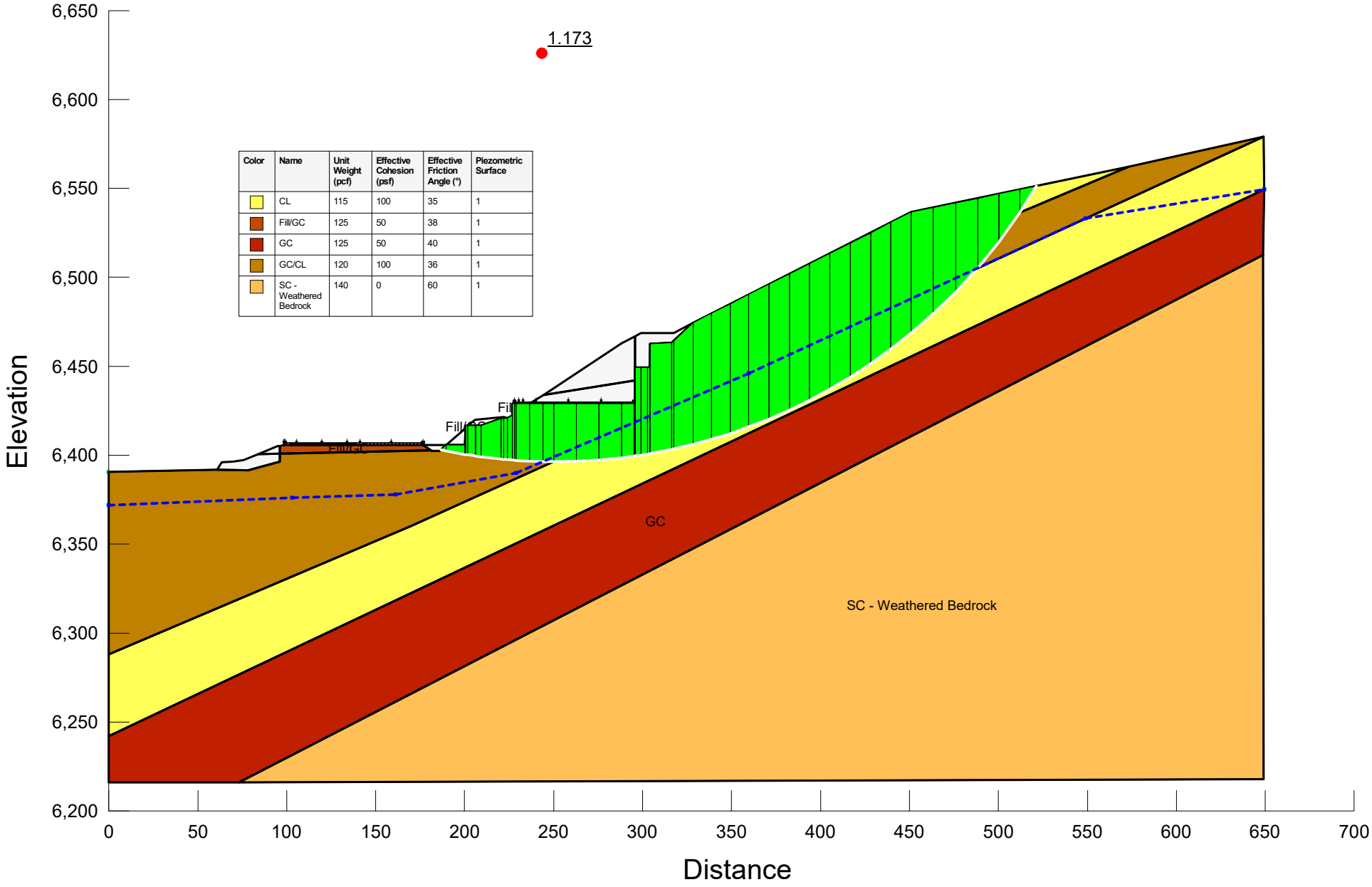
Lot 53 and 58 B-B' Existing Conditions



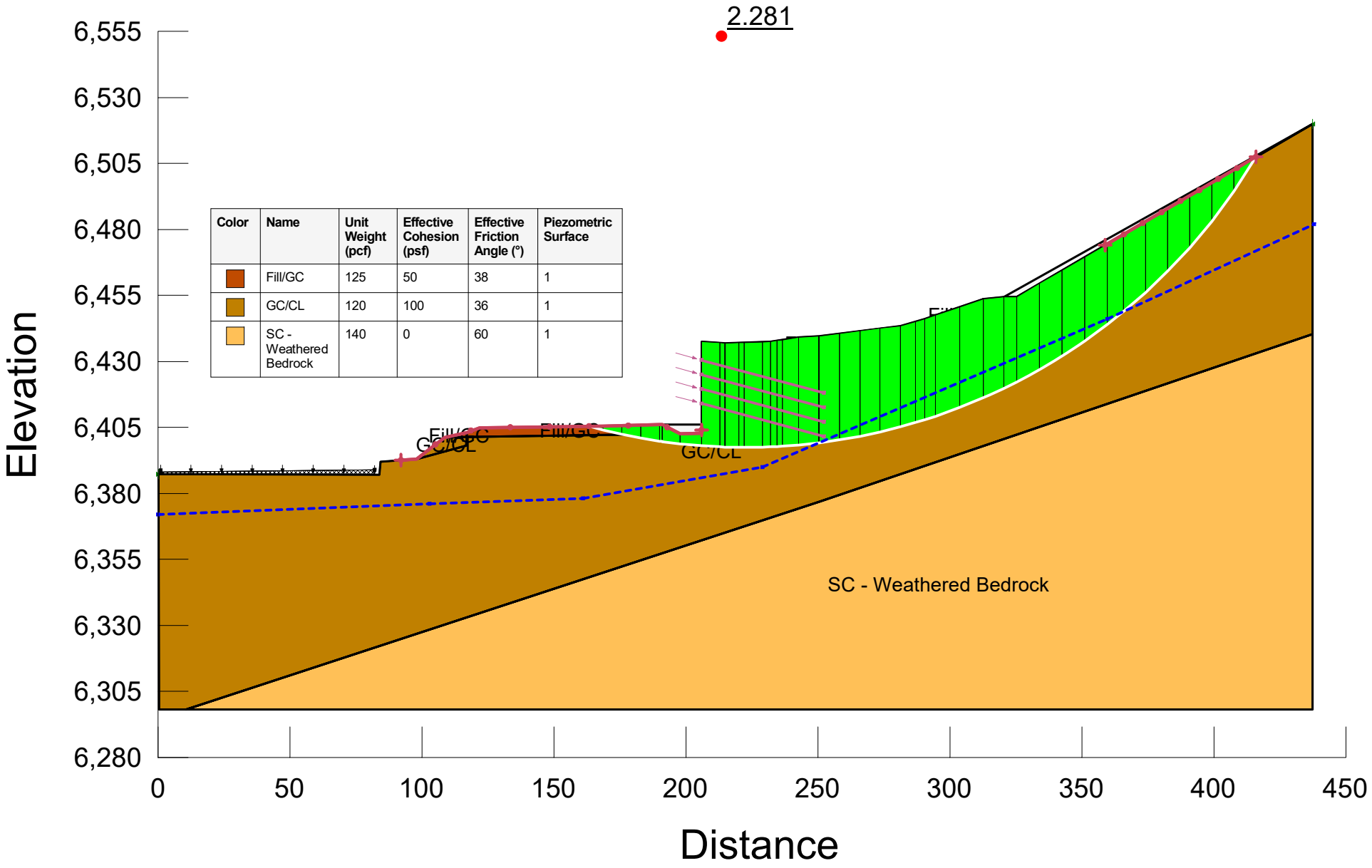
Lot 53 and 58 B-B' Proposed Conditions



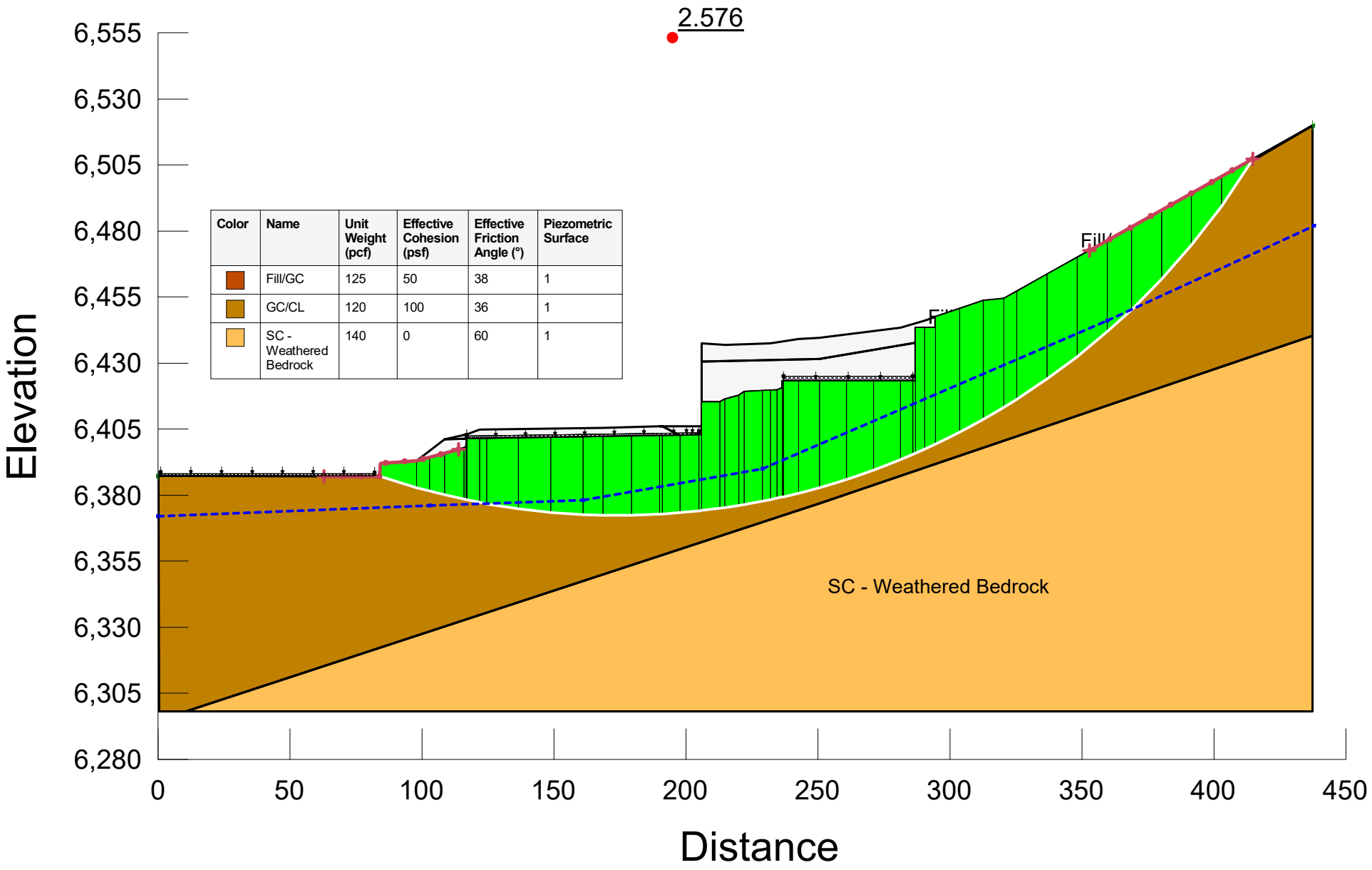
Lot 53 and 58 B-B' Proposed Conditions Siesmic



Lot 53 and 58 C-C' Existing Conditions

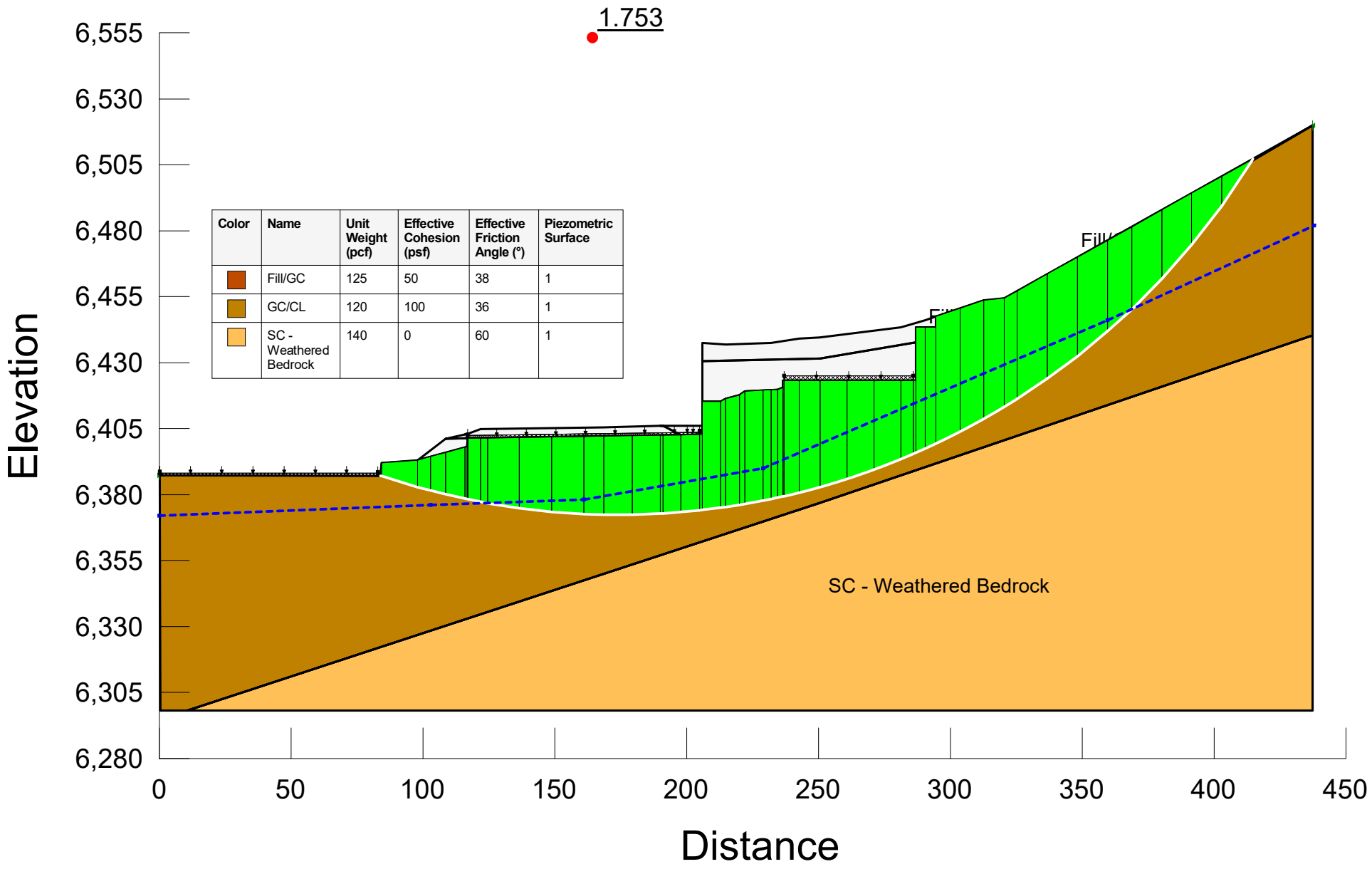


Lot 53 and 58 C-C' Proposed Conditions



Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Piezometric Surface
	Fill/GC	125	50	38	1
	GC/CL	120	100	36	1
	SC - Weathered Bedrock	140	0	60	1

Lot 53 and 58 C-C' Proposed Conditions Siesmic

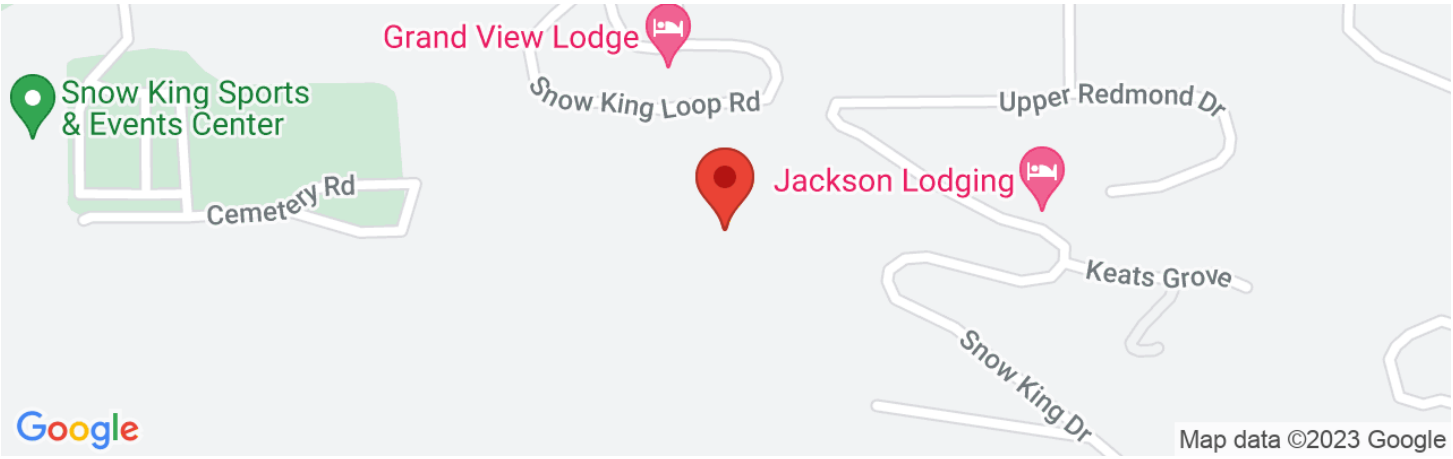


Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Piezometric Surface
	Fill/GC	125	50	38	1
	GC/CL	120	100	36	1
	SC - Weathered Bedrock	140	0	60	1

USGS web services were down for some period of time and as a result this tool wasn't operational, resulting in *timeout* error.
USGS web services are now operational so this tool should work as expected.

OSHPD

Latitude, Longitude: 43.47138391, -110.75322571



Date	20/12/2023, 15:51:56
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.024	MCE_R ground motion. (for 0.2 second period)
S_1	0.336	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.229	Site-modified spectral acceleration value
S_{M1}	0.505	Site-modified spectral acceleration value
S_{DS}	0.819	Numeric seismic design value at 0.2 second SA
S_{D1}	0.336	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.2	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.454	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.545	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.024	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.145	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.894	Factored deterministic acceleration value. (0.2 second)
S1RT	0.336	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.374	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.721	Factored deterministic acceleration value. (1.0 second)
PGAd	0.66	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.454	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.895	Mapped value of the risk coefficient at short periods

Type	Value	Description
C_{R1}	0.9	Mapped value of the risk coefficient at a period of 1 s
C_V	1.105	Vertical coefficient

DISCLAIMER

While the information presented on this website is believed to be correct, SEAOC /OSHPD and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in this web application should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. SEAOC / OSHPD do not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the seismic data provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the search results of this website.

JORGENSEN
It's About People, Trust and Know How

Project BEAR Dev - Lots 53+56 Project No. 23272
Calculated By HC Date 12/20/2023
Sheet 1/2

K_s Determination

U.S. Seismic Design Maps - Structural Engineers Association of California Design Code Reference Document - ASCE 7-16

Risk Category II
Site Class C - Very Dense Soil & Soft Rock

FHWA (2011)

$$K_{MAX} = F_{PGA} \cdot PGA \qquad (6-1)$$

PGA = 0.454
F_{PGA} = 1.20

K_{MAX} or PGA_m = 1.2(0.454) = **0.545**

K_{AV} or MHA (Maximum Average Horizontal Acceleration) = $\alpha \cdot K_{MAX}$ (6-2)

Where $\alpha = 1 + 0.01(H)[(0.5B)-1]$ (6-3)

Where $B = f_v \cdot S_1 / K_{MAX}$ (6-4)

- B Cross Section B-B'

F_v = 1.5
S_1 = 0.336
K_{MAX} = 0.545

$B = 1.5(0.336)/0.545$ (6-4)

B = 0.924

- B Cross Section C-C'

F_v = 1.5
S_1 = 0.336
K_{MAX} = 0.545

$B = 1.5(0.336)/0.545$ (6-4)

B = 0.924

JORGENSEN
It's About People, Trust and Know How

Project BEAR DEN - LOTS 53+58 Project No. 23072
Calculated By HC Date 12/20/2023
Sheet 2/2

- α Cross Section B-B'

$\beta = 0.924$
$H = 75'$

$\alpha = 1 + 0.01(75)[0.5(0.924) - 1]$ (6-3)

$\alpha = 0.597$

- α Cross Section C-C'

$\beta = 0.924$
$H = 70'$

$\alpha = 1 + 0.01(70)[0.5(0.924) - 1]$ (6-3)

$\alpha = 0.623$

- k_{AV} Cross Section B-B'

$\alpha = 0.597$
$k_{MAX} = 0.545$

$k_{AV} = 0.597\ (0.545)$ (6-2)

$k_{AV} = 0.325$

- k_{AV} Cross Section C-C'

$\alpha = 0.623$
$k_{MAX} = 0.545$

$k_{AV} = 0.623\ (0.545)$ (6-2)

$k_{AV} = 0.339$

- k_S Cross Section B-B'

$k_S = r \cdot k_{AV}$ (6-5)

$r = 0.5$ ASSUMING 2-INCHES OF ALLOWABLE PERMANENT SEISMIC DEFORMATION

$k_S = 0.5\ (0.325)$

$k_S = 0.163$

- k_S Cross Section C-C'

$k_S = r \cdot k_{AV}$ (6-5)

$r = 0.5$ ASSUMING 2-INCHES OF ALLOWABLE PERMANENT SEISMIC DEFORMATION

$k_S = 0.5\ (0.339)$

$k_S = 0.169$

MINIMUM FACTOR OF SAFETY OF 1.1 USING r OF 0.5 AND ASSUMING 2-INCHES OF ALLOWABLE PERMANENT SEISMIC DEFORMATION

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

December 28, 2023

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosh, WI 53142

RE: GEOTECHNICAL-ENGINEERING REPORT, BEAR DEVELOPMENT – SNOW KING LOOP LOTS 53 AND 58, TETON COUNTY, WYOMING
PROJECT NO: 23072

Dear Nick,

We are pleased to present this Geotechnical-Engineering Report on our geotechnical site exploration for the proposed development at Lots 53 and 58 on Snow King Loop in Teton County, Wyoming. This report describes site conditions observed during the subsurface exploration, presents engineering analyses and recommendations to support the design and construction of foundation elements, and presents pre-construction and post-construction slope stability analyses.

Jorgensen Geotechnical explored subsurface conditions by drilling seven (7) boreholes and excavating four (4) exploratory test pits throughout Lots 53 and 58. A geophysical exploration was also performed comprising MASW and ReMi exploration techniques. In general, the site is underlain primarily by landslide debris, a chaotic mixture lean clay (CL), clayey gravel (GC), and clayey sands (SC). The site sits on a mapped landslide which likely mobilized prior to the Quaternary period. As such, we assume the soil at the site to be well consolidated. We also observed weathered sandstone bedrock during the subsurface exploration. The weathered bedrock was only observed in one borehole, BH-02, at 67.5-ft below ground surface (bgs), and is assumed to be part of the Cretaceous-age Bacon Ridge Formation (Kb).

Building locations and foundation elevations are based on preliminary design data provided by Hoyt Architecture, dated July 19, 2023. As the design progresses, we will be able to make site-specific recommendations.

If you have any questions about this report, or if we may provide other services to you, please contact us. As the project progresses, we will be available to answer questions for you.

Respectfully submitted,
JORGENSEN GEOTECHNICAL







Bruce Jackson G.I.T.
Geotechnical Design Engineer Technician

Harrison Carter, P.E.
Geotechnical Project Manager

Dominique Brough, P.G.
Geotechnical Project Manager

Geotechnical-Engineering Report

Bear Development – Snow King Loop Lots 53 and 58 | Teton County, Wyoming



43.471263°N, -110.753274°W

December 28, 2023

PREPARED FOR

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosh, WI 53142

PREPARED BY

Jorgensen Geotechnical, LLC
PO Box 9550
1315 HIGHWAY 89 S., Ste. 201
Jackson, WY 83002

CONTENTS

1.0 INTRODUCTION 1

2.0 PROJECT DESCRIPTION 1

3.0 GEOTECHNICAL EXPLORATION 2

3.1 DESCRIPTION 2
3.2 SUBSURFACE SOIL CONDITIONS 4
3.3 GROUNDWATER 7
3.4 EARTHQUAKES AND GROUND SHAKING 8
3.5 GEOLOGIC AND GEOTECHNICAL HAZARDS 9
3.5.1 Potential Settlement/Compressible Clays 9
3.5.2 Seismic and Fault Related Hazards 9
3.5.3 Slope-Related Hazards 9

4.0 GEOTECHNICAL ENGINEERING ANALYSES 9

4.1 SLOPE STABILITY ANALYSES 9
4.1.1 Results 10
4.2 SETTLEMENT 11
4.3 LATERAL EARTH PRESSURES 11
4.3.1 Active Pressures 12
4.3.2 At-Rest Pressures 12
4.3.3 Passive Pressures 12

5.0 GEOTECHNICAL RECOMMENDATIONS 13

5.1 RECOMMENDATIONS OVERVIEW 13
5.2 REINFORCED FILLS 13
5.3 ENGINEERED AGGREGATE PIERS 13
5.4 DEEP FOUNDATION ELEMENTS 14
5.5 EARTHWORK 14
5.5.1 Site Preparation 14
5.5.2 Excavation and Cut Slope Stability 14
5.5.3 Final Backfilling and Grading 14
5.5.4 Compaction 15
5.5.5 Compaction Requirements 15
5.5.6 Observation during Construction 16

6.0 LIMITATIONS 16

7.0 REFERENCES 17

Note: Clicking on a desired section in the table of contents will direct the reader to that section and clicking on the Jorgensen logo in the upper left of the page will bring you back to this page.

FIGURES

Figure 1: Site Location and Geologic Map 2
Figure 2: Borehole, Test Pit and Geologic Cross Section Location Map 4
Figure 3: Geologic Cross Section A-A' 5
Figure 4: Geologic Cross Section B-B' 5
Figure 5: Geologic Cross Section C-C' 6

TABLES

Table 3-1: U.S. Seismic Design Maps Summary 8
Table 4-2: Soil Parameters Used for Slope Stability Analysis B-B' 10
Table 4-3: Soil Parameters Used for Slope Stability Analysis C-C' 10
Table 4-4: Summary of Stability Analyses Results 10
Table 4-5: Lateral Pressure Parameters for Landslide Debris 11
Table 5-1: Compaction Parameters for Stony Fill 15

APPENDICES

Appendix A: Site Exploration Procedures and Subsurface Exploration Logs
Appendix B: Figures
Appendix C: Lab Testing Results
Appendix D: Soil Engineering Parameters
Appendix E: Calculations
Appendix F: Slope Stability Analyses

1.0 INTRODUCTION

Jorgensen Geotechnical, LLC was commissioned by Bear Development, LLC to perform a subsurface surface exploration and geotechnical engineering and analyses for the proposed development for Lots 53 and 58 accessed by Snow King Loop in Teton County, Wyoming. The purposes of the exploration were to provide information and geotechnical-engineering recommendations pertaining to:

- Subsurface soil conditions
- Site preparation and earthwork
- Geophysical exploration
- Seismic site classification per the International Building Code
- Evaluation of settlement and/or collapse potential
- General foundation design and construction recommendations
- Slabs-on-grade design and construction recommendations
- Lateral earth pressures for retaining structures
- Subgrade preparation
- Slope Stability Analyses
    - Existing Conditions
    - Proposed Conditions
    - Proposed Seismic Conditions

A detailed description of the subsurface exploration and graphical logs are shown in Appendix A, Figures in Appendix B, laboratory testing results are included as Appendix C, determination of soil engineering parameters in Appendix D, Calculations for settlement in Appendix E, and Slope Stability Analyses in Appendix F.

2.0 PROJECT DESCRIPTION

The project site is located in Jackson, Wyoming and is situated at the base of Snow King Resort. Preliminary plans were provided by Hoyt Architecture, dated July 19, 2023. The plans indicate the development for lots 53 and 58 will include two housing units: each with a first-floor parking garage area with three floors of living space above.

It is our understanding the project is in the early stages of the design, and the architectural plans are subject to substantial changes. As the project progresses, Jorgensen Geotechnical is available to consult with team members to increase design and construction efficiency based on our understanding of the subsurface conditions and the proposed design.

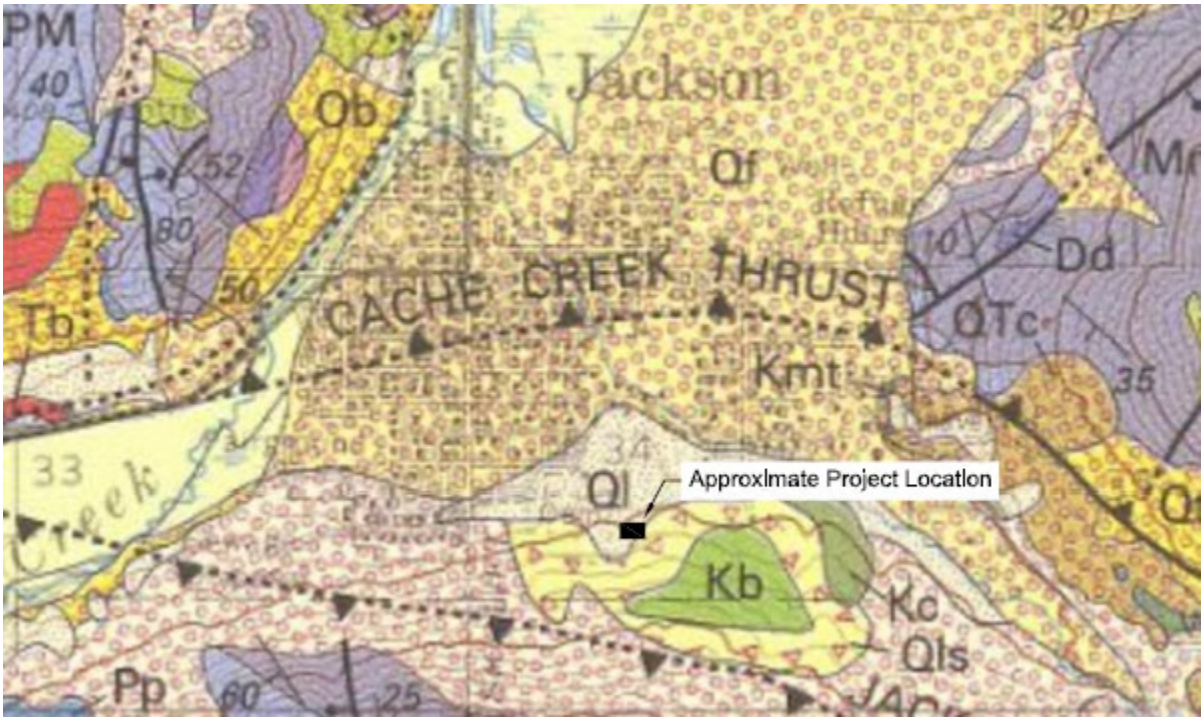


Figure 1: Site Location and Geologic Map

3.0 GEOTECHNICAL EXPLORATION

3.1 Description

JG developed the following description of the site based on field visits, meetings with the project team, our review of available historical aerial imagery, and observations made during the subsurface exploration.

Item	Description
Location and Parcel Information	• Lots 53 and 58 are located at the base of Snow King Resort and are accessed via Snow King Loop. The project area sits at a generalized latitude and longitude of 43.471263°N, -110.753274°W.
Existing Conditions	• The project location slopes from the north upwards to the south and ranges in elevation from approximately 6,400-ft Above Mean Sea Level (AMSL) on the northern boundary of Lot 53, to approximately 6,530-ft AMSL on the southern property boundary of Lot 58. The lots are bisected by a dirt road that provides access for employees at Snow King Resort. • Lot 53 is currently being used for storage by Snow King Resort. • A retaining wall approximately 20-ft tall is present on Lot 53 between the storage area and the access road. This Retaining wall comprises H-piles, lagging, and tie-backs and was built based on construction drawing dated August 13, 2007. • Slopes at the project site range from 10 to 35%.

	• Current utilities at the site include power, gas and water.
Geologic Setting	• The project location is found on the Geologic Map of Grand Teton National Park (Love et. al., 1992), in an area that contains three mapped geologic units including Loess (Ql), a fine-grained, windblown deposit, Landslide Debris (Qls), and the Bacon Ridge Sandstone (Kb). The soils observed from the subsurface exploration seem to be consistent with mapped geology. • The project location sits on a mapped multiple slump/multiple flow landslide, and is understood to be deep seated(WSGS, Wyoming Geologic Hazards Map Tool). A portion of the project site is capped with a wind-blown deposit known as loess which was likely deposited during or after the Pinedale Glaciation Period, or between approximately 30,000 to 10,000 years ago. The mapped loess stratigraphically overlies portions of the mapped landslide unit. • Numerous Quaternary faults (i.e., relatively young and potentially active) are mapped throughout the area. The Teton Fault is mapped approximately 8 miles northwest of the project, at the base of the eastern flank of the Teton Range (Zellman, 2019). Slip rates along the Teton fault is estimated to be between 0.2 and 1.0 mm/year. The Hoback Fault is located approximately 3 miles to the southwest of the project site but is considered old and inactive.

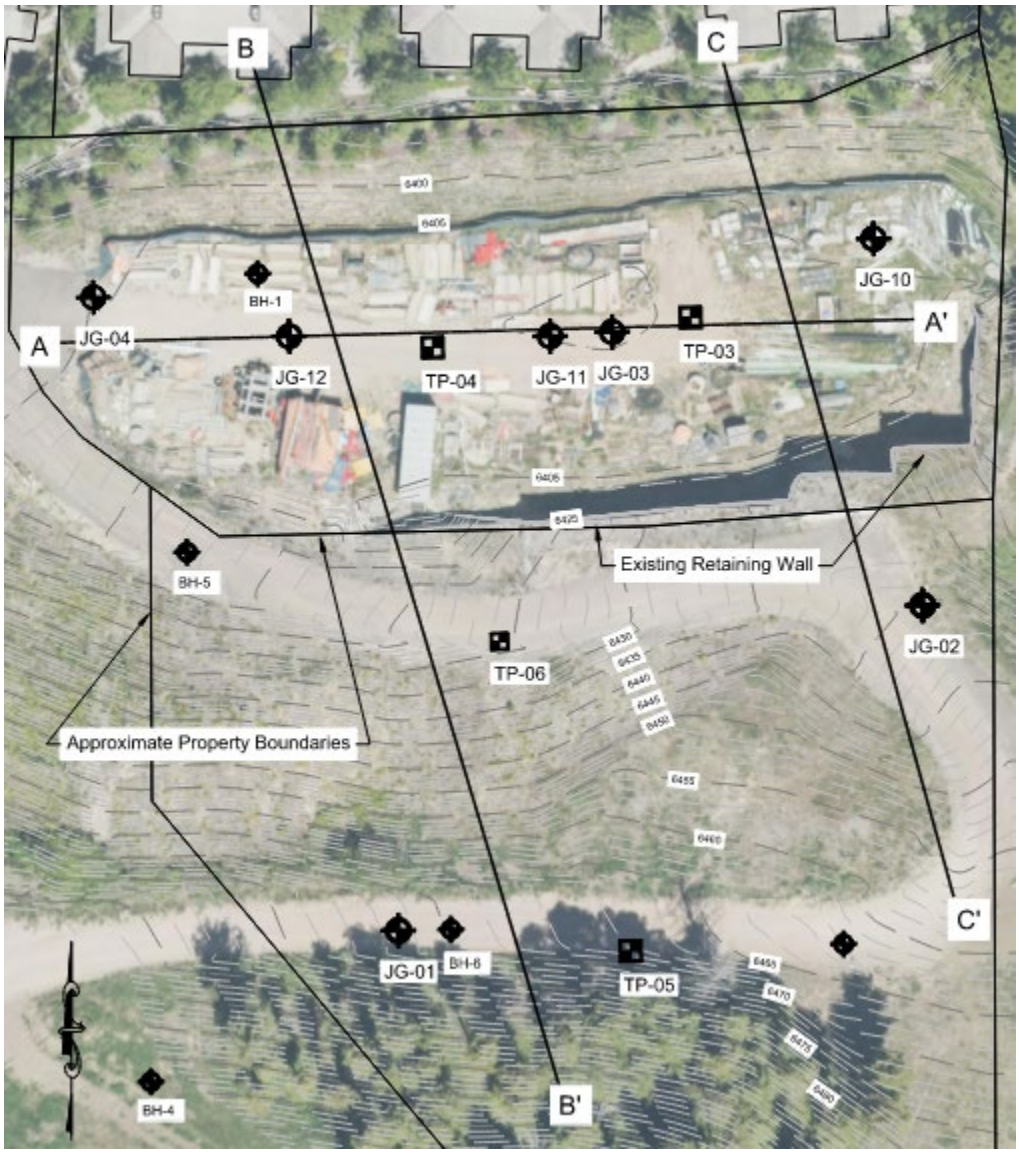


Figure 2: Borehole, Test Pit and Geologic Cross Section Location Map

3.2 Subsurface Soil Conditions

In general, three soil types were encountered during the subsurface exploration:

- **Landslide Debris** – consisting of clayey gravels (GC), lean clays (CL), and clayey sands (SC). The landslide debris soils are assumed to be derived from native colluvium soils prior to mobilization. These landslide debris soils exhibited chaotic deposition, which is also represented in the MASW plots provided by Atlas Geophysics. These results can be found attached to Appendix A.
- **Loess** – consisting of lean clay with sand (CL).
- **Weathered Bedrock** – consisting of soft weathered sandstone of the Bacon Ridge Formation (SC).

Below are three generalized geologic cross-sections spanning both north-south and east-west depicting the subsurface soil conditions and approximate foundation elevations for the buildings on Lots 53 and 58. Cross-section alignments can be found in Figure 2 and complete figures can be found in Appendix B.

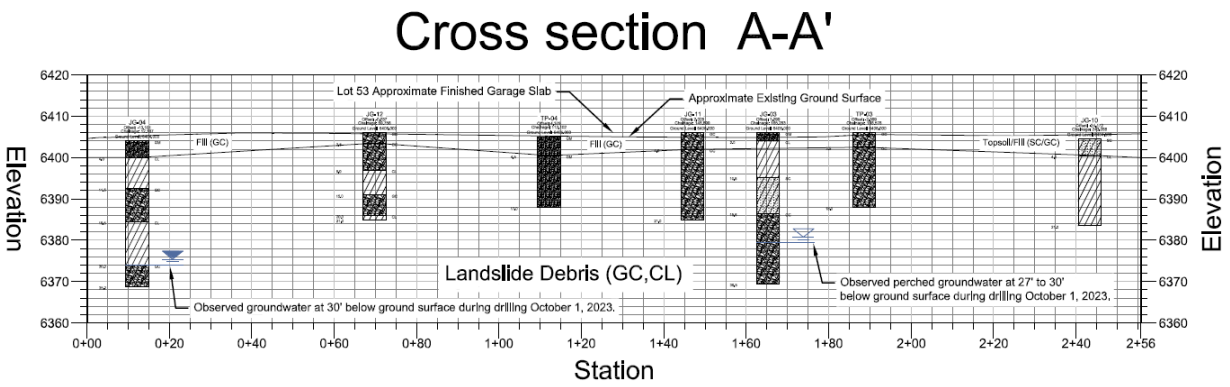


Figure 3: Geologic Cross Section A-A'

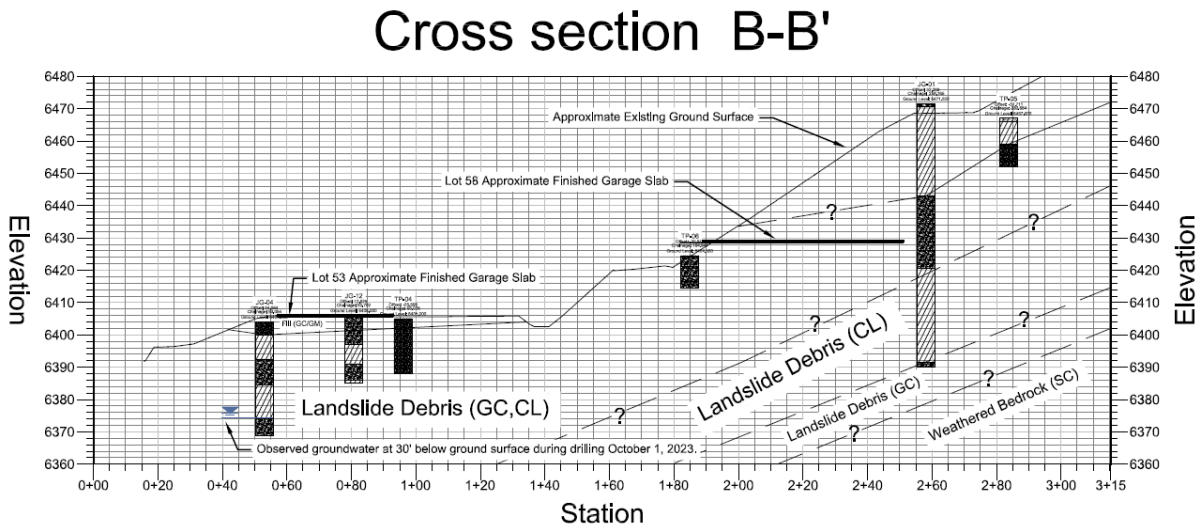


Figure 4: Geologic Cross Section B-B'

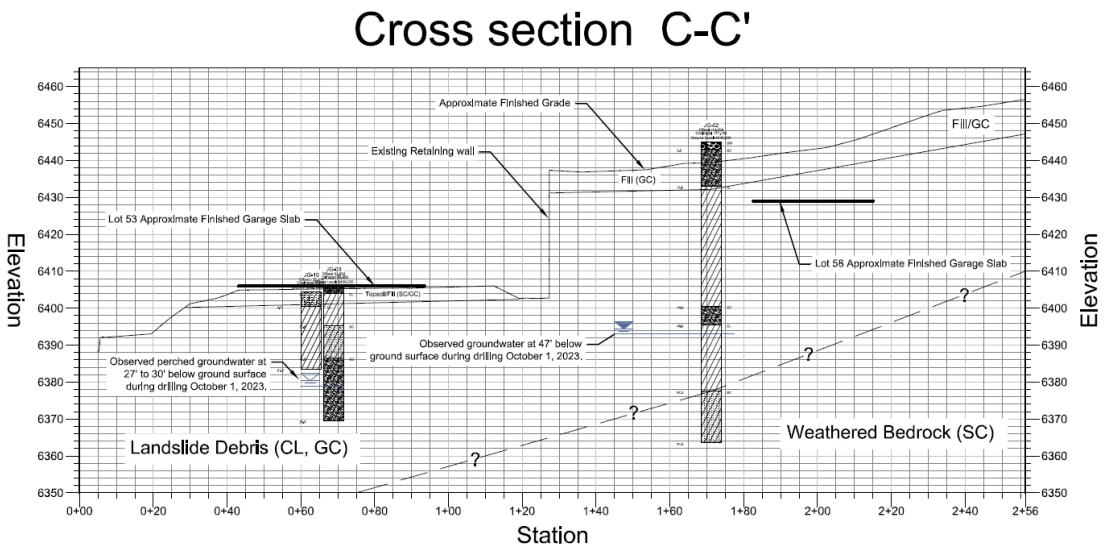


Figure 5: Geologic Cross Section C-C'

The table below describes each soil and rock layer, and detailed borehole logs are represented graphically in Appendix A. **It is important to note that** the borehole exploration techniques used either a 4-inch coring barrel or a 1.5-inch diameter split spoon sampler, limiting the soil that was collected during the drilling effort. It is likely that gravels larger and cobbles 3.0-inches are present but were unable to be logged due to the sampling method. Cobbles and boulders were encountered in the test pits.

Layer	Layer Name	Description	Geotechnical Considerations and Uses
1	**Topsoil/Fill (GC/GM/SC)**	• Observed in all boreholes and test pits • Depths ranging from 1- to 4.5-ft bgs • Classified as a Clayey **Gravel** with Sand, Silty **Gravel** with sand, or a Clayey **Sand** with Gravel. • Both the topsoil and fill are assumed to be derived from native soils • Brown to dark brown • Contains construction debris, including rebar, wood and concrete.	• Undocumented construction fill should be remove from beneath foundations • Non-structural applications
2	**Landslide Debris (GC/CL)**	• Observed in all boreholes and test pits	• Acceptable bearing layer with appropriate subgrade

		• Classified as Clayey **Gravel** with Sand, **Lean Clay**, **Lean Clay** with Sand, Sandy **Lean Clay** with Gravel, • Reddish brown to brownish gray • Coarse-grained soils are loose to very dense • Fine-grained soils are soft to very stiff • **Chaotic deposition, including charcoal fragments** • Observed 15-25% cobbles by volume • 10-55% gravel • 15-30% sand • 25-90% Clay/Silt	improvement methods • Settlement concerns • Structural applications • Non-structural applications
3	**Weathered Bedrock (SC)**	• Observed in BH-02 at 67.5-ft bgs • Classified as Clayey **Sand** • Grayish brown to reddish gray • Very dense • 55% sand • 45% fines	• Unlikely to be reached during construction

3.3 Groundwater

Groundwater was encountered in three boreholes during the subsurface exploration. Groundwater was observed in JG-02 at a depth of 47-ft bgs, JG-04 at a depth of 30-ft bgs, and a region of perched groundwater was encountered in JG-03 ranging from 27- to 30-ft bgs. These groundwater levels were incorporated into our slope stability analysis modeling and are discussed further in Appendix E.

The exploration occurred during a time of year that is considered to take place after peak groundwater levels have occurred, therefore the groundwater levels encountered during the drilling effort are *not* expected to represent peak groundwater levels. Groundwater levels fluctuate in response to seasonal snowmelt, runoff and flow levels in nearby rivers and streams, and is likely most heavily influenced by spring runoff and natural springs uphill. Soil moisture conditions on this site are most likely influenced by surface infiltration due to precipitation, snowmelt, and uphill natural springs. Two groundwater standpipes were installed on Lot 53 as part of the subsurface exploration. These standpipes were installed in JG-10 and JG-12, to total depths of 20 and 21-ft bgs, respectively.

Groundwater data was also presented in the previous Site Investigation Report published by Nelson Engineering, which was dated July, 2021. In this Report, they describe their encounters with perched groundwater to be in relatively thin (<1-ft in thickness) saturated zones. Groundwater measurements taken between 2005 and 2021 typically coincided with these saturated zones. We assume the measured groundwater levels at the site to be heavily influenced by spring runoff and natural springs uphill of the site.

3.4 Earthquakes and Ground Shaking

Jackson, Wyoming is located within the Intermountain Seismic Belt, a zone of seismicity that extends from southern Utah through eastern Idaho, western Montana, and Western Wyoming (Smith and Arabasz, 1991). The Teton fault, located along the eastern margin of the Teton Range, approximately 8-miles northeast of the site, is considered an important structural element of the Intermountain Seismic Belt. Predicted recurrence intervals for maximum credible earthquakes have passed for most of the fault systems capable of generating magnitude 7.5 earthquakes in western Wyoming (Case, 1997), implying the risk of major earthquakes is relatively high. In the event of a large magnitude earthquake (i.e., approximately 7.5), strong ground shaking, liquefaction, or slope movement could potentially cause damage to structures (Smith, et al., 1993).

Shear wave velocity calculated by Atlas Technical Consulting LLC, of Salt Lake City, Utah using ReMi geophysical exploration method for the project site is 1,200 ft/s. The IBC references ASCE 7-16 to determine the ground motion accelerations. Based on subsurface soils, and the results from the geophysical exploration, the site is classified as Site Class C ("Very dense soil and soft rock"). For your convenience, Seismic Design Maps (SEAOC, 2019) values are summarized in Table 3-1: U.S. Seismic Design Maps Summary.

Table 3-1: U.S. Seismic Design Maps Summary

Maximum Considered Earthquake (MCE) Spectral Response Acceleration Parameters			
	Short Period (S_s) =	1.024	
	1-Second Period (S_1) =	0.336	
Site Coefficients and Adjusted MCE Spectral Response Acceleration Parameters			
F_a =	1.2	S_{MS} =	1.229
*F_v =	1.5	*S_{M1} =	0.504
Design Spectral Response Parameters			
	S_{DS} =	0.819	
	*S_{D1} =	0.336	

*Note: Values for F_v, S_{M1}, and S_{D1} were determined in accordance with Section 11.4.4 of ASCE 7-16. Per Section 11.4.8 of ASCE 7-16, if the proposed structure foundation will include seismic isolators or damping systems, a site response analysis shall be performed in accordance with Section 21.1.

The project site is located in an area of moderate seismic activity. The current peak horizontal acceleration (PGA) with a probability of occurrence of 2% in 50 years is approximately 0.454g (USGS, 2014). The site amplification factor at PGA is 1.2, resulting in a site modified peak ground acceleration (PGA_M) of 0.545. This has been applied for the analysis of seismic lateral loading on retaining walls Section 4.3.

The provisions of the IBC are intended to provide uniform levels of performance for structures depending on their intended use and the risk inherent to their failure. The approach adopted in the IBC is intended to provide a uniform margin of safety against collapse at the design motion. The design earthquake ground motion is selected at a ground shaking level that is 2/3 of the maximum considered earthquake (MCE) ground motion, which has a likelihood of exceedance of 2% in 50 years (corresponding to a return period of 2,500 years). The IBC is not intended to prevent damage or loss of

function during a major earthquake; it is intended to reduce the risk of loss of life. Structural design should follow the level of risk tolerable by the Design team.

3.5 Geologic and Geotechnical Hazards

3.5.1 Potential Settlement/Compressible Clays

The primary geotechnical concern at the project site is differential settlement of foundation elements placed on unimproved landslide deposits. Based on the borehole logs, in-situ testing, lab testing, and geophysical exploration, the subgrade soils comprise a range of chaotic mixture of soils, from compressible clays to competent stony soils. The soft clays are expected to experience moderate to severe settlement, while the stony soils are *not* expected to experience substantial settlement. Calculated settlement values are discussed in Section 5.2 and calculation spreadsheets are shown in Appendix E.

3.5.2 Seismic and Fault Related Hazards

The owner should be aware that in the event of a large magnitude earthquake (i.e., approximately 7.5), strong ground shaking could potentially cause damage to structures (Smith et al, 1993). The owners may wish to consider the option of carrying earthquake insurance in addition to homeowner's insurance. Older faults mapped in the immediate vicinity of the property are believed to be old and inactive. Surface rupture due to faulting is very unlikely, and no slope failure is anticipated to occur.

3.5.3 Slope-Related Hazards

In the event of an earthquake or extreme precipitation event, rock fall, debris flows, or avalanches produced from the steep slopes to the south of the development area could potentially cause damage to structures, especially following wildfires. Risk assessment of the slope related hazards was beyond the scope of this Report, but we present slope stability analyses of several slopes captured in the cross section Lot 53 and 58. These are discussed in Section 4.1 and presented in Appendix F.

4.0 GEOTECHNICAL ENGINEERING ANALYSES

4.1 Slope Stability Analyses

The slope stability analyses were performed using SLOPE/W module of Geostudio. We analyzed two sets of geometry for global slope stability, taken from cross sections B-B’ and C-C’. Pre-construction and post-construction external geometry was determined using topographic data provided by Jorgensen Associates, as well as proposed design data provided by Jon Althschuld of Chinook Landscape Architecture, LLC.

Soil-strength parameters were determined using direct testing methods, as well as correlations based on index tests and SPT N-Values. A detailed discussion on soil-strength parameters can be found in Appendix D. The parameters used in the stability analysis are shown in Table 4-2 and Table 4-3. We incorporated a phreatic surface into model based on observed water conditions during the drilling effort. We included surcharge loads to account for future building loads and evaluated seismic conditions using a pseudo-static approach.

Table 4-2: Soil Parameters Used for Slope Stability Analysis B-B'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (CL)	115	100[1]	35
Landslide Debris (GC)	125	50[2]	40
Landslide Debris (GC/CL)	120	100[2]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

Table 4-3: Soil Parameters Used for Slope Stability Analysis C-C'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (GC/CL)	120	100[1]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

4.1.1 Results

Results of the stability analyses are summarized in Table 4-4. Appendix F shows the output of the stability model for Cross-Section B-B' and C-C'.

Table 4-4: Summary of Stability Analyses Results

Cross section	Analysis	FS	Change in FS[1]
B-B'	Pre-construction	1.646	-1.03%
	Post-construction	1.629	
	Post-Construction Seismic	1.173	N/A
C-C'	Pre-construction	2.281	+12.93%
	Post-construction	2.576	
	Post-Construction Seismic	1.753	N/A

1. Negative indicates a reduction in FS from pre-construction to post-construction, while positive indicates an increase in FS from pre-construction to post-construction.

Discussion regarding accepted FS can be found in Appendix F. Changes in Factors of Safety (FS) from pre-construction to post-construction conditions range from -1.03 to 12.93%, though all of the post-construction conditions indicate static FS's above the 1.5 threshold for residential construction ranging from 1.629 to 2.576. Post-construction seismic conditions indicate factors of safety from 1.173 to 1.753, both of which are above the 1.1 FS threshold for maximum allowable permanent seismic deformations of 2 inches (FHWA 2011).

Residual strength results from strain-softening behavior; i.e., soils become weaker with shearing (as in the case of slope movement) decreasing from peak strength to residual strength. Reduced shear strength usually occurs only in soils that have been previously sheared while undisturbed soils typically exist at peak strength. It is possible that sheared soils exist on this site or nearby and exhibit behavior

consistent with residual strength. In this case, seismic slope stability may result in factors of safety less than 1.0. **However, soil shearing was not observed during subsurface exploration at this site. If pockets or layers of soft, weak, or sheared soils are observed during construction, work shall cease, and Jorgensen Geotechnical be notified immediately to evaluate site conditions and review the stability model.**

4.2 Settlement

As described is Section 3.5.1, several different soil types were encountered at the site, all of which represent different levels of settlement potential, increasing the risk of differential settlement which is particularly damaging to structures. Settlement calculations were performed for the compressible clay, and the potentially compressible clayey sands. Because the stony soils contain varying amounts of matrix soils (i.e., clays and sands), estimated settlement is difficult. Though, it is important to note that in general, as the matrix content increases, the risk of settlement increases.

Item	Settlement Analyses – Slopewash	
	Scenario 1	**Scenario 2**
Bearing Layer	**Clay** – Foundation system is placed in direct contact with the clay soils	**Colluvium** - Foundation placed in direct contact with clayey sand soils
Foundation Assumptions	Comprises typical reinforced concrete spread footings	
	Bearing pressure of 3,000 pounds per square foot	
	Buried 3-feet below finished grade	
	Spread footings is 2-feet wide	
Calculated Settlement	3.38-inches	1.67 -inches

The risk of settlement can be reduced by several subgrade improvement methods, of which are discussed below in Section 5.0.

4.3 Lateral Earth Pressures

Lateral pressures were calculated using methods suggested by Bowles (1996) for at-rest, active, and passive conditions and are presented in Table 4-5. These values assume a combination of lean clay and clayey gravel landslide debris will be used as non-structural backfill. We have assumed an estimated internal friction angle of 36° and a unit weight of 130 pcf based on experience working with similar soil deposits and laboratory testing. Calculations assume level backfill against foundation walls or retaining walls.

Table 4-5: Lateral Pressure Parameters for Landslide Debris

Condition	Coefficient of Earth Pressures	γK (equivalent fluid pressure)
Static Conditions Level Backfill	K_o = 0.41 K_a = 0.26 K_p = 3.85	54 pcf 34 pcf 501 pcf
Earthquake Conditions	K_{ae} = 0.38	49 pcf

Level Backfill	K_{pe} = 3.46	449 pcf

Lateral earth pressure design will be estimated based on the concept of equivalent fluid pressures, in which the soil pressure-distribution is triangular against the foundation or retaining wall. The following sections summarize each design situation.

4.3.1 Active Pressures

Application	Retaining walls which are allowed to deflect and develop an active soil wedge
Resultant Force Calculation	½ $\gamma K_a H^2$; pounds per horizontal foot of wall
Resultant Force Location	one-third the wall height (1/3 H) above the base
Seismic Coefficient[1]	K_s = 0.338g (r·α·PGA) per the FHWA (2011)
Seismic Calculation Basis	Mononobe-Okabe equations (Bowles, 1996)
Seismic Resultant Force	½ (γK_{ae} - γK_a) H^2; pounds per horizontal foot of wall
Seismic Resultant Force Location[2]	Applied at 60% of the wall height above the base

1. Discussion and calculations for the Seismic Coefficient can be found in Appendix F.
2. Research has indicated that lateral pressures due to earthquakes are non-hydrostatic in distribution, and the resultant acts above the lower third-point of the wall (Bakeer, et al, 1990).

4.3.2 At-Rest Pressures

Application[1]	Walls which are restrained and not allowed to deflect
Resultant Force Calculation	½ $\gamma K_0 H^2$; pounds per horizontal foot of wall
Resultant Force Location	One-third the wall height (1/3 H) above the base

1. Design control of such walls shall be whichever generates the higher resultant force: at-rest pressures or active seismic pressures.

4.3.3 Passive Pressures

Application[1]	Toe of retaining walls where the wall is allowed to move into soil
Resultant Force Calculation	½ $\gamma K_p H^2$; pounds per horizontal foot of wall
Resultant Force Location	One-third the wall height (1/3 H) above the base
Design Control	k_s = 0.338g (r·α·PGA) per the FHWA (2011)
Seismic Calculation Basis	Mononobe-Okabe equations (Bowles, 1996)
Seismic Resultant Force Location	One-third the wall height (1/3 H) above the base

1. Passive pressure design should neglect loose fill and soil located within the frost zone.

5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 Recommendations Overview

The fine-grained soils encountered at the site exhibit moderate settlement potential as described above in Section 4.2. Typical spread footings are likely to experience settlement greater than 1-inch if placed above the compressible soils. The risk of settlement can be reduced by **ground improvement techniques** such as geosynthetic reinforced fills, or engineered aggregate piers (EAPs). The risk of settlement can also be reduced by incorporating **deep foundation elements** such as driven piles or micropiles into the foundation design. Subgrade improvement methods to reduce the risk of future differential settlement are discussed in Sections 5.2, 5.3, and 5.4, below.

Due to the need for a construction shoring system, if mass excavation (i.e., over-ex and replace with geosynthetic reinforced fill) is selected, the shoring system will need to be extended at or below the over-excavation limit, increasing the overall height of the shoring system. Deep foundation elements and aggregate piers would negate the need for mass excavation below the shoring system.

It should be noted that different subgrade improvement methods correspond with different levels of risk reduction. Any subgrade improvement method that leaves problematic soil beneath foundation systems has a higher level of risk than those that do not. Similarly, deep foundation elements greatly reduce the risk of settlement by transferring the foundation load past the problematic soils and into the underlying competent soils. Typically, the cost of a foundation system correlates to the risk reduction (i.e., the more expensive foundation system the more risk reduction).

5.2 Reinforced Fills

Reinforced fill comprise imported soil compacted and interbedded with a pre-determined geosynthetic. The reinforced fill will better distribute the foundation load thereby reducing the load applied to the fine-grained, compressible and reducing the amount of future potential settlement. Exact thickness of a reinforced fill is currently unknown due to the limited design data available, though it can be expected to be four to six fee thick with a geosynthetic layer placed at every 1-ft increment.

5.3 Engineered Aggregate Piers

Engineered aggregate piers are a ground improvement technique that utilize compacted aggregate to reinforce potentially problematic soils. The piers are predrilled with an auger to the full design-depth (or to a refusal condition on competent rock/soil), a select aggregate is dumped into the predrilled hole from the surface, and the aggregate is then compacted with a down hole compactor attached to an excavator. The compaction effort not only compacts the imported aggregate, but also densifies the surrounding native soils. The increased density of the select aggregate as well as the surrounding native soils reduces the potential of future foundation settlement. One major benefit of EAPs compared to deep foundation elements, is the EAPs are a ground improvement technique, therefore the foundation footings do not need to be designed as grade beams as it would need to be for deep foundation elements, but typical spread footings.

Aggregate piers are typically designed and installed by a design-build contractor. Such as Keller, Geotech Foundation Company, and Montana Helical Piers. Jorgensen is available to provide design values and recommendations to the selected contractor for final design and price estimates.

5.4 Deep Foundation Elements

Foundations consisting of grade beams supported by deep foundation elements, such as driven piles or micropiles, typically allow very little vertical movement of structural elements. This option represents the lowest risk of future foundation settlement.

Both micropiles and driven piles are typically designed and installed by a design-build contractor. Jorgensen is available to provide design values and recommendations to the selected contractor for final design and price estimates.

5.5 Earthwork

5.5.1 Site Preparation

Prior to the placement of any fill, concrete slabs, or foundation elements, the site should be cleared and stripped of topsoil and all organic debris. No brush, roots, frozen material, or other deleterious or unsuitable materials shall be incorporated in the foundation subgrade or structural fill. All exposed subgrade surfaces should be free of mounds and depressions which could prevent uniform compaction. If unexpected fills or obstructions are encountered during site clearing or excavation, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

During the excavation, the equipment may disturb and loosen the surface of the subgrade soils. All disturbed areas should be compacted with a smooth-drum vibratory roller, in vibratory mode with a minimum of three passes, prior to the placement of structural fill and footing construction. The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed and approved by a representative of this office.

5.5.2 Excavation and Cut Slope Stability

OSHA regulations (29CFR1926) appear to classify the coarse-grained at the site as Type C soil. For planning and design purposes, simple cut slopes should be no steeper than 1.5H:1V. According to OSHA, any cut slope greater than 20 feet in height requires additional analysis. Shallow groundwater conditions at the site may impact shoring requirements. These recommendations are based on observations made at the time of the site exploration. The contractor shall be responsible for adherence to OSHA and other safety regulations by observing soil conditions at the time of construction.

The design of a temporary construction shoring system is beyond the scope of this report. Jorgensen Geotechnical is available to coordinate with shoring contractors to provide design parameters and local expertise to the project and deliver the most efficient shoring option.

5.5.3 Final Backfilling and Grading

Properly compacted backfill and site drainage are very important to protect subgrade soils and prevent water from flowing to undesirable locations (i.e., to the highway). All soils at the site are acceptable for use as backfill and general site grading. Compaction guidelines for both soil types can be found in Section 5.5.4.

5.5.4 Compaction

Based on our borehole logs, compaction of the on-site soils during construction can be measured by performing a Standard Proctor test per ASTM D698 and performing nuclear density gauge testing during the compaction process. Site soils should be moisture-conditioned and placed in lifts and compacted to a predetermined percentage (typically either 92% or 95%) of the maximum dry density as determined by Standard Proctor testing. Soil should be moisture conditioned to between -2% and +2% of the optimum moisture content (OMC). Fine-grained soils require a sheepsfoot or padfoot roller.

It is important to note, the on-site soils contain fine-grained soils which become difficult to compact if moisture contents become too high. Moisture management of the compacted soils will be paramount to reach adequate densities. Additionally, groundwater may impact the ability to compact the soils during construction.

If imported "pit-run" is used as structural fill or if soils at the site contain more oversized clasts (greater than 3-inches) compaction testing with a nuclear density gauge is usually problematic due to the presence of stones. Therefore, we recommend compacting stony soils using a **method specification**, for which Table 5-1 provides initial guidelines.

Table 5-1: Compaction Parameters for Stony Fill

Compactor Type	Lift Thickness	Maximum Particle Size	Minimum Number of Passes[1]
5-ton vibratory	12 inches	9-inch[2]	3
1.5-ton vibratory	9 inches	6-inch	5
Hand-held	4 inches	4-inch	5

1. The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.
2. Occasional clasts to 12-inch are permitted, if encountered, but should not be nested.

The method specification may be established as follows:

- The contractor will place fill in loose lifts no greater than specified in the above table for whichever class of compactor is used.
- Fill will be compacted with the *minimum* number of passes specified above. The actual number of passes should be determined by observing compaction after each pass to determine if the surface is non-yielding. If the fill surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.
- Once the number of passes is determined, this **method** (unique to the material type, compactor, lift thickness, and number of passes) may be continued for the rest of the project as long as fill material properties and subgrade soil conditions remain the same.

It is important to establish a method specification as early in the construction as possible and apply it consistently for the entirety of the project. JG should observe lift thickness, number of passes, and equipment used during compaction. Additional guidance on construction observations may be found in Section 5.5.6.

5.5.5 Compaction Requirements

We recommend the following requirements for engineered fill materials:

Material Type and Location	Minimum Compaction Requirement	Moisture
Stony soils[1]: All Locations (Structural and Non-Structural Applications)	Non-yielding Condition	Usually 6-8%[2]
Non-stony soils	92% or 95% maximum dry density	+2-2% OMC

1. Stony soil may be imported or site-derived
2. Clean, stony soils are typically moisture insensitive and field observations are usually adequate to estimate when soils achieve the proper moisture.

We recommend compaction of fills be observed and tested during construction. If stony fill is not observed to be in a non-yielding condition or non-stony fills do not achieve the recommended compaction requirements, the area represented by the test should be reworked and retested as required to meet the requirements.

5.5.6 Observation during Construction

Recommendations in this report are contingent upon our involvement. If any unexpected soils or conditions are revealed during construction, this office should be notified immediately to survey the conditions and make necessary modifications. All excavations and foundation subgrades should be observed by a representative of JG prior to fill or concrete placement, especially if questionable materials are exposed. Notice shall be provided at a minimum of 24 hours before the requested observation.
We are able to provide the most value observing site conditions at the following times:

1. Upon completion of site preparation to verify all organics and unsuitable material have been removed, and to verify stony alluvial soils have been reached and structural fills have been prepared in accordance with Sections 5.5.1 and 5.5.4.
2. we can observe placement and compaction of fill and aid in the development of a method specification, Section 5.5.4.
3. We can perform density testing by means of proof rolls and with the use of a Nuclear Density Gauge for structural and non-structural soils.

6.0 LIMITATIONS

This report has been prepared based on a limited amount of data. Actual site conditions may vary. These services have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty is made or implied.

This report is site-specific and has been prepared in support of the proposed project. The report is for the sole use of the current property owner and their design and construction team and shall be considered non-transferable to future property owners without the written consent of Jorgensen Geotechnical. Under no circumstances are the figures and text to be used separately.

7.0 REFERENCES

American Concrete Institute, 1997, Guide for Concrete Floor and Slab Construction: ACI302.1R-896.

American Society of Civil Engineers, Minimum Design Loads for Building and Other Structures: ASCE/SEI Standard 7-16.

Bakeer, R.M., S.K. Bhatia, and I. Ishibashi, 1990, Dynamic Earth Pressure with Various Gravity Wall Movements *in* Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen, ed.): ASCE Geotechnical Special Publication 25, p. 887-899.

Bowles, J.E., 1996, Foundation Analysis and Design, 5th Ed. : McGraw Hill.

Case, J.C., 1997, Earthquakes and Active Faults in Wyoming; Wyoming State Geological Survey, Preliminary Hazards Report 97-2.

Das, B., 2011, Principles of Foundation Engineering, 7th edition, Cengage Learning, Stamford, CT, USA.

Duncan, J.M., Horz, R.C., and Yang, T.L., 1996, Shear Strength Correlations for Geotechnical Engineering, Virginia Tech, Department of Civil Engineering, Blacksburg, Virginia, pp. 86.

FHWA (1996) "Design Guidance: Geotechnical Earthquake Engineering for Highways," Geotechnical Engineering Circular No. 3, Federal Highway Administration, Vol. 1 and Vol. 2, Reports No. FHWA-SA-97-076 and FHWA-SA-97-077

FHWA (2011) "LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations," Geotechnical Engineering Circular No. 3, Report No. FHWA-NHI-11-032, 592 p"

Gilbert, J.D., D. Ostenaa, and C. Wood, 1983, Seismotectonic Study Jackson Lake Dam and Reservoir, Minidoka Project, Idaho-Wyoming: Seismotectonic Report 83-8, US Bur. Reclam.

Hatanaka, M. and Uchida, A., 1996, Empirical Correlation Between Penetration Resistance and Internal Friction Angle of Sandy Soils, Soils and Foundations, Vol. 36, No. 4, pp. 1-9, https://doi.org/10.3208/sandf.36.4_1.

Holland, J.A., and W. Walker, 1998, Controlling Curling and Cracking in Floors to Receive Coverings: Concrete Construction Publication Number C980603.

Hynes-Griffin, M.E., and Franklin, A.G., 1984, Rationalizing the Seismic Coefficient Method: U.S. Army Corps of Engineers, Waterways Experiment Station, Miscellaneous Paper GL-84-13.

International Building Code, 2021.

Kelly, D., 2006, Seismic Site Classification for Structural Engineers, Structure Magazine, pp. 21-24.

Kulhawy, F.H., and Mayne, P.W., 1990, Manual of Estimating Soil Properties for Foundation Design, Electric Power Research Institute, Palo Alto, California.

Love, J.D., & Albee, H.F., Geologic Map of the Jackson Quadrangle, Teton County, Wyoming, 2004.

Machette, M.N, Pierce, K.L., McCalpin, J.P., Haller, K.M., and Dart, R.L., 2001, Map and Data for Quaternary faults and folds in Wyoming, United States Geological Survey, Open-File Report 01-461.

McCalpin, J.P., Machette, M.N., and Haller, K.M., compilers, 1994, Fault number 726a, Grand Valley fault, Swan Valley section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed October 30, 2023.

Nagaraj, T.S., and Murthy, B.R.S., 1985, Prediction of the Preconsolidation Pressure and Recompression Index of Soils, Geotechnical Testing Journal, American Society for Testing and Materials, Vol. 8, No. 4, pp.199-202.

NCHRP 12-70 (2008) "Seismic Analysis and Design of Retaining Walls, Buried Structures, Slopes and Embankments," NCHRP Report 611, Transportation Research Board, Washington, DC (2 volumes)

O'Connell, D.R.H., Wood, C.K., Ostenaa, D.A., Block, L.V., and LaForge, R.C., 2003, Final Report, Ground Motion Evaluation for Jackson Lake Dam, Minidoka Project, Wyoming: U.S. Bureau of Reclamation Report 2003-2.

Pack, John S., P.E., 2020, Simplified Design and Inspection Guide, copyright Heli-Pile, published March 2020, Denver, Colorado.

Pampeyan, E.H., Schroeder, M.L., Schell, E.M., and Cressman, E.R., 1967, Geologic map of the Driggs quadrangle, Bonneville and Teton Counties, Idaho, and Teton County, Wyoming, U.S. Geological Survey, Mineral Investigations Field Studies Map MF-300, 1:31,680.

Pit Slope Manual, 1982, Chapter 9, Waste Embankments: Mining Research Laboratories, CANMET Report 77-01.

Schmertmann, J.M., 1975, Measurement of in-situ shear strength, Proceedings of Conference on In Situ Measurement of Soil Properties, Raleigh, NC, USA, June.

Skempton, A. W., 1944, Notes on the Compressibility of Clays, Quarterly Journal of Geological Society, London, Vol. C, pp: 119-135.

Smith, R.B. and Arabasz, W.J., 1991, Seismicity of the Intermountain Seismic Belt, in Slemmons, D.B., Engdahl, E.R., Zoback, M.L., and Blackwell, D.D., editors, Neotectonics of North America: Geological Society of America, Decade Map Volume 1, p. 185-228.

Smith, R.B., Byrd, J.O.D., and Susong, D.D., 1993, The Teton fault, Wyoming: Seismotectonics, Quaternary History, and Earthquake Hazards, in Snoke, Q.W., Steidtmann, J.R., and Roberts, S.M., editors, Geology of Wyoming; Geological Survey of Wyoming Memoir No. 5, p. 628-667.

Structural Engineers Association of California, U.S. Seismic Design Maps, accessed October 30, 2023, from SEAOC website: https://seismicmaps.org/

Suprenant, B.A., and Malisch, 1998, Where to Place the Vapor Retarder: Concrete Construction Publication Number C980427.

Suprenant, B.A., and Malisch, 1999, Don't Use Loose Sand under Concrete Slabs: Concrete Construction Publication Number C99C0223.

Terzaghi, K., R.B. Peck, and G. Mesri, 1996, Soil Mechanics in Engineering Practice, 3rd Ed.: John Wiley & Sons.

U.S. Geological Survey Earthquake Hazards Program, 2014, Unified Hazard Tool, accessed October 30, 2023 from USGS website: https://earthquake.usgs.gov/hazards/interactive/

U.S. Geological Survey, 2006, Quaternary Fault and Fold Database for the United States, accessed October 30, 2023 from USGS website: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

Whitman, R.V., 1990, Seismic Design and Behavior of Gravity Retaining Walls in Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen ed): ASCE Geotechnical Special Publication 25, p. 817-842.

Wroth, C.P., and Wood, D.M., 1978, The Correlation of Index Properties with Some Basic Engineering Properties of Soils, Canadian Geotechnical Journal, Vol. 15, No. 2, pp. 137-145.

Zellman, M.S., DuRoss, C.B., and Thackray, G.D., 2019, The Teton fault—Teton County, Wyoming: Wyoming State Geological Survey Open File Report 2019-1, scale 1:75,000.

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX A

Site Exploration Procedures and Subsurface Exploration Logs

Field Exploration

Borehole Locations and Elevations

Borehole and test pit locations were determined by Jorgensen Geotechnical (JG) staff to bracket the approximate location of the proposed development. Approximate locations of the boreholes and test pits are presented in Figure 2. The approximate location of each borehole and test pit locations were estimated based on relative proximity to landmarks identifiable on aerial photography. Approximate GPS coordinates for each borehole were also collected in the field. Approximate elevations were based on topographic data from Jorgensen Associates.

Subsurface Exploration Procedure

JG conducted a site exploration at the proposed project site utilizing two different subsurface exploration techniques: geotechnical boreholes and open test pits. During the exploration effort, several disturbed samples from SPTs were collected during the drilling effort as well as bulk disturbed grab samples during the test pit excavation. Shelby tubes were used to collect relatively undisturbed samples of soft material for consolidation testing, shear testing, and index testing. The samples were tested at GCI in Salt Lake City, Utah, and the results are presented in Appendix B. Soil-engineering properties were based on visual classification, direct lab testing results, and accepted correlations based on index test results and SPT blow counts and are discussed further in Appendix D. The subsurface exploration techniques are described below.

Sonic Boreholes

On October 1 and 2, 2023, JG directed and oversaw the drilling of four sonic boreholes; two to 80-feet below the ground surface (bgs) and two to 35-feet bgs using a sonic drill rig operated by Cascade Drilling of West Jordan, Utah. Sonic drilling utilizes high frequency vibrations to advance a core barrel or casing into the subsurface soils while collecting one continuous disturbed sample. At predetermined intervals, standard penetration tests (SPT) were performed to generate blow count values and collect additional disturbed samples.

Hollow Stem Auger Boreholes

Three additional boreholes were completed each to 20-feet bgs on October 25, 2023 using a hollow stem auger (HSA) drilling technique with a Diedrich D120 drill rig operated by SK Geotechnical of Billing, Montana. The HSA drilling technique utilized a 4.25-inch inside diameter hollow auger with a solid stem rod in the center that is removed to perform standard penetration tests every 2.5-feet.

Open Test Pits

On October 31, 2023, JG directed and oversaw the excavation of four open test pits. The test pits were excavated using a Hitachi Zaxis 160 steel tracked excavator operated by FCExcvation. The test pits ranged in depth from 10 to 18-feet bgs. Disturbed bulk samples were collected from pertinent soil layers.

Borehole Logs

Field data were collected in the field digitally using the application pLog on a tablet. Draft logs were reviewed in the office, and final versions are presented below. Blow counts for SPT (field N-values) were adjusted to a standard hammer efficiency of 60% and overburden pressure of one atmosphere as suggested by Youd and Idriss (1997) and Fang (1991), to obtain the adjusted (N1)60 values in blows per foot. Soil type, thickness, consistency, and relative moisture content were observed and documented by Jorgensen Geotechnical staff.

Detailed borehole logs are attached. Site conditions may vary and actual soil conditions may differ from those presented in the borehole logs. The final logs represent JG's interpretation of the subsurface soil conditions. Actual soil conditions may differ from those observed in the boreholes.

In addition to borehole and test pit logs produced by Jorgensen Geotechnical, borehole logs presented in a report produced by Nelson Engineering dated July 28, 2021 were also reviewed to determined subsurface soil conditions and are presented below. Approximate borehole locations performed by Nelson Engineering are presented in Figure 2. Test pit logs presented in a report prepared by Womack and Associated dated June 4, 2012 for the water tank due south of the proposed project site were also reviewed.

Geophysical Exploration

Jorgensen Geotechnical contracted with Atlas Technical Consultants LLC of Salt Lake City to perform a geophysical evaluation at the project site. The primary purpose of the geophysical study was to develop subsurface shear-wave velocity profiles using Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Waves (MASW). The geophysical exploration was performed on October 23 and 24th 2024. One ReMi line and one MASW line were performed at the specific project site (Lots 53 and 58), while the other ReMi and MASW lines were performed on Lot 57.

The ReMi study extended to a maximum depth of 100-ft below the ground surface, allowing us to select a Site Class based on the results. Shear wave velocity for the ReMi line RL-2 performed at lots 53 and 58 produced a shear wave velocity of 1,201 ft/s, classifying the site as a Site Class C per ASCE 7-16

The MASW line ML-2 performed at the project site indicates the upper approximately 20-feet are softer (i.e., slower shear wave velocity), and the soils become denser at approximately 30-feet below the ground surface. Though the soils appear to become denser at 30-feet, the upper 20-feet appear to be chaotic and have portions that are dense, and portions that are soft, consistent with the observations made in the boreholes and test pits.

The full Report from Atlas is attached.



Photo 1: Typical sonic drilling setup/JG--01



Photo 2: Typical sonic drilling bulk sample/Landslide Debris (GC/CL)



Photo 3: Typical hollow stem auger drilling setup/JG-12



Photo 4: Typical SPT sample/JG-10 D3



Photo 5: Typical test pit excavation setup/TP-07



Photo 6: Landslide Debris (GC)/TP-03



Photo 7: Chaotic sorting in Landslide Debris (GC)/TP-03



Photo 8: Charcoal present within landslide debris/TP-03



Photo 9: Large angular cobbles ~'1 to 2' diameter/TP-04 spoils pile

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
0			D1				Gravel (GW): Slightly moist to moist, brown, medium dense, clast supported, sub-rounded clasts approximately 50% sand and 50% sub-rounded gravel [FILL]					
1												
2			D2				Gravelly LEAN CLAY with Sand (CL): slightly moist, brownish tan, stiff, 25-30% angular gravel, 15-20% sand, 55-65% fines, [LANDSLIDE DEBRIS]					
3												
4												
5			D3									
6												
7			D4									
8			D5									
9												
10												
11												
12												
13												
14			D6									
15												
16												
17			D7									
18			D8					12		31	16	15
19												
			D9									

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
□ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) / MC (%) / PL & LL (%) / Fines Content (%)
21							Gravelly LEAN CLAY with Sand (CL): slightly moist, brownish tan, stiff, 25-30% angular gravel, 15-20% sand, 55-65% fines, [LANDSLIDE DEBRIS]						
22			D10										
23													
24													
25			D11										
26													
27													
28			D12	67	11-16-21 38			11		28	16	12	
29							CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, very dense, 50-55% angular gravel, 15-25% sand, 25-30% fines [LANDSLIDE DEBRIS]						
30			D13										
31			D14										
32													
33			D15										
34													
35			D16										
36													
37			D17	56	46-50/5" 94								
38			D18										
39			D19										

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) / □ Fines Content (%) 20 40 60 80
41			D20				CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, very dense, 50-55% angular gravel, 15-25% sand, 25-30% fines [LANDSLIDE DEBRIS]						
42			D21										
43			D22										
44			D23										
45			D24										
46			D25										
47		⧗	D26	200	19-50/1" 84								
48													
49													
50													
51							LEAN CLAY, Sandy LEAN CLAY with Gravel, LEAN CLAY with Sand (CL): slightly moist, brownish tan, very stiff, 10-20% gravel, 20-30% sand, 50-90% fines, [LANDSLIDE DEBRIS]						
52													
53													
54													
55													
56			D27					13		33	15	18	●⊢
57													
58													
59			D28										

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
61							LEAN CLAY, Sandy LEAN CLAY with Gravel, LEAN CLAY with Sand (CL): slightly moist, brownish tan, very stiff, 10-20% gravel, 20-30% sand, 50-90% fines, [LANDSLIDE DEBRIS]						
62			D29										
63			D30										
64													
65			D31										
66													
67													
68			D32	115	19-31-50/4" 56			10		26	16	10	● ⊢
69			D33										
70			D34										
71			D35										
72													
73			D36					12		38	17	21	● ⊢
74													
75			D37										
76													
77													
78			D38										
79													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-01

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Diedrich D120
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471263 **Longitude:** -110.753274 **Elevation:** 6471.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
81			D39	100	9-23-35 35		CLAYEY GRAVEL with Sand (GC): slightly moist, brownish gray, dense, angular 55% gravel, 15% sand, 30% fines [LANDSLIDE DEBRIS]						▲
82													
83													
84													
85													
86													
87													
88													
89													
90													
91													
92													
93													
94													
95													
96													
97													
98													
99													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) / MC (%) / PL & LL (%) / Fines Content (%)
1			D1				GRAVEL (GW): slightly moist to moist, brown, medium dense, clast supported, approximately 50% sand and 50% sub-rounded gravel [FILL]						
2													
3			D2				CLAYEY GRAVEL with Sand (GC): slightly moist, medium dense, brownish tan, 55% angular gravel, 15% sand, 30% fines [LANDSLIDE DEBRIS]						
4													
5			D3										
6													
7			D4							20	15	5	H
8													
9			D5										
10			D6										
11													
12			D7				LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel, (CL): Slightly moist, reddish brown, soft to medium stiff, homogeneous, 10-20% sub-angular to angular gravel , 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]						
13													
14													
15			D8					12		31	15	16	●⊣
16													
17													
18			D9	0	4-3-3 6								▲
19													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
21			D10				LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel, (CL): Slightly moist, reddish brown, soft to medium stiff, homogeneous, 10-20% sub-angular to angular gravel , 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]						
22													
23			D11					13		29	15	14	● ⊢
24													
25													
26			D12										
27													
28			D13	100	7-12-13 24	2.50							▲
29			D14										
30													
31			D15										
32													
33			D16					15		21	16	5	●
34													
35													
36			D17										
37													
38			D18	93	16-12-15 24								▲
39			D19					16		29	17	12	● ⊢

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
▽ At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
41			D20				LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel, (CL): Slightly moist, reddish brown, soft to medium stiff, homogeneous, 10-20% sub-angular to angular gravel , 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]					
42												
43			D21									
44												
45			D22				CLAYEY GRAVEL with Sand (GC): moist to wet, reddish brown to grayish tan, dense, homogeneous, 40-50% angular gravel, 20-30% sand, 30-35% fines [LANDSLIDE DEBRIS]					
46												
47							▽					
48			D23	100	14-25-31 45							
49			D24									
50							LEAN CLAY, LEAN CLAY with Sand (CL): wet, tan to reddish tan, stiff to very stiff, homogeneous, 0-10% angular gravel, 5-35% sand, 60-95% fines [LANDSLIDE DEBRIS]					
51			D25									
52												
53			D26					12		26	14	12
54												
55												
56			D27									
57												
58			D28	100	14-26-36 45							
59			D29									

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
☐ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) 8 16 24 32 / MC (%) / PL & LL (%) 20 40 60 80 / Fines Content (%) 20 40 60 80
61			D30				LEAN CLAY, LEAN CLAY with Sand (CL): wet, tan to reddish tan, stiff to very stiff, homogeneous, 0-10% angular gravel, 5-35% sand, 60-95% fines [LANDSLIDE DEBRIS]	14		37	14	23	
62													
63			D31										
64													
65			D32					13		31	17	14	
66													
67		⧗	D33	400	50/4" 66								
68			D34				CLAYEY SAND (SC): wet, grayish brown to reddish gray, very dense, 55% sand, 45% fines, ironoxide staining, organic odor [WEATHERED ROCK]						
69													
70			D35							21	16	5	
71													
72			D36										
73													
74													
75			D37										
76			D38										
77													
78			D39										
79													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-02

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 01 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
▽ At time of drilling 47.00 on Oct 01 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 81.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471530 **Longitude:** -110.752693 **Elevation:** 6440.00
Notes: Groundwater encountered at 47' bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
81			D40	0	50/2" 59		CLAYEY SAND (SC): wet, grayish brown to reddish gray, very dense, 55% sand, 45% fines, ironoxide staining, organic odor [WEATHERED ROCK]						
82													
83													
84													
85													
86													
87													
88													
89													
90													
91													
92													
93													
94													
95													
96													
97													
98													
99													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-03

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471750 **Longitude:** -110.753041 **Elevation:** 6406.00
Notes: Perched groundwater encountered between 27 and 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1			D1				SILTY GRAVEL with Sand (GM): slightly moist, dark brown, medium dense, 45% sub-rounded to rounded gravel, 25% sand, 30% fines [FILL]					
2							GRAVELLY LEAN CLAY with Sand (CL): slightly moist, brownish tan, soft, approximately 15-25% angular cobbles by volume, matrix supported, 30-35% angular gravel, 15-20% sand, 50% fines [LANDSLIDE DEBRIS]					
3			D2									
4												
5			D3					10		33	14	19
6												
7			D4	93	4-3-4 7							
8												
9			D5									
10			D6									
11							CLAYEY SAND with Gravel (SC): slightly moist, very light brownish tan, dense, approximately 15-25% angular cobbles by volume, matrix supported, 25-30% angular gravel, 30-35% sand, 40-45% fines [LANDSLIDE DEBRIS]					
12												
13			D7									
14												
15			D8					8		30	15	15
16												
17			D9	100	10-17-20 33							
18							CLAYEY GRAVEL with Sand (GC): moist to wet, reddish brown, medium dense, homogenous, approximately 15-25% angular cobbles by volume, matrix supported, 30-55% angular gravel, 20-30% sand, 30-50% fines [LANDSLIDE DEBRIS]					
19			D10									

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-03

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471750 **Longitude:** -110.753041 **Elevation:** 6406.00
Notes: Perched groundwater encountered between 27 and 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D11				CLAYEY GRAVEL with Sand (GC): moist to wet, reddish brown, medium dense, homogenous, approximately 15-25% angular cobbles by volume, matrix supported, 30-55% angular gravel, 20-30% sand, 30-50% fines [LANDSLIDE DEBRIS]					
22												
23			D12					12		35	15	20
24												
25			D13									
26												
27			D14	87	10-11-14 22							
28												
29			D15									
30			D16									
31			D17					11		29	15	14
32												
33												
34			D18									
35			D19	80	20-25-10 17							
36												
37												
38												
39												

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-04

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
At time of drilling 30.00 on Oct 02 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 35.2 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471774 **Longitude:** -110.753619 **Elevation:** 6404.00
Notes: Groundwater encountered at 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1			D1				SILTY GRAVEL with Sand (GM): slightly moist, dark brown, medium dense, 45% sub-rounded gravel, 25% sand, 30% fines [FILL]					
2												
3			D2									
4							LEAN CLAY with Gravel (CL): slightly moist, brownish tan, soft, approximately 15-25% angular cobbles by volume, matrix supported, 15-20% angular gravel, 15-20% sand, 60-70% fines [LANDSLIDE DEBRIS]					
5			D3									
6												
7			D4	93	2-2-7			12		34	16	18
8			D5		8							
9												
10			D6									
11												
12							CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, dense, approximately 15-25% angular cobbles by volume, matrix supported, 35-55% angular gravel, 15-30% sand, 30-35% fines [LANDSLIDE DEBRIS]					
13			D7									
14												
15			D8					7		19	14	5
16												
17			D9	53	18-27-30							
18					49		LEAN CLAY with Sand (CL): slightly moist, brownish tan, medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-5% angular gravel, 25-30% sand, 65-70% fines [LANDSLIDE DEBRIS]					
19			D10									

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-04

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic
▽ At time of drilling 30.00 on Oct 02 2023

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 35.2 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471774 **Longitude:** -110.753619 **Elevation:** 6404.00
Notes: Groundwater encountered at 30-ft bgs. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D11				LEAN CLAY with Sand (CL): slightly moist, brownish tan, medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-5% angular gravel, 25-30% sand, 65-70% fines [LANDSLIDE DEBRIS]	17				
22												
23			D12							31	17	14
24												
25												
26			D13									
27												
28			D14	87	25-32-12 21							
29			D15									
30			D16									
31			D17				CLAYEY GRAVEL with Sand (GC): wet, grayish brown to reddish gray, very dense, approximately 15-25% angular cobbles by volume, matrix supported, 40-45% angular gravel, 15-20% sand, 40-45% fines [WEATHERED ROCK/LANDSLIDE DEBRIS]	10		33	15	18
32												
33												
34			D18									
35			~~D19~~	400	50/1" 83							
36												
37												
38												
39												

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
□ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-10

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471827 **Longitude:** -110.752751 **Elevation:** 6404.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-2 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1–4							CLAYEY SAND with Gravel (SC): slightly moist, very loose, brown, 20% angular gravel, 55% sand, 20% fines [TOPSOIL/FILL]					
3			D-1	40	1-1-4 4							
4–5							GRAVELLY LEAN CLAY with Sand. LEAN CLAY with Sand, LEAN CLAY (CL): dry, reddish tan, soft to medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-30% angular gravel, 10-20% sand, 50-90% fines, [LANDSLIDE DEBRIS]					
6			D-2	67	5-8-7 11							
8			D-3	60	5-5-6 9					25	16	9
10–11			D-4	67	9-17-12 18							
13			U-1					14		39	15	24
15–16			D-5	83	4-6-8 11			16		38	21	17
18			U-2					14		32	14	18
19												

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-10

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471827 **Longitude:** -110.752751 **Elevation:** 6404.50
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-2 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / ☐ Fines Content (%) 20 40 60 80
21			D-6	100	5-9-8 14		GRAVELLY LEAN CLAY with Sand. LEAN CLAY with Sand, LEAN CLAY (CL): dry, reddish tan, soft to medium stiff, approximately 15-25% angular cobbles by volume, matrix supported, 0-30% angular gravel, 10-20% sand, 50-90% fines, [LANDSLIDE DEBRIS]						▲
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-11

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471746 **Longitude:** -110.753110 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1–4			D-1	20	11-11-19 26		CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, medium dense, 55% sub-rounded gravel, 25% sand, 20% fines [FILL]					
5–7			D-2	79	5-11-50/5" 50		CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, medium dense to very dense, chaotic sorting, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 30-50% angular gravel, 15-30% sand, 35-40% fines, Charcoal present [LANDSLIDE DEBRIS					
8–9			D-3	90	8-12-14 20			7		22	15	7
10–12			D-4	83	4-9-12 16							
13–15			D-5	100	6-17-23 33							
16–17			D-6	73	10-18-20 31							
18			~~D-7~~	0	50/1" 79							
19			D-8	125	50/5" 77							

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-11

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471746 **Longitude:** -110.753110 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21							CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, medium dense to very dense, chaotic sorting, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 30-50% angular gravel, 15-30% sand, 35-40% fines, Charcoal present [LANDSLIDE DEBRIS					
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
☐ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-12

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471744 **Longitude:** -110.753401 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-3 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
0							CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, very loose, 55% rounded gravel, 25% sand, 20% fines [FILL]					
3			D-1	60	4-4-3 5		CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, loose to very dense, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 30-35% angular gravel, 25-30% sand, 40-45% fines [LANDSLIDE DEBRIS]					
5			D-2	93	9-19-50/5" 55			10		27	15	12
7			D-3	75	50/5" 78							
9							LEAN CLAY with Sand (CL): dry, tan, medium stiff, 10% angular gravel, 30-40% sand, 50-60% fines, [LANDSLIDE DEBRIS]					
10			D-4	100	6-6-14 15			13		27	17	10
13			D-5	93	4-6-15 17							
15			D-6	100	6-23-29 41		CLAYEY GRAVEL WITH SAND (GC): dry to slightly moist, brown, dense, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 50% angular gravel, 15% sand, 35% fines [LANDSLIDE DEBRIS]					
18			D-7	73	19-16-42 45							

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-12

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 25 2023 **Completed:** Oct 25 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Total Depth: 21.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471744 **Longitude:** -110.753401 **Elevation:** 6406.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-3 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D-8	100	6-9-15 20		SANDLY LEAN CLAY with Gravel (CL): dry to slightly moist, brown, medium stiff, homogeneous, approximately 15-25% angular cobbles by volume, matrix supported, 20-30% angular gravel, 20-30% sand, 50% fines [LANDSLIDE DEBRIS]	11		26	14	12

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
□ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-03

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471762
Longitude: -110.752954
Elevation: 6406.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

Notes:
No groundwater encountered. Stopped at target depth and limits of excavtator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
0						CLAYEY GRAVEL with Sand(GC): dry to slightly moist, blackish brown, homogeneous, 45% sub-angular gravel, 30% sand, 25% fines, [FILL]						
4						CLAYEY GRAVEL with Sand(GC): dry to slightly moist, brown, clast supported, 25% sub-angular to angular cobbles by volume, remaining 50% angular gravel, 15% sand, 35% fines by mass, Large amounts of charcoal. Chaotic sorting. Layer of CL (-0.5") at 6.5' and 8' [LANDSLIDE DEBRIS]						

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-04

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471736
Longitude: -110.753241
Elevation: 6405.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160
Notes: No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
1						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, blackish brown, homogeneous, 45% sub-rounded gravel, 30% sand, 25% fines, Chunks of asphalt present, rebar [FILL]						
2												
3												
4												
5						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, clast supported, 15% sub-angular to angular cobbles by volume, remaining 50% angular gravel, 15% sand, 35% fines by mass, Large amounts of charcoal. Chaotic sorting. [LANDSLIDE DEBRIS]						
6												
7												
8												
9												
10												
11												
12			D-1									
13												
14												
15												
16												
17												
18												
19												

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-05

Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471248
Longitude: -110.753015
Elevation: 6467.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Notes:
Contractor: FCE
Equipment: Hitachi Zaxis 160

No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
1						CLAYEY SAND (SC): dry, brown, loose, 15% gravel, 55% sand, 30% fines, [TOPSOIL]						
2						LEAN CLAY with Sand (CL): dry, light whitish tan, pinholed, 5% angular gravel, 15% sand, 80% fines, medium plasticity, Some gravels and cobbles present. Lime stringers present [LOESS]						
3												
4												
5												
6												
7			D-1									
8						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, clast supported, 35% angular cobbles by volume, remaining 50% angular gravel, 15% sand, 35% fines by mass, charcoal. Chaotic sorting. [LANDSLIDE DEBRIS]						
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

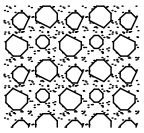
Test Pit ID: TP-06

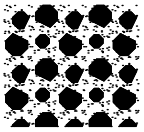
Project Name: Bear Development - Snow King Loop Lots 53 and 58
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471498
Longitude: -110.753164
Elevation: 6424.50
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

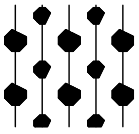
Notes:
No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

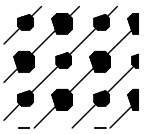
Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
0						CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, 40% angular cobbles by volume, remaining 55% angular gravel, 15% sand, 30% fines by mass, 2-4' cobbles and boulders [LANDSLIDE DEBRIS]						
4						CLAYEY GRAVEL with Sand (GC): slightly moist, dark reddish brown, dense, clast supported, 40% angular cobbles by volume, remaining 55% angular gravel, 15% sand, 30% fines by mass, 2-4' cobbles and boulders. Increased to very dense at bottom of pit. [LANDSLIDE DEBRIS]						
8						CLAYEY GRAVEL with Sand (GC): Dry, reddish brown, very dense, 80% angular cobbles by volume, remaining 55% angular gravel, 20% sand, 25% fines by mass, Appears to be layer of scree/ loose bedrock [LANDSLIDE DEBRIS/WEATHERED BEDROCK]						

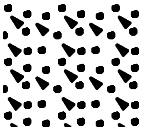
SOIL GRAPHICS

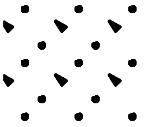
GW 

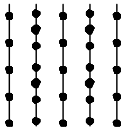
GP 

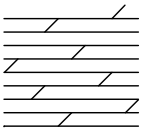
GM 

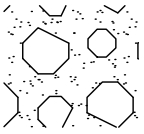
GC 

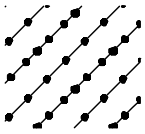
SW 

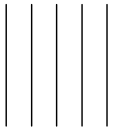
SP 

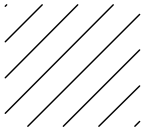
SM 

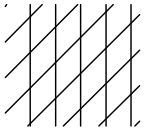
BEDROCK 

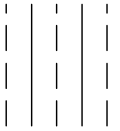
COBBLES/BOULDERS 

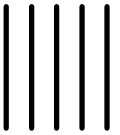
SC 

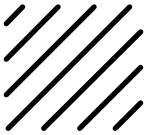
ML 

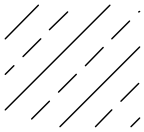
CL 

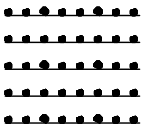
ML–CL 

OL 

MH 

CH 

OH 

PT 

NOTE: ANGLED DEMARCATIONS ON THE LOGS INDICATE APPROXIMATE OR POORLY DEFINED BOUNDARIES BETWEEN SOIL TYPES.

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**		**DRILL HOLE No. BH-1**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/11/05 10/12/05**		DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**		DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6408.5**		HOLE DIAMETER: **4"**	
		HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ALUVIAN GRAVEL, COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED ON EXCAVATED CUT SLOPE. SURFICIAL SOILS AT BORING SITE AND IN ADJACENT CUT SLOPES ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER (6' M.D.)*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-5' ARE ROCK CHIPS AND SILTY CLAY FINES*						
		4												
		5						*DRILLING THROUGH ROCK 4.8-6'*						
		6												
		7												
		8												
		9						*CUTTINGS 0-10.1' ARE ROCK CHIPS AND SILTY CLAY FINES*						
		10	X			BH1-1 2" SS	87	*DRY GREY GRAVEL, GP, FILGC, LIMESTONE FRAGMENTS IN MOIST BROWN SILTY SAND MATRIX*			>50			
		11	X											
		12												
		13												*10-20' DR REPORTS INTERVALS OF 1-4" SOFTER MATERIAL. PRIMARILY DRILLING THROUGH ROCK MATERIAL CUTTINGS ARE LIMESTONE FRAGMENTS IN SILTY SAND*
		14												
		15												
		16												
		17												
		18												
		19												
		20	X			BH1-2 2" SS	46	*MOIST BROWN GRAVEL W/ SILT AND SAND, GP-GM, GRAVELS ANGULAR, SILT STIFF. MULTICOLORED GRAVELS HIGHLY WEATHERED*			35			
		21	X											

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-1* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	22												DR MOD. TO EASY DRILLING IN 20–22' INTERVAL 8" ROCK 22.3–23'
		23												
		24												
		25				BH1-3 3"CS	25	MOIST BROWN CLAYEY SAND WITH GRAVEL, SC, PP=2.5 TSF, STIFF TO V. STIFF. FRAG. IN SHOE			8			
		26												DR 1–3" INTERVALS BETWEEN CLASTS
		27												
		28						SOME HIGHER PLASTICITY LEAN CLAYS IN CUTTINGS						
		29												
		30				BH1-4 2.5" SS	21	MOIST BROWN CLAYEY SAND WITH GRAVEL, SC, V. STIFF TO HARD, PP=4.0TSF	27	16	10		10	DR EASIER DRILLING FROM 29.5'± WITH LITTLE HAMMER ACTION
		31												
		32						HOLE CAVED TO 20' AFTER 30' SAMPLE						DR EASIER DRILLING FROM 29.5'± WITH LITTLE HAMMER ACTION FREQ. HAMMER PLUGGING 32–40'
		33												
		34												
		35												
		36												
		37												
		38												
		39												
		40						NO SLUFF IN HOLE @40' DIFFICULTY CLEANING HOLE TO REMOVE ROD INDICATES SOME CAVING IN 30–40' INTERVAL.						
		41				BH1-5 2" SS	70	MOIST BROWN CLAYEY SAND, SC, VERY STIFF TO HARD, FINE ANGULAR GRAVELS IN A SANDY CLAY MATRIX. UPPER 2" HIGHER MOISTURE CONTENT, MAY INDICATE SEEPAGE ZONE 40–41'	19	4	30		12	DR GRAVEL AND COBBLE ZONE 42–43' WATER LEVEL 11/3/05
		42												
		43												
		44												

S:\STANDARD\BORDERS\NE_BOREHOLE.DWG (BOREHOLE PG1) JUN 20 2002 08:53:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-1* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44						*CUTTINGS ARE MOIST TO WET OLIVE GREEN CLAYEY SAND*						*DR CONT. HAMMER CLOGGING FROM 42'*
		45	X			*BH1-6 2" SS*	*83*	*MOIST OLIVE GREEN CLAYEY SAND, SC, MED. STIFF TO STIFF, SLIGHTLY SANDY LENS WITHIN. SOME CALCIUM CARBONATE STRINGERS.*	*30*	*6*	*16*		*20*	
		46	X											
		47	X											
		48												
		49												
		50												
		51												
		52	X											*AT 52' DR APPROX. 12' OF WATER IN HOLE OVERNIGHT*
		53	X			*BH1-7 2" SS*	*40*	*AS ABOVE BUT GREY BROWN, SOME COAL/ORGANICS, PP=3.5-4.0 TSF.*			*22*			
		54	X					*BOH =52.0'*						
		55						*SET PIEZO (1"PVC) BOTTOM AT 51.1 SLOTTED BOTTOM 10' FILLED ANNULUS WITH SAND TO 38' 1' STICKUP*						
		56												
		57												
		58												
		59												
		60												
		61												
		62												
		63												
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJECTS\06-12 GRAND VIEW LODGES\DRILLING\BHBORINGLOG.DWG (BH-1 (2)) FEB 13 2006 10:56:01 AM PLOTTED BY: GYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-2**	PAGE: **1 OF 5**
DATE STARTED / FINISHED: **10/11/05 10/12/05**	DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6550.3**	HOLE DIAMETER: **4"**	
	HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	FREQ. GRAVEL, COBBLE. AND BOULDER SIZE CLASTS	1–6						*BORING LOCATED ON GRASSY AREA. SURFICIAL SOILS IN ADJACENT ROAD CUT ARE GENERALLY STIFF TO HARD GRAVEL AND SILT MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE. SEVERAL LARGE BOULDERS EXCAVATED FROM NEARBY WATER TANK EXCAVATION.*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		3–5						*CUTTINGS 0–5' ARE MOIST LT BROWN GRAVEL WITH WITH SILT, GP–GM*						*DR FREQ. COBBLES. HAMMER ACTION IS NEARLY CONTINUOUS*
		6												*DR NO GRAVEL/COBBLES FROM 6'±*
	WET TO SATURATED SOILS IN INTERVALS FROM 7'–18'	7–9						*DR VERY SOFT DRILLING 7–9.5' CUTTINGS ARE WET CLAY/SANDY CLAY. APPEARS TO BE A SATURATED ZONE*						
		10–11				BH2-1 2.5" CS	75	*FROM 9.5' SAND CONTENT OF CUTTINGS INCREASING MOIST GREY BROWN CLAY, CL, STIFF TO VERY STIFF, NONUNIFORM PLASTICITY IN SAMPLE.*			15			
		12–14												*DR GRAVELLY DRILLING 12'–13'*
		15–16				BH2-2 2" SS	75	*MOIST TO WET GREY CLAYEY SAND W/GRAVEL, SC, GRAVELS FINE TO MED. SANDS FINE. V. STIFF TO HARD, MEDIUM PLASTICITY*			16			
		17												
		18						*HAMMER PLUGGING FREQ. TO 17' CUTTINGS ARE MOIST CLAYS*						
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	19–21						*ROCKY DRILLING FROM 18' FREQ. HAMMER ACTION ON COBBLE AND GRAVELS. CUTTINGS SLIGHTLY MOIST*						

MATERIAL DESCRIPTION

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	22												*DR ROCKY DRILLING FROM 20'*
		23						*CUTTINGS TO 25' ARE GRAVEL/COBBLE FRAGMENTS IN SILT/SILTY CLAY WITH SAND MATRIX*						
		24												
		25	X			BH2-3 2.5"	25	*MOIST GREY SANDY SILT/SANDY CLAY, SC, V. STIFF*			18			
		26	X											*DR WET PLASTIC SOILS CONT. PLUG HAMMER. BORING ADVANCED WITH 1.875" ø NQ CORE FROM 30'*
		27	X											
		28												
		29												
		30						*CORING FROM 30' RETURN LOGGED AS IN"/IN"*						
		31		X				*30-30.8' WET SAT GREY CLAY, CL, WET FROM DRILLING FLUID. WITH 2 3" GRAVEL PARTICLES*						
		32		X			33/36	*30.8-33' MOIST GREY GREEN SANDY SILT, ML, V. STIFF TO HARD. GRADES TO SILTY SAND W RED COLORING SOME INTERVALS. TRACE CLAY. THROUGHOUT. 1 2" SEAM OF V.STIFF MED. PLASTICTY CH 31.0'*						
		33		X										
		34												
		35					2/60	*MOIST GREY SAND W/SILT, SP/SM, SANDS FINE, DENSE, WEAKLY CEMENTED*						
		36												
		37												
		38												
		39												
		40					35/60	*MOIST DENSE GRAY GREEN SAND W/SILT, SP-SM, DENSE, CONTAINS 1/4" THICK STRATA OF DK BROWN SILT W/SAND IN LOWER HALF*						
		41												
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\STANDARD\REFERENCE\BOREHOLE\BOREHOLE.PGU JUN 20 2002 09:53:53 AM PLOTTED BY: GREEN

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-2* PAGE: *3 OF 5*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44					43/60	*MOIST DENSE GRAY GREEN SILTY SAND, SM, SANDS FINE, SILT % INCREASING WITH DEPTH, LOWER 1.5' OF SAMPLE MAY BE SANDY SILT. 3–5 DARKER FINE GRAINED STRATA <1" THICKNESS IN INTERVAL*						
		45												
		46												
		47												
		48												
		49												*48–53 DR VARIABLE RATE OF ADVANCE IND. 6"± STRATA*
		50					60/60	*4" INTERVAL 48.2–48.6 SAT V. SOFT SILTY SAND (DRILLING FLUID). MOIST GRAY GREEN SILT, ML, V. STIFF, OCCASIONAL BLACK ANGULAR FINE GRAVELS.*						
		51						*SAND % INCREASING FROM 51' MOIST GREY GREEN SILTY SAND, SM, SANDS FINE, DENSE*						
		52												
		53												
		54					48/48	*MOIST GREY GREEN SILT, SILTY SAND, ML/SM, WEAKLY CEMENTED SILTSTONE UPPER 6"*						
		55												
		56												
		57					12/12	*AS ABOVE*						
		58												
		59												
		60					12/60	*DR COBBLE AND GRAVEL DRILLING AND LOSS OF DRILLING FLUID FROM APPROX. 58'. POOR RETURN, 2" MINUS SANDTONE GRAVELS AND SILTY SAND. APPEARS TO BE COBBLES IN SILTY SAND MATRIX.*						
		61												
		62												
		63												
		64												
		65					12/20	*BLOCKED OF AT 64.7 BY COBBLE. MED. COARSE GRAVEL SIZE FRAGMENTS QUARTZITE NO WATER RETURN 65.5–66'*						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\STANDARD REFERENCE FILES\LOGGING GRIDDLE.PGU JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-2* PAGE: *4 OF 5*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		67					14/40	*AS ABOVE.* *CONT. LOSS OF FLUID TO FORMATION*						
		68												
		69					18/30	*GRAVEL SIZE LIMEYSANDSTONE FRAGMENTS, SOME SAND ADHEREING TO GRAVEL SURFACES*						
		70						*BLOCKED OFF BY COBBLE @70.5*						
		71					15/30	*DR HARDER COMPETENT ROCK WITH THIN (<2") SOFTER INTERVALS THROUGHOUT. CONT. WATER LOSS.* *MOIST GREEN SILT W/SAND, ML, HARD, TRACE CLAYS.*						
		72												
		73												
		74					54/60	*UPPER 1' IS SILT W SAND, ML, SAT. SOFT (DRILLING FLUID)* *REMAINDER IS MOIST GREEN SANDY SILT, ML, GRADES TO SILTY SAND IN SOME INTERVALS, SANDS FINE. VERY STIFF TO HARD*						
		75												
		76												
		77												
		78												
		79												
		80					44/60	*UPPER 10" MOIST GREEN SAND W/SILT, SP-SM,* *9" INTERVAL MOIST GREEN THEN BLACK CLAY, CH, MED. TO HIGH PLASTICITY, V. STIFF TO HARD* *16" SAND W SILT AS ABOVE* *GRADES TO MOIST GREEN CLAY, CH, HARD, BOTTOM 4"*						*DR REPORTS RED SEDIMENT IN RETURN FLOW 80-81 NO RED MATERIAL IN CORE*
		81												
		82												
		83												
		84					21/51	*14" MOIST GREEN TAN SILTY SAND/SANDY SILT, DENSE/HARD SANDS FINE* *2" MOIST GREEN CLAY, CH/CL, MED. HIGH PLASTICITY , WITH FINE SAND. V. STIFF TO HARD* *5" COBBLES LARGE GRAVELS IN SILT W SAND MATRIX*						*DR REPORTS LITTLE WATER LOSS 83-88*
		85												
		86												*BIT BLOCKED@87.25 NO RETURN FROM 87.5 DR COBBLE DRILLING*
		87												
		88					18/30							
		89												

S:\STANDARD\BORERS\NE_BOREHOLE.DWG (BOREHOLE PLG) JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-2* PAGE: *5 OF 5*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		90						*FRACTURED BLUE GREY LIMESTONE, 1" MD*						*DR COBBLES NO RETURN 89.8–93*
		91					14/38	*FRACTURED LIMESTONE AS ABOVE*						
		92												
		93												
		94												
		95					23/30	*LIMESTONE, 7" CONT. CORE, REMAINDER FRACTURED GRAVEL SIZE*						
		96					20/30	*BLACK TO GREY FRACTURED LIMESTONE, 1.5" M.D. SOME SANDY CALY MATRIX. APPEARS TO HAVE WEATHERED SURFACES*						*BLOCKED@96.5*
		97												
		98												*NO REUTRN 98–103 COBBLES WITH SMOOTH INTERVALS (CORING THROUGH LARGER COBBLE)*
		99												
		100					27/60	*CONT. FRACTURED LIMESTON, WITH SANDY CLAY INTERVALS. FRAGS UP TO 3" CORE LENGTH. WEATHERED SURFACES*						
		101												
		102												
		103												
		104												*NO REUTRN 103–108 CONT. COBBLE DRILLING*
		105					40/60	*AS ABOVE TO BOH*						
		106												
		107												
		108						*SET PIEZOMETER 1" ø PVC.* *BOTTOM AT 107.7* *SLOTTED 97.7–107.7* *NO WATER MEASURED ON 11/3/05*						
		109												
		110												
		111												
		112												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\PROJECTS\2006\126-02 GRAND VIEW GEOTECH\DRAWINGS\LOGS\DWG GBH-2(5).DWG FEB 13 2006 11:06:21 AM PLOTTED BY: GYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-3** PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/20/05 10/20/05**	DRILLER: **PIEDMONT**
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6445.8**	HOLE DIAMETER: **4"**
	HAMMER TYPE: **140#**

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED UNDISTURBED GROUND. SOILS EXPOSED IN WATERLINE TRENCH TO WEST TO DEPTH OF APPROX. 15' ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE (6' M.D.)*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-10' ARE ROCK CHIPS AND SILTY CLAYEY SAND*						
		4												*10-9.5' DR COBBLES AND GRAVELS WITH MATRIX INTERVALS OF 1" OR LESS THICKNESS*
		5												
		6												
		7												
		8												
		9												
		10	X			BH3-1 2" SS	46	*MOIST LT BROWN SILTY CLAYEY SAND W/GRAVEL, SC-SM, GRAVELS FINE ANGULAR, WITH CALCEROUS STRINGERS. SANDS FINE. GRADES TO SILTY CLAY WITH GRAVEL, STIFF*			34			
		11												
		12												*COBBLES LESS FREQ. FROM 9.5'*
		13												
		14						*DR ROCK, 14.1-16.8'*						
		15												
		16												
		17												
		18												
		19												
		20	X			2" SS	NS				30/0			*DR GRAVEL AND COBBLES FREQ. FROM 20.5'*
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

S:\PROJ\2005\129-12 GRAND VIEW GEOTECH\ENGINEERING\DRIVE (ENGR)\ FEB 13 2006 11:46:48 AM PLOTTED BY: GYR

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-3* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22						*CUTTINGS ARE GRAVEL FRAGS AND RED SAND FROM 20'*						
		23												
		24												*WATER LEVEL 11/3/05*
		25												
		26				BH3-2 2"SS	33	*MOIST LT BROWN SILTY CLAY W GRAVEL , CL-ML, FILGC, GRAVELS FINE TO MED. LIMESTONE. STIFF TO VERY STIFF. DRILLING INDICATES HIGHER ROCK % THAN SAMPLE CONTENTS.*			30			*DR FREQ. PLUGGING 25-30' GRAVELLY*
		27												
		28												
		29												
		30												
		31				BH3-3 2.5" SS	100	*MOIST GREY BROWN SILTY SAND W.GRAVEL, SM, SANDS FINE, VERY STIFF*			17			
		32												*DR FREQ. HAMMER PLUGGING 30-35' DUE TO WET SILTY CLAY.*
		33												
		34						*CUTTINGS 35-40' ARE SILTY CLAY, GRAVEL, SILT, AND SAND MIXTURE*						
		35												
		36												
		37												
		38												
		39				BH3-4 2.5" SS	50	*MOIST GREY CLAY, CL HARD. SUSPECT WATER ABOVE IMPERMEABLE CLAY LAYER.*			>50			
		40												
		41				BH3-5 2" SS	58	*MOIST BROWN TO YELLOWBROWN SILTY CLAY W/GRAVEL, CL-ML, SOME COAL, STIFF TO VERY STIFF.*			12			*DR GRAVEL AND COBBLE ZONE 42-43'*
		42				BH3-6 2" SS	100	*MOIST GREY SILT W GRAVEL, ML, FRAGS UP TO 2", V. STIFF TO HARD.*			>50			
		43												
		44												

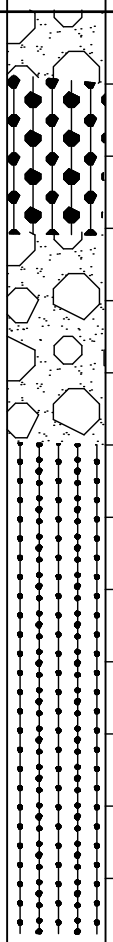
DRILLED BH3A TO 40' WITH DOWNHOLE HAMMER. SET PIEZO BOTTOM AT 33.25 SLOTTED TO 23.25. SAND 33.25-22.0' DRILLED BH3B APPROX. 7' EAST OF BH3A, 3B DRILLED WITH HAMMER TO 42' CASED 3.75"ø TRICONE WITH WATER FROM 42'

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\STANDARD\BORINGS\NE_BOREHOLE.PGU JUN 26 2002 09:35:3 AM PLOTTED BY: GREEN

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-3* PAGE: *3 OF 3*



DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
44						This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.						*DR SOFT EASY DRILLING FROM 44–45'*
45												
46												*DR COBBLES 3–6" WITH SOFT INTERVALS 46–49'*
47												
48												
49												*DR SMOOTH DRILLING FROM 49'–BOH*
50												
51	✕			*BH3-7 2" SS*	*100*	*MOIST GREY FINE SILTY SAND, SM, INCLUDES 4" OF CLAY WITH BLACK PEAT/COAL INCLUSIONS, V. STIFF*			*23*			
52	✕											
53												
54												
55												
56	✕			*BH3-8 2" SS*	*100*	*AS ABOVE. V. STIFF, DENSE.*			*20*			
57	✕					*BOH=–55.75'*						
58												
59												
60												
61												
62												
63												
64												
65												
66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\STANDARDS\BOREHOLE\NE_BOREHOLES.DVG (BOREHOLE.PGL) JUN 28 2002 08:13:53 AM PLOTTED BY: GREEN

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-4**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/22/05 10/23/05**	DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6487.8**	HOLE DIAMETER: **4"**	
	HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED ON UNDISTURBED GROUND. SOILS EXPOSED 50' HIGH CUT SLOPE DOWNSLOPE TO THE NORTH ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE (6' M.D.) SEEPS ARE EVIDENT IN AREA OF CUT FACE DOWNSLOPE OF BORING.*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-6' ARE ROCK CHIPS AND MOIST SILTY CLAYEY SAND*						
		4												*CUTTINGS MOISTURE % INCREASING FROM 6' FEWER ROCKS AND FREQ. BIT PLUGGING.*
		5												
		6												
		7												
		8												
		9	X			BH4-1 2.5" SS	79	*MOIST LT TAN GREEN SILTY SAND, TRACE CLAY, TRACE COAL, HARD.*			35			
		10	X											
		11												
		12												
		13												
		14	X			BH4-2 2" SS	50	*MOIST TO WET RED SILTY CLAYEY GRAVEL W/SAND, MED. PLASTICITY, STIFF TO V. STIFF. MOIST. CHAOTIC, NOT STRATIFIED*			17			*DRILLING WITH 3.75" ø TRICONE AND WATER FROM 15'*
		15	X											
		16												
		17												
		18												
		19												
		20												*DR ROCK 19.5-20.2'*
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

S:\PROJECTS\06-07\TRANSFER STATION GEOTECH\TRANSFER MAIN BUILDING BORING LOGS.DWG GINT-D MAR 14 2005 01:31:31 PM PLOTTED BY:

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-4* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*DR SOFT 20.5–22 DR 50% ROCK WITH 4"–8" INTERVALS OF SOFTER MATERIAL BETWEEN 22–29'*
		23												
		24												
		25												
		26												
		27												
		28												
		29												
▼		30												*WATER LEVEL 11/3/05*
		31												
		32												
		33												
		34						*AT 34' ATTEMPTED SPLIT SPOON, BORING CAVED TO 29' DRILLING WITH CASED 3.75" TRICONE FROM 34' DR SMOOTHER DRILLING AT 35'*						
		35												
		36												
		37												
		38												
		39				BH4-3 2" SS	92	*MOIST TO WET SILT, ML, TAN, MED PLASTICITY. SEAMS .5–1" THICK MAY BE SATURATED. STIFF.*			8			
		40												
		41												*DR COBBLES FROM 39.5 LOSING WATER FROM 40.5*
		42												
		43												
		44												

S:\STANDARD\BORERS\NE_BOREHOLE.DWG (BOREHOLE PLT) JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-4* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44						*DR CONT FRACTURED ROCKY DRILLING FROM 39' CUTTINGS ARE ANGULAR LIMETONE/SANDSTONE GRAVEL SIZE FRAGMENTS*						
		45												
		46												
		47												
		48												
		49												
		50												
		51												
		52												
		53						*DR CONT FRACTURED ROCKY DRILLING FROM 39' CUTTINGS ARE ANGULAR BLUE BLACK LIMESTONE/SANDSTONE GRAVEL SIZE FRAGMENTS*						
		54						*MAJORITY OF WATER LOST, 39'–BOH*						
		55						*BOH =55.75*						
		56						*SET PIEZO (¾"PVC) BOTTOM AT 36.1' SLOTTED BOTTOM 6' BENTONITE IN HOLE TO 36.1, SAND TO 20' FILLED ANNULUS WITH SAND TO 38'*						
		57												
		58												
		59												
		60												
		61												
		62												
		63												
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJ\2002\130-12 GRAND VIEW GEOTECH\BH\BORINGLOGS.DWG (BH-4 (3)) FEB 13 2006 11:07:07 AM PLOTTED BY: GVR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**		**DRILL HOLE No.** BH-5	PAGE: 1 OF 4
DATE STARTED / FINISHED: 10/24/05 10/25/05		DRILLER: PIEDMONT	
LOGGED BY: GYR/ROLFE		DRILL TYPE: TRACK MOUNT B-50	
BOREHOLE LOCATION/ELEVATION: SEE LOCATION MAP/6409.9		HOLE DIAMETER: 4"	
		HAMMER TYPE: 140#	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		1						*BORING LOCATED AT BASE OF 60' PLUS CUT SLOPE*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-10' ARE MOIST TO WET LT BROWN CLAY, SILTY CLAY WITH SOME GRAVEL FRAGMENTS.*						
		4						*DRILLING INDICATES OCCASIONAL COBBLES*						
		5						*MOIST TO WET PLASTIC SOIL CAUSING FREQ. PLUGGING FROM 4'*						
		6												
		7												
		8												
		9												
		10						*DR ROCK 9.5-11'*						
		11						*WET FROM 11' FREQ. HAMMER PLUGGING*						
		12												
		13												*NO WATER IN HOLE @13' AFTER 28 HOURS*
		14												
		15						*NQ CORING FROM 15' RETURN LOGGED AS IN"/IN"*						
		16					10/36	*MOIST LT BROWN CLAYEY SAND W. GRAVEL, COBBLE FRAG. IN SHOE. V. STIFF TO HARD PP> 3.0 TSF*						
		17												
		18												*18-23 LITTLE WATER LOSS SMOOTH DRILLING W/OCCASIONAL COBBLES*
		19					10/60	*AS ABOVE*						
		20												
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *2 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*MINIMAL WATER LOSS 23–28'*
		23												
		24												
		25					19/60	*COBBLE IN BIT. MOIST BROWN CLAYEY SAND, SC, SANDS FINE, CLAY FRACTION MED. TO HIGH PLASTICITY, TRACE GRAVELS, HARD*	29	4				
		26												*SOME WATER LOSS @29' REGAINED BY 30'*
		27												
		28												
		29												*DRILLING IND. SAT. SOFT/LOOSE ZONE 30'±1 28–33 SMOOTH DRILLING W/SOME COBBLES LOWER PORTION*
		30					51/60	*AS ABOVE W/COBBLES TO 6", MOIST TAN BROWN SILTY CLAY W/GRAVELS*						
▼		31						*DRILLER REPORTS SAND LENSE "PUSHING IN ON HOLE" AT 30' HOLE CASED TO 33'*						
		32												
		33												
		34												
		35					18/36	*ALL GRAVEL AND COBBLE FRAGMENTS, LITTLE FINE GRAINED MATERIAL*						*MIN. WATER LOSS 33–40'*
		36						*36–38' MOIST TAN BROWN CLAYEY SAND, SC, TRACE GRAVEL, MED. PLASTIC*						
		37					13/24	*ABUNDANT GRAVEL MOIST TAN TO GREY CLAYEY SAND W/GRAVEL, SC, MED. PLASTICITY*						*DRILLING IND. HIGHER GRAVEL FRACTION THAN IN RETURN FROM 33'*
		38												
		39					15/17	*MOIST BROWN CLAYEY SAND, SC, SANDS FINE, FINES MED. PLASTIC, V.STIFF TO HARD, TRACE GRAVEL*	28	12				
		40												
		41					9/43	*MOIST GREY CLAYEY SAND, W/ GRAVEL AND COBBLES, SC, V. STIFF TO HARD*						
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\PROJECTS\2006\126-02 GRAND VIEW LODGES\CAD\BHSBORINGLOG.DWG (BH-5C2) JAN 06 2006 10:56:56 AM PLOTTED BY CYR

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *3 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44												
		45					21/60	*MOIST TAN SILTY TO SANDY CLAY W/GRAVEL, CL, MED. PLASTICITY, V. STIFF TO HARD*						*TAN BROWN RETURN*
		46												
		47												
		48												
		49					13/24	*AS ABOVE*						
		50												*GOOD RETURN*
		51												
		52					15/36	*MOIST TAN BROWN SILTY CLAYEY SAND W/GRAVEL, SC-SM COAL IN SHOE @53' V/ STIFF TO HARD*						
		53												
		54					30/30	*MOIST TAN BROWN SILTY CLAY W/GRAVEL, INTERBEDDED COAL STRATA, V. STIFF, SOME MOTTLEING*						
		55												
		56												
		57					27/30	*AS ABOVE*						
		58												
		59												
		60					14/60	*MOIST BROWN SANDY SILTY CLAY W/GRAVEL, CL-ML, VERY STIFF*						
		61												
		62												
		63												
		64						*63-68 SOME KNOCKING, SOME FAST DRILLING*						
		65						*ORGANICS AT 65'*						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *4 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		67					34/60	*AS ABOVE TO 65' <u>FIBROUS ORGANIC MATERIAL @65±</u> BELOW ORGANICS IS MOIST BLUE GREY SANDY CLAY/CLAYEY SAND, STIFF TO VERY STIFF, WITH GRAVEL. BOTTOM 1' IS MOIST SILTY SAND/SANDY SILT/HARD/V. DENSE*						
		68												
		69												
		70					37/60	*SILTY SAND AS ABOVE SMOOTH DRILLING OCCASION KNOCKING, MOD FAST DRILLING*						
		71												
		72												*GOOD RETURN BLUE/GREY TO WHITE GREY*
		73												
		74						*<u>ORGANIC DEBRIS</u> MOIST BLUE GREY CLAYEY SAND W/ GRAVEL AND OCCASIONAL LARGE FRAGS OF WHITE LIMESTONE, STIFF TO VERY STIFF, CHARCOAL AND ORGANIC DEBRIS*						
		75					44/48							
		76												
		77												
		78					9/12	*MOIST BLUE GREY SANDY SILT, ML, TRACE GRAVEL LOW PLASTICITY STIFF TO VERY STIFF, CHARCOAL*						
		79												
		80					24/33	*AS ABOVE CHARCOAL IN SHOE*						
		81						*BOH AT 80.75 3/4" PIEZO INSTALLED PULLED CASING, CAVED TO 50' WATER IN BORING ABOVE 50' AS SEEN ON CLOTH TAPE. BENTONITE TO 45.5' BOTTOM OF PIEZO AT 45.5' SLOTTED TO 35.5 SAND TO 35.0' CAVED ABOVE*						
		82												
		83												
		84												
		85												
		86												
		87												
		88					18/30							
		89												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJECTS\2005\05-12 GRAND VIEW LODGES\ENGINEERING\DRAWINGS\BORINGLOGS\BH-5(4).DWG FEB 13 2006 10:07:36 AM PLOTTED BY: CYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-6**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **6/24/2021 6/25/2021**	DRILLER: **IME**	
LOGGED BY: **PRUETT**	DRILL TYPE: **TRUCK-MOUNTED CME85**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6466.0'**	HOLE DIAMETER: **8" OD HOLLOW STEM AUGER (HSA)**	
	HAMMER TYPE: **140# AUTO**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES DRIVE	SAMPLES UNDISTURBED	SAMPLES BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
1						*BORING LOCATED ON CENTERLINE OF MOUNTAIN ACCESS ROAD W/GRAVEL SURFACE. UPHILL ROAD CUTS EST. 3-7' HEIGHT. STEEP GRASSY SLOPES UPHILL AND DOWNHILL. SURFICIAL SOILS ON CUT SLOPES DRY SILTY/CLAYEY GRAVEL/GRAVELLY SILT/CLAY WITH COBBLES AND BOULDERS.*						*EASY DRILLING WITH INTERMITTENT BIT GRINDING FROM 1'-10'*
2												*2 MINUTES TO DRILL 0'-5'*
3												
4												
5	5			BH6-1 2" SS	83	*5.0'-6.5' MOIST, BROWN/LT BROWN GRAVELLY SILT/SILTY GRAVEL, HARD, ANGULAR LIMESTONE AND SANDSTONE GRAVELS, FILGC*			34			
6	7											*3 MINUTES TO DRILL 5'-10'*
7	11											*HARD DRILLING IN GRAVELS FROM 7'-8'*
8												
9												
10	6			BH6-2 2" SS	61	*10.0'-11.5' MOIST, LT BROWN/GRAY SILTY GRAVEL WITH SAND, DENSE, ANGULAR LIMESTONE GRAVEL FRAGMENTS, FILGC*			34			*MODERATE DRILLING WITH CONSTANT BIT GRINDING ON GRAVELS AND COBBLES FROM 10'-21'*
11	10											*4 MINUTES TO DRILL 10'-15'*
12	12											
13												
14												
15	12			BH6-3 2" SS	67	*15.0'-16.5' SAME AS ABOVE, TRACE SAND, LIMESTONE GRAVEL LODGED IN TIP OF SS*			47			
16	17											*5 MINUTES TO DRILL 15'-20'*
17	17											
18												
19												
20	17			BH6-4 2" SS	78	*20.0'-21.5' 0"-12" SAME AS ABOVE, DENSE, ANGULAR GRAY LIMESTONE AND MINOR YELLOW SANDSTONE GRAVELS, MEDIUM PLASTICITY SILT*			32			
21	15					*12"-14" MOIST, OLIVE GREEN SILTY CLAYEY GRAVEL WITH MINOR SAND*						
	11											

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
22	11											
	6			BH6-4B 3" DM	83	22.0'–23.0' MOIST, OLIVE GREEN LEAN CLAY CHAOTICALLY MIXED WITH MINOR GRAY SILTY CLAY, STIFF TO VERY STIFF, MINOR COAL FRAGMENTS, PP>4.0 TSF, ORANGE OXIDATION STAINING IN TIP OF SS	33	15	15	108	18	MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 21'–25'
23	13	X										
24												4 MINUTES TO DRILL 20'–25'
25	3											
	5			BH6-5 2" SS	83	25.0'–26.5' MOIST, GRAY GRAVELLY SILTY CLAY WITH SAND, STIFF, MEDIUM PLASTICITY SILTY CLAY, PP=1–2 TSF, ANGULAR LIMESTONE AND SANDSTONE CLASTS, SANDSTONE CLAST WITH SHELL FOSSIL, ABUNDANT ORANGE OXIDATION STAINING THROUGHOUT			13			SMOOTH EASY DRILLING FROM 25'–30'
26	6											
27												2 MINUTES TO DRILL 25'–30'
28												BIT GRINDING FROM 28'–29'
29	7			BH6-5B 3" DM	83	28.5'–29.5' MOIST, BROWN SILTY CLAYEY/CLAYEY GRAVEL WITH SAND, MEDIUM DENSE, FINE SAND, ANGULAR LIMESTONE FRAGMENTS, FILGC			16			
	14											
30	14			BH6-6 2" SS	67	30.0'–31.5' MOIST, BROWN SILTY GRAVEL WITH SAND, VERY DENSE, FINE SAND, ANGULAR LIMESTONE FRAGMENTS, FILGC, FROM 4"–8" GRAVEL WITH SILT AND SAND LENS, GRAVEL LODGED IN TIP OF SS			51			MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 30'–35'
31	23											5 MINUTES TO DRILL 30'–35'
	24											
32												
33	7											INCREASED BIT GRINDING FROM 33'–35'
	20	X		BH6-6B 3" DM	100	33.0'–34.0' MOIST, OLIVE GREEN CLAYEY GRAVEL WITH SAND, MEDIUM DENSE, ANGULAR LIMESTONE, DOLOMITE, AND SANDSTONE GRAVELS			19			
34												
35	11											HARD DRILLING WITH CONSTANT BIT GRINDING 35'–45'
	18			BH6-7 2" SS	83	35.0'–36.5' TOP HALF–MOIST, OLIVE GREEN CLAYEY GRAVEL WITH SAND BOTTOM HALF–MOIST BROWN SILTY GRAVEL WITH SAND, DENSE, ANGULAR LIMESTONE FRAGMENTS, FILGC			34			
36	16											GRINDING ON COBBLE/BOULDER FROM 39'–39.5' FOR 15 MIN W/ NO PROGRESS. MOVED BH 6' EAST (BH–6B) DRILLED TO 40.4 WHERE GRINDING ON BOULDER FOR 30 MINS W/ MINOR PROGRESS. MOVED BH 7' WEST (BH–6C/ MW) OF ORIGINAL BH
37												
38						MONITORING WELL DRY ON 6/28/2021						
39												
40	23											
	50			BH6-8C 3" DM	67	39.5'–40.5' 0"–3" PULVERIZED LIMESTONE GRAVEL/COBBLE 3"–8" MOIST, SILTY CLAYEY GRAVEL WITH COBBLES, VERY DENSE, FRACTURED GRAY SANDSTONE GRAVEL AT BOS			>50			
41												
42												
43												HARD DRILLING WITH CONSTANT BIT GRINDING 40'–45'
44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-6* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44												
		45	11			BH6-9 2" SS	117	*45.0'–46.5' 0"–4" MOIST, OLIVE GREEN SANDY LEAN CLAY WITH MINOR GRAVEL, PP>4.0 TSF*			34			*EASY TO MODERATE DRILLING WITH OCCASIONAL BIT GRINDING FROM 45'–47.5'*
		46	20					*4"–21" MOIST, BROWN/GRAY/OLIVE GREEN CHAOTICALLY MIXED GRAVELLY LEAN CLAY/SILTY CLAY/SILT WITH SAND, HARD, PP>4.0 TSF, MINOR ORANGE OXIDATION STAINING, VERTICAL CONTACTS IN BOTTOM 6"*						
			17											
		47												*STIFF SMOOTH DRILLING FROM 47.5'–50'*
		48												
		49												*9 MINUTES TO DRILL 45'–50'*
		50	6					*50.0'–51.5' SAME AS ABOVE, TRACE GRAVELS, VERY STIFF, COAL*						
			12			BH6-10 2" SS	122	*FRAGMENTS IN BOTTOM 6"*			26			
		51	18											*EASY TO MODERATE DRILLING WITH INCREASING BIT GRINDING FROM 50'–55'*
		52												
			15					*52.0'–53.0' SAME AS ABOVE WITH GRAVELS, HARD, COAL FRAGMENTS*						
			50	X		BH6-11 3" DM	67	*THROUGHOUT, TOP PORTION OF SAMPLE IS SATURATED DUE TO SURFACE WATER INFILTRATION FOR THUNDERSTORM INTO DRILL STRING*	25	11	>50	121	15	
		53												
		54												
		55												
			9					*55.0'–56.3' SAME AS ABOVE WITH COAL FRAGMENTS*						
			16			BH6-12 2" SS	94				>50			
		56	50/4"											*MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 55'–60'*
		57												
		58												*6 MINUTES TO DRILL 55'–60'*
		59												
		60	10					*60.0'–61.5' MOIST, GRAY SILTY SAND, DENSE, FINE SAND, FINE GRAVEL*						*INITIAL BORING CAVED TO 22' AFTER HSA REMOVAL*
			18			BH6-13 2" SS	89	*INTERVALS, COAL FRAGMENTS THROUGHOUT*			43			
		61	36											
		62												
			21			BH6-14 3" DM	55	*62.0'–62.9' SAME AS ABOVE, VERY DENSE*			>50			
			50/5"											
		63						*BOH = 62.9'*						
								MONITORING WELL CONSTRUCTION						
		64						*PIPE*						
								37.9 FEET OF 2" DIAMETER SCHEDULE 40 PVC CASING FROM 0.3'–18.2', 20–SLOT SCREEN FROM 18.2'–38.2'						
		65						*BACKFILL*						
								BENTONITE– 0.5'–1.5', SPOILS– 1.5'–16.5', BENTONITE– 16.5'–17.5', SILICA SAND– 17.5'–40', BENTONITE– 40'–49', SPOILS– 49'–62.9'						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733–2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-7**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **6/25/2021**	DRILLER: **IME**	
LOGGED BY: **PRUETT**	DRILL TYPE: **TRUCK-MOUNTED CME85**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6459.0'**	HOLE DIAMETER: **8" OD HOLLOW STEM AUGER (HSA)**	
	HAMMER TYPE: **140# AUTO**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES DRIVE	SAMPLES UNDISTURBED	SAMPLES BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
0						*BORING LOCATED ON UPHILL/SOUTH EDGE OF MOUNTAIN ACCESS ROAD. EXCAVATED CUT SLOPES ABOVE, MINOR FILLS DOWNSLOPE SIDE. GRAVEL WITH SAND ROADWAY G.S. STEEP GRASSY SLOPES BOTH UP AND DOWN SLOPES. EXPOSED SOILS IN CUTS ARE DRY SILTY/CLAYEY GRAVEL/GRAVELLY SILT/CLAY WITH COBBLES AND BOULDERS.*						*MODERATE TO HARD DRILLING WITH CONSTANT BIT GRINDING FROM 1'–9'*
4	6			BH7-1 2" SS	89	*4.0'–5.5' MOIST, BROWN AND DK BROWN CLAYEY GRAVEL WITH TRACE SAND, FRACTURED AND ANGULAR GRAVELS, FILGC, MEDIUM DENSE TO DENSE, 4" FRACTURED LIMESTONE COBBLE AT BOS. WATERLINE FILL OF NATIVE SOILS*			30			
5	5											*GRINDING ON COBBLE/BOULDER FROM 5.5'–6.5'*
	11											
9	4			BH7-2 2" SS	78	*9.0'–10.5' MOIST BROWN SILTY GRAVEL WITH TRACE SAND, FRACTURED AND ANGULAR LIMESTONE AND SANDSTONE GRAVELS, FILGC, MEDIUM DENSE, MINOR ORANGE OXIDATION STAINING THROUGHOUT, PULVERIZED LIMESTONE GRAVEL/COBBLE IN TOP 2"*			29			*15 MINUTES TO DRILL 4'–9'*
10	8											
	11											*EASY DRILLING WITH INTERMITTENT BIT GRINDING FROM 9'–19'*
14	5			BH7-3 2" SS	67	*14.0'–15.5' SAME AS ABOVE*			29			*3 MINUTES TO DRILL 9'–14'*
15	9											
	12											*3 MINUTES TO DRILL 14'–19'*
19	7			BH7-4 3" DM	100	*19.0'–20.5' CHAOTICALLY MIXED BROWN/DK BROWN SANDY LEAN CLAY AND GRAY SILTY CLAY WITH MINOR GRAVEL, VERY STIFF, ORANGE OXIDATION STAINING THROUGHOUT, PP>4.0 TSF*	25	14	18	117	14	
20	14	X										
21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-7* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 19'–23'*
		23												*GRINDING ON COBBLE FROM 22'–23'*
		24	4											
			7			BH7-5 2" SS	117	*24.0'–25.5' MOIST, BROWN/DK BROWN LEAN CLAY WITH SAND, MINOR GRAVELS, VERY STIFF, MINOR WHITE CALCAREOUS STRINGERS THROUGHOUT, PP=2–3 TSF*			19			*10 MINUTES TO DRILL 19'–24'*
		25	9											
			10											*SMOOTH EASY DRILLING FROM 23'–28'*
		26	17	X		BH7-6 3" DM	100	*25.5'–26.5' MOIST BROWN LEAN CLAY WITH SAND, PP=3–4 TSF, COARSE GRAVEL FRAGMENTS COMPLETELY WEATHERED INTO SAND TO FINE GRAVEL SIZED FRAGMENTS*	35	17	21	101	22	
		27												
		28												
		29	19											*EASY TO MODERATE DRILLING WITH CONSTANT BIT GRINDING FROM 28'–44'*
			28			BH7-7 2" SS	67	*29.0'–30.5' MOIST, BROWN SILTY GRAVEL WITH TRACE SAND, ABUNDANT FRACTURED GRAY LIMESTONE AND SANDSTONE GRAVELS, FILGC, VERY DENSE, ORANGE OXIDATION STAINING IN BOTTOM 6", GRAVEL LODGED IN TIP OF SS*			59			
		30	26											*5 MINUTES TO DRILL 29'–34'*
		31												
		32												
		33												
		34	15											
			23			BH7-8 2" SS	89	*34.0'–35.5' SAME AS ABOVE, NO OXIDATION STAINING, GRAY SANDY SILT LENS FROM 5"–7", GRAVEL LODGED IN TIP OF SS*			63			
		35	39											*4 MINUTES TO DRILL 34'–39'*
		36												
		37												
		38												
		39	17											
			50/5"			BH7-9 2" SS	91	*39.0'–39.9' SAME AS ABOVE, GRAY SANDSTONE GRAVEL LODGED IN TIP OF SS*			>50			
		40												*6 MINUTES TO DRILL 39'–44'*
		41												
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-7* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44	16					*44.0'–45.3' SAME AS ABOVE*						
		45	17			BH7-10 2" SS	69				>50			*HARD DRILLING WITH CONSTANT BIT GRINDING FROM 44'–56.5'*
			50/4"											
		46						*GROUNDWATER MEASURED AT 46.35' ON 6/28/2021*						
		47												*GRINDING ON COBBLE/BOULDER FROM 47'–48'*
		48												*20 MINUTES TO DRILL 44'–49'*
		49	17					*49.0'–50.3' SATURATED FROM 0"–4", MOIST FROM 4"–12", BROWN*						
			36			BH7-11 2" SS	75	*CLAYEY GRAVEL, VERY DENSE, PULVERIZED GRAY SANDSTONE COBBLE*			>50			
		50	50/4"					*FROM 5"–11", FILGC*						*GRINDING ON BOULDER FROM 50'–51.5'*
		51												*24 MINTUES TO DRILL 49'–54'*
		52												
		53												
		54	17					*54.0'–55.5' 0"–3" SATURATED SAND AND GRAVEL HEAVE*						
			36			BH7-12 2" SS	78	*3"–14" CHAOTICALLY MIXED MOIST, GRAY AND BROWN SILTY CLAYEY*			61			
		55	39					*GRAVEL, FRACTURED AND ANGULAR GRAVELS, VERY DENSE, FILGC, TIP OF SS IS SATURATED*						
		56												
		57												*MODERATE SMOOTH DRILLING FROM 56.5'–59'*
		58												
		59	11					*59.0'–60.0' SATURATED TO MOIST, GRAY/DK GRAY SANDY LEAN CLAY,*						
			30			BH7-13 3" DM	75	*VERY STIFF, MOIST CLAY PP>4.0 TSF, CHAOTIC BLACK COAL FRAGMENTS IN BOS*	29	15	21	114	18	
		60						*BOH = 60.0'*						
		61						*MONITORING WELL CONSTRUCTION*						
								PIPE						
		62						*59.4 FEET OF 2" DIAMETER SCHEDULE 40 PVC CASING FROM 0.3'–39.5', 20–SLOT SCREEN FROM 39.5'–59.5'*						
								BACKFILL						
		63						*BENTONITE– 0.5'–1.5', SPOILS– 1.5'–34.5', BENTONITE– 34.5'–37', SILICA SAND– 37'–59.5', BENTONITE– 59.5'–60'*						
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733–2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

PROJECT: Town of Jackson, Snow King Water Tank

PIT LOCATION: Southwest of center of tank

TEST PIT: TP- 1

Approximate Pit Dimensions (feet): Length: 40 Width: 15 Depth: 31.5

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6740' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① Clayey GRAVEL and COBBLE: Slightly moist to moist, dark brown, loose to medium dense, ~40% sandy clay is moderately plastic, ~60% angular gravel and cobbles up to 6" diameter, some silt, grades into below over 10" [COLLUVIUM]

② Silty sandy GRAVEL with clay and cobbles: Slightly moist, yellow tan, very slightly plastic, medium dense, few clasts up to 12" diameter, limestone clasts angular to subangular, grades into below [COLLUVIUM]

③ GRAVEL and COBBLE: Dry to slightly moist, reddish gray, fractures/voids lined with calcium carbonate, abundant voids, very loose, limestone, follows topography, consistently overlies olive sandy layer below, calcium carbonate mineralization on clasts, abundant raveling, bottom contact ~35-45 degrees [TALUS]

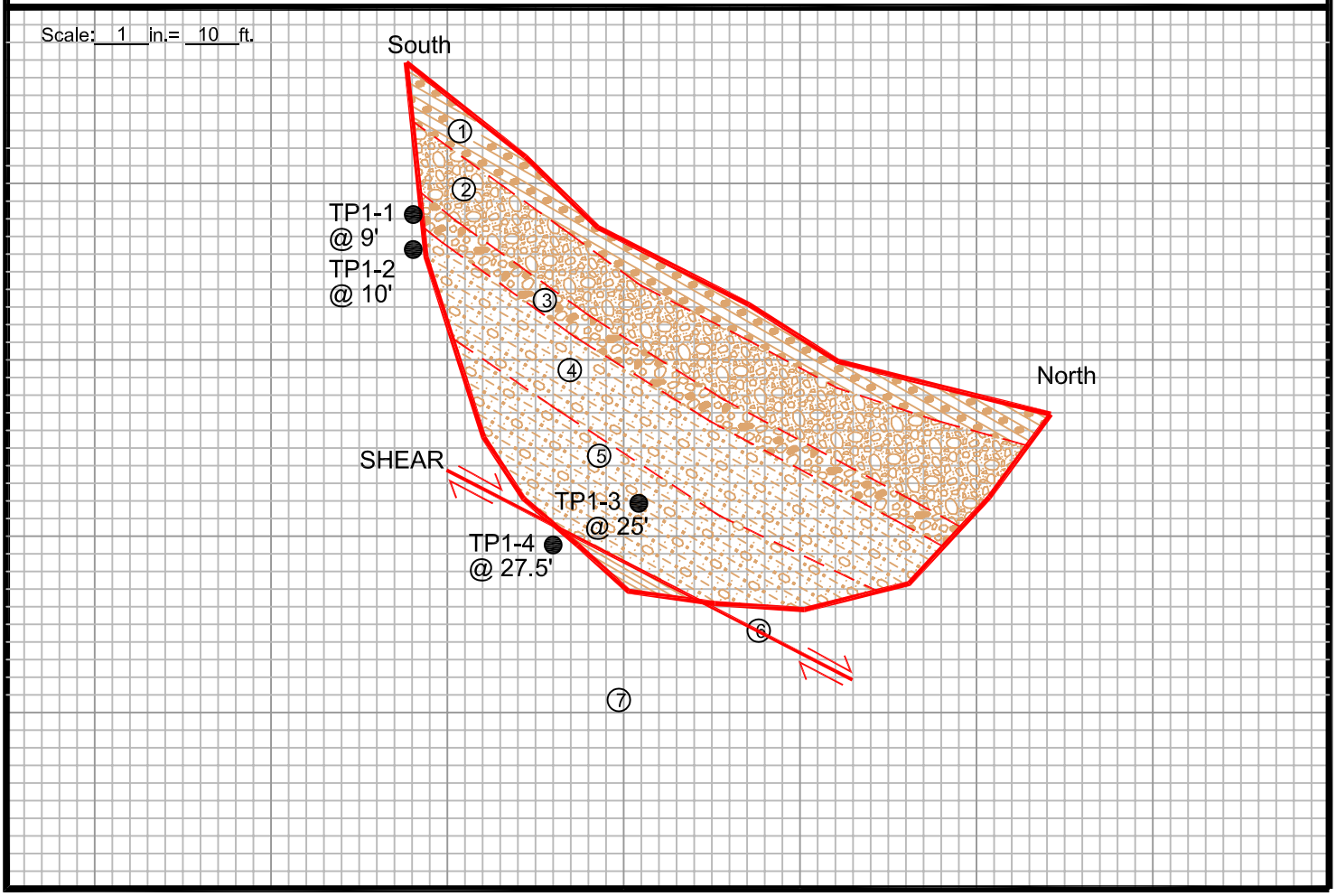
④ Sandy CLAY with gravel and cobble: Slightly moist, olive green, stiff to very stiff, moderately to highly plastic, abundant polished surfaces, irregularly follows silty sandy gravel, cobbles and boulders below contact with material below, varies, ~20% sand, ~15% gravel, ~15% cobble, ~50% sand [LANDSLIDE DEBRIS]

⑤ CLAY and sandy silty GRAVEL and COBBLE: Yellow tan to gray green, intervals of claye and sandy silty gravel and cobbles, few boulders, multiple irregular planar (~bedding) surfaces, angular to subangular boulders up to 2' diameter (mostly limestone), medium dense/very stiff, combination of the olive green sandy clay and the yellow tan silty sandy gravel with clay and cobbles, little consistency with shear orientations, abundant limestone fragments, very irregular contacts [LANDSLIDE DEBRIS]

⑥ CLAY: Pale blue gray, up to 1" thick, soft, moderately plastic, slickensided, dip 30° north [SHEAR ZONE]

⑦ CLAY with sand: Moist, gray, massive, heavily sheared, abundant polished surfaces, highly plastic, darker irregular beds throughout, wavy sheared zone, lots of slickensided surfaces, few coal beds, stiff [LANDSLIDE DEBRIS]

Note: No groundwater observed. Backfilled with spoils. Underlain by stony sandy clay.
Note: Soil Classifications (USCS) based on field descriptions



PROJECT: Town of Jackson, Snow King Water Tank

PIT LOCATION: ~20' northwest of northeast BH-3 (NE 2009)

TEST PIT: TP- 2

Approximate Pit Dimensions (feet): Length: 16 Width: 15 Depth: 12.6

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6711' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① 0.0-1.6ft Clayey sandy GRAVEL and COBBLES: Moist to very moist, medium to dark brown, abundant organics, moderately plastic, angular clasts up to 6" diameter, massive, medium dense [FILL]

② 1.6-2.6ft Sandy CLAY with gravel and cobble: Very moist, dark gray, medium stiff, massive, ~60% clay, ~40% gravel and cobbles up to 6" diameter [TOPSOIL]

③ 2.6-4.8ft Clayey sandy GRAVEL: Very moist, pale brown, medium dense, ~50% fine gravel [COLLUVIUM]

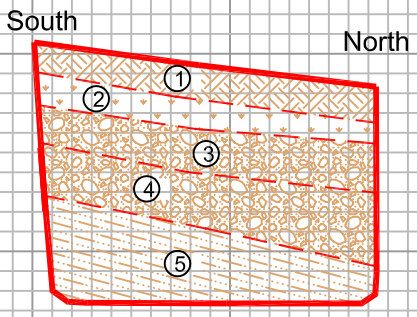
④ 4.8-7.0ft Clayey SAND and GRAVEL: Very moist, pale brown, medium dense, ~50% fine gravel [COLLUVIUM]

⑤ 7.0-12.6ft Sandy CLAY: Moist, green, slightly mottled yellow brown, very stiff, massive, abundant angular to subangular limestone clasts to 1' diameter (most up to 2" diameter) [LANDSLIDE DEBRIS]

Note: No groundwater observed. Backfilled hole with spoils.

Note: Soil Classifications (USCS) based on field descriptions

Scale: 1 in.= 10 ft.



PROJECT: Town of Jackson, Snow King Water Tank

TEST PIT: TP- 3

PIT LOCATION: ~25' east of northeast BH-1 (NE 2009)

Approximate Pit Dimensions (feet): Length: 15 Width: 15 Depth: 11.0

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6762' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① 0.0-1.2ft Silty CLAY with gravel: Moist to very moist, dark brown to blackish brown, abundant organics, highly plastic, soft [TOPSOIL]

② 1.2-3.5ft Gravelly silty CLAY: Buff yellow tan, stiff, ~25-35% gravel to 3" diameter [COLLUVIUM]

③ 3.5-5.0ft Silty CLAY: Moist, greenish brown with yellow mottling, very stiff [LANDSLIDE DEBRIS]

④ 5.0-6.0ft Gravelly silty CLAY: Moist, yellow tan (buff), stiff to very stiff [LANDSLIDE DEBRIS]

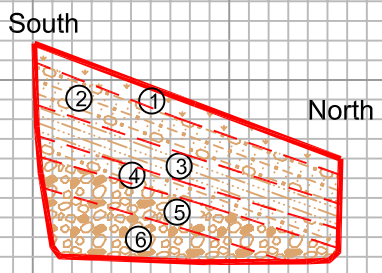
⑤ 6.0-7.5ft Rubble zone: Loose, white precipitates [TALUS]

⑥ 7.5-11.0ft Silty clayey GRAVEL and COBBLE: Yellow brown to red brown, dense, 50-60% clasts up to 8" diameter, oversize [TALUS]

Note: No groundwater observed. Hole standing OK. Backfilled hole with spoils.

Note: Soil Classifications (USCS) based on field descriptions

Scale: 1 in.= 10 ft.





GEOPHYSICAL EVALUATION

SNOW KING - DRAFT

Jackson, Wyoming

PREPARED FOR:

Colter Lane, P.E.
Jorgensen Geotechnical
1315 Highway 89 South, Suite 201
Jackson, Wyoming 83002

PREPARED BY:

Atlas Technical Consultants, LLC
358 South 700 East, Suite B518
Salt Lake City, Utah 84102

December 19, 2023

358 South 700 East
Salt Lake City, UT 84102
(310) 951-1993 | OneAtlas.com

December 19, 2023

Atlas No. 11143 - DRAFT
Report No. 1

MR. COLTER LANE, P.E.
JORGENSEN GEOTECHNICAL
1315 HIGHWAY 89 SOUTH, SUITE 201
JACKSON, WYOMING 83002

Subject: Geophysical Evaluation - DRAFT
Snow King
Jackson, Wyoming

Dear Mr. Lane:

In accordance with your authorization, Atlas Technical Consultants (Atlas) has performed a geophysical evaluation pertaining to a portion of the Snow King project located in Jackson, Wyoming. The primary purpose of our study was to develop subsurface shear-wave velocity profiles and characterize subsurface geologic conditions at select locations of the project site. This was accomplished through the collection of Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Wave (MASW) data. Our services were conducted on October 23rd and 24th, 2023. This report presents our methodology, equipment used, analysis, and findings.

We appreciate the opportunity to be of service on this project. Should you have any questions related to this report, please contact the undersigned at (310) 951-1993.

Respectfully submitted,
Atlas Technical Consultants LLC

Stephan A. Callas
Project Geophysicist

Patrick F. Lehrmann, P.G., P.Gp.
Principal Geologist/Geophysicist

SAC:XXX:XXX:xx

Distribution: Mr. Colter Lane at CLane@JorgEng.com

CONTENTS

1. INTRODUCTION 1
2. SCOPE OF SERVICES 1
3. SITE AND PROJECT DESCRIPTION 1
4. STUDY METHODOLOGY 1
   - 4.1 ReMi 1
   - 4.2 MASW 2
5. RESULTS AND CONCLUSIONS 3
   - 5.1 ReMi 3
   - 5.2 MASW 4
6. LIMITATIONS 4
7. SELECTED REFERENCES 5

FIGURES

Figure 1 Site Location Map
Figure 2 Line Location Map
Figure 3 Site Photographs
Figure 4a ReMi Results (RL-1)
Figure 4b ReMi Results (RL-2)
Figure 5a MASW Profile (ML-1)
Figure 5b MASW Profile (ML-2)

1. INTRODUCTION

In accordance with your authorization, Atlas has performed a geophysical evaluation pertaining to a portion of the Snow King project located in Jackson, Wyoming (Figure 1). The primary purpose of our study was to develop subsurface shear-wave velocity profiles and characterize subsurface geologic conditions at select locations of the project site. This was accomplished through the collection of Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Wave (MASW) data. Our services were conducted on October 23rd and 24th, 2023. This report presents our methodology, equipment used, analysis, and findings.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of two 1-D ReMi profiles (RL-1 & RL-2).
- Performance of two 2-D MASW profiles (ML-1 & ML-2).
- Compilation and geophysical analysis of the collected data.
- Preparation of this illustrated report presenting our methodology and findings.

3. SITE AND PROJECT DESCRIPTION

The project site is generally located just southeast of the Snow King Mountain Resort in Jackson, Wyoming (Figure 1). Specifically, the study area is located on the south side of Snow King Loop Road. The locations of the seismic traverses were generally selected by a representative of your office and adjusted when necessary to account for surface conditions. The study area contained construction material, vehicles, surface obstructions, two graded lots and an access road separating the two lots. The seismic traverses were performed over relatively flat terrain on the east and west sides of the access road. Figure 2 depicts the approximate locations of the seismic traverses while Figure 3 depicts the general site conditions.

4. STUDY METHODOLOGY

As previously indicated, our evaluation included the performance of two ReMi and two MASW transects. The following sections detail the methods and instrumentations used.

4.1 ReMi

The ReMi technique uses recorded surface waves (specifically Rayleigh waves) that are contained in background noise to develop a shear-wave velocity profile of the study area down to a depth, in this case, of approximately 100 feet. The depth of exploration is dependent on the length of the line and the frequency content of the background noise. The results of the ReMi method are displayed as a one-dimensional profile which represents the average condition across the length of the line. The ReMi method does not require an increase of material velocity with depth; therefore, low velocity zones (velocity inversions) are detectable with ReMi.

Our ReMi evaluation included the use of a 24-channel Geometrics Geode seismograph and 24, 4.5-Hz vertical component geophones. Geophones were spaced 10 feet apart for a total line length of 230 feet for each line. A total of 22 records, each 32 seconds in duration, were recorded at each location. 10 records utilized passive data collection of ambient ground vibration noise while 12 utilized an active source. The active source data gathers included generating a seismic signal at both ends of the seismic spread, approximately 10 or 30 feet off the ends of the geophone array. Six active source files were collected at each end of the line. The recorded data was then downloaded to a field computer for post-processing. The data was later processed using Surface Plus 9.1 - Advanced Surface Wave Processing Software (Geogiga Technology Corp., 2020), which uses the refraction microtremor method (Louie, 2001), and other surface wave analysis methods. The program generates phase-velocity dispersion curves for each record and provides an interactive dispersion modeling tool to determine the best fitting model. The result is a one-dimensional shear-wave velocity model of the site with roughly 85 to 95 percent accuracy (Louis 2001). For situations in which the shear wave velocity values are close to the limit between site class boundary values, Geotechnical consultants should consider the site's subsurface geologic stratigraphy and structure, soil mechanics, and ReMi evaluation results when assessing seismic site classification. Figures 2 and 3 depict the general site conditions in the study area.

4.2 MASW

Surface waves (specifically Rayleigh waves) were recorded along lines ML-1 and ML-2 in order to provide S-wave velocity information for portions of the site (Figure 2). The surface waves were generated by a hammer and plate (shot) and recorded using a 24-channel Geometrics Geode seismograph and 24, 4.5-Hz vertical component geophones. The geophones were coupled to the ground surface using a Geostuff Landstreamer with geophones stationed four feet apart and shots conducted off the end of the lines. Prior to the collection of surface wave data, near and far field effects were evaluated for several shot offset distances. The results indicated that an offset shot of 16 feet off the end of the line was optimal for our evaluation.

Three records, each one second long, were recorded at each shot location. After each shot location, the shot location and geophones were moved an integer multiple of the geophone spacing longitudinally along the profile direction and the line was reshot. The number of shots, spread length, and start and end stations are presented in Table 1.

Table 1 – MASW Array Geometry

Line No.	No. of Shots	Total Spread Length (feet)	Profile Length/Start and End Stations (feet)
ML-1	21	252	160/(0-160)
ML-2	25	284	192/(0-192)

The recorded MASW data was processed using SurfSeis® (Kansas Geological Survey, 2019), a MASW software program. One dimensional (1-D) shear-wave (S-wave) velocity (Vs) profiles were

generated for each shot location, which correspond to the middle of the geophone array. A two-dimensional color gradient model was then created from the 1-D models using the SurfSeis® interpolation scheme. It should be emphasized that the 2-D profile represents the area between the midpoint of the first shot location and the midpoint of the last shot location. The actual model section length and start and end stations for the sections are also listed in Table 1.

5. RESULTS AND CONCLUSIONS

As previously indicated, our evaluation consisted of performing two 1-D ReMi profiles (RL-1 & RL-2) and two 2-D MASW profiles (ML-1 & ML-2) at the project site. Figures 4a and 4b present the ReMi results for RL-1 and RL-2, respectively. Figures 5a and 5b present the MASW results for ML-1 and ML-2, respectively. The analysis of each is detailed below.

5.1 ReMi

As previously indicated, the purpose of our ReMi evaluations were to develop shear-wave velocity profiles to be used for design and construction parameters at the project site. Table 2 and Figures 4a and 4b present the results from our ReMi evaluations. It should be noted that the ReMi results represent the average condition across the length of the line. When the 1-D ReMi surface wave velocity results (analogous to shear wave) show an IBC Vs100 velocity value that is close to the "border line" boundary between IBC Site Classes, the project geotechnical consultant of record should be consulted. The geotechnical consultant of record should also consider other existing available site information and whether obtaining additional new geotechnical evaluation data such as boreholes, surface to downhole seismic (ASTM D 7400), crosshole seismic (ASTM D 4428), and/or additional 1-D ReMi data collections would be needed concerning the site's subsurface geologic stratigraphy and structure, soil mechanics and soil modulus, along with the initial 1-D ReMi evaluation results when assessing the "borderline" IBC Vs100 Seismic Site Class.

Table 2 – ReMi Results

Line No.	Depth (feet)	Shear Wave Velocity (feet/second)	Average Shear Wave Velocity (Vs in feet/second)	Site Class (IBC, 2019)
RL-1 (NW-SE)	0-6	618	Vs100' = 1,320 ft/s	C
	6-14	1170		
	14-25	1494		
	25-35	1435		
	35-69	1152		
	69-100	2010		

RL-2 (W-E)	0-9	390	Vs100' = 1,201 ft/s	C
	9-14	799		
	14-25	1361		
	25-69	1446		
	69-100	2052		

5.2 MASW

As previously indicated, two MASW traverses were conducted as part of our study. Figures 5a and 5b present the S-wave velocity models generated from our analysis of lines ML-1 and ML-2, respectively. Based on the results, it appears that the project site is generally underlain by low-velocity materials in the near-surface and higher velocity materials at depth. Distinct vertical and lateral velocity variations are evident within the models. Specifically, ML-1 appears to contain pockets of low and high velocity materials in the near surface, possibly related to landslide deposits. At depth, ML-1 displays a high velocity contact that spans the length of the profile from northwest to southeast. This high velocity contact is generally contained towards the bottom of the profile; however, protrudes closer to the surface between 90 and 120 feet along the x-axis. This high velocity material may represent bedrock contacts. ML-2 displays slightly more homogenous material in the near surface compared to ML-1. At depth, ML-2 displays a moderately high velocity contact that spans the length of the profile from west to east. This moderately high velocity contact is generally contained within 20 and 50 feet below ground surface and may represent weathered bedrock contacts. It should be noted that there were several underground utilities present in the vicinity of ML-1, and possibly ML-2, that could be affecting the results from our evaluation. As a general rule of thumb, the S-wave velocity of a given material might be between approximately 0.4 to 0.6 of the P-wave velocity, depending on the soil/rock type and condition.

6. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Atlas should be

contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

7. SELECTED REFERENCES

Golden Software, Inc., 2022, Surfer, Surface Mapping System: Version 23.2.202.

Iwata, T., Kawase, H., Satoh, T., Kakehi, Y., Irikura, K., Louie, J.N., Abbott, R.E., and Anderson, J.G., 1998, Array Microtremor Measurements at Reno, Nevada, USA (abstract): Eos, Trans. Amer. Geophys. Union, v. 79, suppl. to no. 45, p. F578.

Geogiga Technology Corp., 2020, Surface Plus - Advanced Surface Wave Processing Software: Version 9.1.

Kansas Geological Survey, 2019, SurfSeis© 6 MASW (Multichannel Analysis of Surface Waves): Version 6.5.4.30.

Louie, J.N., 2001, Faster, Better, Shear wave Velocity to 100 Meters Depth from Refraction Microtremor Arrays: Bulletin of the Seismological Society of America, v. 91, p. 347-364.

Mooney, H.M., 1976, Handbook of Engineering Geophysics, dated February.

Saito, M., 1979, Computations of Reflectivity and Surface Wave Dispersion Curves for Layered Media; I, Sound wave and SH wave: Butsuri-Tanko, v. 32, no. 5, p. 15-26.

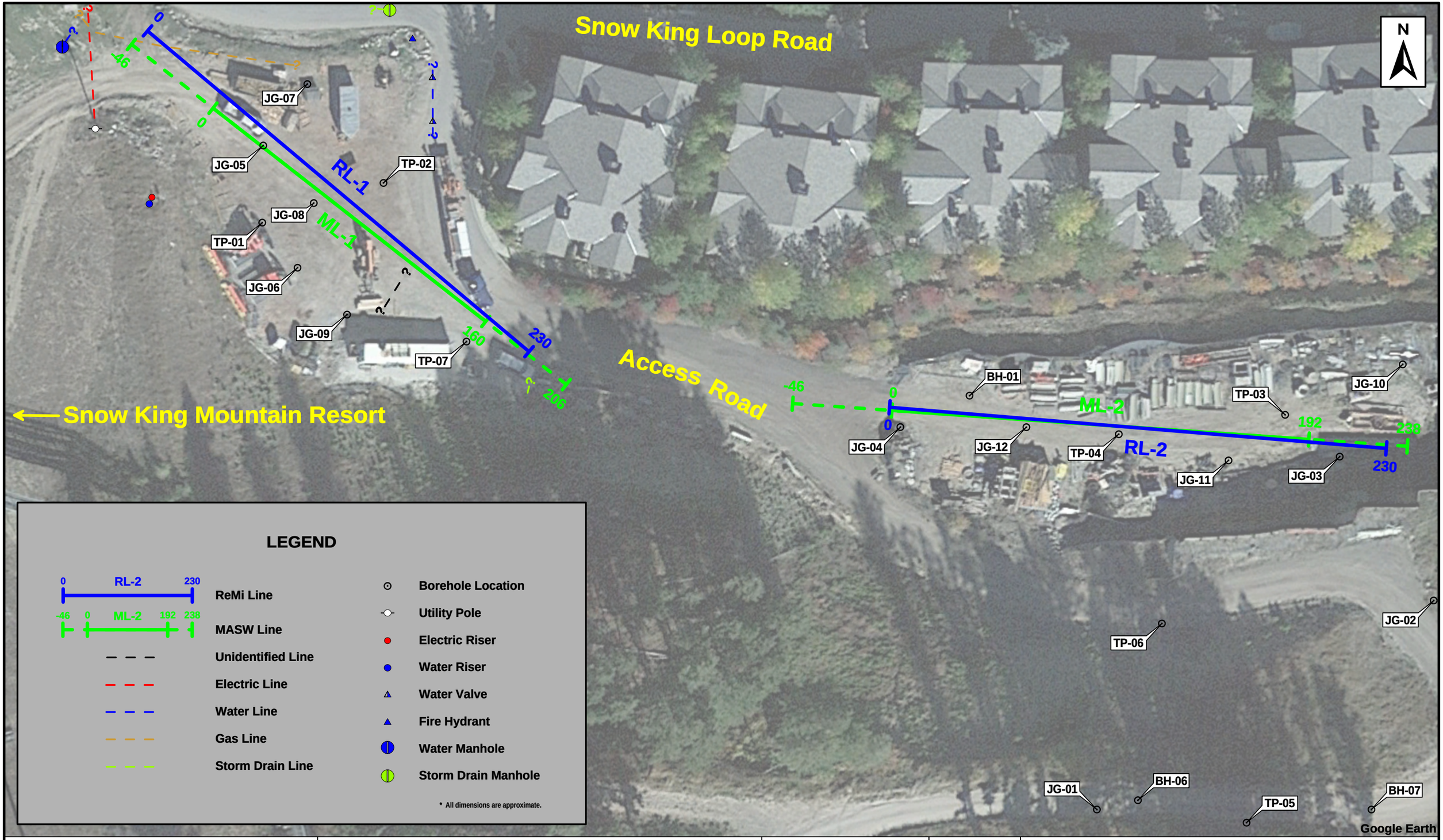
Saito, M., 1988, Compound Matrix Method for the Calculation of Spheroidal Oscillation of the Earth: Seismol. Res. Lett., v. 59, p. 29.

Telford, W.M., Geldart, L.P., Sheriff, R.E., and Keys, D.A., 1976, Applied Geophysics, Cambridge University Press.

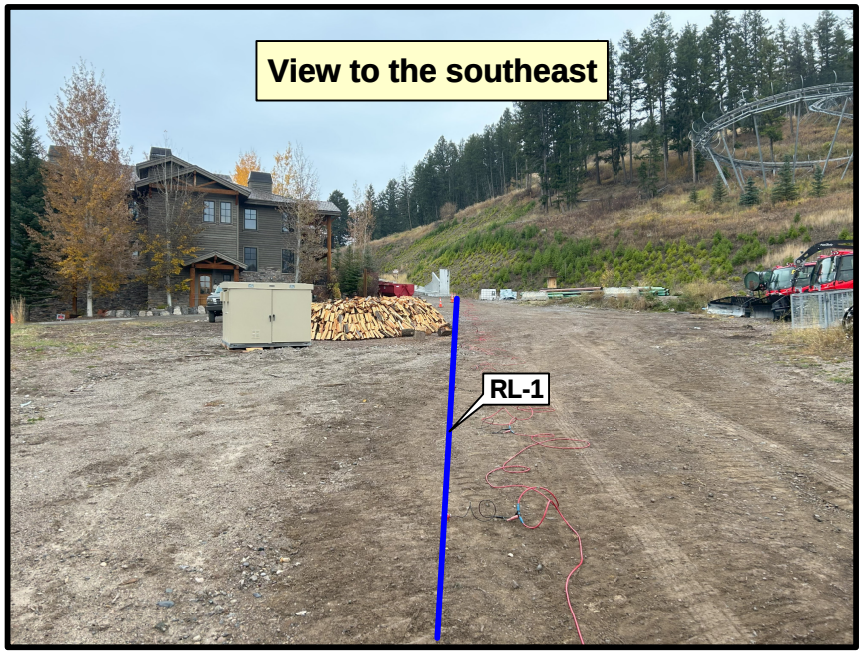
Xia, J., Miller, R.D., and Park, C.B., 1999, Estimation of Near-Surface Shear wave Velocity by Inversion of Rayleigh Wave: Geophysics, v. 64, p. 691-7.

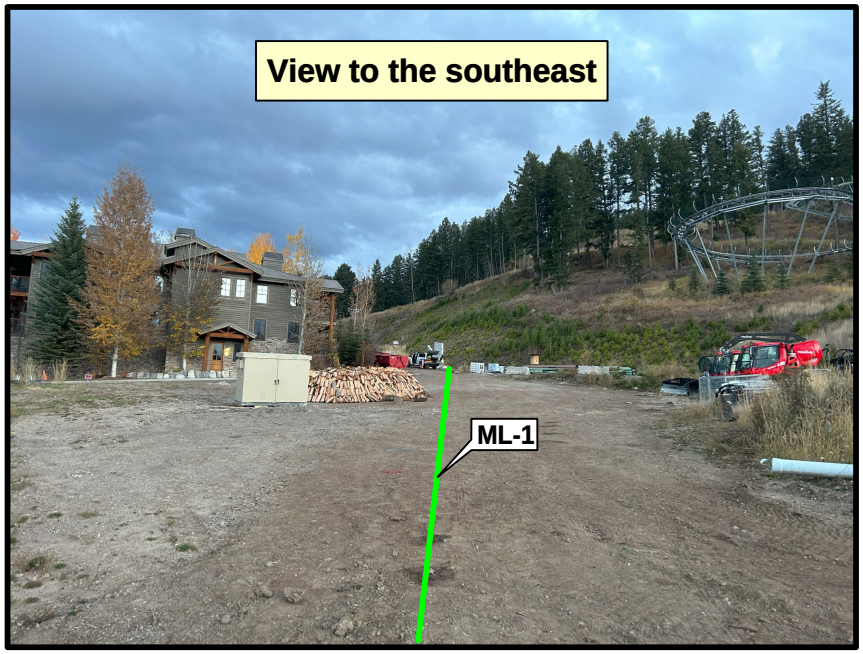


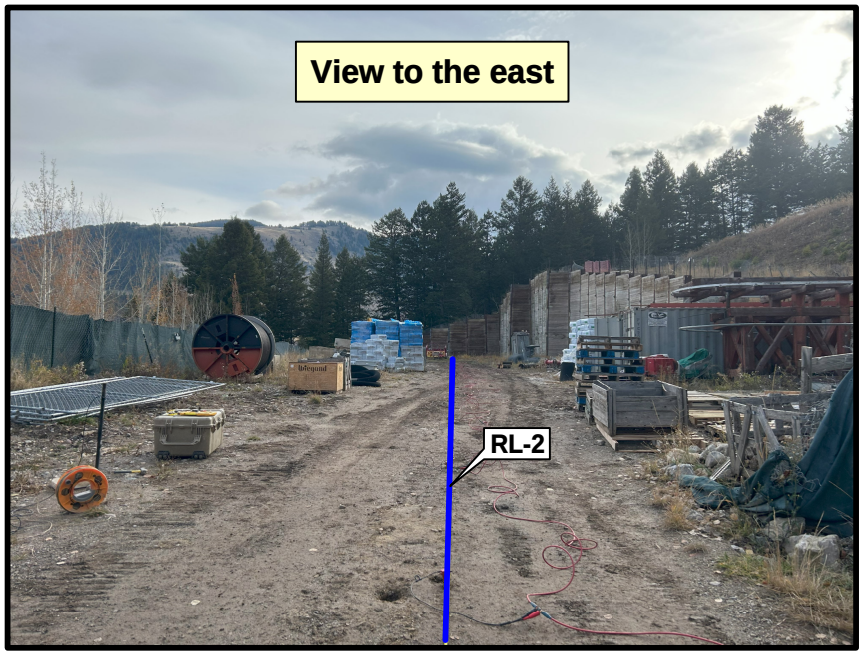
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 1	**SITE LOCATION MAP**

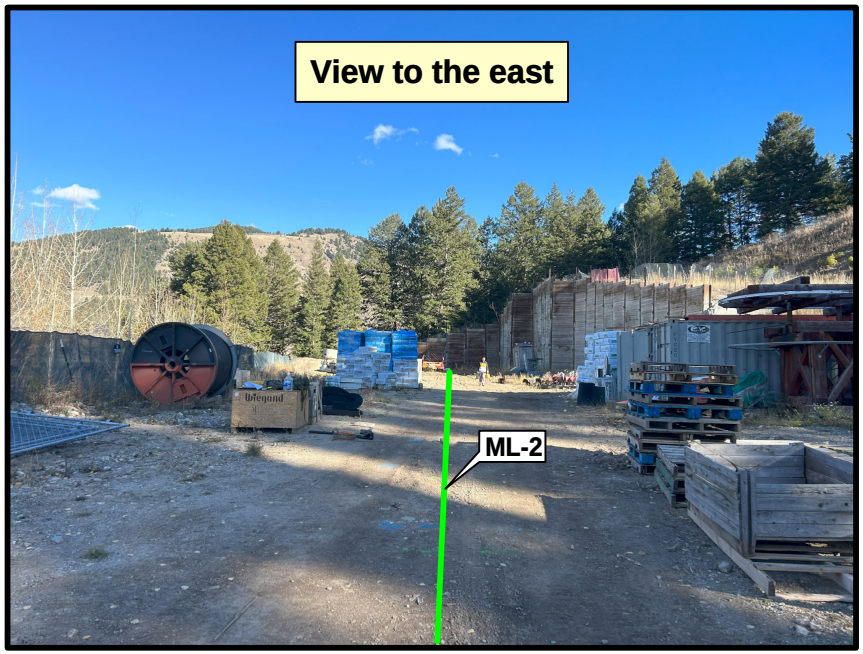


ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 2	**LINE LOCATION MAP**

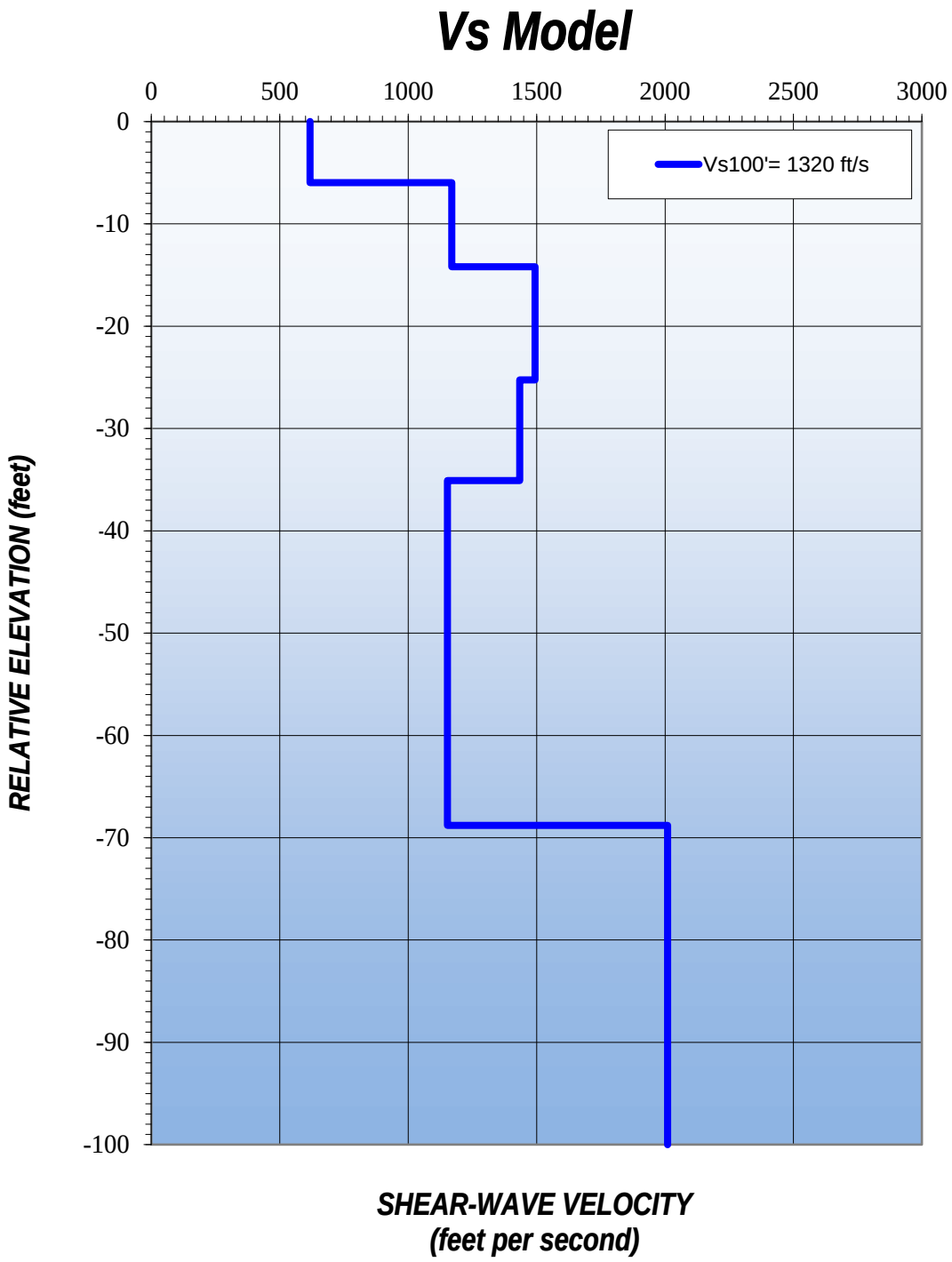






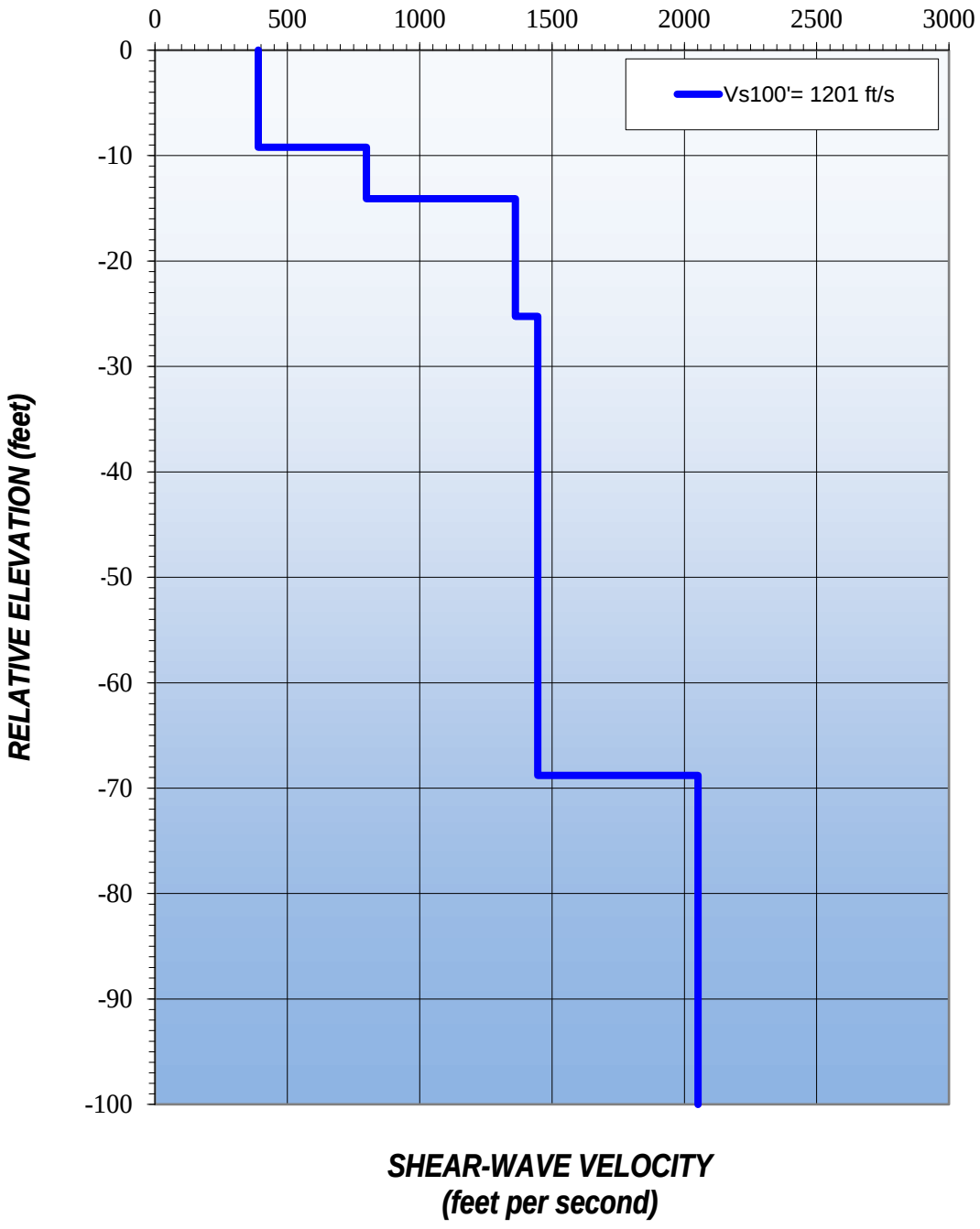


ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 3	**SITE PHOTOGRAPHS**



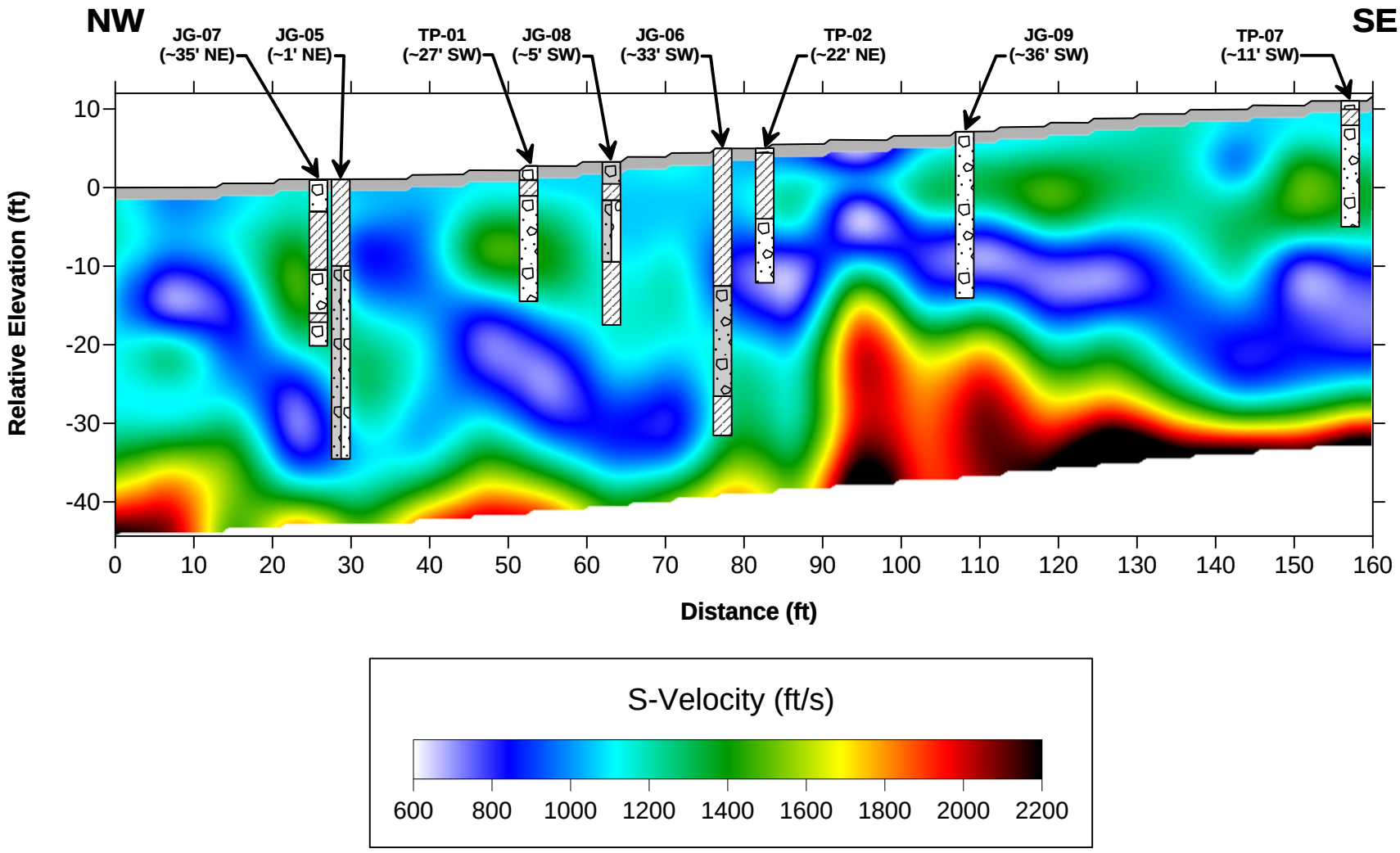
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 4a	**ReMi RESULTS** **RL-1**

Vs Model



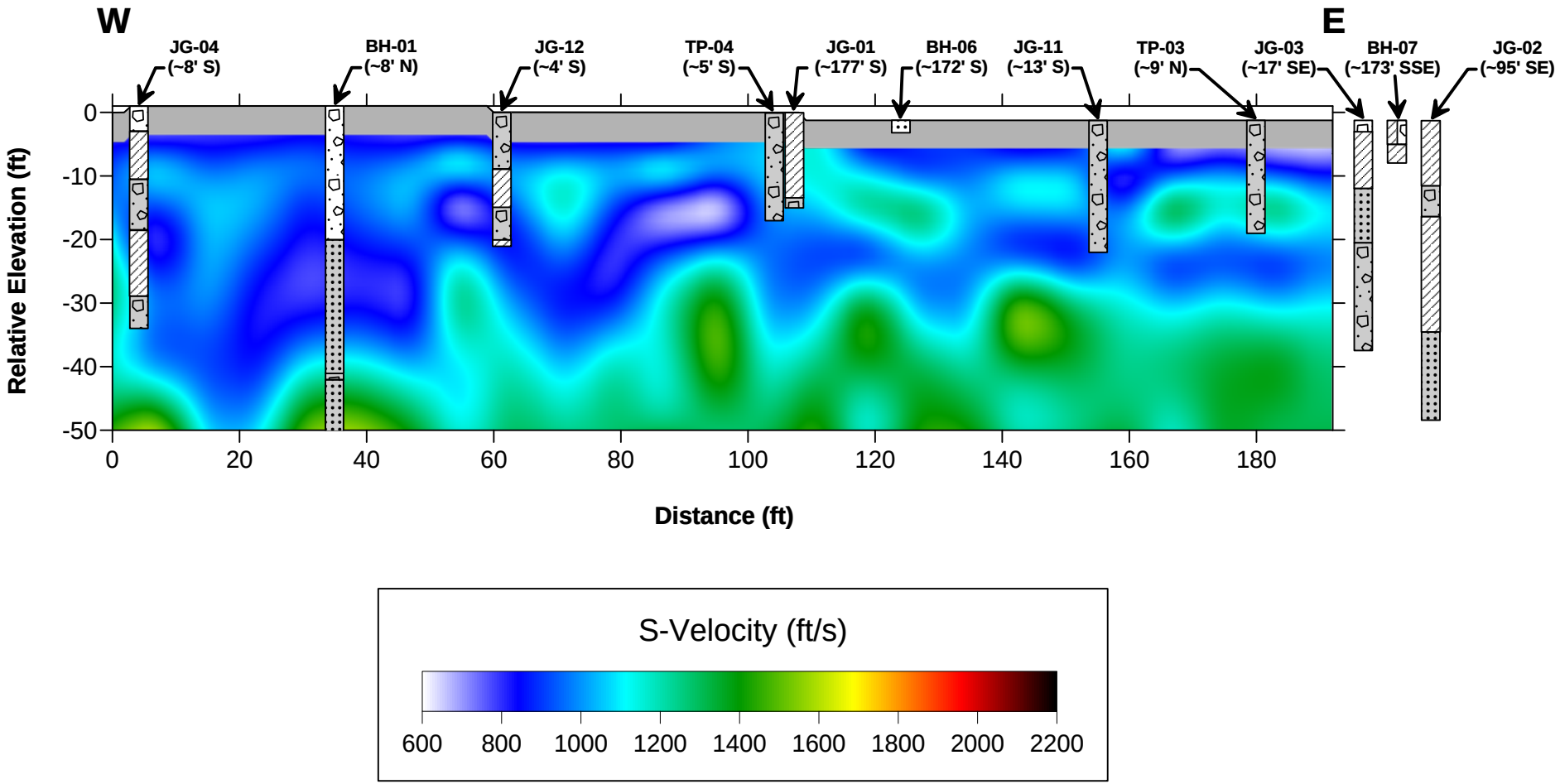
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 4b	**ReMi RESULTS** **RL-2**

MASW PROFILE
ML-1



ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 5a	**MASW PROFILE** **ML-1**

MASW PROFILE
ML-2



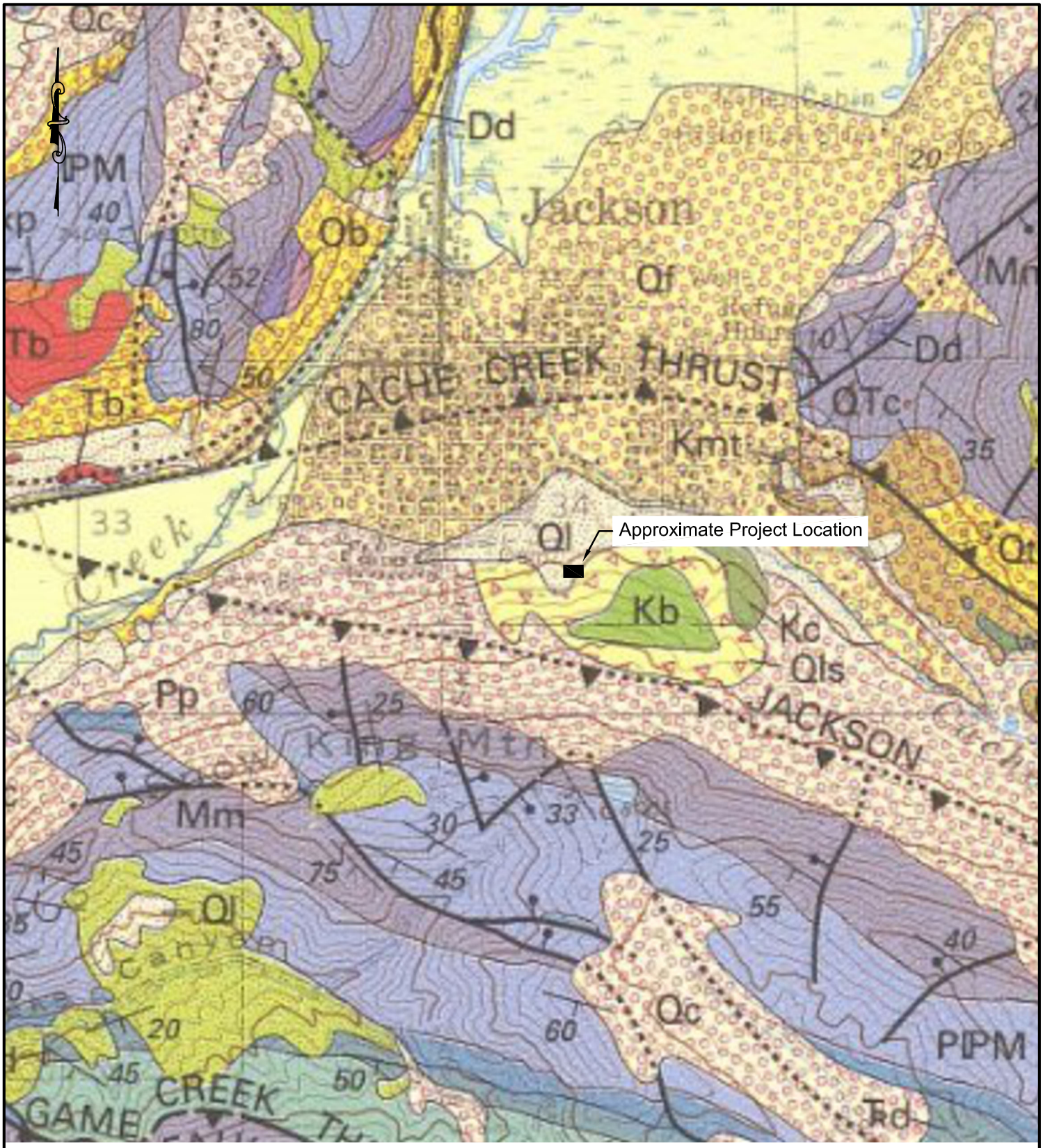
ATLAS	Snow King Jackson, Wyoming DRAFT	Project No.: 11143 Date: 12/23	Figure 5b	**MASW PROFILE** **ML-2**

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX B

Figures



0 2000 4000

SCALE: 1 INCH = 2000 FEET

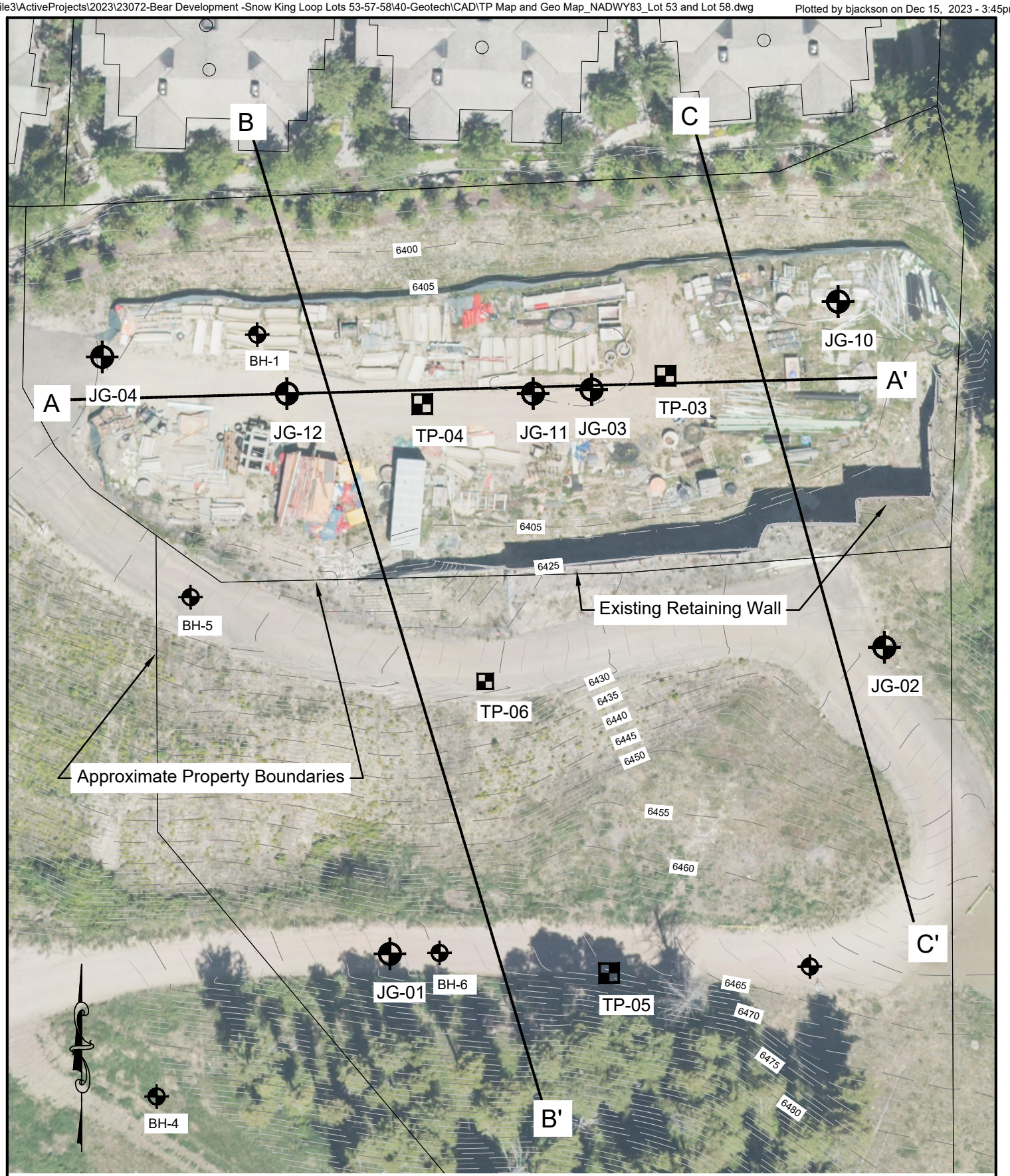
THIS SCALE VALID ONLY FOR 8.5x11 PRINTS

Map symbols:

Ql - Loess
Qls - Landslide Debris
Kb - Bacon Ridge Sandstone (Upper Cretaceous)

From Love et. al, Geologic Map of Grand Teton National Park, 1992

DRAFTED BY: JBJ REVIEWED BY: HC PROJECT NUMBER 23072	SHEET TITLE: Figure 1 Site Location and Geologic Map	PROJECT TITLE: Geotechincal-Engineering Report Bear Development - Lot 53 and Lot 58 Teton County, Wyoming	JORGENSEN GEOTECHNICAL, LLC PO Box 9550 | 1315 HWY 89 S., Ste. 201 Jackson, WY 83002 PH: 307.733.5150 www.jorgeng.com



0 40 80

SCALE: 1 INCH = 40 FEET
THIS SCALE VALID ONLY FOR 8.5x11 PRINTS

Borehole (JG-XX), Historic Nelson Engineering Borehole (BH-X), and test pit (TP-XX) locations are approximate and may be surveyed upon request. Existing ground surface topography provided by Jorgensen Associates, taken from topographiuc survey completed November 1, 2023. Aerial imagery provided by Teton County, 2019.

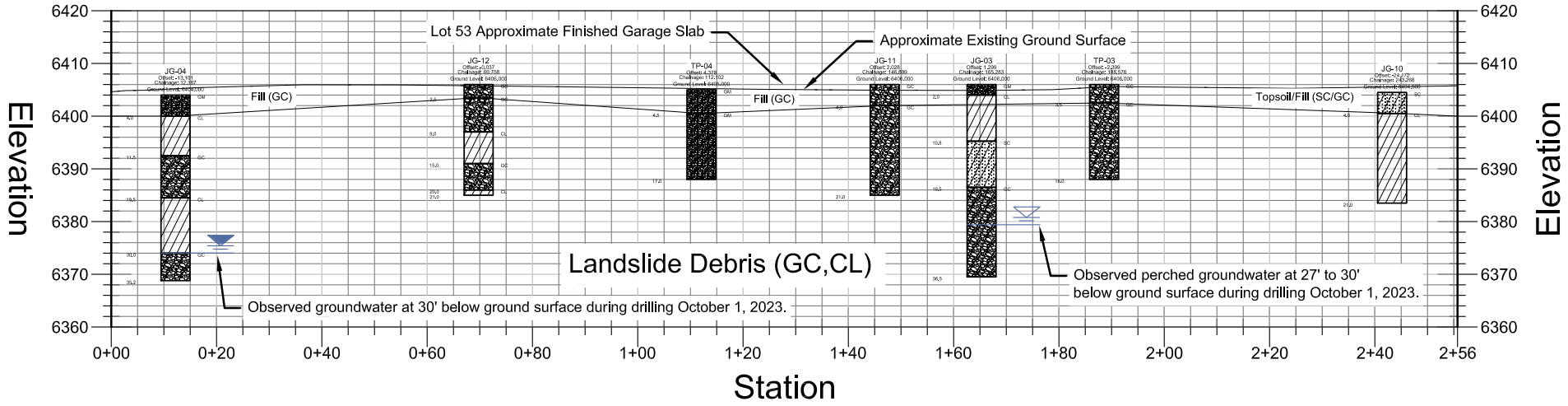
DRAFTED BY:	JBJ
REVIEWED BY:	HC
PROJECT NUMBER	23072

SHEET TITLE:
Figure 2
Borehole, Test Pit and Geologic Cross Section Location Map

PROJECT TITLE:
Geotechnical Engineering Report
Bear Development - Lot 53 and Lot 58
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section A-A'

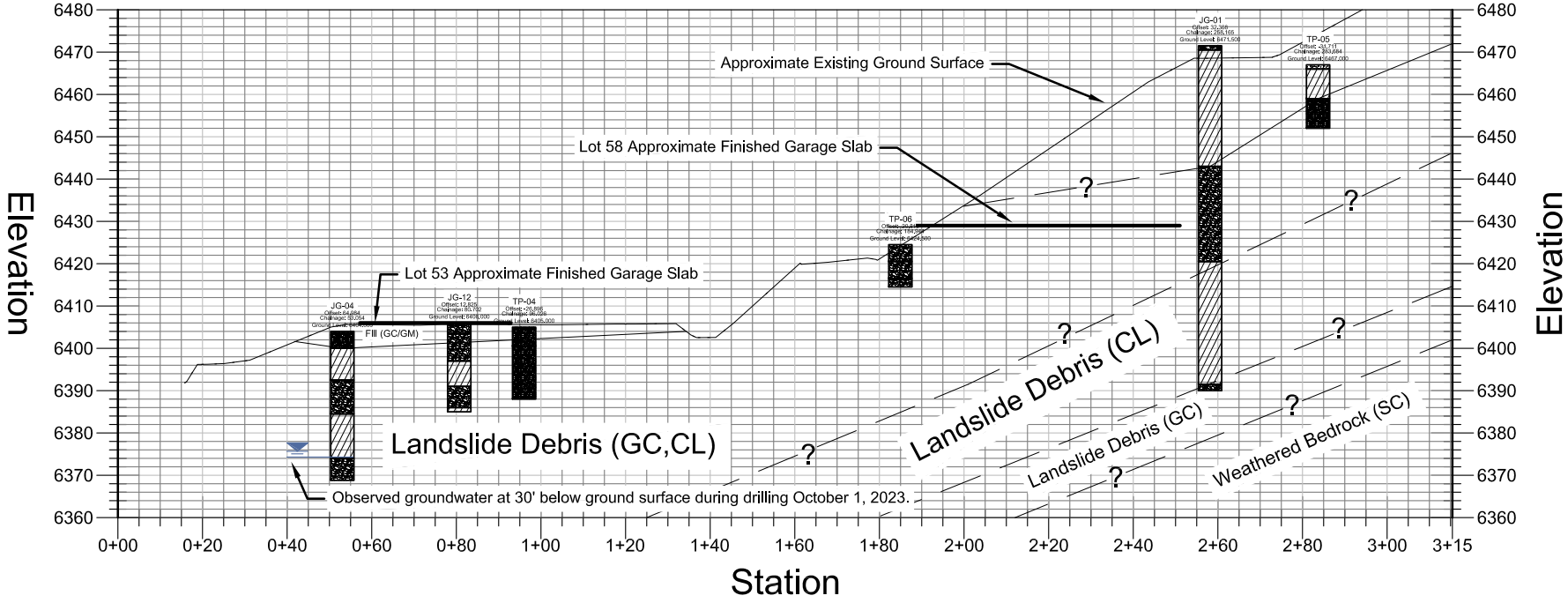


Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

DRAFTED BY: JBJ REVIEWED BY: HC/DB PROJECT NUMBER 23072	SHEET TITLE: Figure 3 Geologic Cross Section A-A'	PROJECT TITLE: Geotechnical-Engineering Report Bear Development - Lot 53 and Lot 58 Teton County, Wyoming	JORGENSEN GEOTECHNICAL, LLC PO Box 9550 | 1315 HWY 89 S., Ste. 201 Jackson, WY 83002 PH: 307.733.5150 www.jorgeng.com

Cross section B-B'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

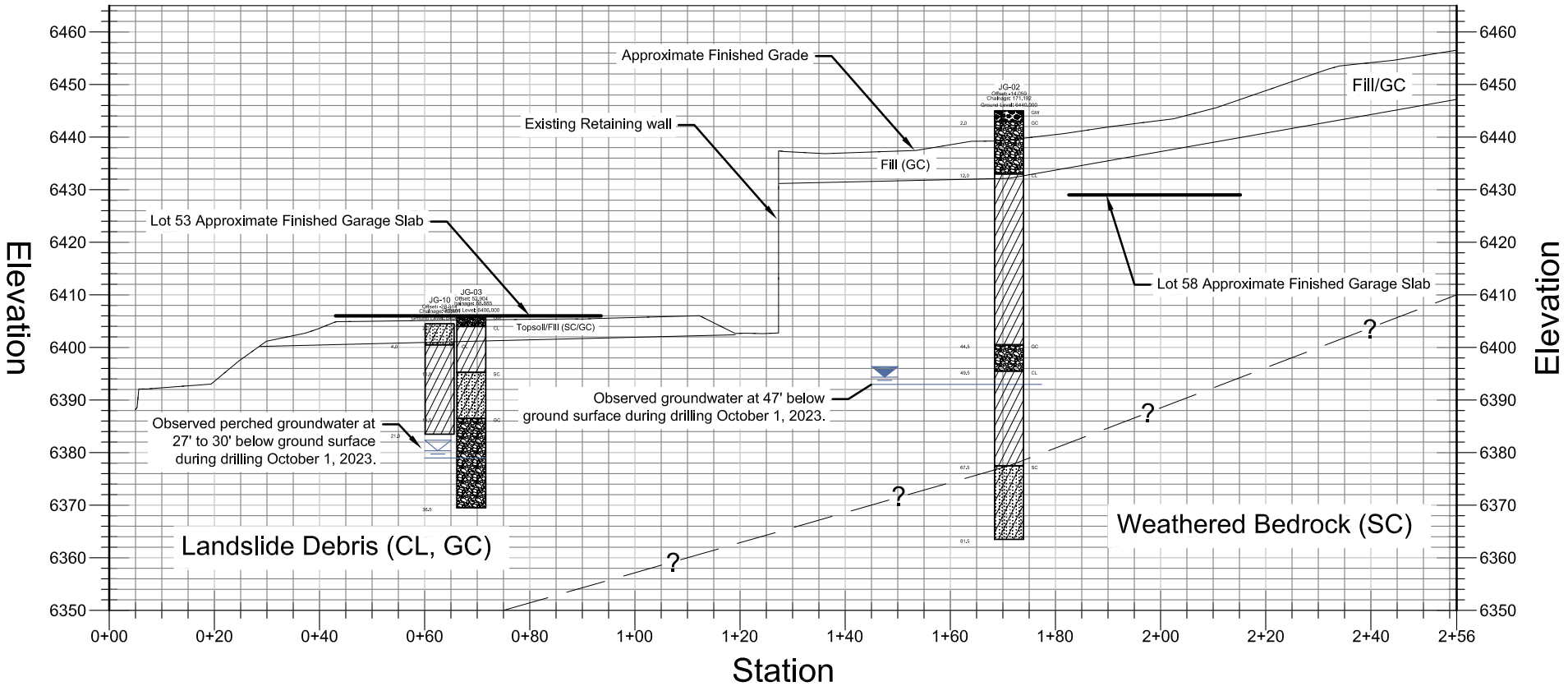
DRAFTED BY:	JBJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 4
Geologic Cross Section B-B'

PROJECT TITLE:
Geotechnical-Engineering Report
Bear Development - Lot 53 and Lot 58
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section C-C'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

DRAFTED BY:	JBJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 5
Geologic Cross Section C-C'

PROJECT TITLE:
Geotechnical-Engineering Report
Bear Development - Lot 53 and Lot 58
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX C

Soils Laboratory Procedures and Results

Laboratory Testing

Laboratory Testing Procedures

Lab samples were submitted for testing at GCI in Salt Lake City, Utah from boreholes JG-01, JG-02, JG-03, JG-04, JG-10, JG-11, and JG-12.

During the October 2023 site exploration for the Development at Lots 53 and 58, JG collected relatively undisturbed (i.e., thin-walled Shelby tubes) and disturbed samples (i.e., split spoon (SPT) samples and sonic drilling grab samples). Of the samples collected, 31 disturbed samples and two relatively undisturbed samples were selected for lab analysis. Laboratory testing included natural moisture content, unit weight, Atterberg limits, grain-size distribution, hydrometer, and consolidation testing.

The laboratory testing program consisted of:

- Twenty Seven (27) Moisture Contents (ASTM D2937/D2216)
- Thirty (30) Atterberg Limits (ASTM D4318)
- Twenty Seven (27) Grain Size Analysis (ASTM D422)
- Four (4) Hydrometer (ASTM D422a)
- Two (2) One Dimension Consolidation (ASTM D2435)

Results are shown on the following pages.

Laboratory Test Results: Detailed Summary

Laboratory testing included index testing for classification per USCS and indirect correlation with engineering parameters, and direct testing of strength. Classification tests – including Atterberg limits and grain-size analysis – have been summarized in table 4-1, with hydrometer tests and consolidation tests summarized in Tables 4-2 and 4-3, respectively. Full laboratory data sheets are attached.

The data herein are provided for informational purposes. Design-build contractors shall be responsible for providing their own analysis of the test results and for development of appropriate design parameters.

Table 4-1: Classification Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	Gravel (%)	Sand (%)	Fines (%)	Moisture Content (%)	Liquid Limit	Plasticity Index
JG-01	D8	18-19	CL	19.0	18.2	62.8	12.3	31	15
JG-01	D12	27-29	CL	27.7	17.1	55.2	11.0	28	12
JG-01	D17	37-38	GC	51.6	22.7	25.7	--	--	--
JG-01	D27	54.5-57	CL	11.9	20.2	67.9	12.6	33	18
JG-01	D32	67-69	CL	20.1	28.0	51.9	10.0	26	10
JG-01	D36	72.5-75	CL	4.5	10.0	85.5	20.7	38	21
JG-02	D4	7-10	GC	--	--	--	--	20	5
JG-02	D8	14.5-16	CL	12.4	20.8	66.8	11.9	31	16
JG-02	D11	22-25	CL	15.6	18.7	65.7	13.3	29	14
JG-02	D16	32-35	CL	13.2	18.2	68.6	14.5	21	5
JG-02	D18	38.5-40	CL	0.0	12.9	87.1	15.5	29	12
JG-02	D22	44.5-47	GC	41.6	27.3	31.1	--	--	--
JG-02	D26	52-55	CL	6.4	31.1	62.5	11.6	16	12
JG-02	D30	60-62	CL	0.2	5.3	94.5	13.7	37	14
JG-02	D32	64.5-67	CL	2.2	94.4	3.4	12.8	31	14
JG-02	D35	69.5-72	SC	--	--	--	--	21	5
JG-03	D3	4.5-7	CL	30.3	19.6	50.1	10.1	33	19
JG-03	D8	14.5-17	SC	28.2	31.4	40.4	8.4	30	15
JG-03	D12	22-25	GC	26.8	26.3	46.9	12.4	35	20
JG-03	D18	30-33	GC	32.7	22.1	45.2	10.8	29	14
JG-04	D4	7-10	CL	15.8	14.6	69.6	21.8	34	18
JG-04	D8	14.5-17	GC	37.4	30.1	32.5	6.8	19	5
JG-04	D12	22-25	CL	3.3	26.8	69.9	16.5	31	14
JG-04	D17	30-33	GC	43.1	15.3	41.6	10.1	33	18
JG-10	D3	7.5-9	CL	--	--	--	--	25	9
JG-10	U1	12.5-14	CL	27.6	21.7	50.7	13.7	39	24
JG-10	D5	15-17	CL	4.7	11.8	83.5	16.1	38	17
JG-10	U2	17.5-19	CL	13.9	19.4	66.7	13.8	32	18
JG-11	D3	7.5-9	GC	33.4	28.0	38.6	7.1	22	7
JG-12	D2	5-6.5	GC	33.9	25.3	40.8	10.2	27	12
JG-12	D4	10-11.5	CL	13.5	32.5	54.0	12.8	27	10
JG-12	D8	20-21.5	CL	23.9	25.5	50.6	10.6	26	12

Table 4-2: Hydrometer Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	Silt Fraction (%)	Clay Fraction (%)
JG-01	D17	37-38	GC	18	7
JG-02	D22	44.5-47	GC	23	8
JG-10	D5	15-17	CL	55	36
JG-11	D4	10-11.5	GC	33	17

Table 4-3: Consolidation Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	C_C
JG-10	U1	12.5-14	CL	0.171
JG-10	U2	17.5-19	CL	0.130

Supplemental Laboratory Data

Select laboratory results presented in a Site Investigation Report for Lots 53 and 58produced by Nelson Engineering dated July 28, 2021, and results presented in a Geotechnical Investigation Report for a project in close proximity to the site produced by Womack and Associates, Inc., dated June 4, 2010 are presented below.

GERHART COLE

PO Box 880
Midvale, Utah 84047
801.849.0055
gerhartcole.com

To:	Mr. Bruce Jackson Jorgensen Engineering 58 South Tyler, PO Box 1519 Pinedale, Wyoming 82941
Project:	Bear Development Snow King Lots 53 and 58
Gerhart Cole Project Number:	23-1725
Client Project Number	23072
Report Date:	November 30, 2023

Attached are the requested laboratory test results. These laboratory results are for the addressee and must be presented in their entirety without alteration, except with permission.

Gerhart Cole's Laboratory is accredited through the AASHTO Accreditation Program. The results provided were tested in general accordance with the referenced standards. Any test methods reported in this document outside the scope of this accreditation are marked with an asterisk in the header of the individual test report.

Gerhart Cole will dispose of samples two (2) weeks after the date above. Please contact us for storage pricing.

Approved By:_____
Zach Gibbs, PE (UT, MI) Laboratory Director

AASHTO ACCREDITED

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]1

Sample Info.	Sample:	**JG-01**	**JG-01**	**JG-01**	**JG-01**	**JG-01**	**JG-02**
	Depth:	**18-19 ft**	**27-29 ft**	**54.5-57 ft**	**67-69 ft**	**72.5-75 ft**	**14.5-16 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**14-Nov-23**	**14-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**
	Laboratory sample description:	**gy - bn clay**	**bn - gy clay**	**gy - dk gy clay**	**dk by - lt bn clay**	**gy - dk gy clay**	**bn - ol bn clay**
Moisture	Wet soil + tare (g)	806.82	1190.54	953.45	847.34	688.39	2264.09
	Dry soil + tare (g)	739.68	1074.24	869.05	788.12	590.77	2068.51
	Tare (g)	195.78	13.84	196.69	195.42	118.16	422.19
	Moisture content, w (%)	12.3	11.0	12.6	10.0	20.7	11.9
Comments							
QC/QA	Tested By:	AT	AT	CML	CML	CML	CML
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]2

Sample Info.	Sample:	**JG-02**	**JG-02**	**JG-02**	**JG-02**	**JG-02**	**JG-02**
	Depth:	**22-25 ft**	**32-35 ft**	**38.5-40 ft**	**52-55 ft**	**60-62 ft**	**64.5-67 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**
	Laboratory sample description:	**bn - ol bn clay**	**bn - dk yl bn clay**	**lt ol bn - ol bn clay**	**gy - ol bn clay**	**lt bn - bn clay**	**lt ol bn - ol bn clay**
Moisture	Wet soil + tare (g)	2104.69	2453.36	448.30	460.49	656.13	566.47
	Dry soil + tare (g)	1908.65	2210.32	405.33	433.20	600.68	516.43
	Tare (g)	438.53	539.41	127.25	197.51	195.80	126.68
	Moisture content, w (%)	13.3	14.5	15.5	11.6	13.7	12.8
Comments							
QC/QA	Tested By:	CML	CML	CML	CML	CML	CML
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]3

Sample Info.	Sample:	JG-03	JG-03	JG-03	JG-03	JG-04	JG-04
	Depth:	4.5-7 ft	14.5-17 ft	22-25 ft	30-33 ft	7-10 ft	14.5-17 ft
	Date Sampled:	-	-	-	-	-	-
	Date tested:	13-Nov-23	13-Nov-23	13-Nov-23	13-Nov-23	13-Nov-23	13-Nov-23
	Laboratory sample description:	lt bn - bn clay	pl ol bn - bn clay	lt ol bn - bn clay	bn - dk bn clay	lt ol bn - bn clay	pl ol bn - lt bn silt
Moisture	Wet soil + tare (g)	1630.20	872.07	1046.88	943.07	653.16	601.88
	Dry soil + tare (g)	1521.39	813.63	947.50	865.02	571.20	571.25
	Tare (g)	440.15	119.03	144.65	144.19	195.92	118.32
	Moisture content, w (%)	10.1	8.4	12.4	10.8	21.8	6.8
Comments							
QC/QA	Tested By:	JCC	JCC	JCC	JCC	JCC	JCC
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]4

Sample Info.	Sample:	**JG-04**	**JG-04**	**JG-10**	**JG-10**	**JG-10**	**JG-11**
	Depth:	**22-25 ft**	**30-33 ft**	**12.5-14 ft**	**15-17 ft**	**17.5-19 ft**	**7.5-9 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**	**13-Nov-23**
	Laboratory sample description:	**ol bn - bn silt**	**lt bn - bn clay**	**ol bn - lt bn clay**	**ol bn - y bn clay**	**ol bn - lt bn clay**	**bn - dk bn clay**
Moisture	Wet soil + tare (g)	555.20	1543.36	1129.47	377.19	860.87	758.29
	Dry soil + tare (g)	493.76	1440.63	1044.36	352.11	758.40	721.07
	Tare (g)	120.66	421.65	422.15	196.80	13.83	194.35
	Moisture content, w (%)	16.5	10.1	13.7	16.1	13.8	7.1
Comments							
QC/QA	Tested By:	JCC	JCC	AT	JCC	AT	JCC
	Reduced By:	CML	CML	CML	CML	CML	CML
	Reviewed By:	AT	AT	AT	AT	AT	AT

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 53 and 58**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_MC.xlsx]5

Sample Info.	Sample:	**JG-12**	**JG-12**	**JG-12**			
	Depth:	**5-7 ft**	**10-12 ft**	**20-21 ft**			
	Date Sampled:	**-**	**-**	**-**			
	Date tested:	**14-Nov-23**	**14-Nov-23**	**14-Nov-23**			
	Laboratory sample description:	**lt ol bn - lt bn clay**	**lt ol bn - lt bn silt**	**lt ol bn - lt bn clay**			
Moisture	Wet soil + tare (g)	902.19	566.12	742.99			
	Dry soil + tare (g)	836.69	514.93	683.22			
	Tare (g)	193.61	116.09	117.11			
	Moisture content, w (%)	10.2	12.8	10.6			
Comments							
QC/QA	Tested By:	AT	AT	AT			
	Reduced By:	CML	CML	CML			
	Reviewed By:	AT	AT	AT			

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 18-19 ft

Tested by: JC Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - bn clay
As-received water content(%):	12.3	Approximate maximum particle size:	1.5"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

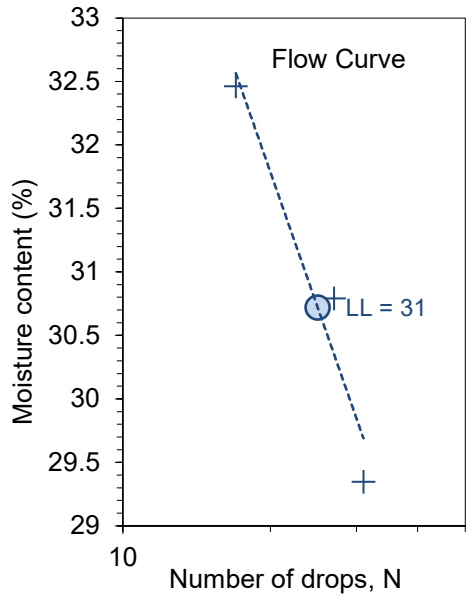
Determination No:	1	2
Wet Soil + Tare (g):	20.94	20.87
Dry Soil + Tare (g):	19.90	19.81
Moisture Loss (g):	1.04	1.06
Tare (g):	13.53	13.42
Dry Soil (g):	6.37	6.39
Moisture Content, w (%):	16.33	16.59

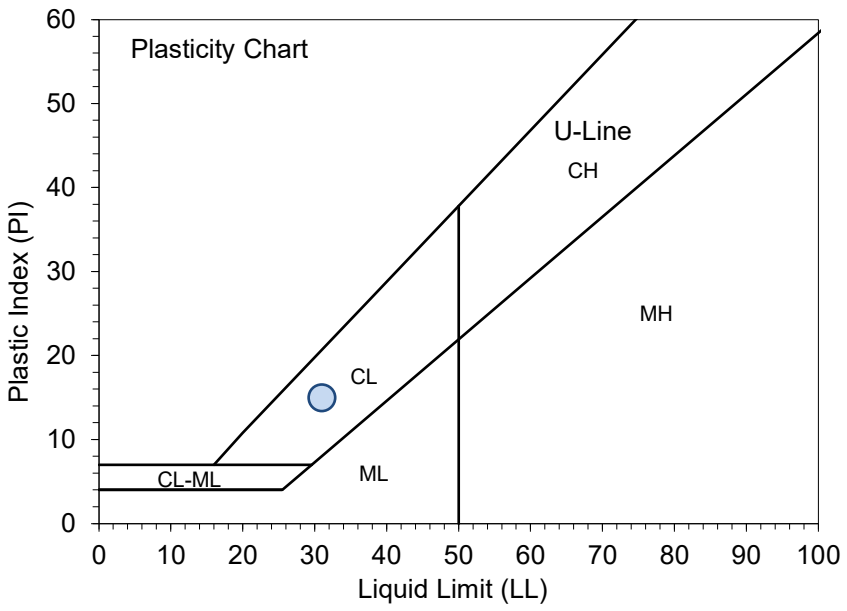
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	27	17
Wet Soil + Tare (g):	23.85	25.34	24.74
Dry Soil + Tare (g):	21.37	22.51	21.75
Moisture Loss (g):	2.48	2.83	2.99
Tare (g):	12.92	13.32	12.54
Dry Soil (g):	8.45	9.19	9.21
Moisture Content, w (%):	29.35	30.79	32.46
One-Point LL:		31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	16
Plasticity Index, PI:	15





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]1

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 27-29 ft

Tested by: JC Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - gy clay
As-received water content(%):	11.0	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

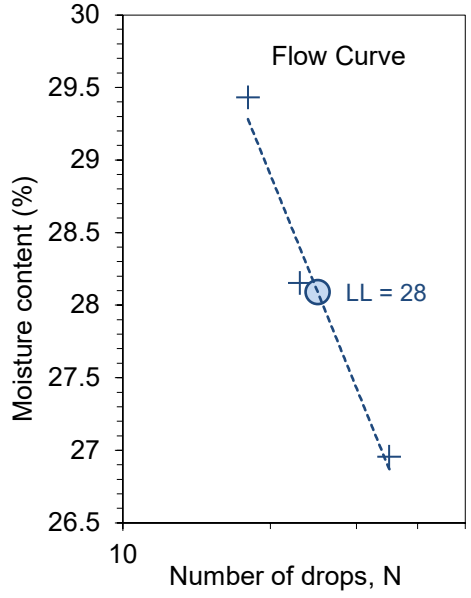
Determination No:	1	2
Wet Soil + Tare (g):	20.76	21.17
Dry Soil + Tare (g):	19.72	20.13
Moisture Loss (g):	1.04	1.04
Tare (g):	13.35	13.69
Dry Soil (g):	6.37	6.44
Moisture Content, w (%):	16.33	16.15

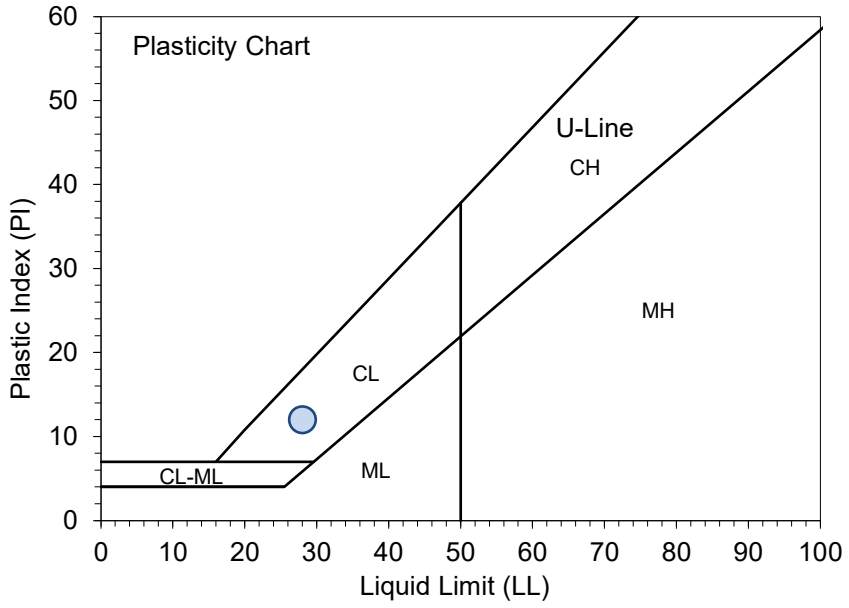
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	23	18
Wet Soil + Tare (g):	25.98	24.87	27.33
Dry Soil + Tare (g):	23.33	22.17	24.16
Moisture Loss (g):	2.65	2.70	3.17
Tare (g):	13.50	12.58	13.39
Dry Soil (g):	9.83	9.59	10.77
Moisture Content, w (%):	26.96	28.15	29.43
One-Point LL:		28	

Results

Liquid Limit, LL:	28
Plastic Limit, PL:	16
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]2

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 54.5-57 ft

Tested by: JC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - dk gy clay
As-received water content(%):	12.5	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

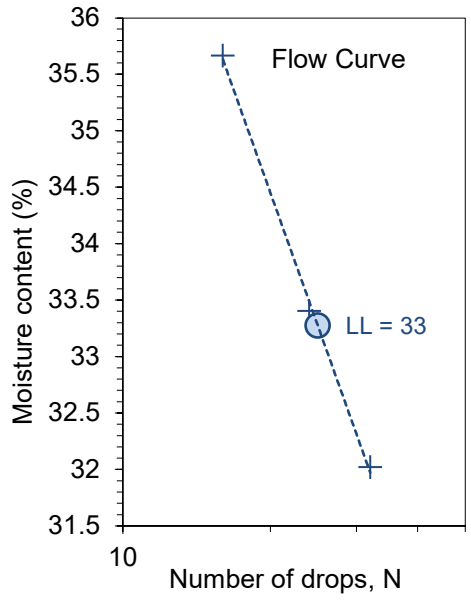
Determination No:	1	2
Wet Soil + Tare (g):	20.65	21.09
Dry Soil + Tare (g):	19.68	20.10
Moisture Loss (g):	0.97	0.99
Tare (g):	13.25	13.55
Dry Soil (g):	6.43	6.55
Moisture Content, w (%):	15.09	15.11

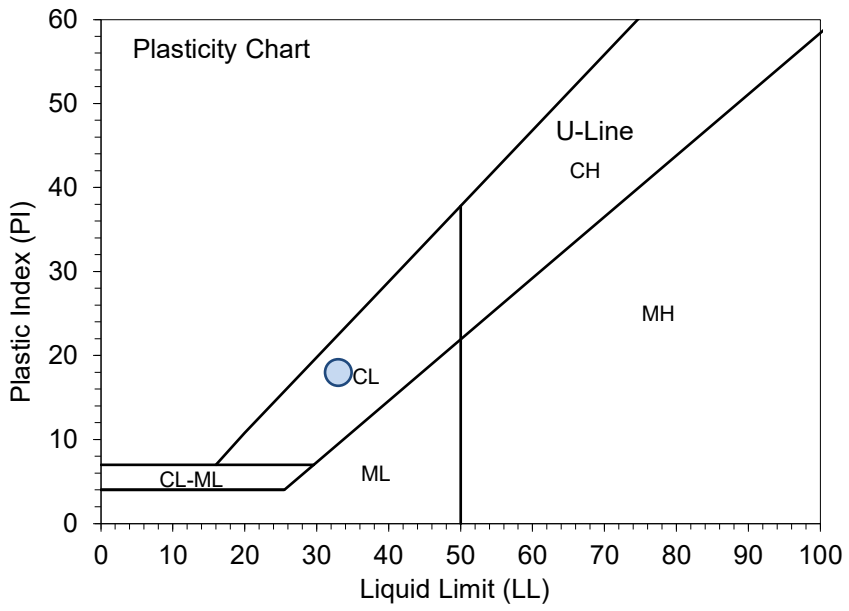
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	32	24	16
Wet Soil + Tare (g):	24.69	24.36	24.92
Dry Soil + Tare (g):	22.00	21.31	21.61
Moisture Loss (g):	2.69	3.05	3.31
Tare (g):	13.60	12.18	12.33
Dry Soil (g):	8.40	9.13	9.28
Moisture Content, w (%):	32.02	33.41	35.67
One-Point LL:		33	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	15
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]3

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 67-69 ft

Tested by: JC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	dk gy - lt bn clay
As-received water content(%):	10.0	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

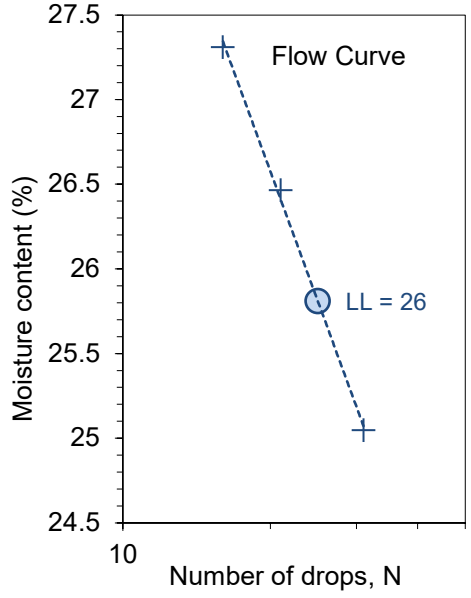
Determination No:	1	2
Wet Soil + Tare (g):	21.01	20.67
Dry Soil + Tare (g):	19.96	19.64
Moisture Loss (g):	1.05	1.03
Tare (g):	13.49	13.07
Dry Soil (g):	6.47	6.57
Moisture Content, w (%):	16.23	15.68

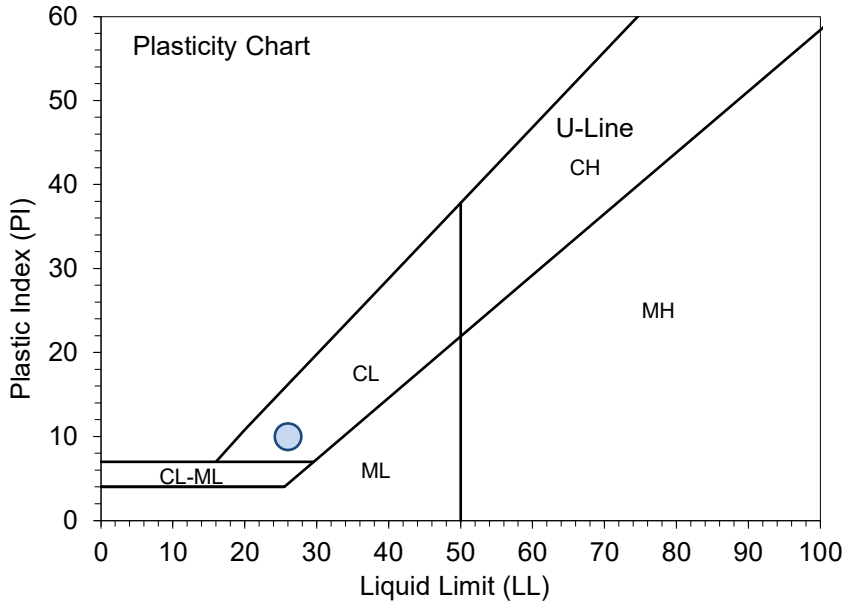
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	21	16
Wet Soil + Tare (g):	26.26	25.37	25.82
Dry Soil + Tare (g):	23.73	22.89	23.22
Moisture Loss (g):	2.53	2.48	2.60
Tare (g):	13.63	13.52	13.70
Dry Soil (g):	10.10	9.37	9.52
Moisture Content, w (%):	25.05	26.47	27.31
One-Point LL:		26	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	16
Plasticity Index, PI:	10





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]4

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 72.5-75 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - dk by clay
As-received water content(%):	20.7	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

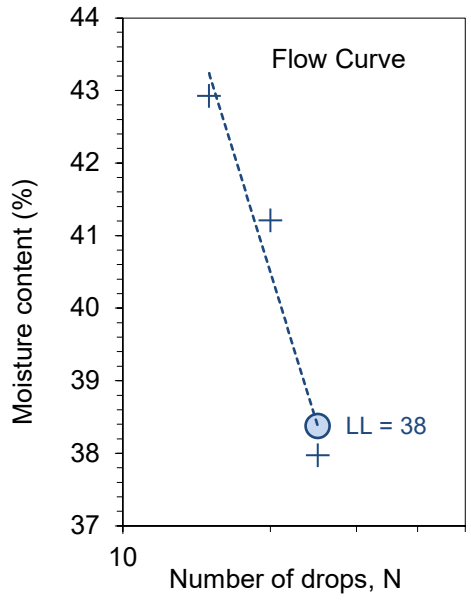
Determination No:	1	2
Wet Soil + Tare (g):	21.19	21.02
Dry Soil + Tare (g):	20.06	19.89
Moisture Loss (g):	1.13	1.13
Tare (g):	13.47	13.48
Dry Soil (g):	6.59	6.41
Moisture Content, w (%):	17.15	17.63

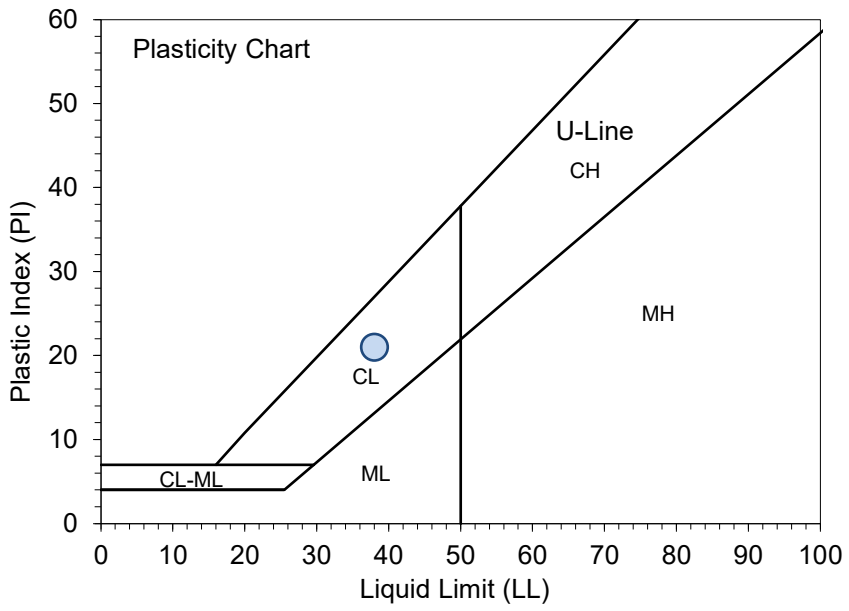
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	25	20	15
Wet Soil + Tare (g):	22.90	24.32	25.41
Dry Soil + Tare (g):	20.31	21.13	21.89
Moisture Loss (g):	2.59	3.19	3.52
Tare (g):	13.49	13.39	13.69
Dry Soil (g):	6.82	7.74	8.20
Moisture Content, w (%):	37.98	41.21	42.93
One-Point LL:	38	40	

Results

Liquid Limit, LL:	38
Plastic Limit, PL:	17
Plasticity Index, PI:	21





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]5

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 7-10 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn gravel
As-received water content(%):	Not Requested	Approximate maximum particle size:	1.5"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

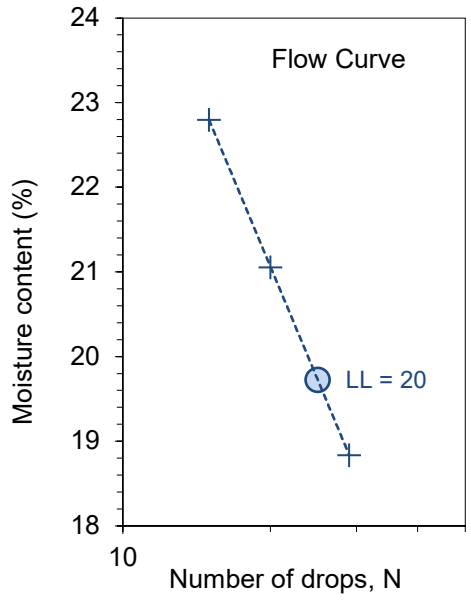
Determination No:	1	2
Wet Soil + Tare (g):	20.22	21.14
Dry Soil + Tare (g):	19.22	20.11
Moisture Loss (g):	1.00	1.03
Tare (g):	12.57	13.32
Dry Soil (g):	6.65	6.79
Moisture Content, w (%):	15.04	15.17

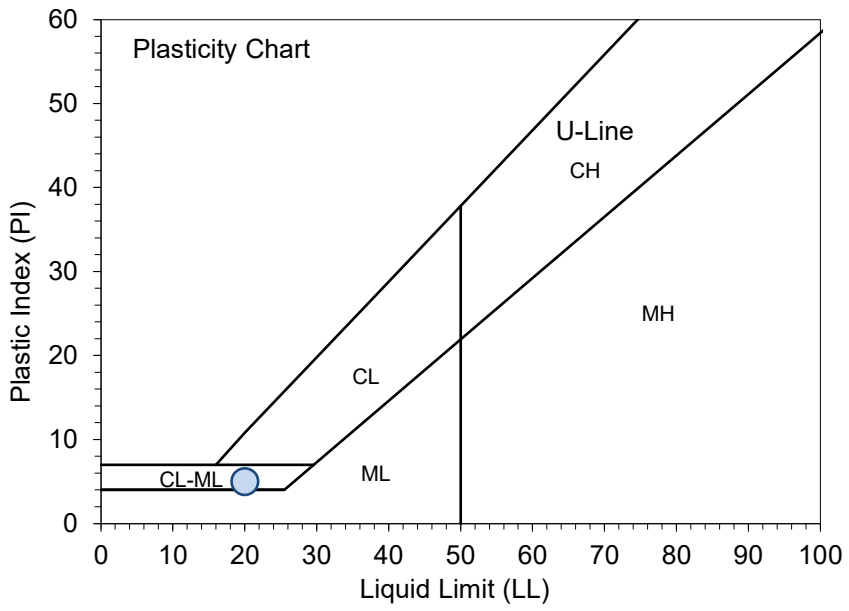
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	20	15
Wet Soil + Tare (g):	26.87	25.20	24.44
Dry Soil + Tare (g):	24.76	23.17	22.29
Moisture Loss (g):	2.11	2.03	2.15
Tare (g):	13.56	13.53	12.86
Dry Soil (g):	11.20	9.64	9.43
Moisture Content, w (%):	18.84	21.06	22.80
One-Point LL:	19	20	

Results

Liquid Limit, LL:	20
Plastic Limit, PL:	15
Plasticity Index, PI:	5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]6

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 14.5-16 ft

Tested by: JC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - ol bn clay
As-received water content(%):	11.9	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

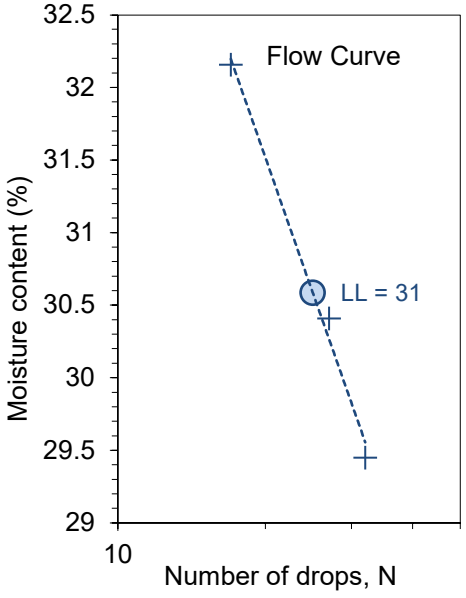
Determination No:	1	2
Wet Soil + Tare (g):	20.91	19.95
Dry Soil + Tare (g):	19.95	19.00
Moisture Loss (g):	0.96	0.95
Tare (g):	13.46	12.46
Dry Soil (g):	6.49	6.54
Moisture Content, w (%):	14.79	14.53

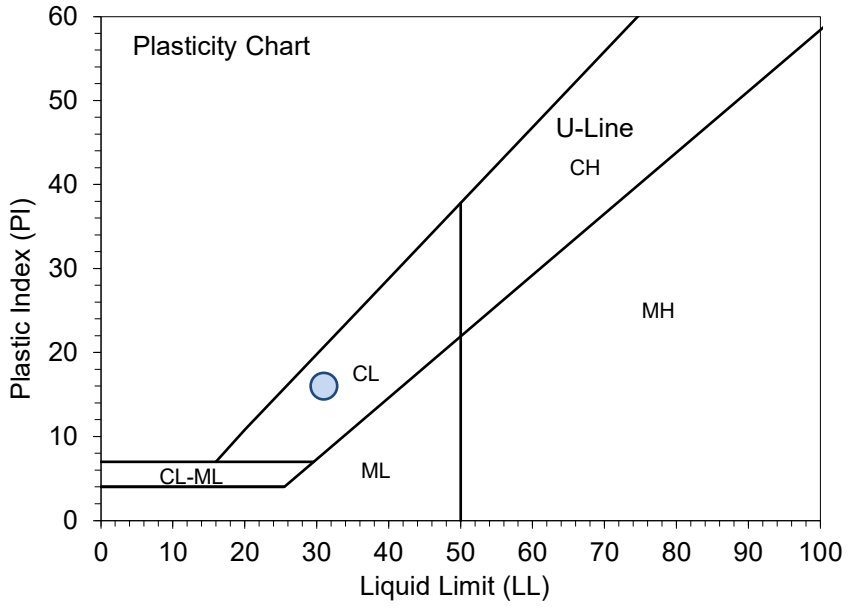
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	32	27	17
Wet Soil + Tare (g):	27.13	25.25	23.71
Dry Soil + Tare (g):	24.02	22.51	20.88
Moisture Loss (g):	3.11	2.74	2.83
Tare (g):	13.46	13.50	12.08
Dry Soil (g):	10.56	9.01	8.80
Moisture Content, w (%):	29.45	30.41	32.16
One-Point LL:		31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	15
Plasticity Index, PI:	16





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]7

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - ol bn clay
As-received water content(%):	13.3	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

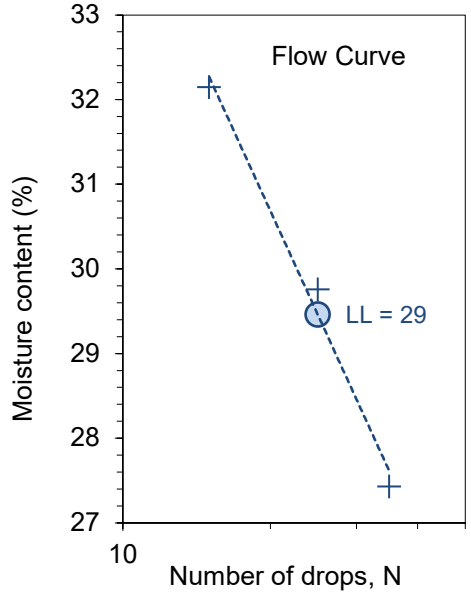
Determination No:	1	2
Wet Soil + Tare (g):	21.43	19.87
Dry Soil + Tare (g):	20.39	18.85
Moisture Loss (g):	1.04	1.02
Tare (g):	13.57	12.08
Dry Soil (g):	6.82	6.77
Moisture Content, w (%):	15.25	15.07

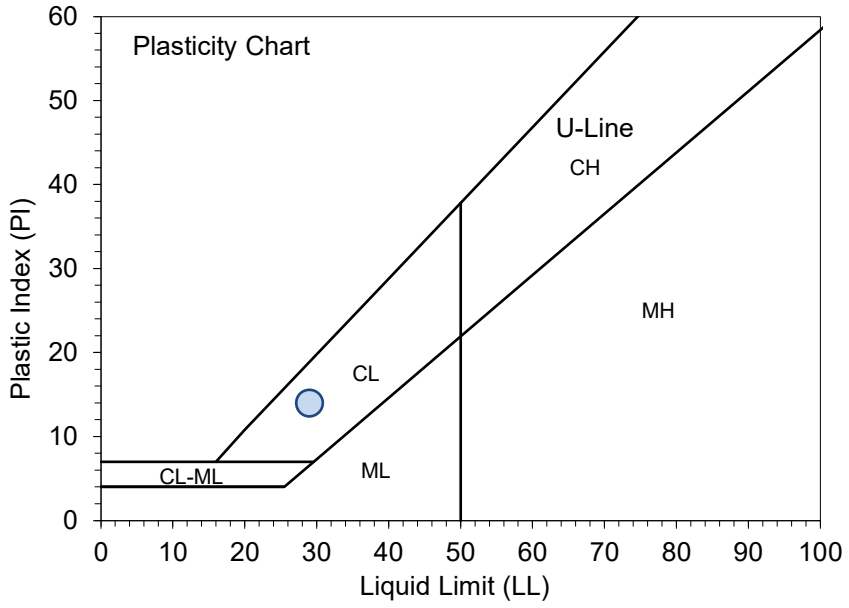
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	25	15
Wet Soil + Tare (g):	22.22	20.57	25.21
Dry Soil + Tare (g):	20.36	18.71	22.22
Moisture Loss (g):	1.86	1.86	2.99
Tare (g):	13.58	12.46	12.92
Dry Soil (g):	6.78	6.25	9.30
Moisture Content, w (%):	27.43	29.76	32.15
One-Point LL:		30	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	15
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]8

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 32-35 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk yl bn clay
As-received water content(%):	14.5	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

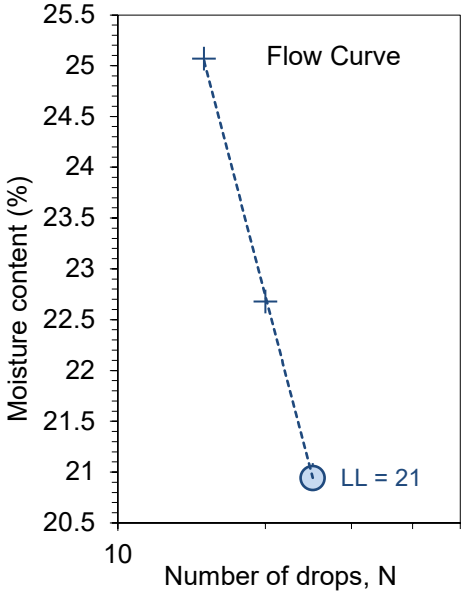
Determination No:	1	2
Wet Soil + Tare (g):	21.05	21.32
Dry Soil + Tare (g):	19.97	20.22
Moisture Loss (g):	1.08	1.10
Tare (g):	13.42	13.54
Dry Soil (g):	6.55	6.68
Moisture Content, w (%):	16.49	16.47

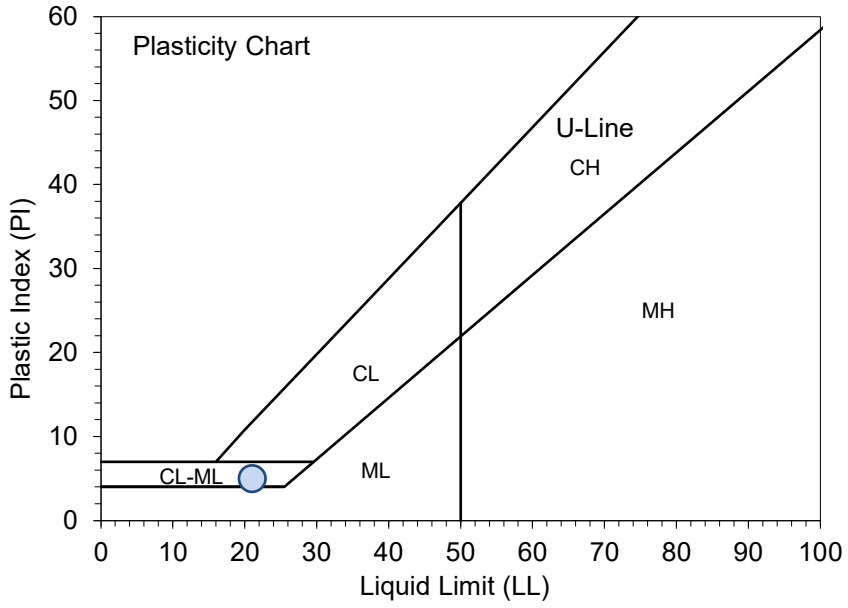
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	25	20	15
Wet Soil + Tare (g):	25.91	24.58	25.44
Dry Soil + Tare (g):	23.76	22.50	22.86
Moisture Loss (g):	2.15	2.08	2.58
Tare (g):	13.51	13.33	12.57
Dry Soil (g):	10.25	9.17	10.29
Moisture Content, w (%):	20.98	22.68	25.07
One-Point LL:	21	22	

Results

Liquid Limit, LL:	21
Plastic Limit, PL:	16
Plasticity Index, PI:	5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]9

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 38.5-40 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - ol bn clay
As-received water content(%):	15.5	Approximate maximum particle size:	No. 10
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

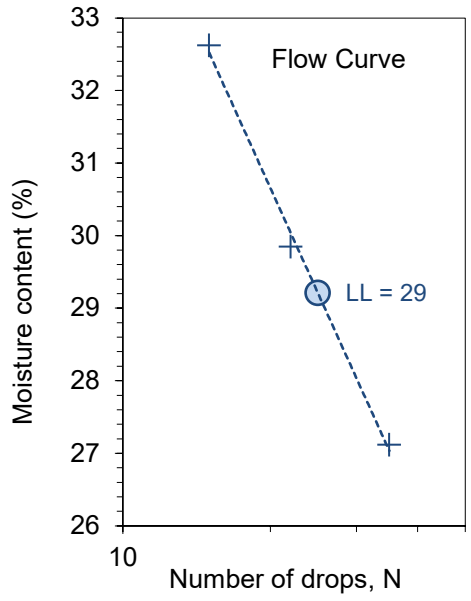
Determination No:	1	2
Wet Soil + Tare (g):	20.84	21.16
Dry Soil + Tare (g):	19.75	20.04
Moisture Loss (g):	1.09	1.12
Tare (g):	13.53	13.60
Dry Soil (g):	6.22	6.44
Moisture Content, w (%):	17.52	17.39

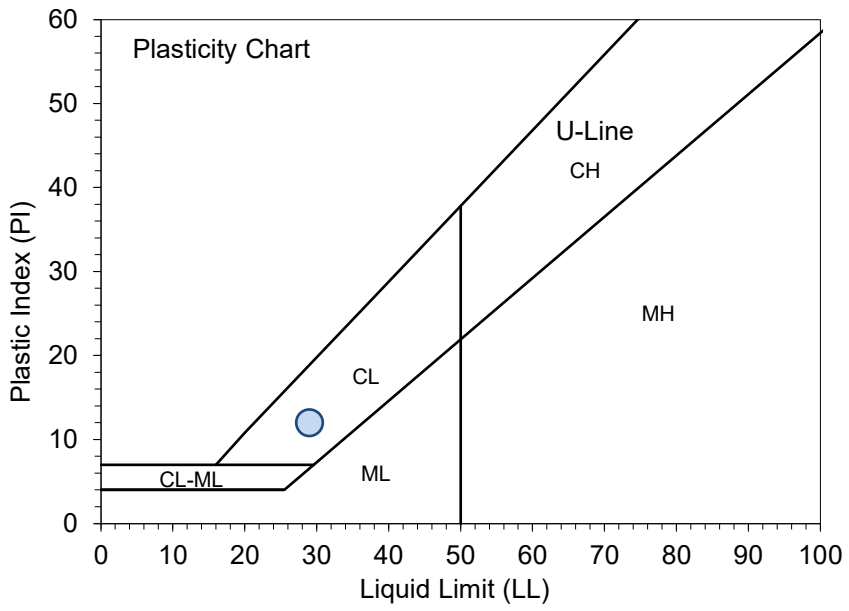
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	22	15
Wet Soil + Tare (g):	24.37	21.89	23.34
Dry Soil + Tare (g):	22.04	19.69	20.88
Moisture Loss (g):	2.33	2.20	2.46
Tare (g):	13.45	12.32	13.34
Dry Soil (g):	8.59	7.37	7.54
Moisture Content, w (%):	27.12	29.85	32.63
One-Point LL:		29	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	17
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]10

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 52-55 ft

Tested by: CML Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	gy - ol bn clay
As-received water content(%):	11.6	Approximate maximum particle size:	No. 10
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

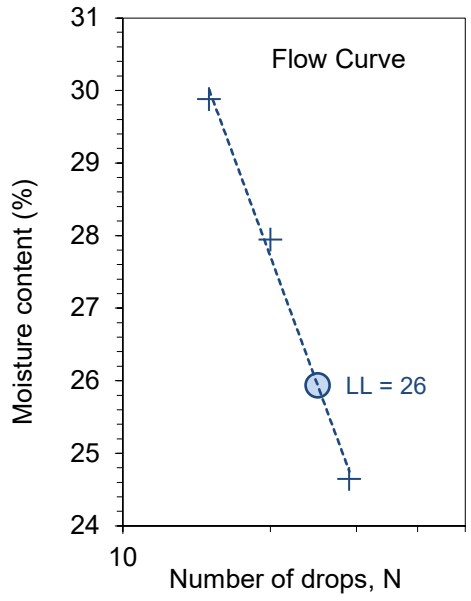
Determination No:	1	2
Wet Soil + Tare (g):	20.78	20.39
Dry Soil + Tare (g):	19.86	19.48
Moisture Loss (g):	0.92	0.91
Tare (g):	13.07	12.86
Dry Soil (g):	6.79	6.62
Moisture Content, w (%):	13.55	13.75

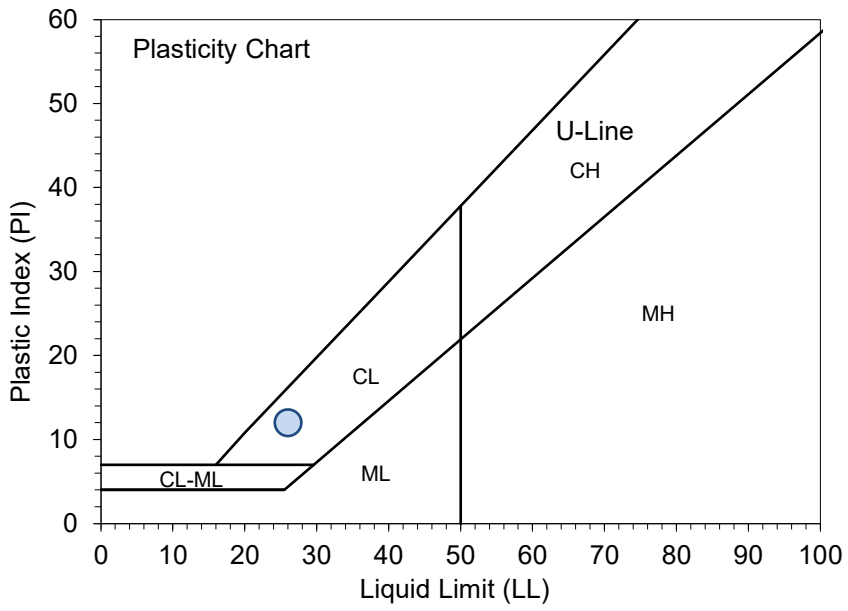
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	20	15
Wet Soil + Tare (g):	26.18	26.47	25.64
Dry Soil + Tare (g):	23.71	23.51	22.84
Moisture Loss (g):	2.47	2.96	2.80
Tare (g):	13.69	12.92	13.47
Dry Soil (g):	10.02	10.59	9.37
Moisture Content, w (%):	24.65	27.95	29.88
One-Point LL:	25	27	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	14
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]11

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 60-62 ft

Tested by: PJF Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	13.7	Approximate maximum particle size:	No. 10
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

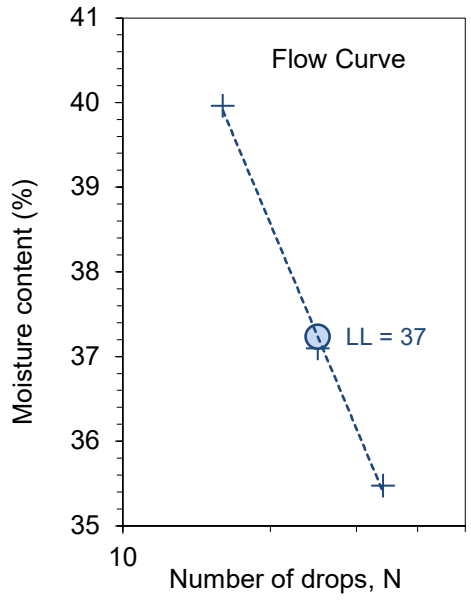
Determination No:	1	2
Wet Soil + Tare (g):	19.85	20.09
Dry Soil + Tare (g):	19.04	19.23
Moisture Loss (g):	0.81	0.86
Tare (g):	13.24	13.20
Dry Soil (g):	5.80	6.03
Moisture Content, w (%):	13.97	14.26

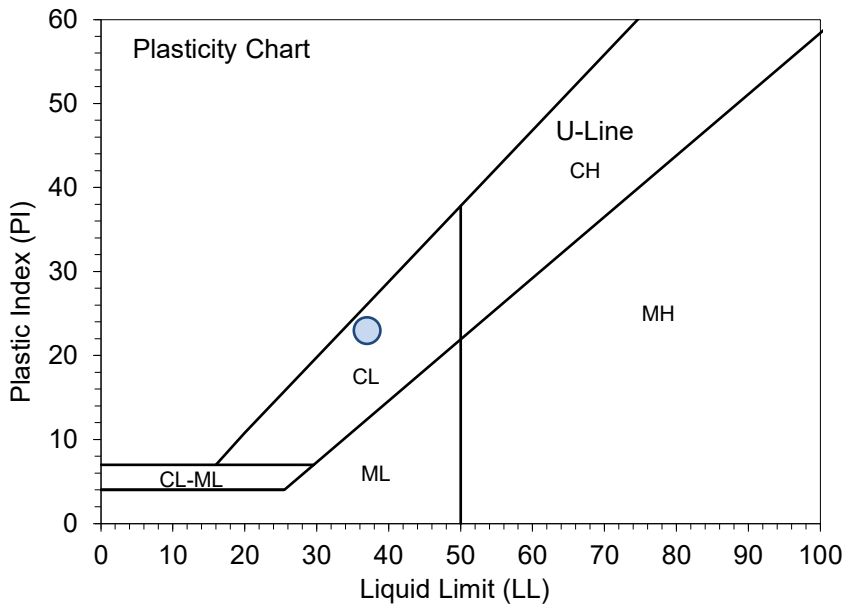
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	34	25	16
Wet Soil + Tare (g):	25.78	25.64	28.95
Dry Soil + Tare (g):	22.31	22.39	24.57
Moisture Loss (g):	3.47	3.25	4.38
Tare (g):	12.53	13.63	13.61
Dry Soil (g):	9.78	8.76	10.96
Moisture Content, w (%):	35.48	37.10	39.96
One-Point LL:		37	

Results

Liquid Limit, LL:	37
Plastic Limit, PL:	14
Plasticity Index, PI:	23





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]12

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 64.5-67 ft

Tested by: PJF Date: 16-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - ol bn clay
As-received water content(%):	12.8	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

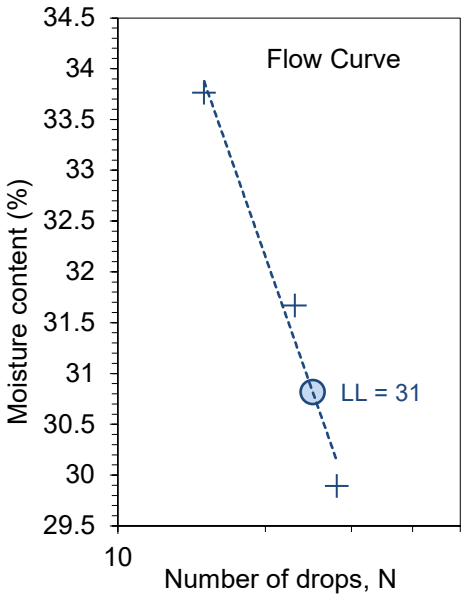
Determination No:	1	2
Wet Soil + Tare (g):	19.92	19.13
Dry Soil + Tare (g):	18.91	18.09
Moisture Loss (g):	1.01	1.04
Tare (g):	12.97	12.20
Dry Soil (g):	5.94	5.89
Moisture Content, w (%):	17.00	17.66

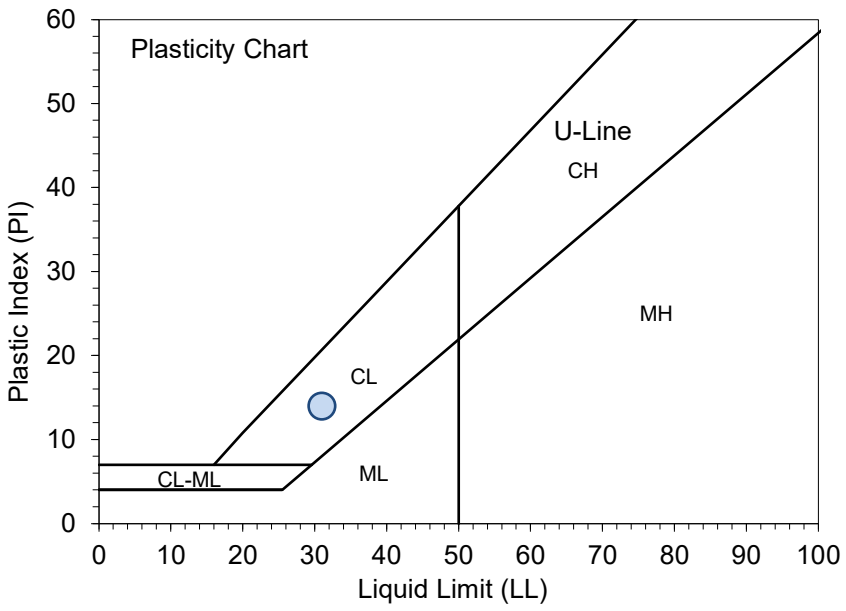
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	28	23	15
Wet Soil + Tare (g):	26.11	26.31	25.75
Dry Soil + Tare (g):	23.21	23.13	22.62
Moisture Loss (g):	2.90	3.18	3.13
Tare (g):	13.51	13.09	13.35
Dry Soil (g):	9.70	10.04	9.27
Moisture Content, w (%):	29.90	31.67	33.76
One-Point LL:	30	31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	17
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]13

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 69.5-72 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn gravel
As-received water content(%):	Not Requested	Approximate maximum particle size:	2"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	75
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

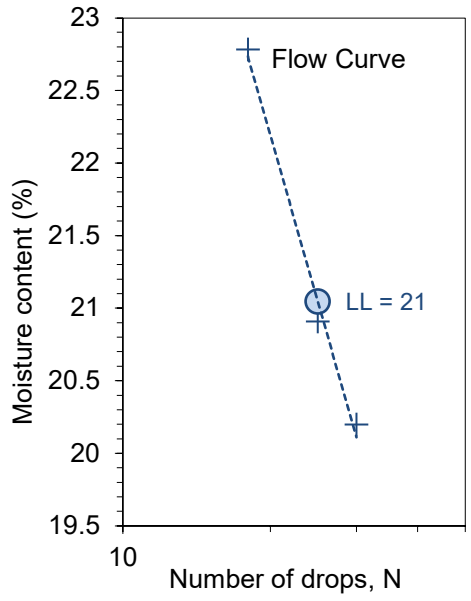
Determination No:	1	2
Wet Soil + Tare (g):	20.46	21.09
Dry Soil + Tare (g):	19.45	20.08
Moisture Loss (g):	1.01	1.01
Tare (g):	12.96	13.57
Dry Soil (g):	6.49	6.51
Moisture Content, w (%):	15.56	15.51

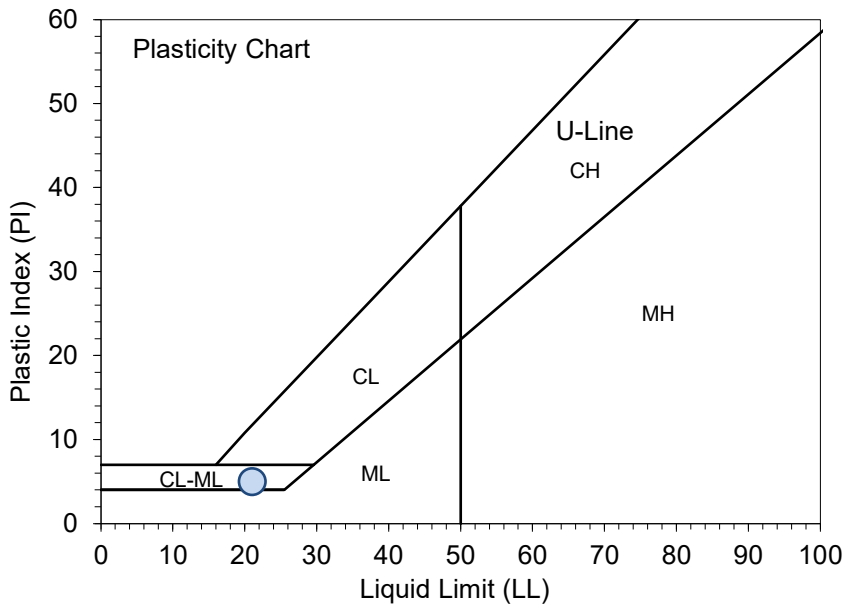
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	25	18
Wet Soil + Tare (g):	24.18	25.29	22.55
Dry Soil + Tare (g):	22.36	23.27	20.75
Moisture Loss (g):	1.82	2.02	1.80
Tare (g):	13.35	13.61	12.85
Dry Soil (g):	9.01	9.66	7.90
Moisture Content, w (%):	20.20	20.91	22.78
One-Point LL:	21	21	

Results

Liquid Limit, LL:	21
Plastic Limit, PL:	16
Plasticity Index, PI:	5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]14

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 4.5-7 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	10.1	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

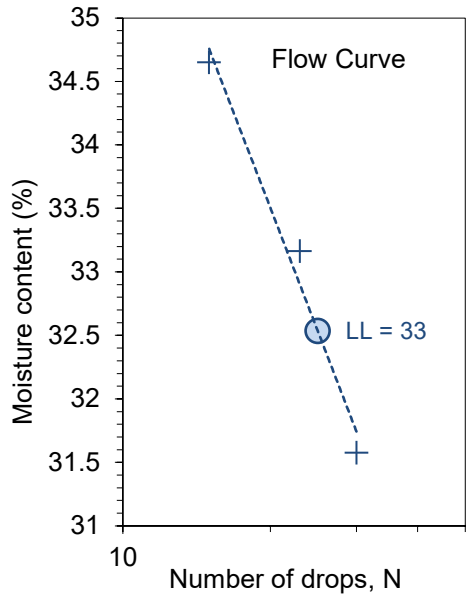
Determination No:	1	2
Wet Soil + Tare (g):	20.63	19.09
Dry Soil + Tare (g):	19.78	18.29
Moisture Loss (g):	0.85	0.80
Tare (g):	13.55	12.54
Dry Soil (g):	6.23	5.75
Moisture Content, w (%):	13.64	13.91

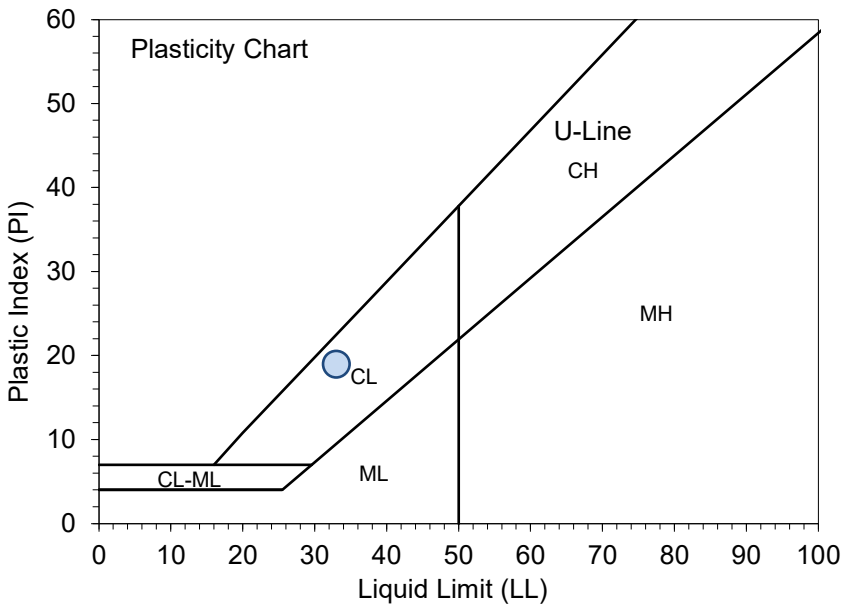
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	23	15
Wet Soil + Tare (g):	27.01	26.81	27.14
Dry Soil + Tare (g):	23.77	23.50	23.64
Moisture Loss (g):	3.24	3.31	3.50
Tare (g):	13.51	13.52	13.54
Dry Soil (g):	10.26	9.98	10.10
Moisture Content, w (%):	31.58	33.17	34.65
One-Point LL:	32	33	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	14
Plasticity Index, PI:	19





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]15

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Tested by: MGS Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	pl ol bn - bn clay
As-received water content(%):	8.4	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

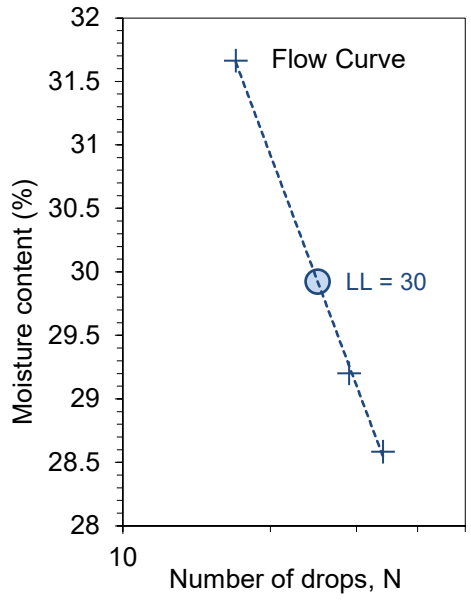
Determination No:	1	2
Wet Soil + Tare (g):	20.68	20.84
Dry Soil + Tare (g):	19.73	19.88
Moisture Loss (g):	0.95	0.96
Tare (g):	13.45	13.56
Dry Soil (g):	6.28	6.32
Moisture Content, w (%):	15.13	15.19

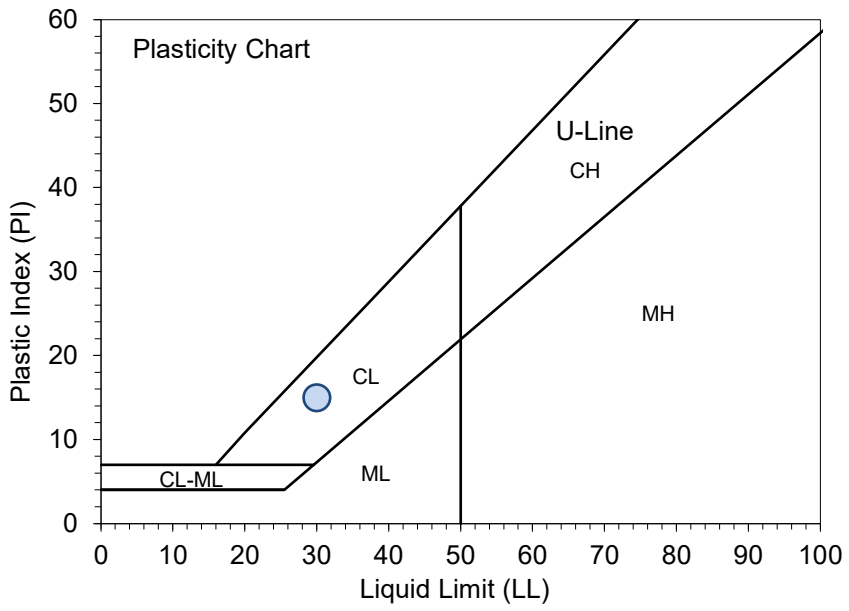
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	34	29	17
Wet Soil + Tare (g):	25.21	28.96	24.78
Dry Soil + Tare (g):	22.32	25.47	22.06
Moisture Loss (g):	2.89	3.49	2.72
Tare (g):	12.21	13.52	13.47
Dry Soil (g):	10.11	11.95	8.59
Moisture Content, w (%):	28.59	29.21	31.66
One-Point LL:		30	

Results

Liquid Limit, LL:	30
Plastic Limit, PL:	15
Plasticity Index, PI:	15





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]16

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - bn clay
As-received water content(%):	12.4	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	20
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

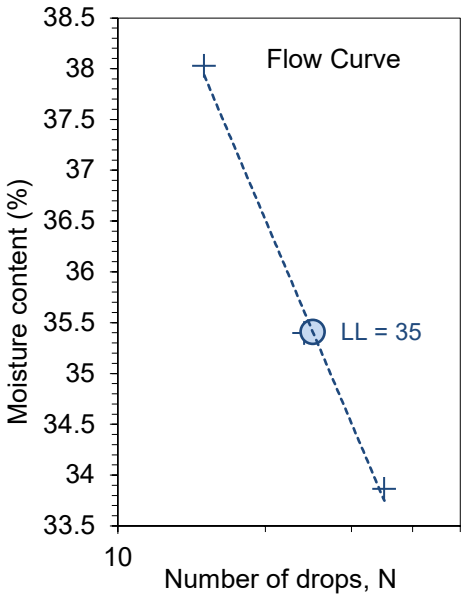
Determination No:	1	2
Wet Soil + Tare (g):	19.21	19.75
Dry Soil + Tare (g):	18.30	18.89
Moisture Loss (g):	0.91	0.86
Tare (g):	12.28	13.22
Dry Soil (g):	6.02	5.67
Moisture Content, w (%):	15.12	15.17

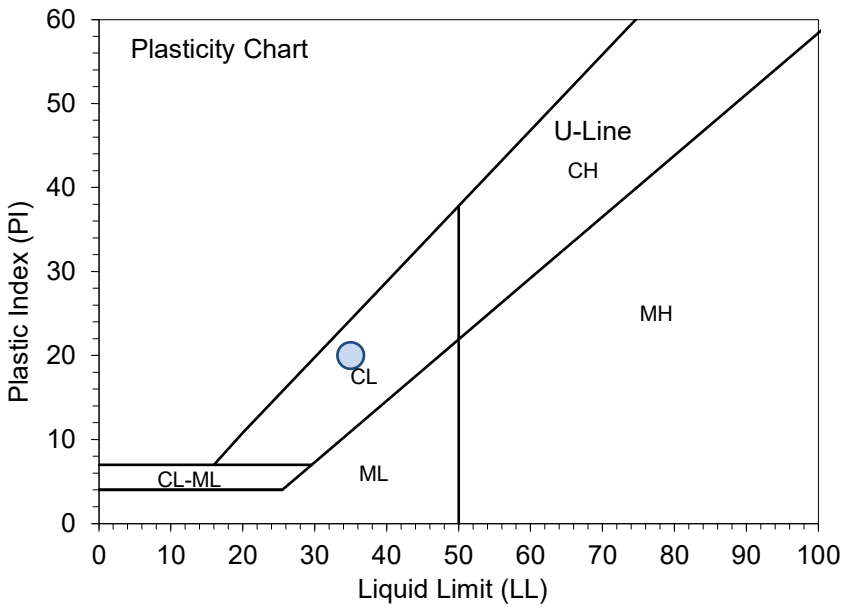
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	24	15
Wet Soil + Tare (g):	26.18	26.09	25.03
Dry Soil + Tare (g):	23.01	22.78	21.90
Moisture Loss (g):	3.17	3.31	3.13
Tare (g):	13.65	13.43	13.67
Dry Soil (g):	9.36	9.35	8.23
Moisture Content, w (%):	33.87	35.40	38.03
One-Point LL:		35	

Results

Liquid Limit, LL:	35
Plastic Limit, PL:	15
Plasticity Index, PI:	20





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]17

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 30-33 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn clay
As-received water content(%):	10.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

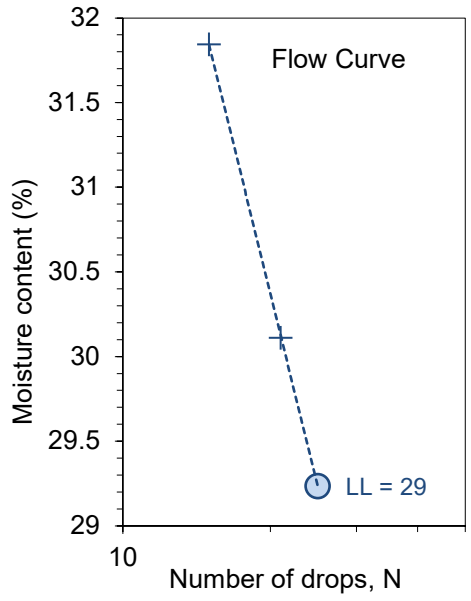
Determination No:	1	2
Wet Soil + Tare (g):	20.40	20.23
Dry Soil + Tare (g):	19.46	19.37
Moisture Loss (g):	0.94	0.86
Tare (g):	13.35	13.51
Dry Soil (g):	6.11	5.86
Moisture Content, w (%):	15.38	14.68

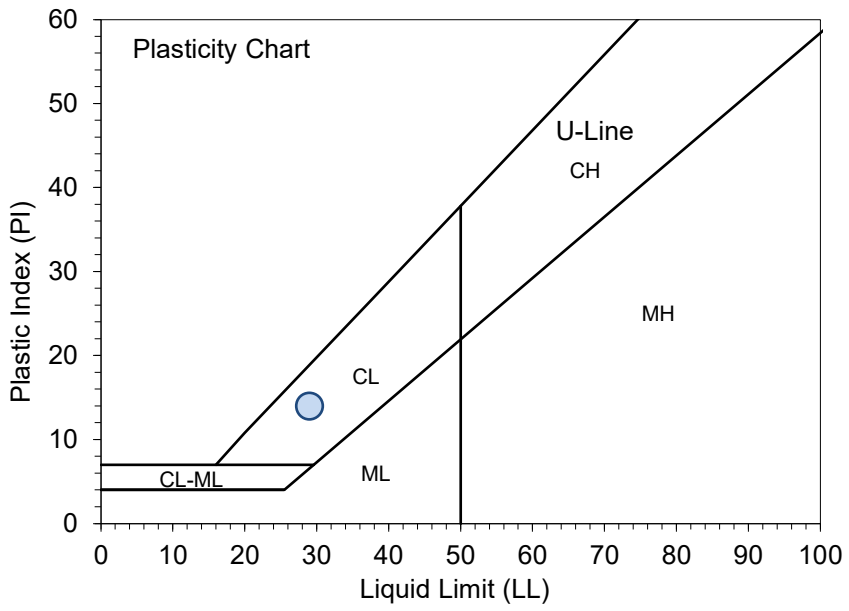
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	25	21	15
Wet Soil + Tare (g):	25.41	25.35	28.60
Dry Soil + Tare (g):	22.55	22.42	24.96
Moisture Loss (g):	2.86	2.93	3.64
Tare (g):	12.77	12.69	13.53
Dry Soil (g):	9.78	9.73	11.43
Moisture Content, w (%):	29.24	30.11	31.85
One-Point LL:	29	29	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	15
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]18

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 7-10 ft

Tested by: MGS Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	It ol bn - bn clay
As-received water content(%):	21.8	Approximate maximum particle size:	No. 4
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

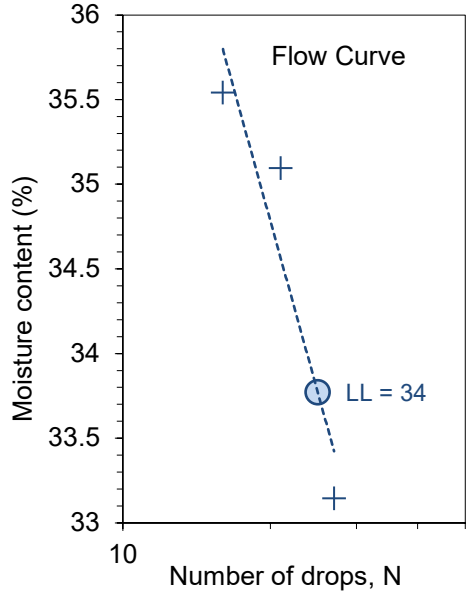
Determination No:	1	2
Wet Soil + Tare (g):	20.44	20.46
Dry Soil + Tare (g):	19.50	19.48
Moisture Loss (g):	0.94	0.98
Tare (g):	13.42	13.24
Dry Soil (g):	6.08	6.24
Moisture Content, w (%):	15.46	15.71

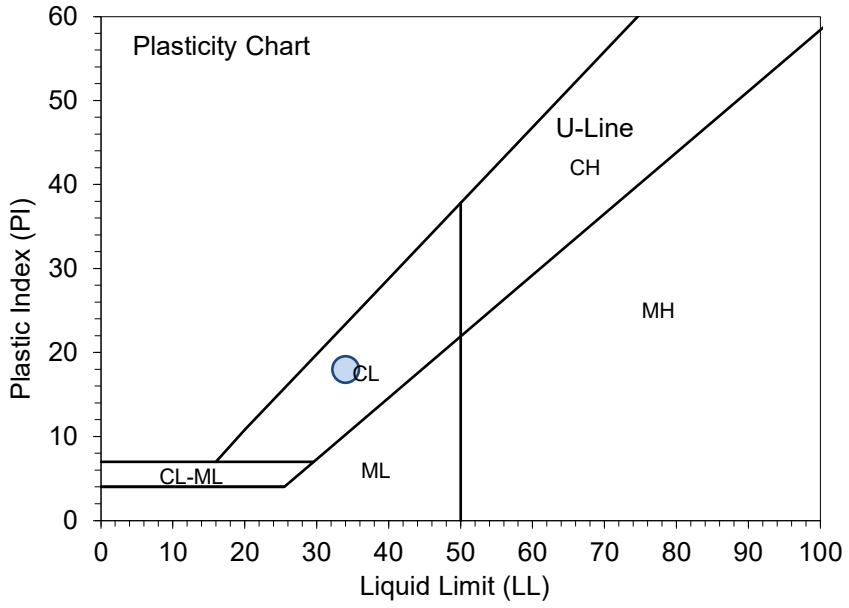
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	27	21	16
Wet Soil + Tare (g):	24.27	26.14	25.99
Dry Soil + Tare (g):	21.30	22.49	22.72
Moisture Loss (g):	2.97	3.65	3.27
Tare (g):	12.34	12.09	13.52
Dry Soil (g):	8.96	10.40	9.20
Moisture Content, w (%):	33.15	35.10	35.54
One-Point LL:	33	34	

Results

Liquid Limit, LL:	34
Plastic Limit, PL:	16
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]19

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Tested by: CML Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	pl ol bn - lt bn silt
As-received water content(%):	6.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

Determination No:	1	2
Wet Soil + Tare (g):	21.13	20.64
Dry Soil + Tare (g):	20.21	19.72
Moisture Loss (g):	0.92	0.92
Tare (g):	13.54	12.92
Dry Soil (g):	6.67	6.80
Moisture Content, w (%):	13.79	13.53

Liquid Limit

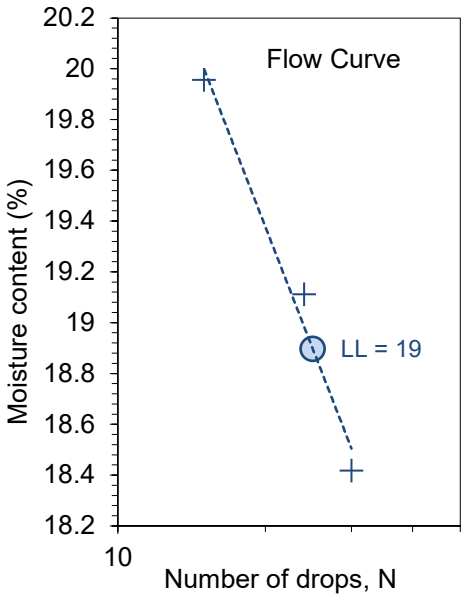
Determination No:	1	2	3
Number of Drops, N:	30	24	15
Wet Soil + Tare (g):	24.37	26.22	24.48
Dry Soil + Tare (g):	22.53	24.15	22.61
Moisture Loss (g):	1.84	2.07	1.87
Tare (g):	12.54	13.32	13.24
Dry Soil (g):	9.99	10.83	9.37
Moisture Content, w (%):	18.42	19.11	19.96
One-Point LL:	19	19	

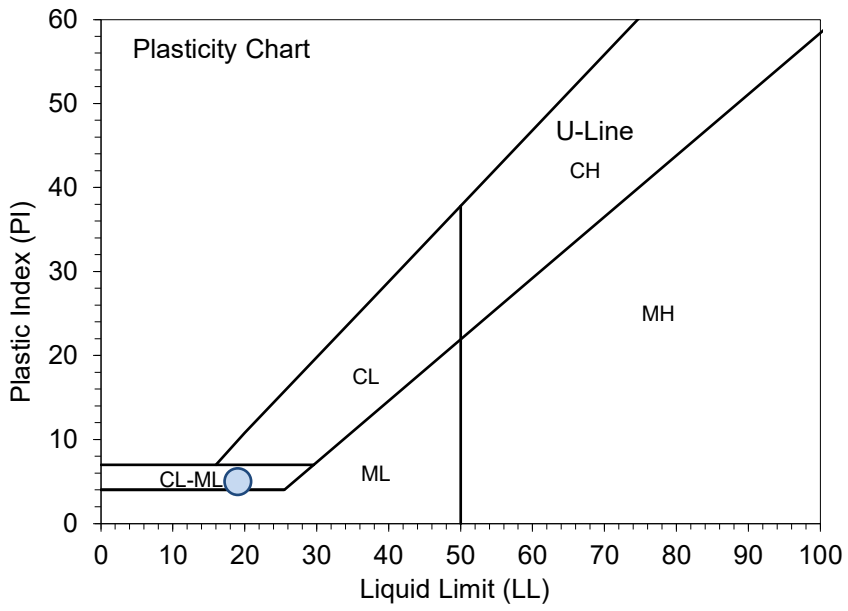
Results

Liquid Limit, LL: 19

Plastic Limit, PL: 14

Plasticity Index, PI: 5





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]20

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: PJF Date: 13-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - bn silt
As-received water content(%):	16.5	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

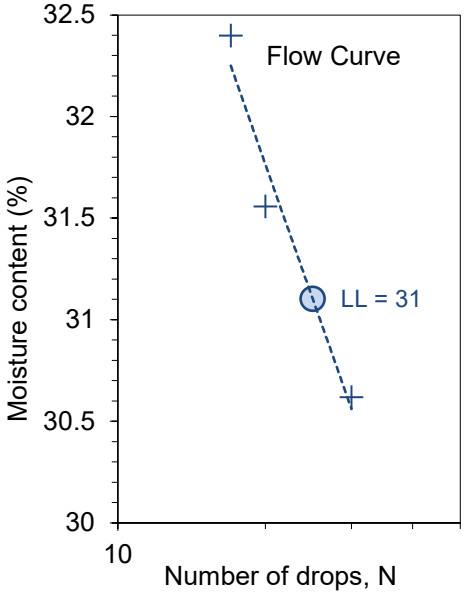
Determination No:	1	2
Wet Soil + Tare (g):	20.25	19.87
Dry Soil + Tare (g):	19.28	18.88
Moisture Loss (g):	0.97	0.99
Tare (g):	13.52	12.94
Dry Soil (g):	5.76	5.94
Moisture Content, w (%):	16.84	16.67

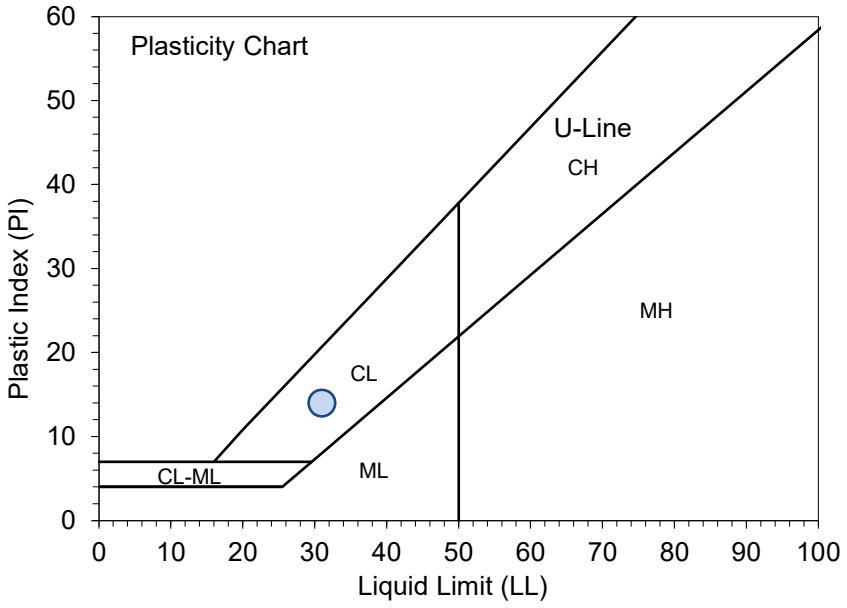
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	20	17
Wet Soil + Tare (g):	26.21	26.45	25.37
Dry Soil + Tare (g):	23.20	23.31	22.48
Moisture Loss (g):	3.01	3.14	2.89
Tare (g):	13.37	13.36	13.56
Dry Soil (g):	9.83	9.95	8.92
Moisture Content, w (%):	30.62	31.56	32.40
One-Point LL:	31	31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	17
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]21

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 30-33 ft

Tested by: CML Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	10.1	Approximate maximum particle size:	2"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	25
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

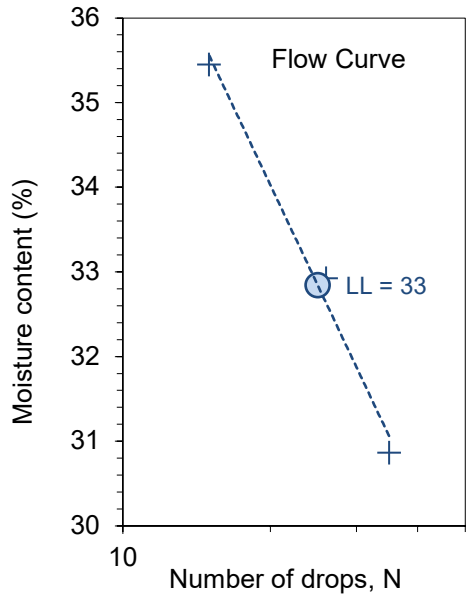
Determination No:	1	2
Wet Soil + Tare (g):	20.99	21.04
Dry Soil + Tare (g):	19.96	20.03
Moisture Loss (g):	1.03	1.01
Tare (g):	13.34	13.41
Dry Soil (g):	6.62	6.62
Moisture Content, w (%):	15.56	15.26

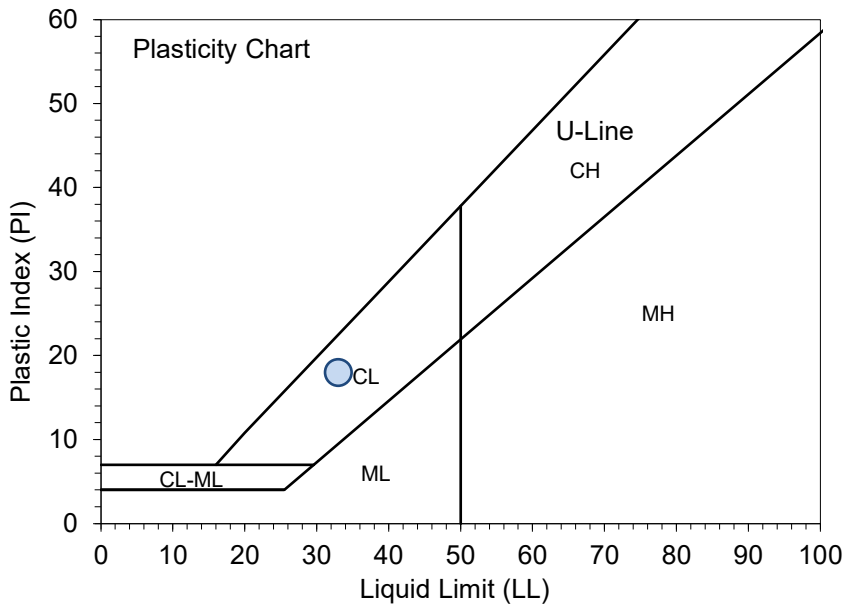
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	26	15
Wet Soil + Tare (g):	25.03	25.76	27.92
Dry Soil + Tare (g):	22.36	22.52	24.13
Moisture Loss (g):	2.67	3.24	3.79
Tare (g):	13.71	12.68	13.44
Dry Soil (g):	8.65	9.84	10.69
Moisture Content, w (%):	30.87	32.93	35.45
One-Point LL:		33	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	15
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]22

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn gravel
As-received water content(%):	Not Requested	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	20
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

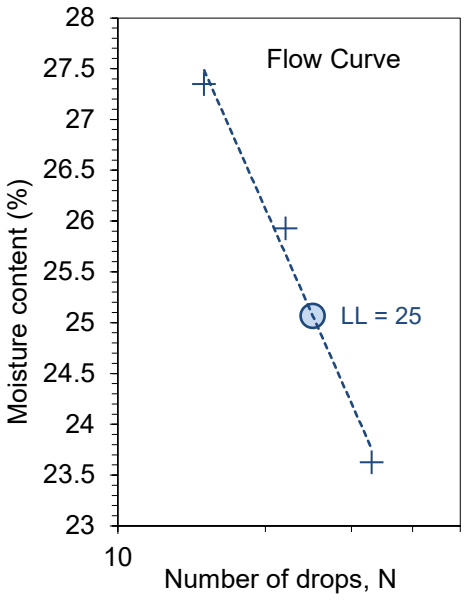
Determination No:	1	2
Wet Soil + Tare (g):	21.15	20.86
Dry Soil + Tare (g):	20.10	19.82
Moisture Loss (g):	1.05	1.04
Tare (g):	13.54	13.35
Dry Soil (g):	6.56	6.47
Moisture Content, w (%):	16.01	16.07

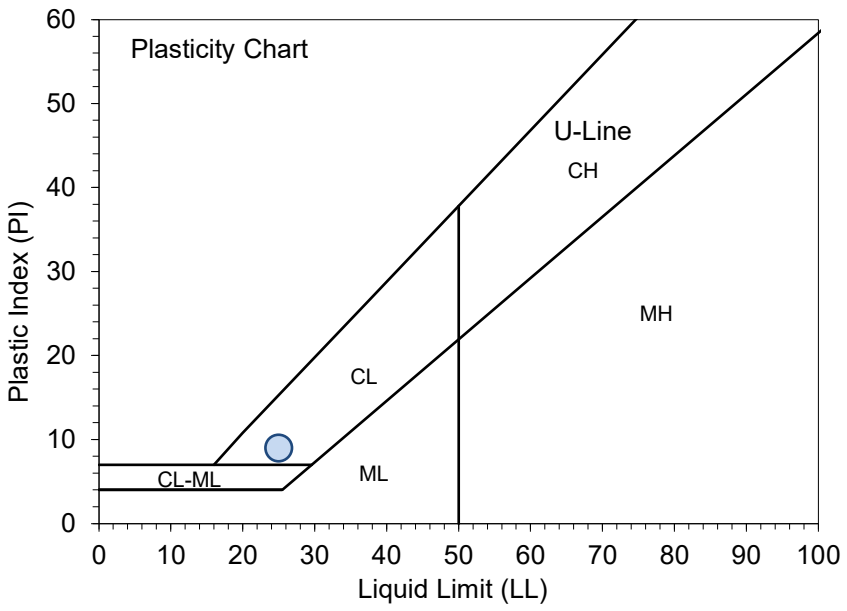
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	33	22	15
Wet Soil + Tare (g):	25.36	27.77	26.44
Dry Soil + Tare (g):	23.03	24.92	23.62
Moisture Loss (g):	2.33	2.85	2.82
Tare (g):	13.17	13.93	13.31
Dry Soil (g):	9.86	10.99	10.31
Moisture Content, w (%):	23.63	25.93	27.35
One-Point LL:		26	

Results

Liquid Limit, LL:	25
Plastic Limit, PL:	16
Plasticity Index, PI:	9





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]23

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Tested by: AT Date: 14-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Oven Dry	Laboratory sample description:	ol bn - lt bn clay
As-received water content(%):	13.7	Approximate maximum particle size:	1.5"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

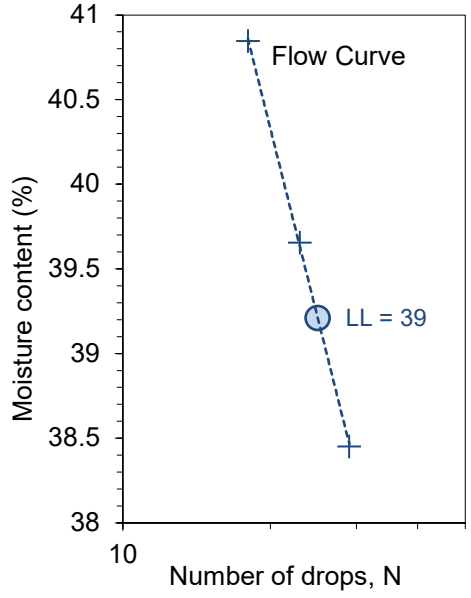
Determination No:	1	2
Wet Soil + Tare (g):	20.12	19.90
Dry Soil + Tare (g):	19.24	19.05
Moisture Loss (g):	0.88	0.85
Tare (g):	13.41	13.55
Dry Soil (g):	5.83	5.50
Moisture Content, w (%):	15.09	15.45

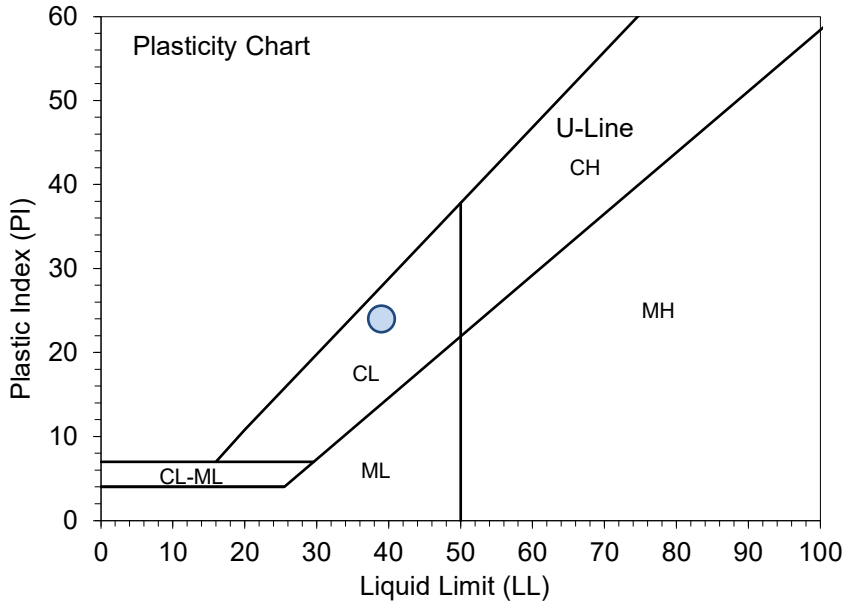
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	23	18
Wet Soil + Tare (g):	25.53	23.25	24.89
Dry Soil + Tare (g):	22.20	20.47	21.61
Moisture Loss (g):	3.33	2.78	3.28
Tare (g):	13.54	13.46	13.58
Dry Soil (g):	8.66	7.01	8.03
Moisture Content, w (%):	38.45	39.66	40.85
One-Point LL:	39	39	

Results

Liquid Limit, LL:	39
Plastic Limit, PL:	15
Plasticity Index, PI:	24





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]24

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 15-17 ft

Tested by: AT Date: 13-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - yl bn clay
As-received water content(%):	16.1	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

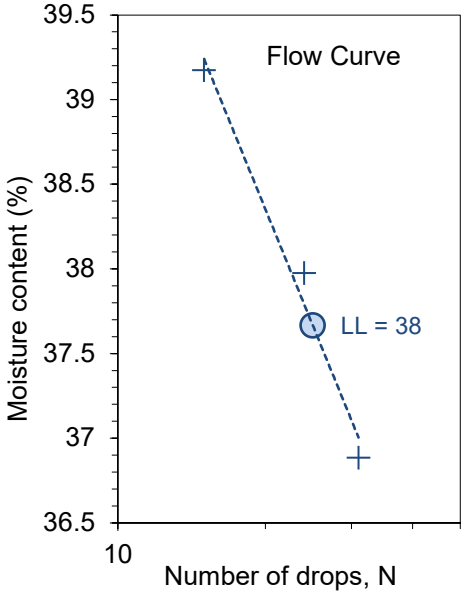
Determination No:	1	2
Wet Soil + Tare (g):	19.43	20.15
Dry Soil + Tare (g):	18.38	18.97
Moisture Loss (g):	1.05	1.18
Tare (g):	13.17	13.33
Dry Soil (g):	5.21	5.64
Moisture Content, w (%):	20.15	20.92

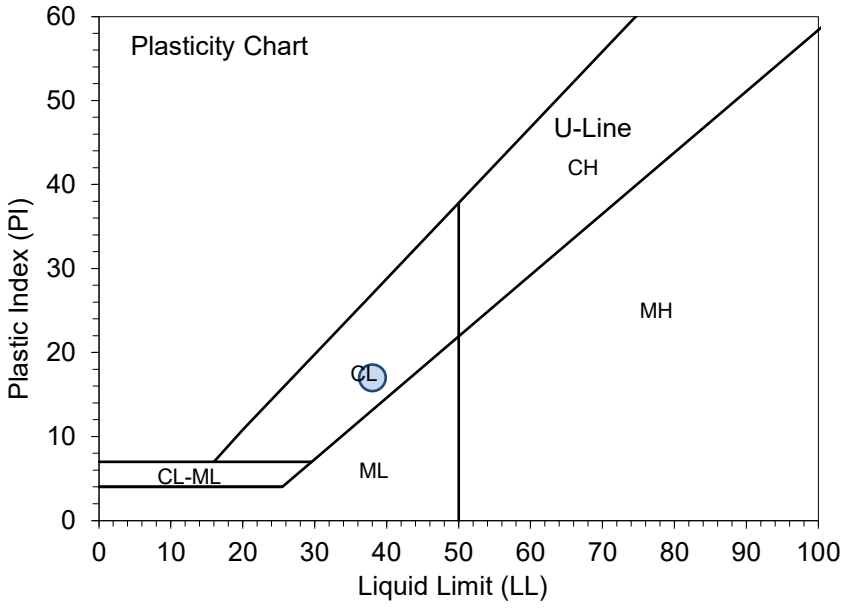
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	24	15
Wet Soil + Tare (g):	24.39	24.09	24.32
Dry Soil + Tare (g):	21.38	21.20	21.28
Moisture Loss (g):	3.01	2.89	3.04
Tare (g):	13.22	13.59	13.52
Dry Soil (g):	8.16	7.61	7.76
Moisture Content, w (%):	36.89	37.98	39.18
One-Point LL:		38	

Results

Liquid Limit, LL:	38
Plastic Limit, PL:	21
Plasticity Index, PI:	17





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]25

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 17.5-19 ft

Tested by: AT Date: 14-Nov-23

Reduced by: AT Location: -

Reviewed by: CML

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - lt bn clay
As-received water content(%):	13.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

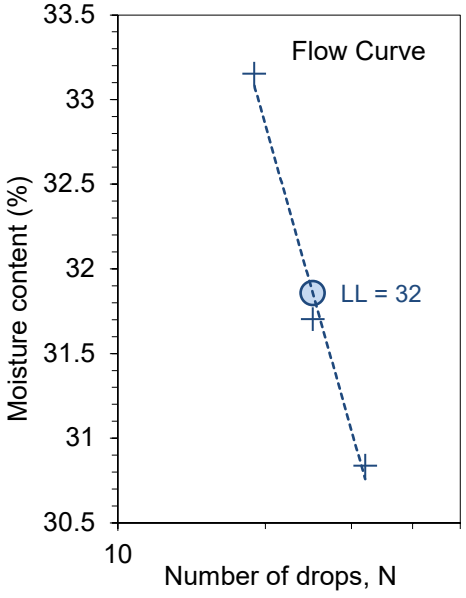
Determination No:	1	2
Wet Soil + Tare (g):	19.95	20.16
Dry Soil + Tare (g):	19.14	19.35
Moisture Loss (g):	0.81	0.81
Tare (g):	13.37	13.72
Dry Soil (g):	5.77	5.63
Moisture Content, w (%):	14.04	14.39

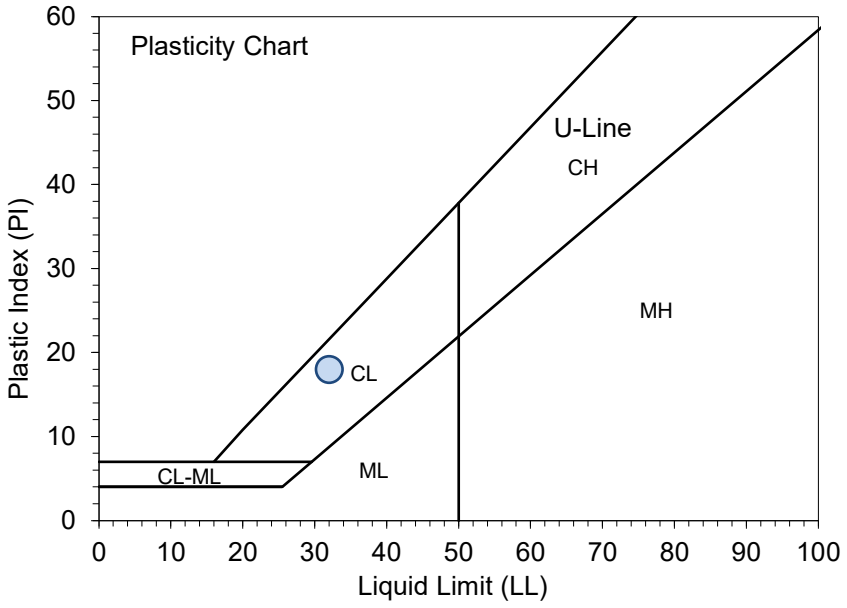
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	32	25	19
Wet Soil + Tare (g):	24.78	24.96	26.04
Dry Soil + Tare (g):	22.10	22.17	22.95
Moisture Loss (g):	2.68	2.79	3.09
Tare (g):	13.41	13.37	13.63
Dry Soil (g):	8.69	8.80	9.32
Moisture Content, w (%):	30.84	31.70	33.15
One-Point LL:		32	

Results

Liquid Limit, LL:	32
Plastic Limit, PL:	14
Plasticity Index, PI:	18





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]26

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-11

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Tested by: CML Date: 13-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn clay
As-received water content(%):	7.1	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	30
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

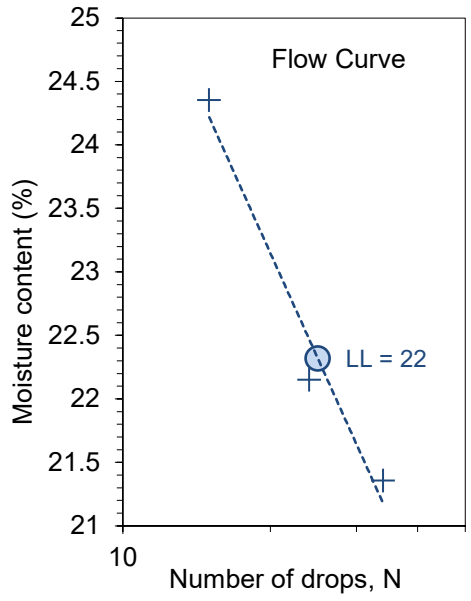
Determination No:	1	2
Wet Soil + Tare (g):	21.19	21.07
Dry Soil + Tare (g):	20.16	20.08
Moisture Loss (g):	1.03	0.99
Tare (g):	13.51	13.52
Dry Soil (g):	6.65	6.56
Moisture Content, w (%):	15.49	15.09

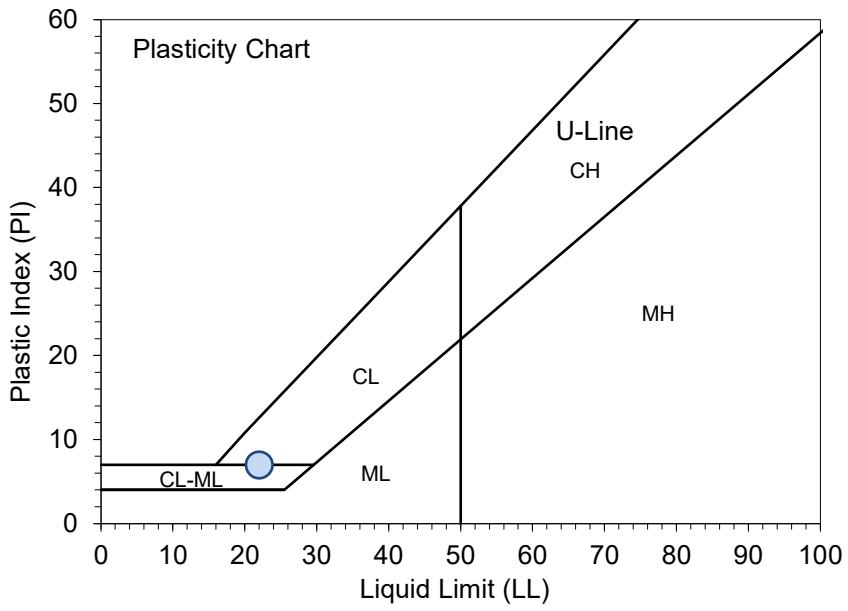
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	34	24	15
Wet Soil + Tare (g):	26.21	23.44	27.01
Dry Soil + Tare (g):	23.95	21.63	24.37
Moisture Loss (g):	2.26	1.81	2.64
Tare (g):	13.37	13.46	13.53
Dry Soil (g):	10.58	8.17	10.84
Moisture Content, w (%):	21.36	22.15	24.35
One-Point LL:		22	

Results

Liquid Limit, LL:	22
Plastic Limit, PL:	15
Plasticity Index, PI:	7





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]27

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 5-7 ft

Tested by: AT Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn clay
As-received water content(%):	10.2	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	15
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

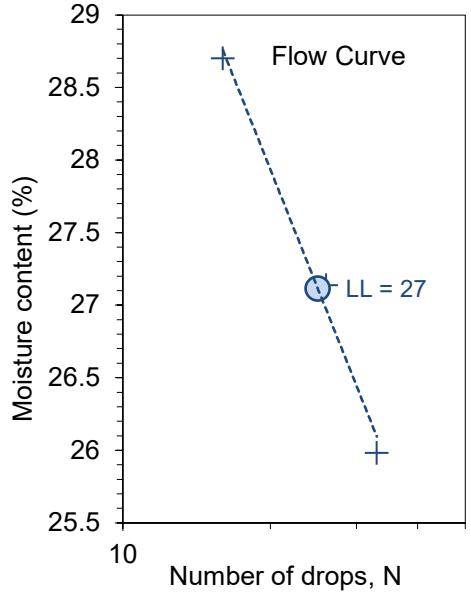
Determination No:	1	2
Wet Soil + Tare (g):	21.43	19.90
Dry Soil + Tare (g):	20.42	18.89
Moisture Loss (g):	1.01	1.01
Tare (g):	13.70	12.28
Dry Soil (g):	6.72	6.61
Moisture Content, w (%):	15.03	15.28

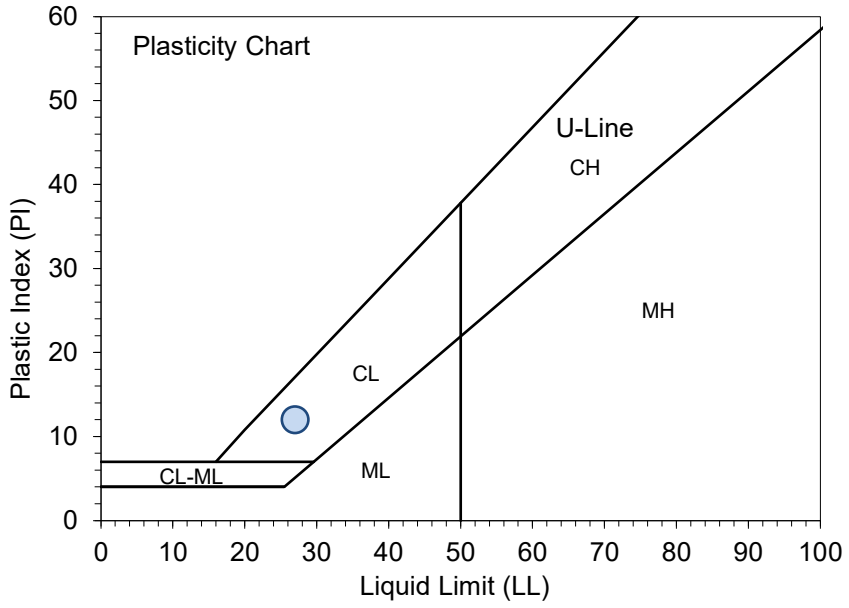
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	33	26	16
Wet Soil + Tare (g):	27.08	27.26	26.22
Dry Soil + Tare (g):	24.24	24.31	23.41
Moisture Loss (g):	2.84	2.95	2.81
Tare (g):	13.31	13.44	13.62
Dry Soil (g):	10.93	10.87	9.79
Moisture Content, w (%):	25.98	27.14	28.70
One-Point LL:		27	

Results

Liquid Limit, LL:	27
Plastic Limit, PL:	15
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]28

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 10-12 ft

Tested by: CML Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn silt
As-received water content(%):	12.8	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

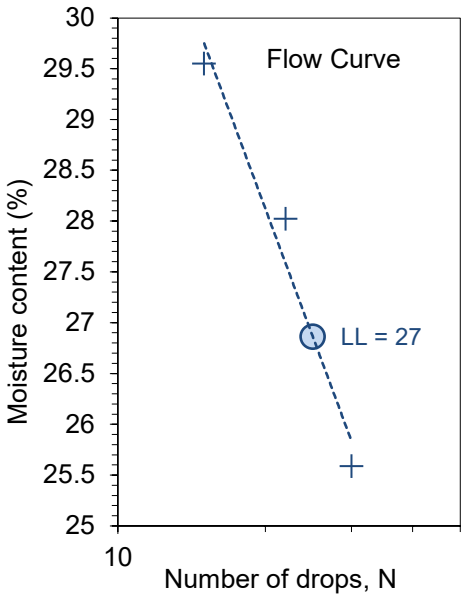
Determination No:	1	2
Wet Soil + Tare (g):	21.25	21.25
Dry Soil + Tare (g):	20.12	20.16
Moisture Loss (g):	1.13	1.09
Tare (g):	13.48	13.69
Dry Soil (g):	6.64	6.47
Moisture Content, w (%):	17.02	16.85

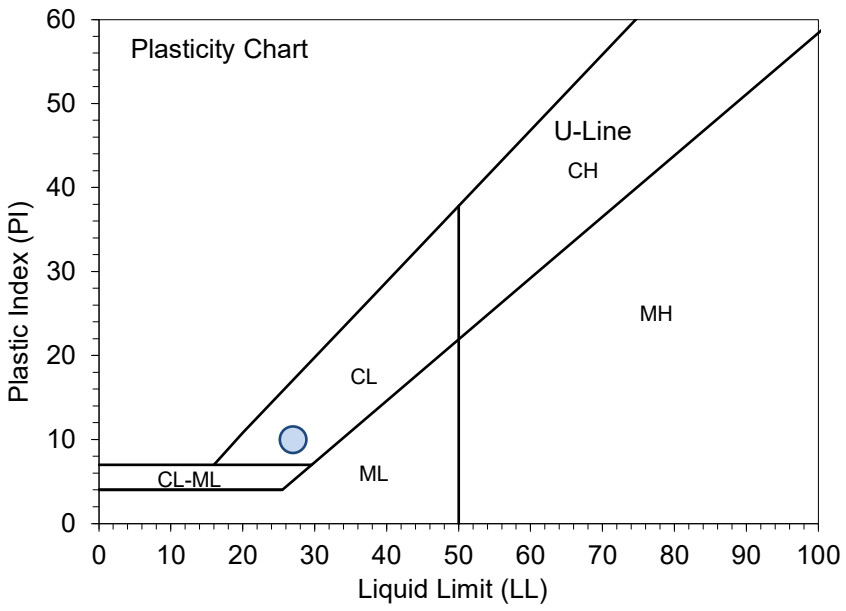
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	22	15
Wet Soil + Tare (g):	26.06	25.37	26.24
Dry Soil + Tare (g):	23.47	22.80	23.27
Moisture Loss (g):	2.59	2.57	2.97
Tare (g):	13.35	13.63	13.22
Dry Soil (g):	10.12	9.17	10.05
Moisture Content, w (%):	25.59	28.03	29.55
One-Point LL:	26	28	

Results

Liquid Limit, LL:	27
Plastic Limit, PL:	17
Plasticity Index, PI:	10





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]29

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 20-21 ft

Tested by: PJF Date: 14-Nov-23

Reduced by: DBW Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt ol bn - lt bn clay
As-received water content(%):	10.6	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

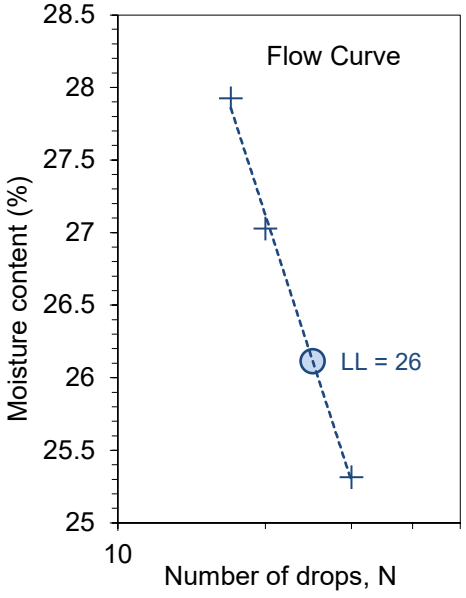
Determination No:	1	2
Wet Soil + Tare (g):	20.36	20.51
Dry Soil + Tare (g):	19.50	19.65
Moisture Loss (g):	0.86	0.86
Tare (g):	13.51	13.56
Dry Soil (g):	5.99	6.09
Moisture Content, w (%):	14.36	14.12

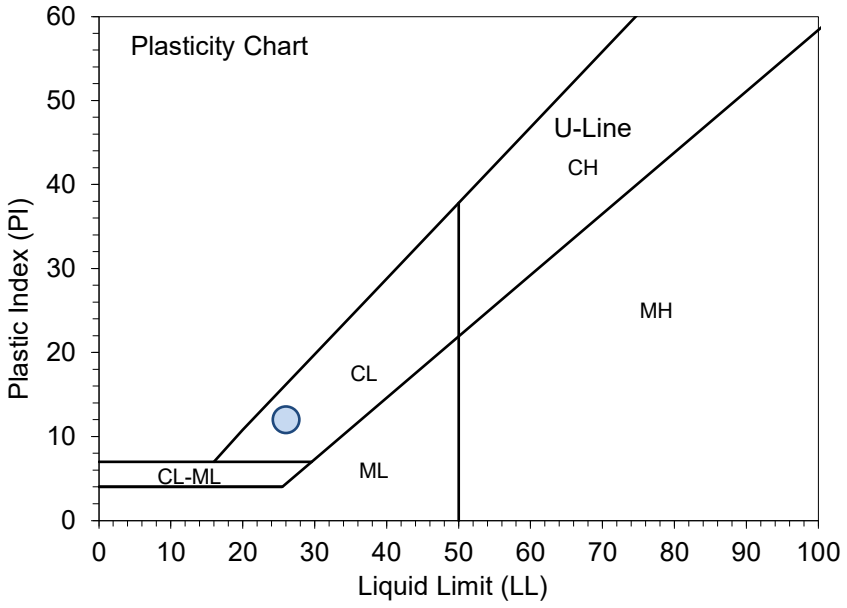
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	30	20	17
Wet Soil + Tare (g):	27.36	25.95	26.13
Dry Soil + Tare (g):	24.56	23.02	23.34
Moisture Loss (g):	2.80	2.93	2.79
Tare (g):	13.50	12.18	13.35
Dry Soil (g):	11.06	10.84	9.99
Moisture Content, w (%):	25.32	27.03	27.93
One-Point LL:	26	26	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	14
Plasticity Index, PI:	12





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_AL.xlsx]30

Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 18-19 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: gy - bn clay

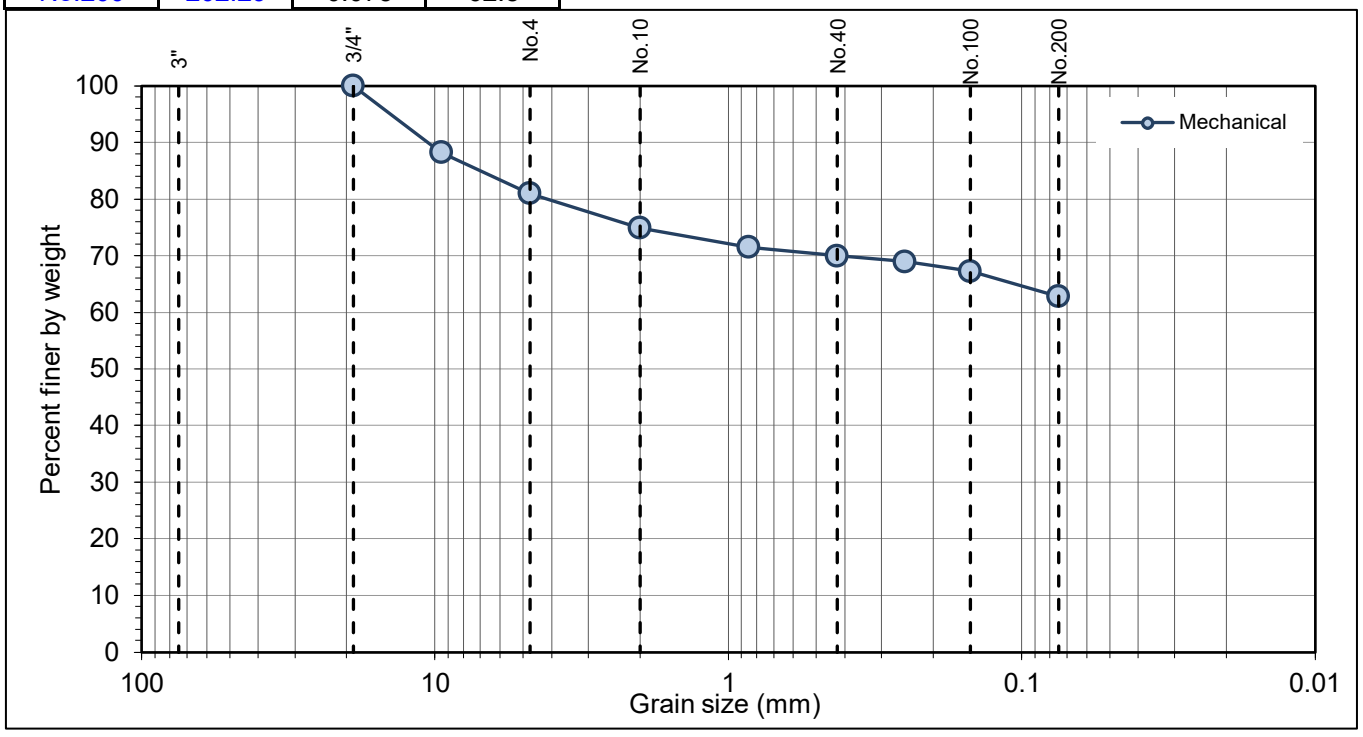
Reduced by: AT Comments: 1.5" rock not included in curve (274.56 g).

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	611.04	543.90
	-	
	611.04	543.90
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	806.82
Dry soil + tare (g):	-	739.68
Tare (g):	-	195.78
Moisture content (%):	0.0	12.3

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	63.83	9.5	88.3
No.4	103.44	4.75	81.0
No.10	136.66	2	74.9
No.20	154.83	0.85	71.5
No.40	163.20	0.425	70.0
No.60	168.87	0.25	69.0
No.100	177.88	0.15	67.3
No.200	202.29	0.075	62.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 27-29 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: bn - gy clay

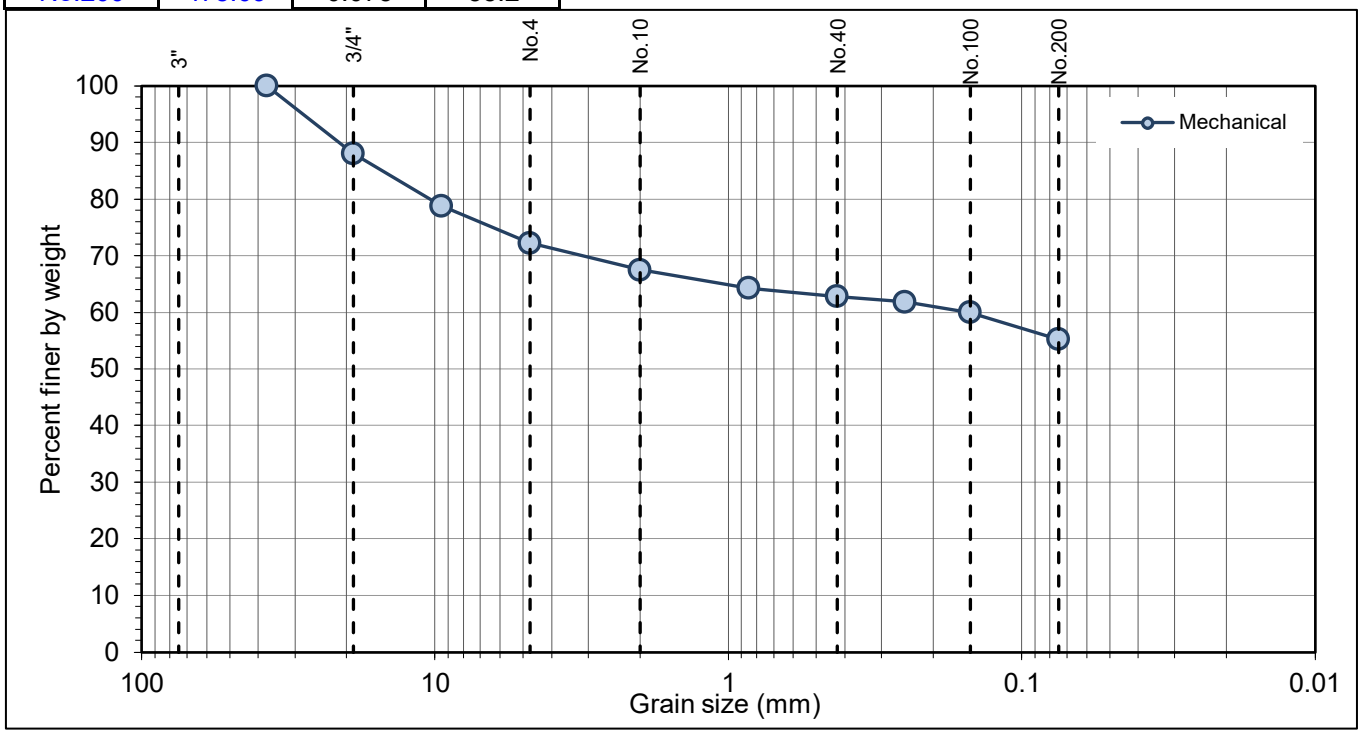
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1176.70	1060.40
	-	
	1176.70	1060.40
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1190.54
Dry soil + tare (g):	-	1074.24
Tare (g):	-	13.84
Moisture content (%):	0.0	11.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	126.52	19	88.1
3/8"	224.74	9.5	78.8
No.4	294.18	4.75	72.3
No.10	344.98	2	67.5
No.20	378.88	0.85	64.3
No.40	394.65	0.425	62.8
No.60	404.46	0.25	61.9
No.100	424.49	0.15	60.0
No.200	475.09	0.075	55.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 54.5-57 ft

Date: 16-Nov-23 Location: -

Tested by: DBW Lab soil description: gy - dk gy clay

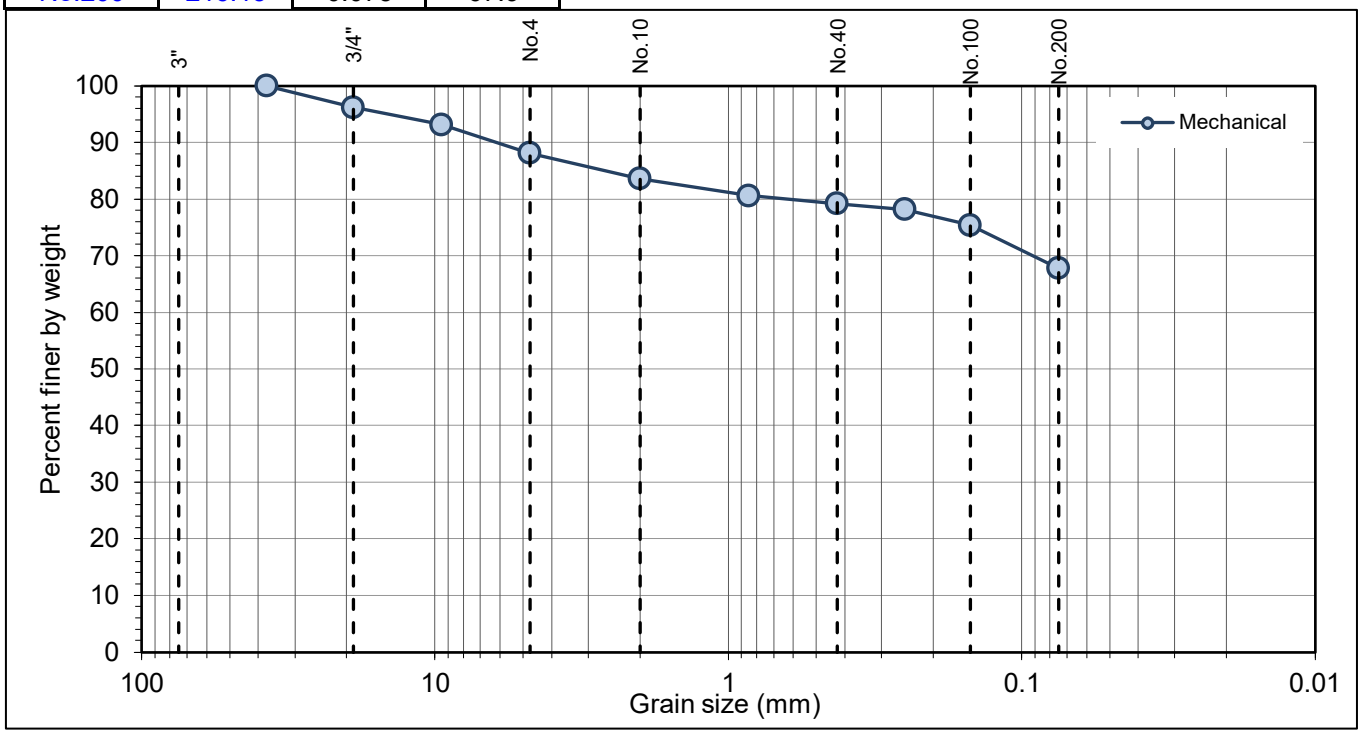
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	756.76	672.36
	-	
	756.76	672.36
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	953.45
Dry soil + tare (g):	-	869.05
Tare (g):	-	196.69
Moisture content (%):	0.0	12.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	25.43	19	96.2
3/8"	45.79	9.5	93.2
No.4	79.85	4.75	88.1
No.10	110.12	2	83.6
No.20	130.27	0.85	80.6
No.40	139.92	0.425	79.2
No.60	146.52	0.25	78.2
No.100	165.51	0.15	75.4
No.200	216.13	0.075	67.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 67-69 ft

Date: 16-Nov-23 Location: -

Tested by: DBW Lab soil description: dk gy - lt bn clay

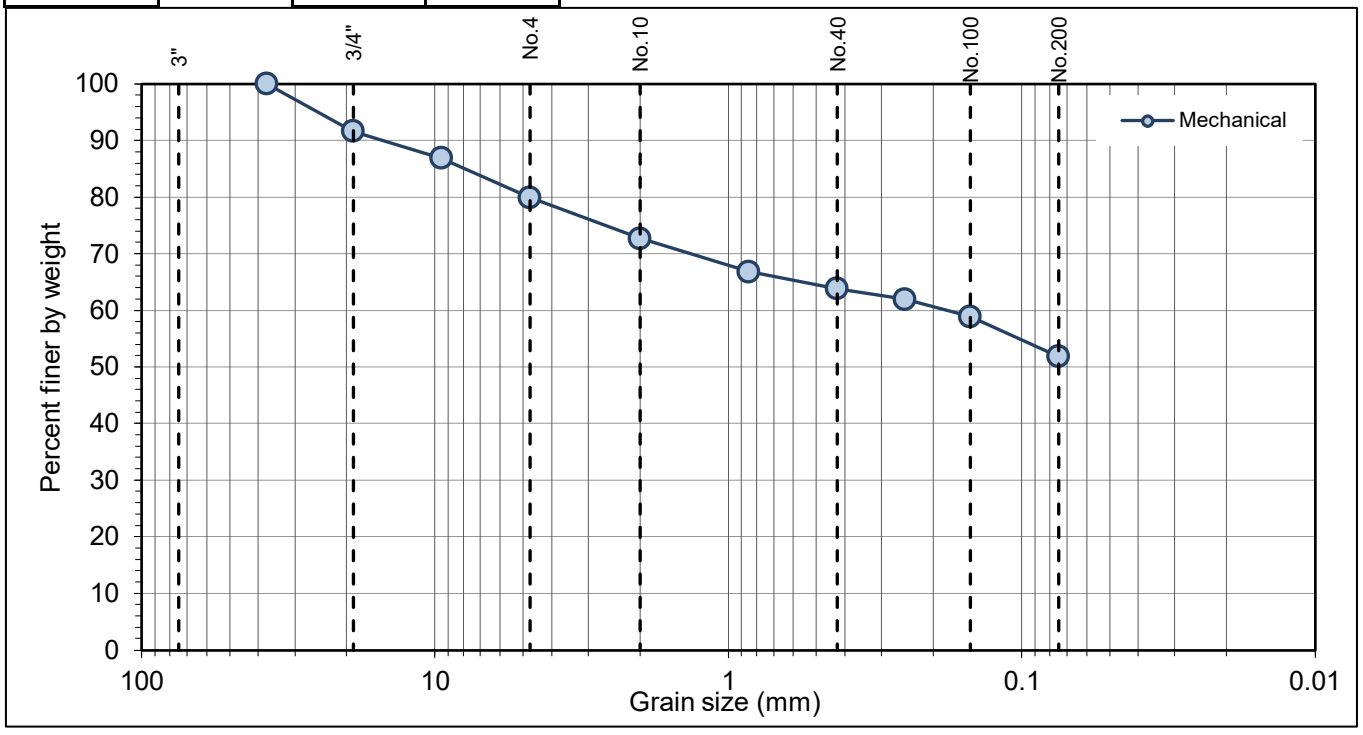
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	651.92	592.70
	-	
	651.92	592.70
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	847.34
Dry soil + tare (g):	-	788.12
Tare (g):	-	195.42
Moisture content (%):	0.0	10.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	49.64	19	91.6
3/8"	77.83	9.5	86.9
No.4	119.04	4.75	79.9
No.10	161.80	2	72.7
No.20	196.75	0.85	66.8
No.40	214.54	0.425	63.8
No.60	225.55	0.25	61.9
No.100	243.72	0.15	58.9
No.200	285.30	0.075	51.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 72.5-75 ft

Date: 16-Nov-23 Location: -

Tested by: DBW Lab soil description: gy - dk gy clay

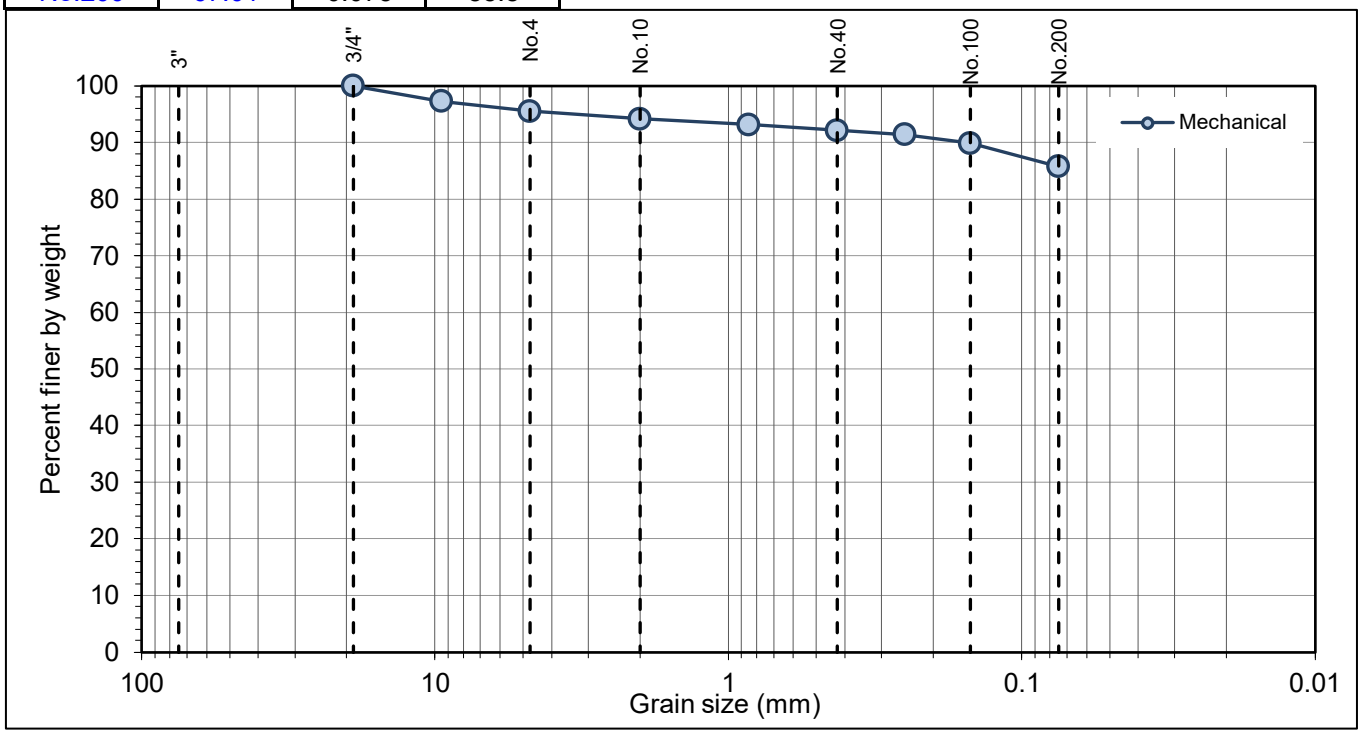
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	570.23	472.61
	-	
	570.23	472.61
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	688.39
Dry soil + tare (g):	-	590.77
Tare (g):	-	118.16
Moisture content (%):	0.0	20.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	12.74	9.5	97.3
No.4	21.18	4.75	95.5
No.10	27.46	2	94.2
No.20	32.38	0.85	93.1
No.40	36.99	0.425	92.2
No.60	40.67	0.25	91.4
No.100	47.81	0.15	89.9
No.200	67.01	0.075	85.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 14.5-16 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: bn - ol bn clay

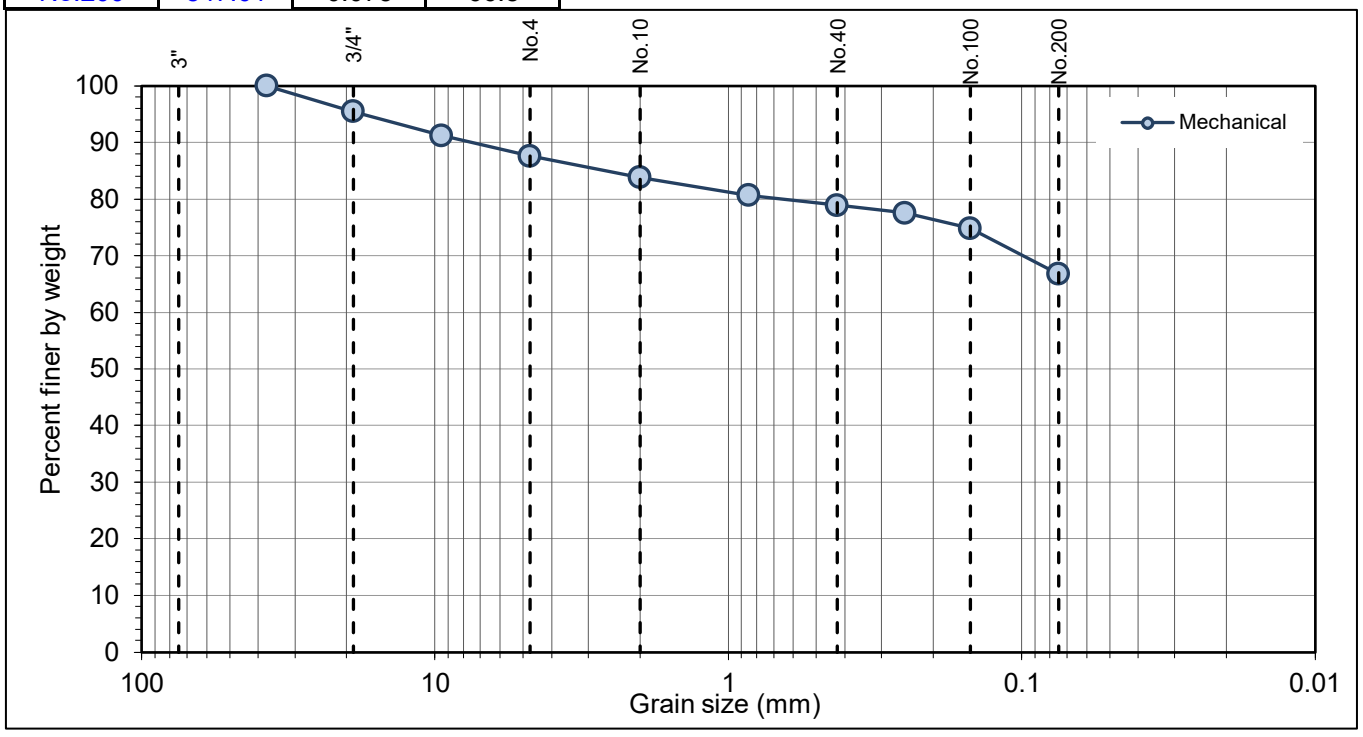
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1841.90	1646.32
	-	
	1841.90	1646.32
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	2264.09
Dry soil + tare (g):	-	2068.51
Tare (g):	-	422.19
Moisture content (%):	0.0	11.9

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	74.19	19	95.5
3/8"	144.60	9.5	91.2
No.4	203.84	4.75	87.6
No.10	266.51	2	83.8
No.20	318.13	0.85	80.7
No.40	347.49	0.425	78.9
No.60	369.50	0.25	77.6
No.100	413.96	0.15	74.9
No.200	547.01	0.075	66.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: bn - ol bn clay

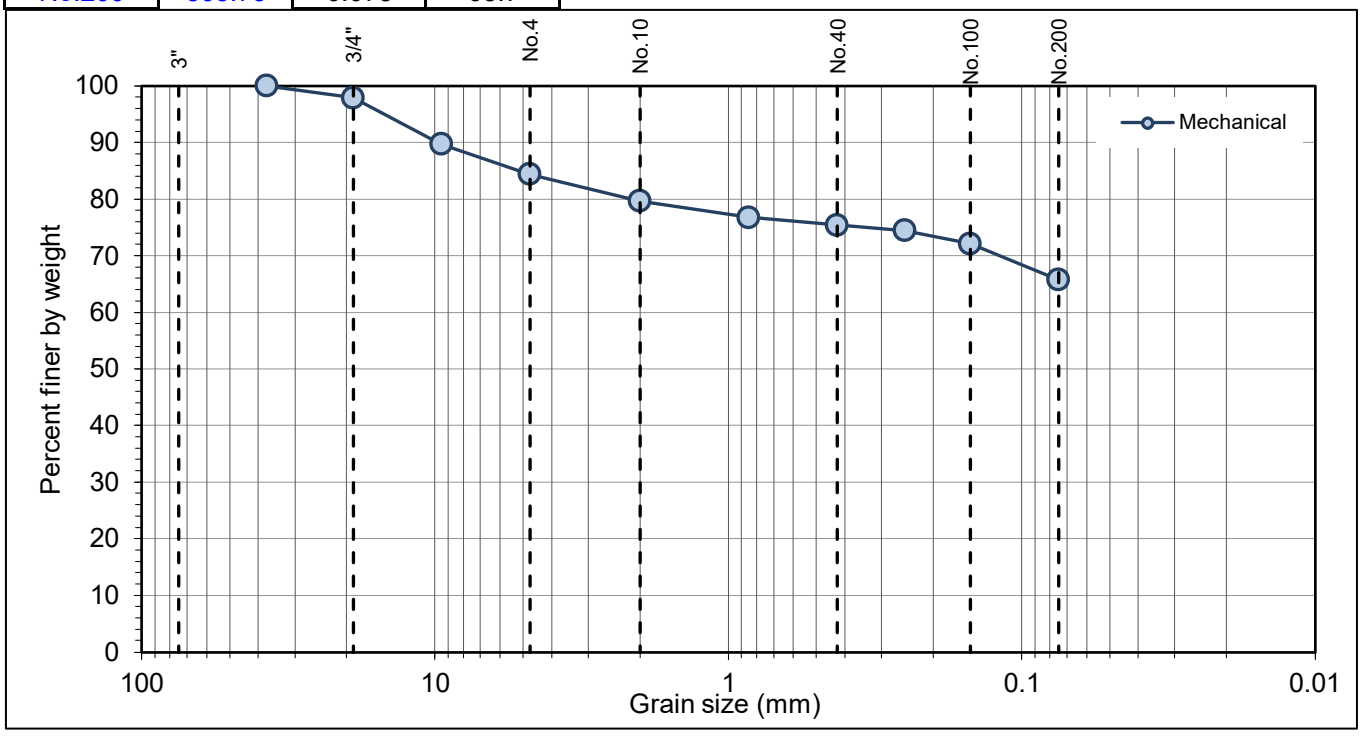
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1666.16	1470.26
	-	
	1666.16	1470.26
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	2104.69
Dry soil + tare (g):	-	1908.79
Tare (g):	-	438.53
Moisture content (%):	0.0	13.3

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	30.28	19	97.9
3/8"	150.96	9.5	89.7
No.4	229.44	4.75	84.4
No.10	298.96	2	79.7
No.20	341.90	0.85	76.7
No.40	361.85	0.425	75.4
No.60	375.86	0.25	74.4
No.100	409.90	0.15	72.1
No.200	503.73	0.075	65.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 32-35 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: bn - dk yl bn clay

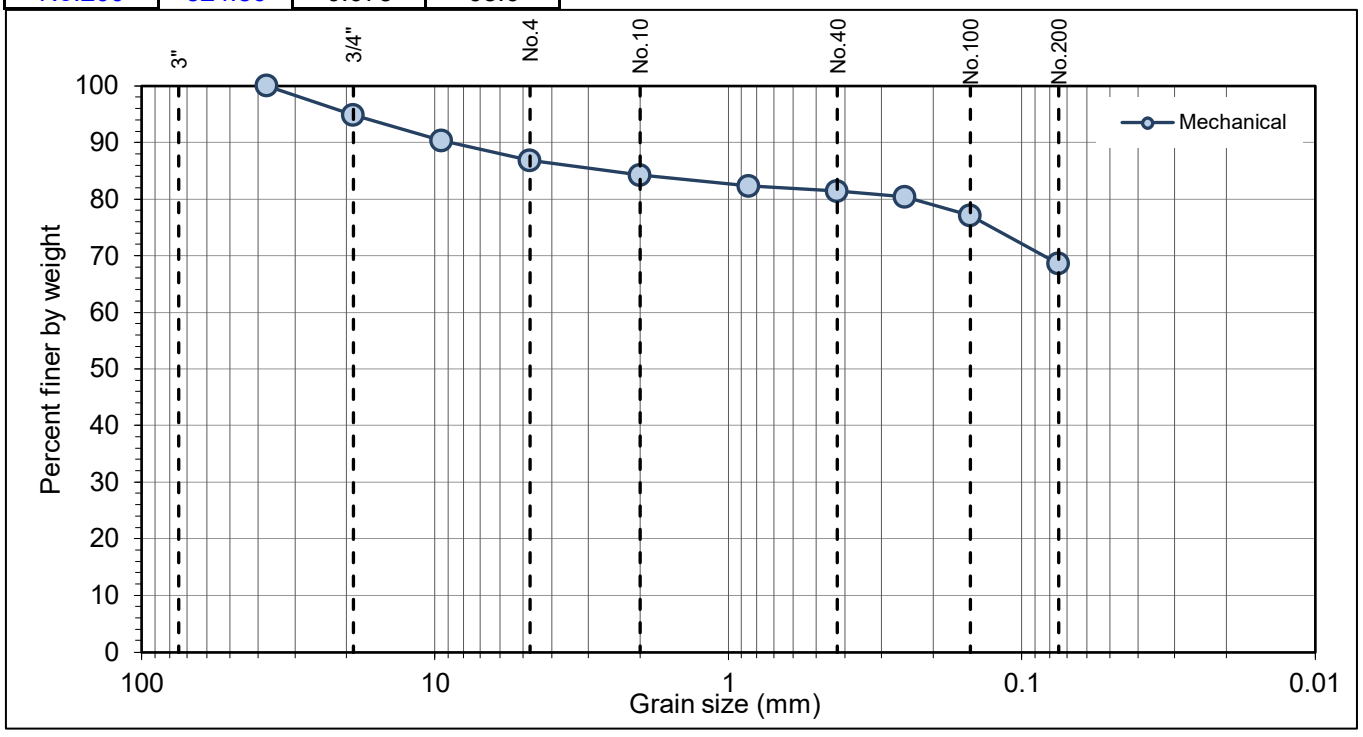
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1913.95	1670.91
	-	
	1913.95	1670.91
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	2453.36
Dry soil + tare (g):	-	2210.32
Tare (g):	-	539.41
Moisture content (%):	0.0	14.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	85.48	19	94.9
3/8"	161.21	9.5	90.4
No.4	219.81	4.75	86.8
No.10	263.64	2	84.2
No.20	295.15	0.85	82.3
No.40	311.17	0.425	81.4
No.60	327.50	0.25	80.4
No.100	382.33	0.15	77.1
No.200	524.86	0.075	68.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 38.5-40 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: lt ol bn - ol bn clay

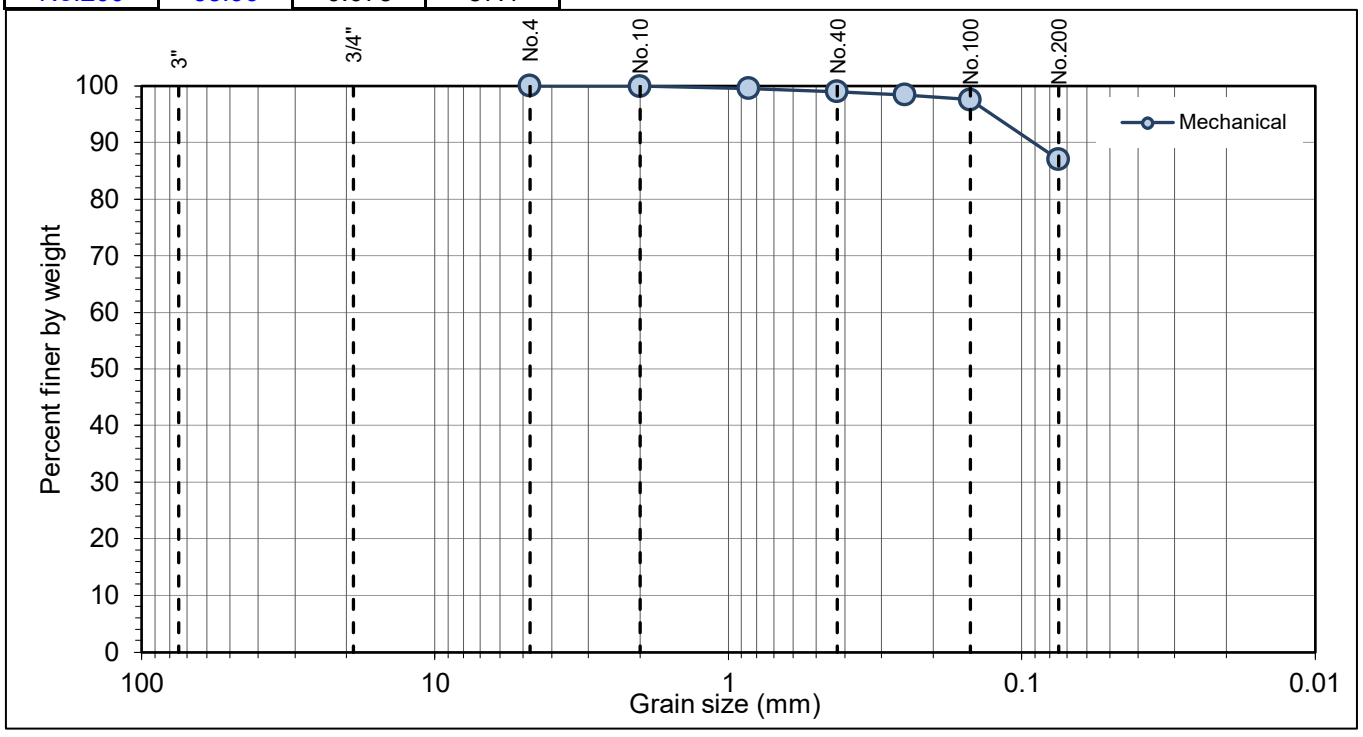
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	321.05	278.08
	-	
	321.05	278.08
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	448.30
Dry soil + tare (g):	-	405.33
Tare (g):	-	127.25
Moisture content (%):	0.0	15.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	-
No.4	-	4.75	100.0
No.10	0.15	2	99.9
No.20	1.17	0.85	99.6
No.40	2.85	0.425	99.0
No.60	4.46	0.25	98.4
No.100	6.75	0.15	97.6
No.200	35.96	0.075	87.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 52-55 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: gy - ol bn clay

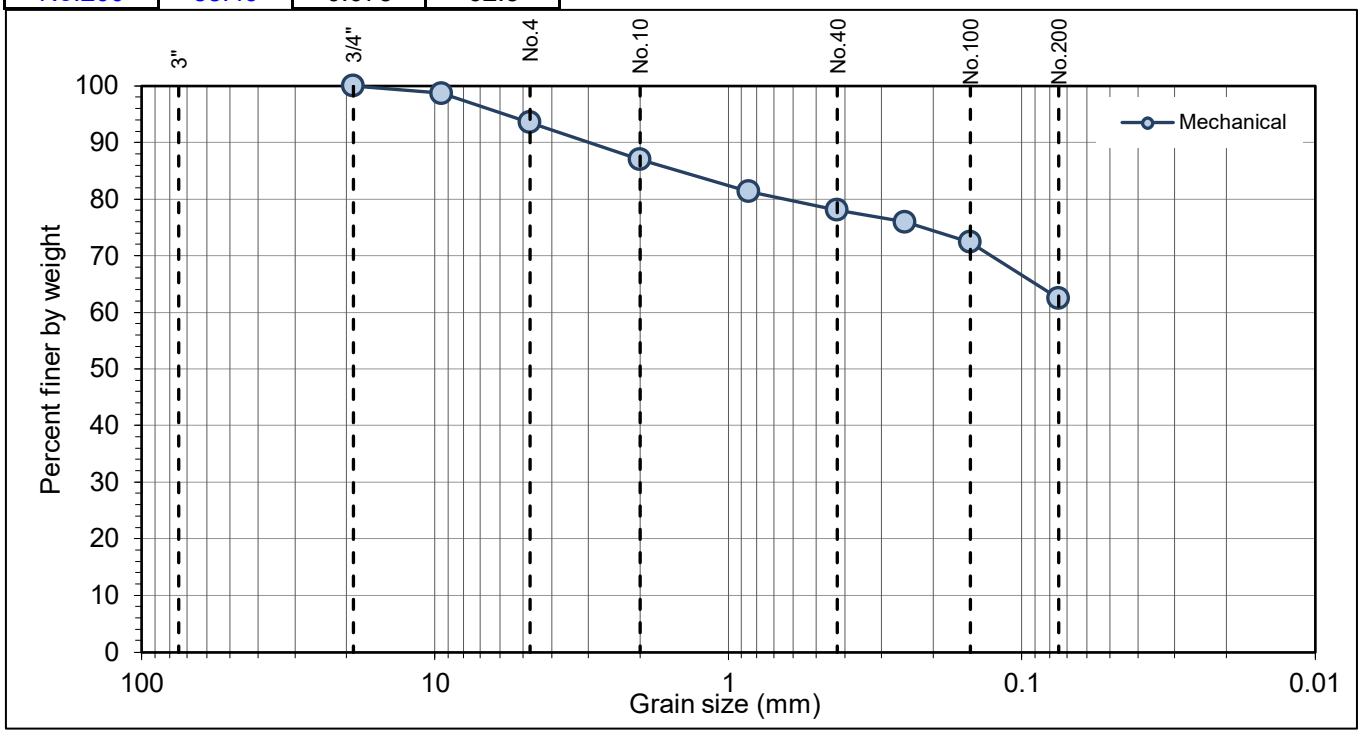
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	262.98	235.69
	-	
	262.98	235.69
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	460.49
Dry soil + tare (g):	-	433.20
Tare (g):	-	197.51
Moisture content (%):	0.0	11.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	3.09	9.5	98.7
No.4	15.18	4.75	93.6
No.10	30.60	2	87.0
No.20	44.01	0.85	81.3
No.40	51.69	0.425	78.1
No.60	56.57	0.25	76.0
No.100	65.04	0.15	72.4
No.200	88.49	0.075	62.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 60-62 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: lt bn - bn clay

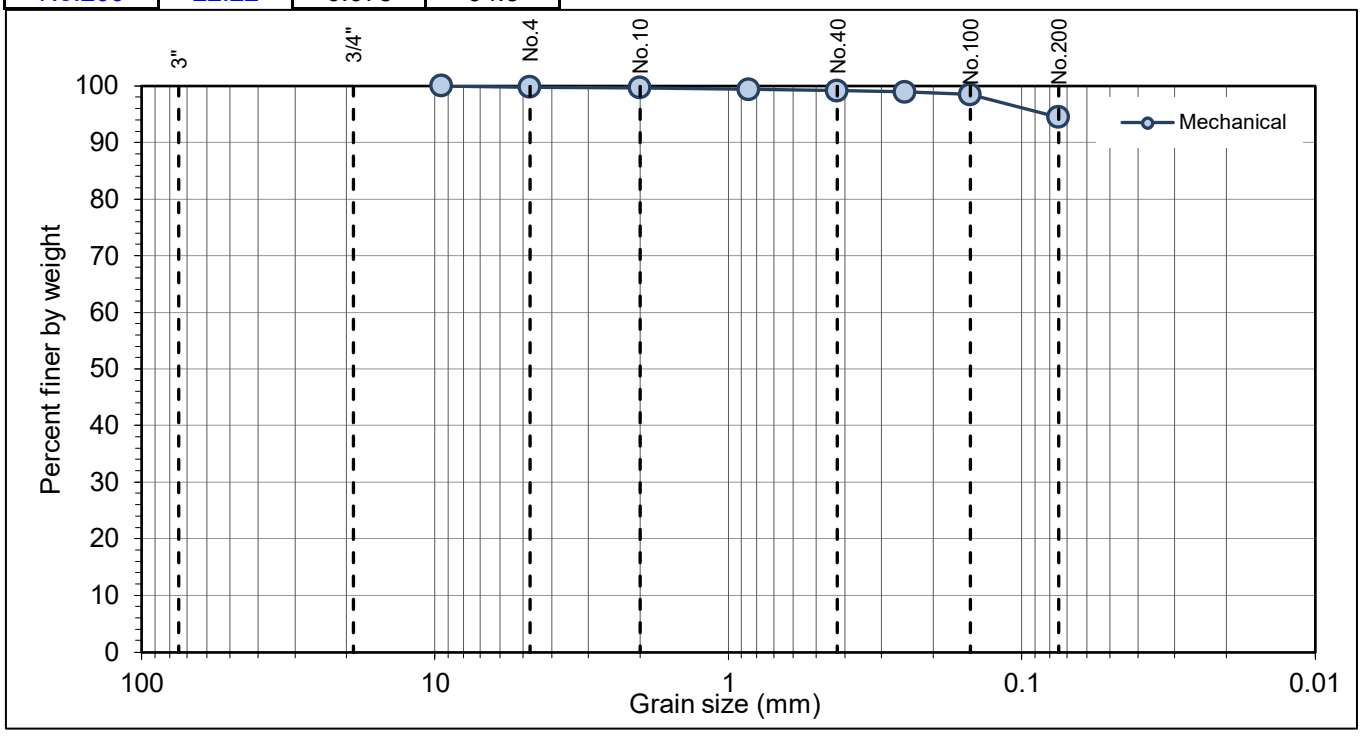
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	460.33	404.88
	-	
	460.33	404.88
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	656.13
Dry soil + tare (g):	-	600.68
Tare (g):	-	195.80
Moisture content (%):	0.0	13.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	100.0
No.4	0.93	4.75	99.8
No.10	1.29	2	99.7
No.20	2.54	0.85	99.4
No.40	3.42	0.425	99.2
No.60	4.29	0.25	98.9
No.100	6.05	0.15	98.5
No.200	22.22	0.075	94.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 64.5-67 ft

Date: 16-Nov-23 Location: -

Tested by: MGS Lab soil description: lt ol bn - ol bn clay

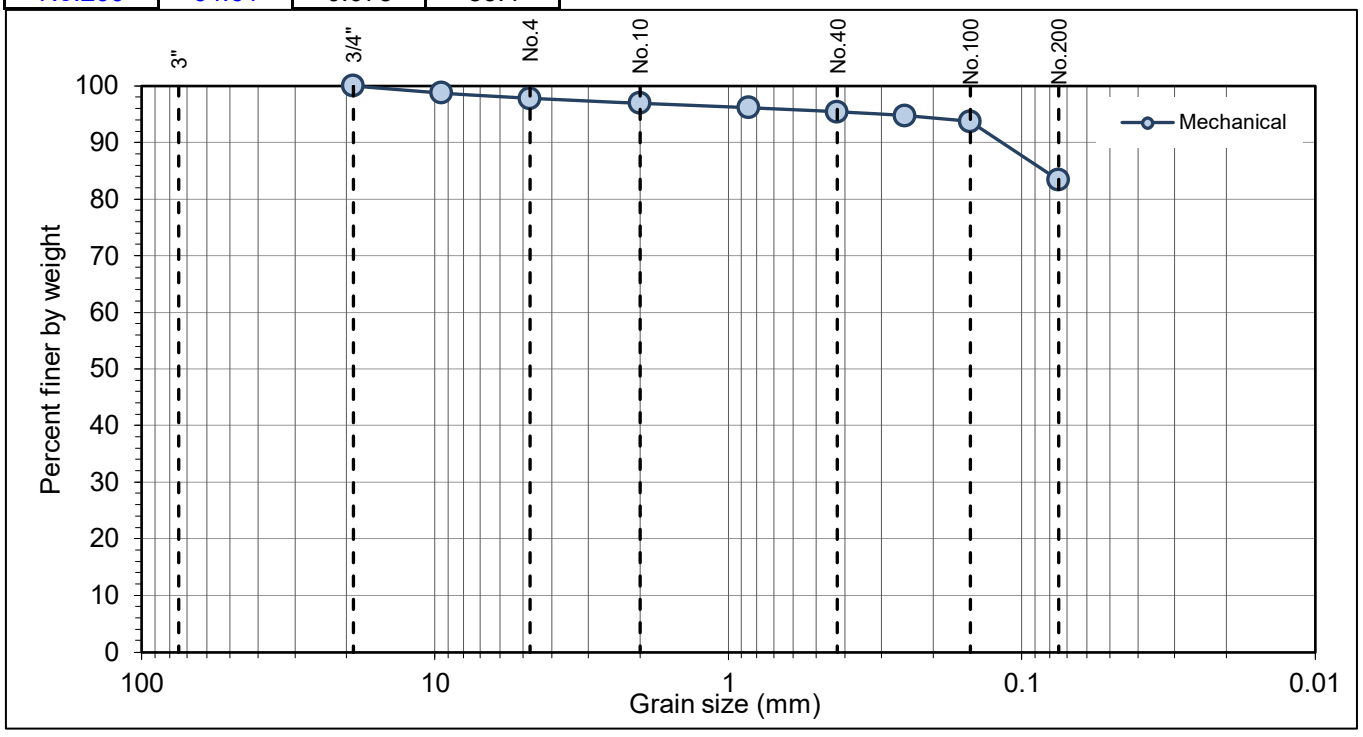
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	439.79	389.75
	-	
	439.79	389.75
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	566.47
Dry soil + tare (g):	-	516.43
Tare (g):	-	126.68
Moisture content (%):	0.0	12.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	4.88	9.5	98.7
No.4	8.54	4.75	97.8
No.10	11.97	2	96.9
No.20	14.92	0.85	96.2
No.40	17.72	0.425	95.5
No.60	20.42	0.25	94.8
No.100	24.38	0.15	93.7
No.200	64.61	0.075	83.4



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 4.5-7 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: lt bn - bn clay

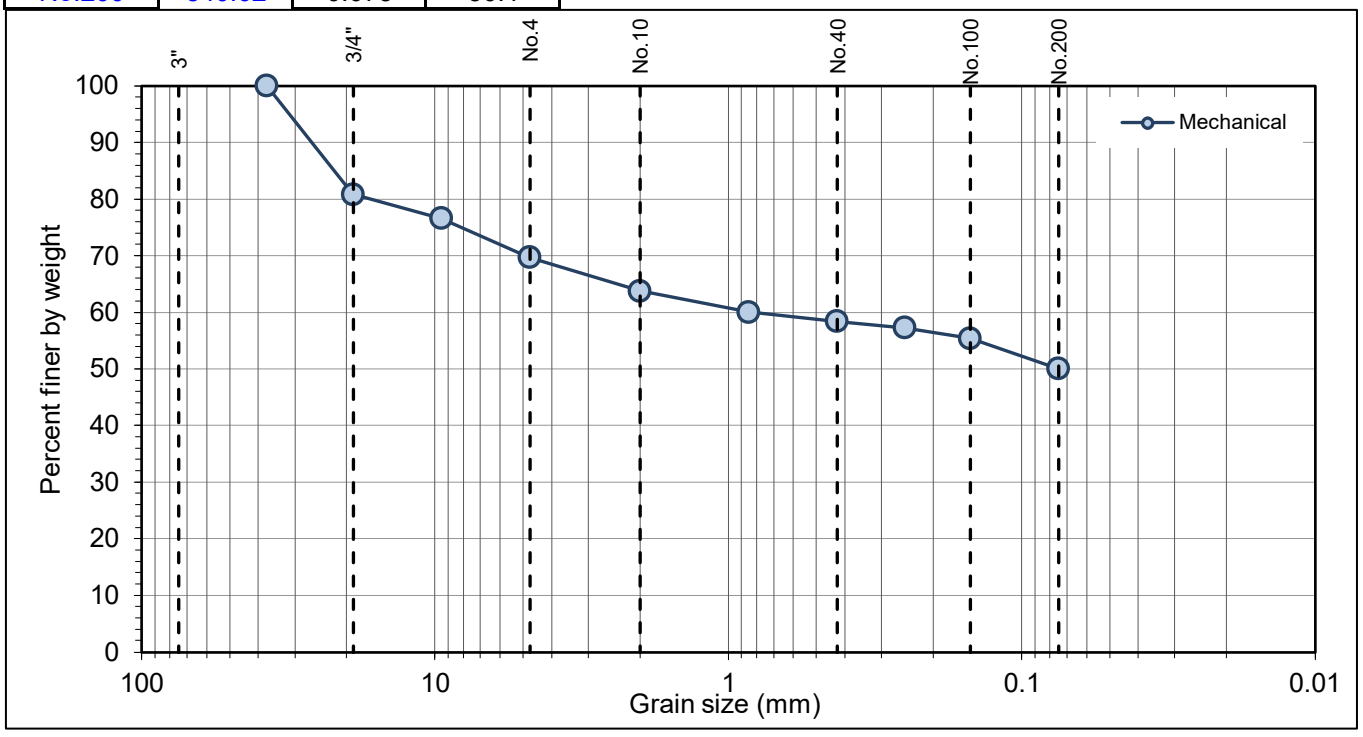
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1190.05	1081.24
	-	
	1190.05	1081.24
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1630.20
Dry soil + tare (g):	-	1521.39
Tare (g):	-	440.15
Moisture content (%):	0.0	10.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	207.44	19	80.8
3/8"	253.12	9.5	76.6
No.4	327.87	4.75	69.7
No.10	391.94	2	63.8
No.20	432.35	0.85	60.0
No.40	450.20	0.425	58.4
No.60	461.91	0.25	57.3
No.100	482.07	0.15	55.4
No.200	540.02	0.075	50.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: pl ol bn - bn clay

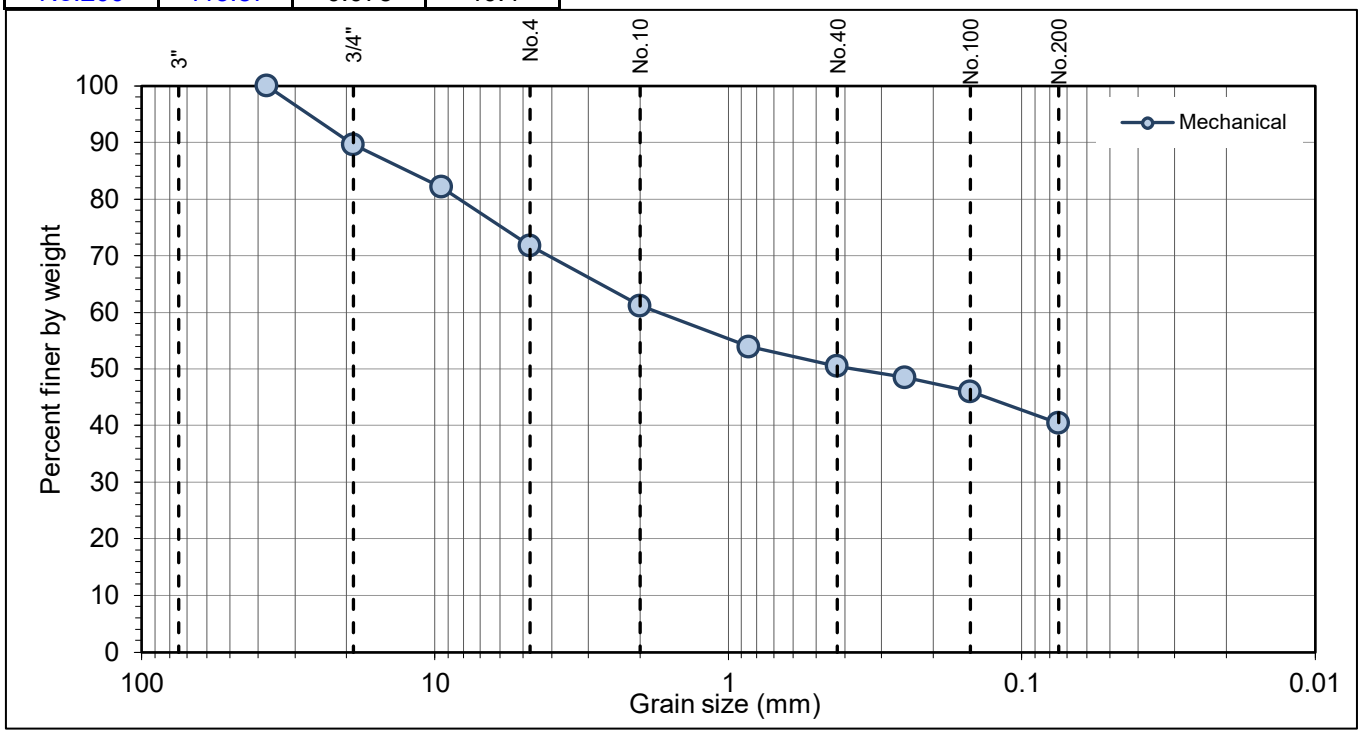
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	753.04	694.60
	-	
	753.04	694.60
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	872.07
Dry soil + tare (g):	-	813.63
Tare (g):	-	119.03
Moisture content (%):	0.0	8.4

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	71.73	19	89.7
3/8"	124.07	9.5	82.1
No.4	195.76	4.75	71.8
No.10	269.78	2	61.2
No.20	320.16	0.85	53.9
No.40	343.81	0.425	50.5
No.60	357.58	0.25	48.5
No.100	374.88	0.15	46.0
No.200	413.87	0.075	40.4



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - bn clay

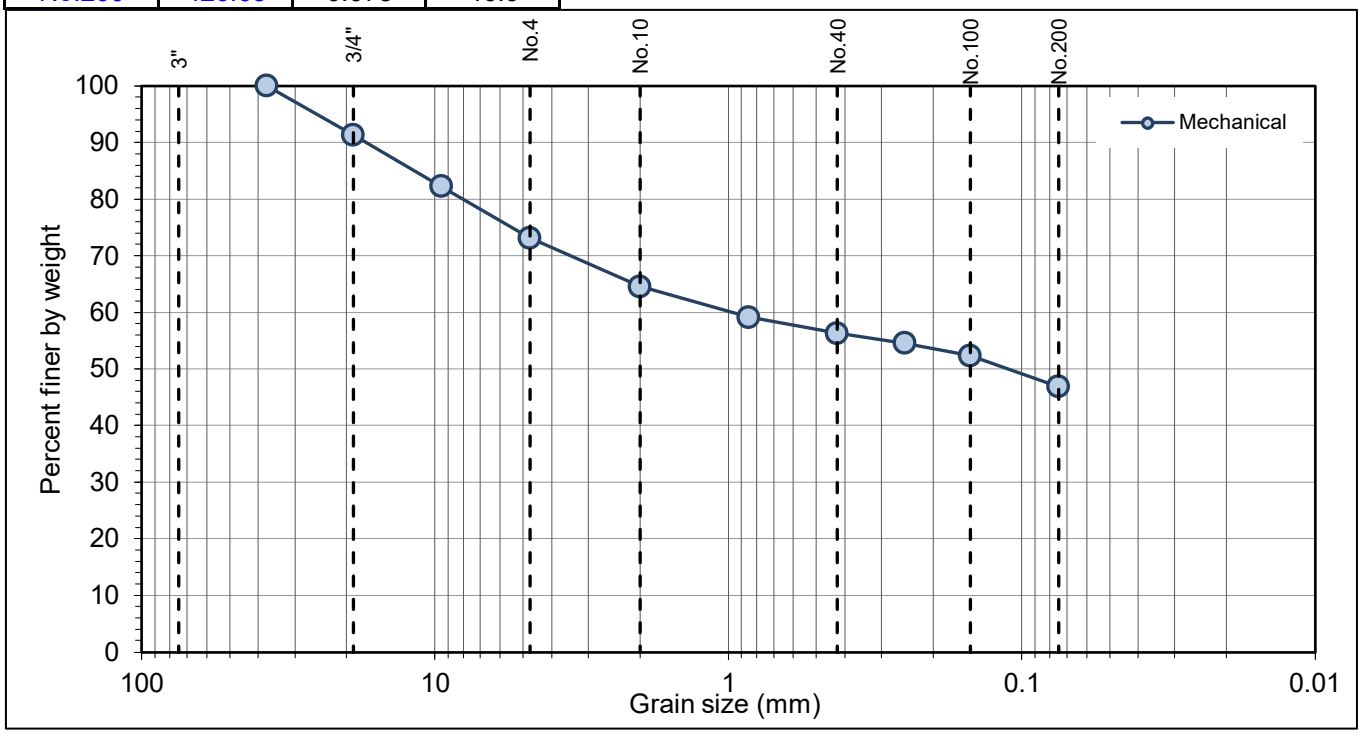
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	902.23	802.85
	-	
	902.23	802.85
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1046.88
Dry soil + tare (g):	-	947.50
Tare (g):	-	144.65
Moisture content (%):	0.0	12.4

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	69.23	19	91.4
3/8"	142.35	9.5	82.3
No.4	215.38	4.75	73.2
No.10	284.76	2	64.5
No.20	328.36	0.85	59.1
No.40	350.76	0.425	56.3
No.60	364.76	0.25	54.6
No.100	382.68	0.15	52.3
No.200	426.63	0.075	46.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-03

No: 23072 (23-1725) **Depth:** 30-33 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: bn - dk bn clay

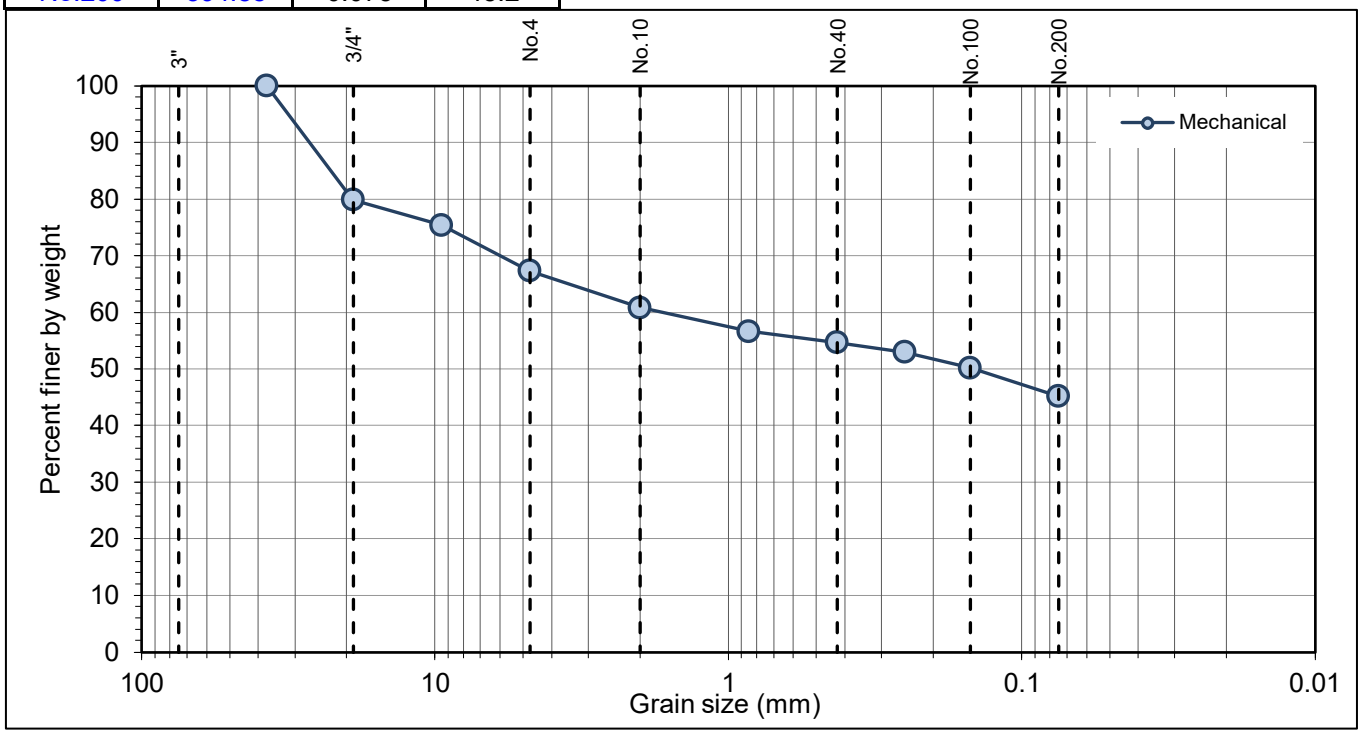
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	798.88	720.83
	-	-
	798.88	720.83
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	943.07
Dry soil + tare (g):	-	865.02
Tare (g):	-	144.19
Moisture content (%):	0.0	10.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	144.91	19	79.9
3/8"	177.22	9.5	75.4
No.4	235.48	4.75	67.3
No.10	282.48	2	60.8
No.20	312.47	0.85	56.7
No.40	326.73	0.425	54.7
No.60	339.06	0.25	53.0
No.100	359.09	0.15	50.2
No.200	394.88	0.075	45.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 7-10 ft

Date: 13-Nov-23 Location: -

Tested by: MGS Lab soil description: lt ol bn - bn clay

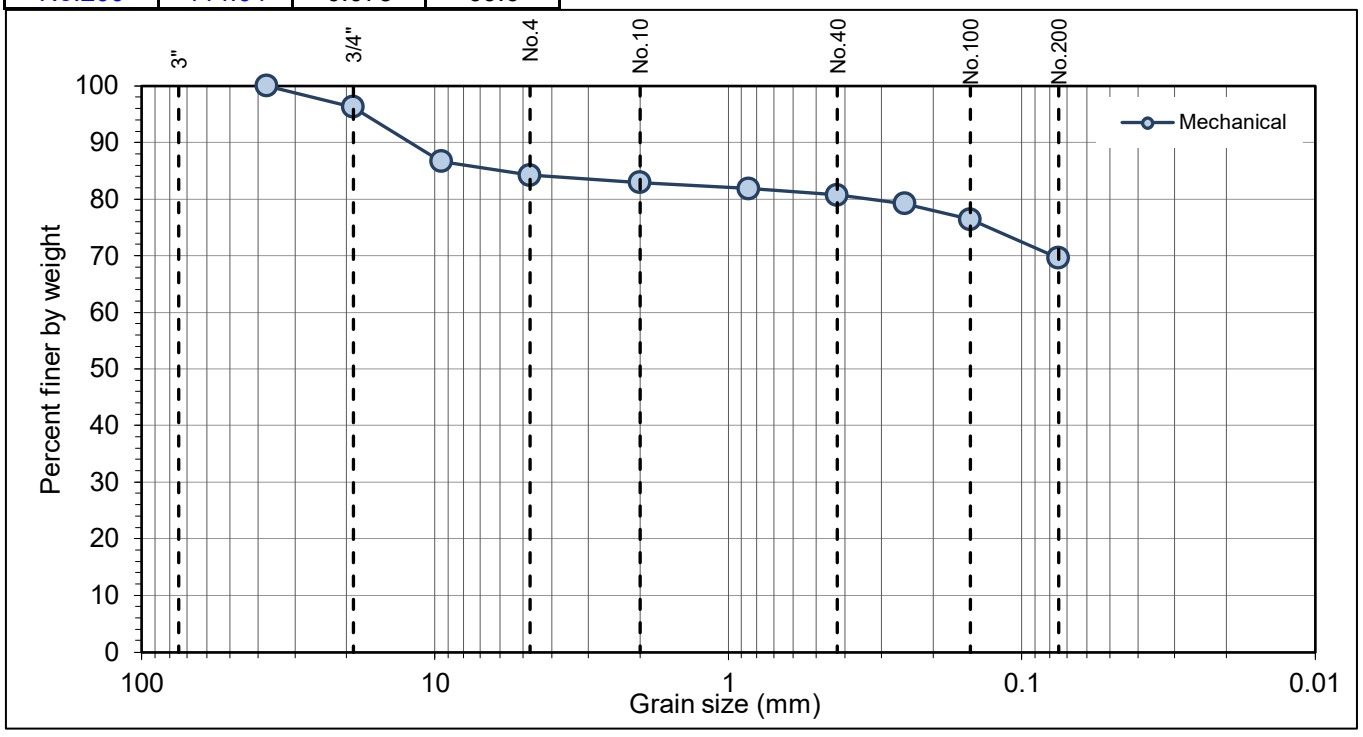
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	457.24	375.28
	-	
	457.24	375.28
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	653.16
Dry soil + tare (g):	-	571.20
Tare (g):	-	195.92
Moisture content (%):	0.0	21.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	13.96	19	96.3
3/8"	50.13	9.5	86.6
No.4	59.19	4.75	84.2
No.10	64.15	2	82.9
No.20	68.10	0.85	81.9
No.40	72.24	0.425	80.8
No.60	78.10	0.25	79.2
No.100	88.55	0.15	76.4
No.200	114.04	0.075	69.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 14.5-17 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: pl ol bn - lt bn silt

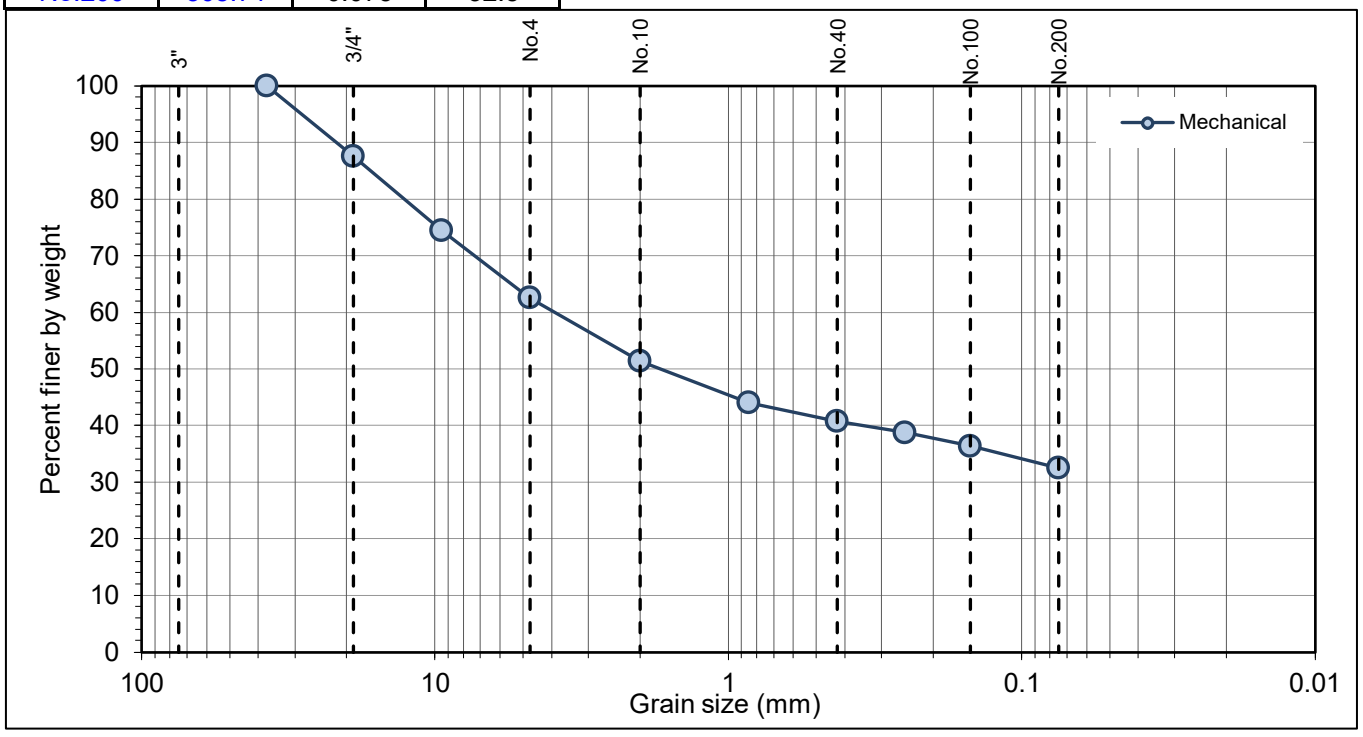
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	483.56	452.93
	-	
	483.56	452.93
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	601.88
Dry soil + tare (g):	-	571.25
Tare (g):	-	118.32
Moisture content (%):	0.0	6.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	56.10	19	87.6
3/8"	115.44	9.5	74.5
No.4	169.54	4.75	62.6
No.10	220.10	2	51.4
No.20	253.53	0.85	44.0
No.40	268.38	0.425	40.7
No.60	277.44	0.25	38.7
No.100	288.21	0.15	36.4
No.200	305.71	0.075	32.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: ol bn - bn silt

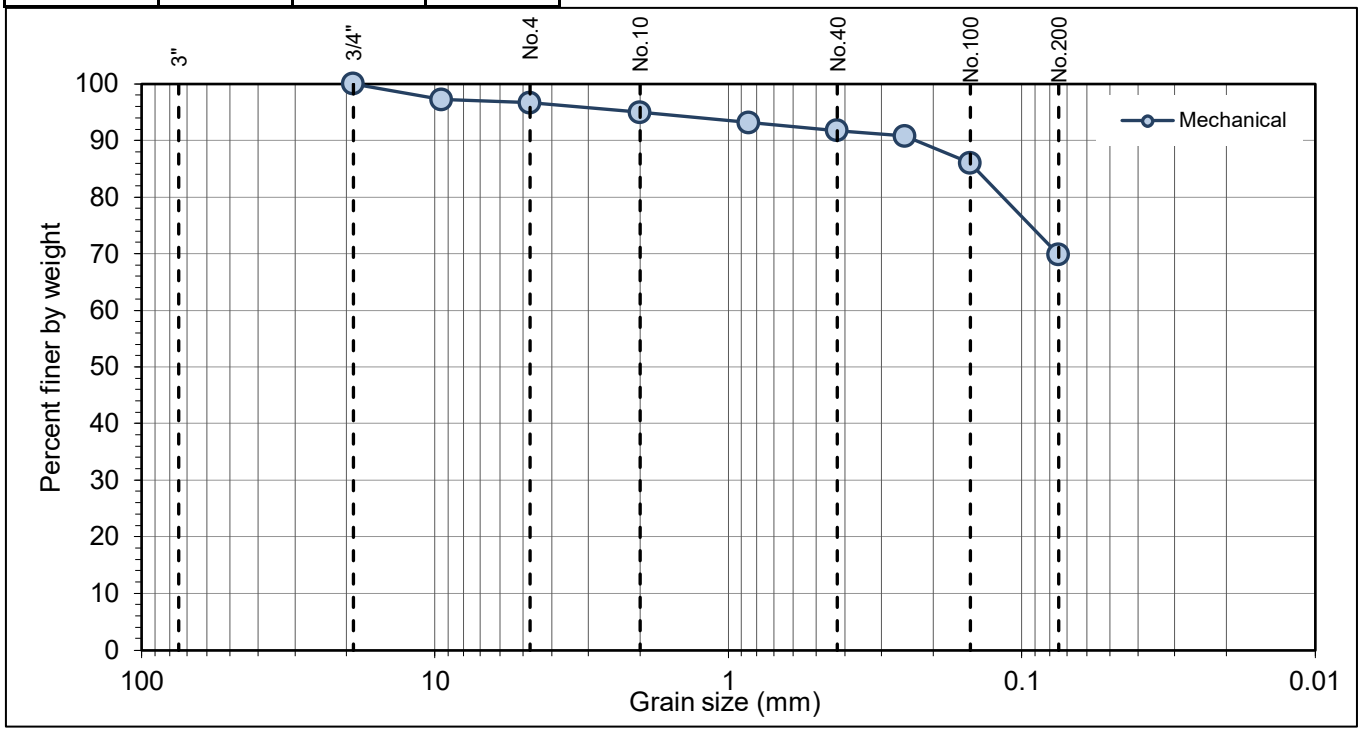
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	434.54	373.10
		-
	434.54	373.10
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	555.20
Dry soil + tare (g):	-	493.76
Tare (g):	-	120.66
Moisture content (%):	0.0	16.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	10.30	9.5	97.2
No.4	12.34	4.75	96.7
No.10	18.72	2	95.0
No.20	25.54	0.85	93.2
No.40	30.76	0.425	91.8
No.60	34.37	0.25	90.8
No.100	52.13	0.15	86.0
No.200	112.39	0.075	69.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-04

No: 23072 (23-1725) **Depth:** 30-33 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: lt bn - bn clay

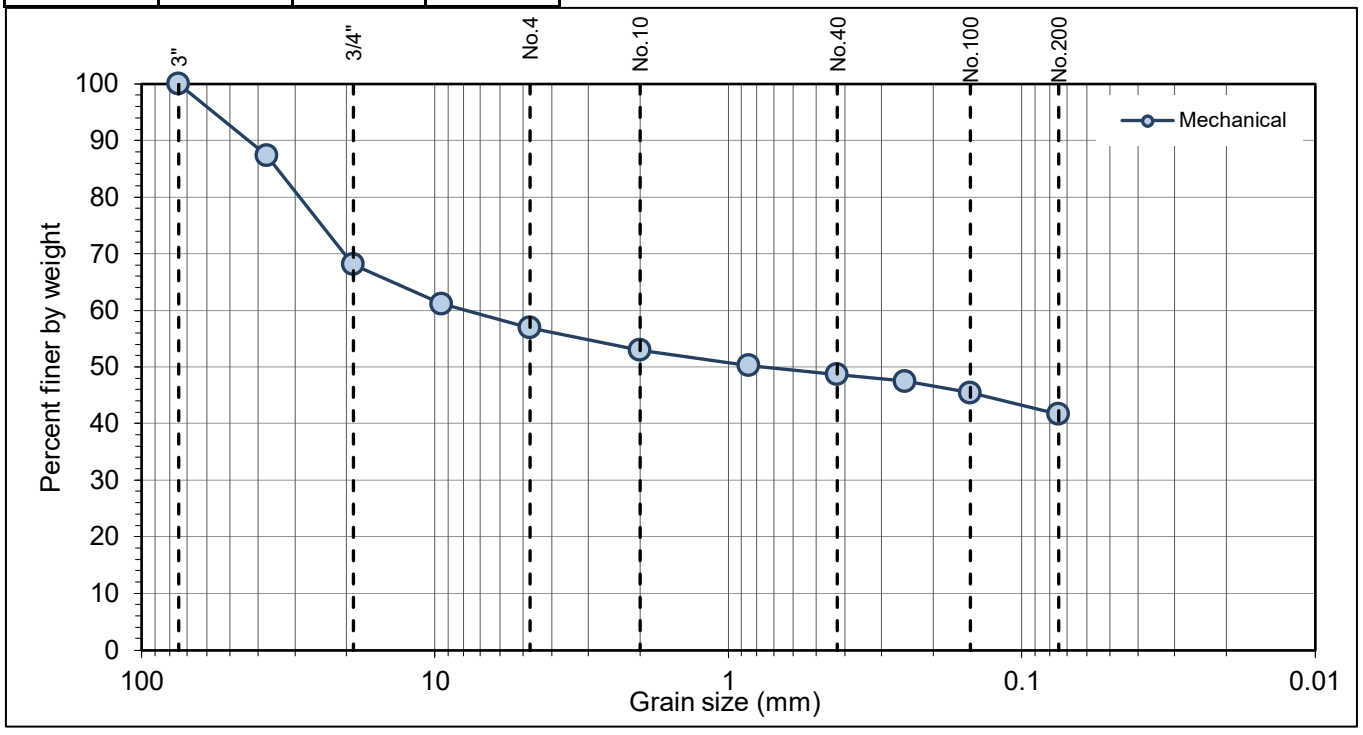
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1120.71	1018.98
	-	
	1120.71	1018.98
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1542.36
Dry soil + tare (g):	-	1440.63
Tare (g):	-	421.65
Moisture content (%):	0.0	10.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	100.0
1.5"	128.32	37.5	87.4
3/4"	325.14	19	68.1
3/8"	396.01	9.5	61.1
No.4	438.75	4.75	56.9
No.10	479.25	2	53.0
No.20	507.10	0.85	50.2
No.40	523.12	0.425	48.7
No.60	535.09	0.25	47.5
No.100	555.98	0.15	45.4
No.200	594.76	0.075	41.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Date: 14-Nov-23 Location: -

Tested by: MGS Lab soil description: ol bn - lt bn clay

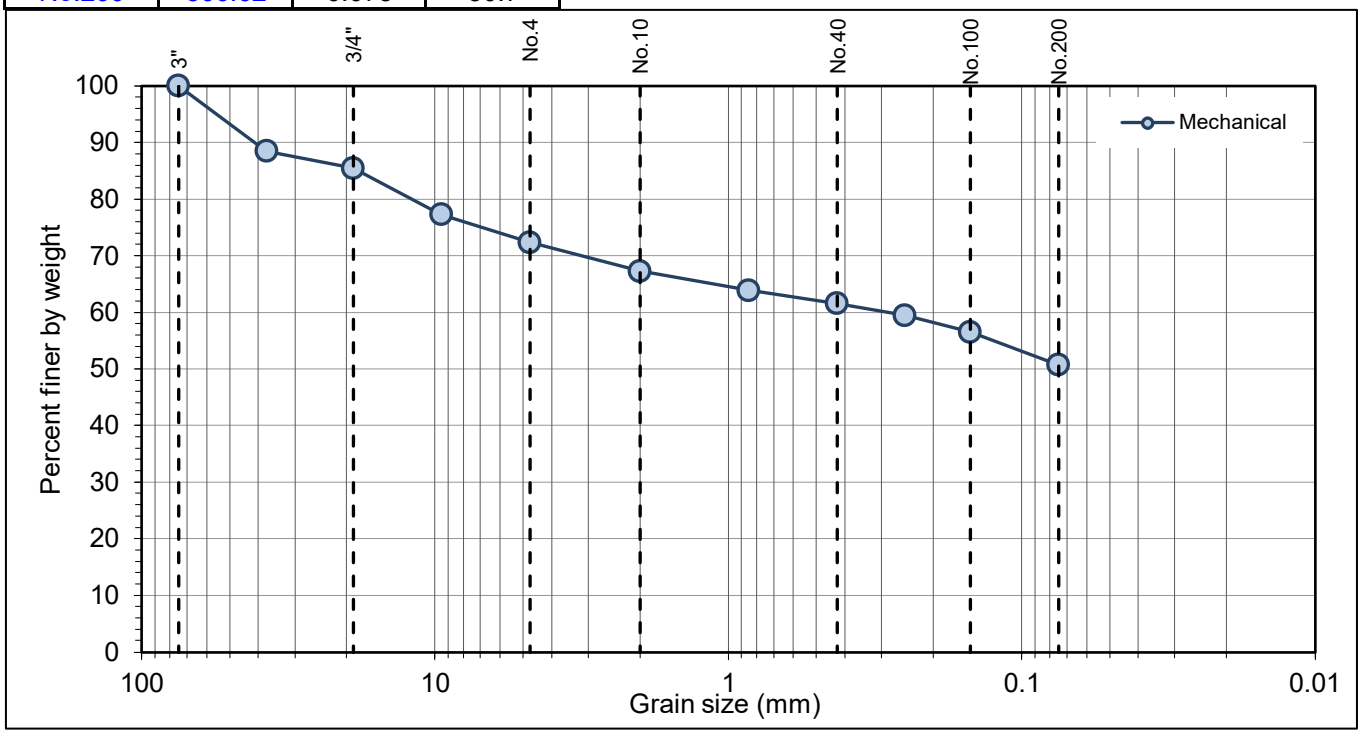
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	707.32	622.21
	-	
	707.32	622.21
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1129.47
Dry soil + tare (g):	-	1044.36
Tare (g):	-	422.15
Moisture content (%):	0.0	13.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	100.0
1.5"	71.56	37.5	88.5
3/4"	90.43	19	85.5
3/8"	141.32	9.5	77.3
No.4	172.00	4.75	72.4
No.10	203.64	2	67.3
No.20	224.65	0.85	63.9
No.40	239.11	0.425	61.6
No.60	252.04	0.25	59.5
No.100	270.48	0.15	56.5
No.200	306.62	0.075	50.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 15-17 ft

Date: 13-Nov-23 Location: -

Tested by: JCC Lab soil description: ol bn - yl bn clay

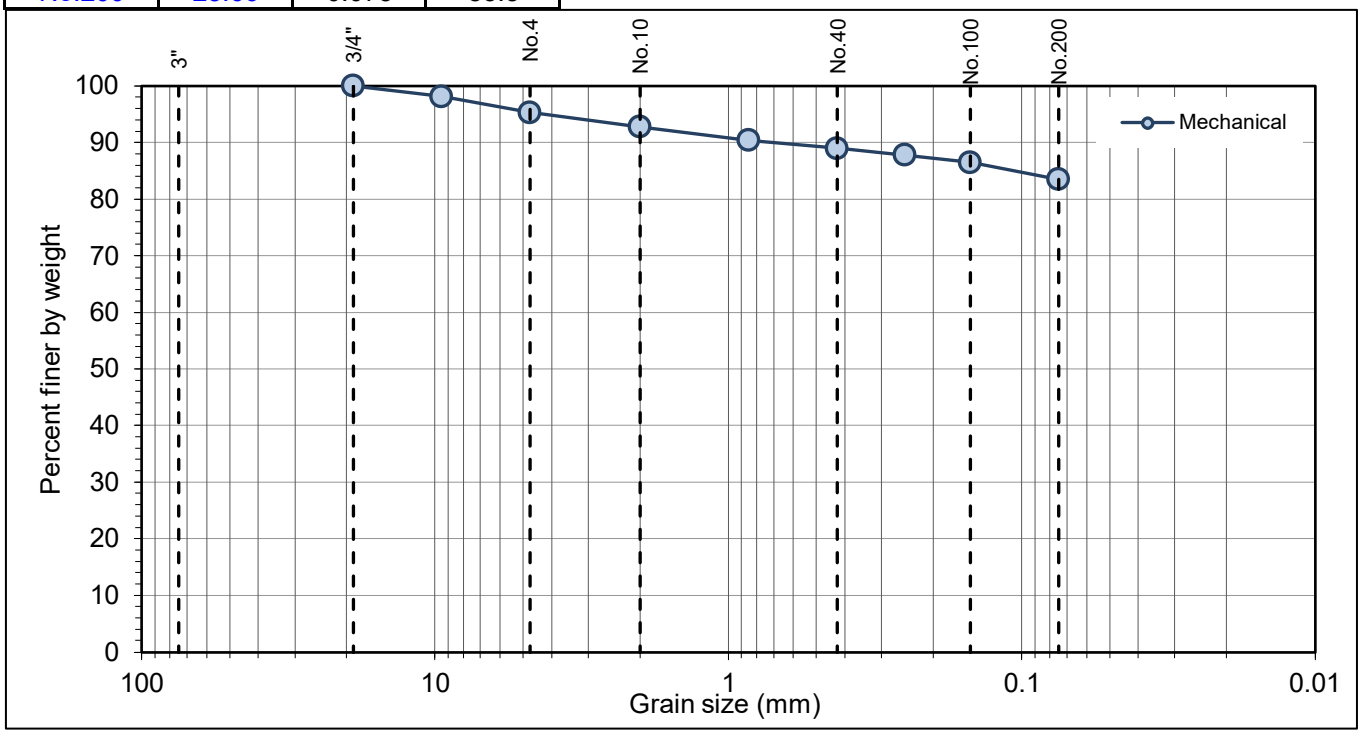
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	180.39	155.31
	-	
	180.39	155.31
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	377.19
Dry soil + tare (g):	-	352.11
Tare (g):	-	196.80
Moisture content (%):	0.0	16.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	2.89	9.5	98.1
No.4	7.30	4.75	95.3
No.10	11.23	2	92.8
No.20	14.96	0.85	90.4
No.40	17.13	0.425	89.0
No.60	18.94	0.25	87.8
No.100	20.99	0.15	86.5
No.200	25.66	0.075	83.5



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 17.5-19 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: ol bn - lt bn clay

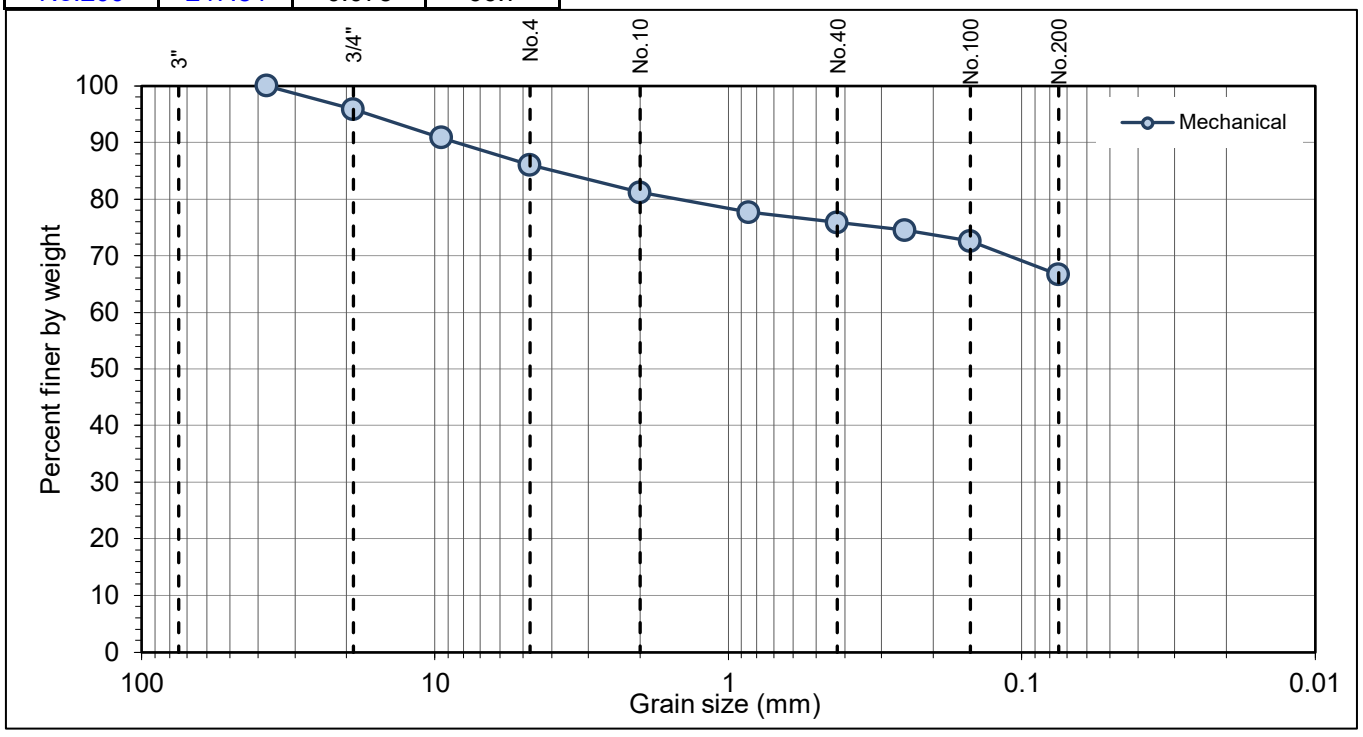
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	847.04	744.57
	-	
	847.04	744.57
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	860.87
Dry soil + tare (g):	-	758.40
Tare (g):	-	13.83
Moisture content (%):	0.0	13.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	30.57	19	95.9
3/8"	68.26	9.5	90.8
No.4	103.76	4.75	86.1
No.10	140.26	2	81.2
No.20	166.43	0.85	77.6
No.40	179.81	0.425	75.9
No.60	189.87	0.25	74.5
No.100	204.29	0.15	72.6
No.200	247.84	0.075	66.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-11

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Date: 13-Nov-23 Location: -

Tested by: DBW Lab soil description: bn - dk bn clay

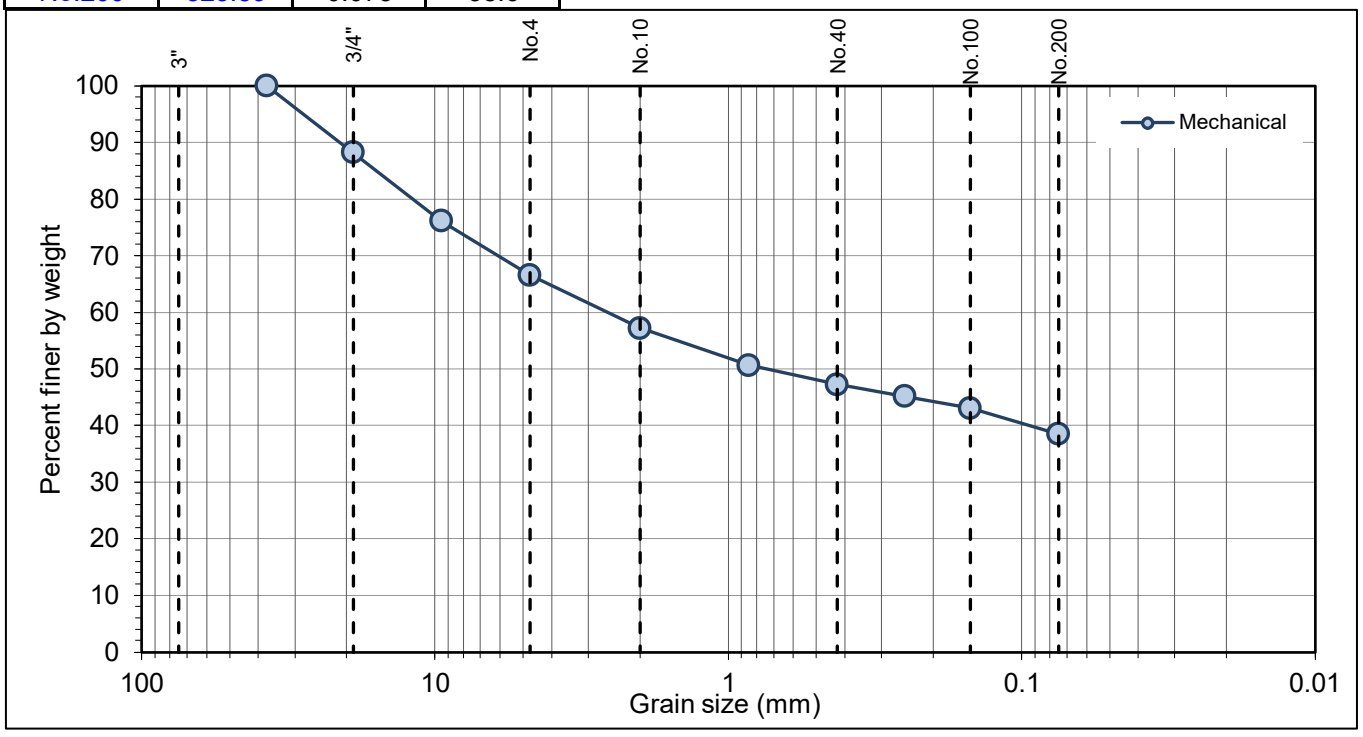
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	563.94	526.72
	-	
	563.94	526.72
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	758.29
Dry soil + tare (g):	-	721.07
Tare (g):	-	194.35
Moisture content (%):	0.0	7.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	61.88	19	88.3
3/8"	125.78	9.5	76.1
No.4	175.93	4.75	66.6
No.10	225.46	2	57.2
No.20	259.93	0.85	50.7
No.40	277.80	0.425	47.3
No.60	288.84	0.25	45.2
No.100	299.98	0.15	43.0
No.200	323.59	0.075	38.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 5-7 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - lt bn clay

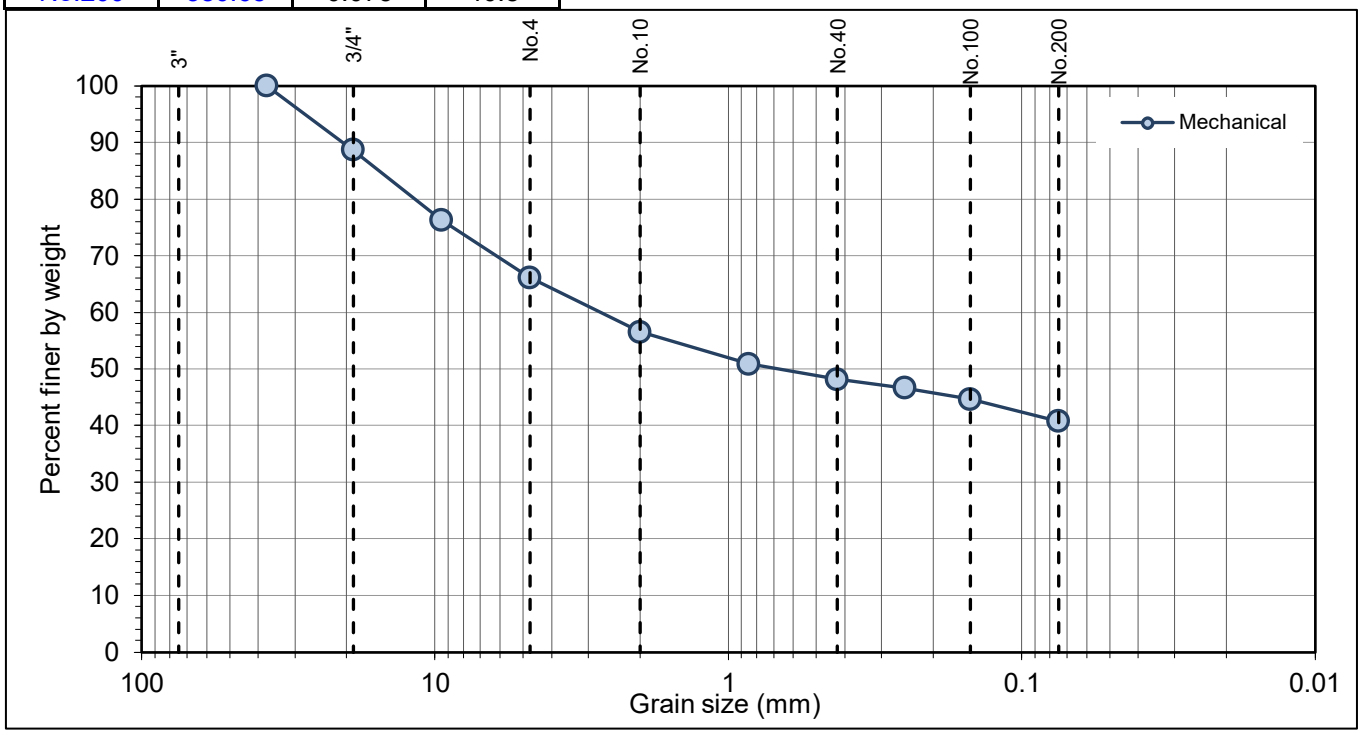
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	708.58	643.08
	-	
	708.58	643.08
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	902.19
Dry soil + tare (g):	-	836.69
Tare (g):	-	193.61
Moisture content (%):	0.0	10.2

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	72.52	19	88.7
3/8"	152.37	9.5	76.3
No.4	217.84	4.75	66.1
No.10	279.58	2	56.5
No.20	316.07	0.85	50.9
No.40	333.42	0.425	48.2
No.60	343.28	0.25	46.6
No.100	355.83	0.15	44.7
No.200	380.65	0.075	40.8



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 10-12 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - lt bn silt

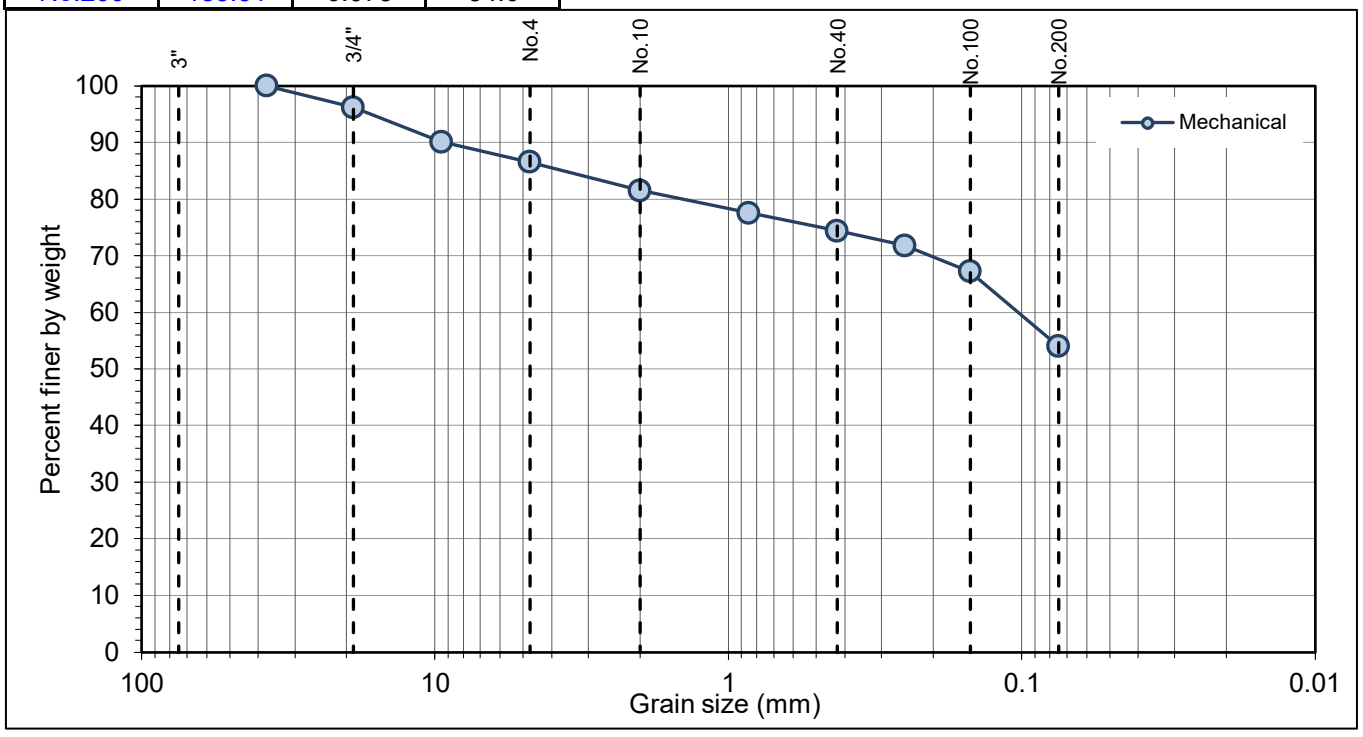
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	450.03	398.84
	-	
	450.03	398.84
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	566.12
Dry soil + tare (g):	-	514.93
Tare (g):	-	116.09
Moisture content (%):	0.0	12.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	15.06	19	96.2
3/8"	39.46	9.5	90.1
No.4	53.76	4.75	86.5
No.10	73.83	2	81.5
No.20	89.44	0.85	77.6
No.40	102.08	0.425	74.4
No.60	112.55	0.25	71.8
No.100	130.86	0.15	67.2
No.200	183.31	0.075	54.0



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-12

No: 23072 (23-1725) **Depth:** 20-21 ft

Date: 14-Nov-23 Location: -

Tested by: DBW Lab soil description: lt ol bn - lt bn clay

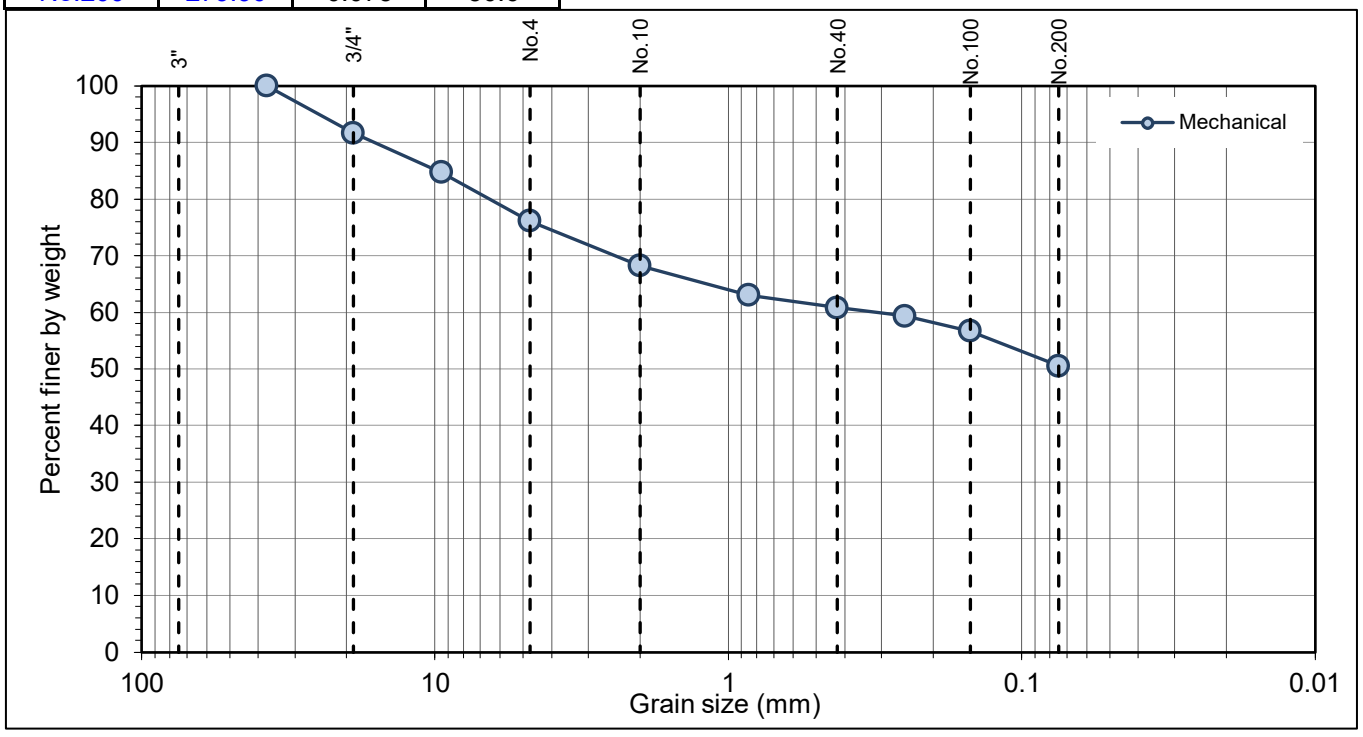
Reduced by: AT Comments:

Reviewed by: CML

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	625.88	566.11
	-	
	625.88	566.11
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	742.99
Dry soil + tare (g):	-	683.22
Tare (g):	-	117.11
Moisture content (%):	0.0	10.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	47.10	19	91.7
3/8"	86.55	9.5	84.7
No.4	135.05	4.75	76.1
No.10	179.77	2	68.2
No.20	209.38	0.85	63.0
No.40	221.94	0.425	60.8
No.60	230.21	0.25	59.3
No.100	245.14	0.15	56.7
No.200	279.90	0.075	50.6



Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-01

No: 23072 (23-1725) **Depth:** 37-39 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: gy - lt gy gravel

Reduced by: AT Comments:

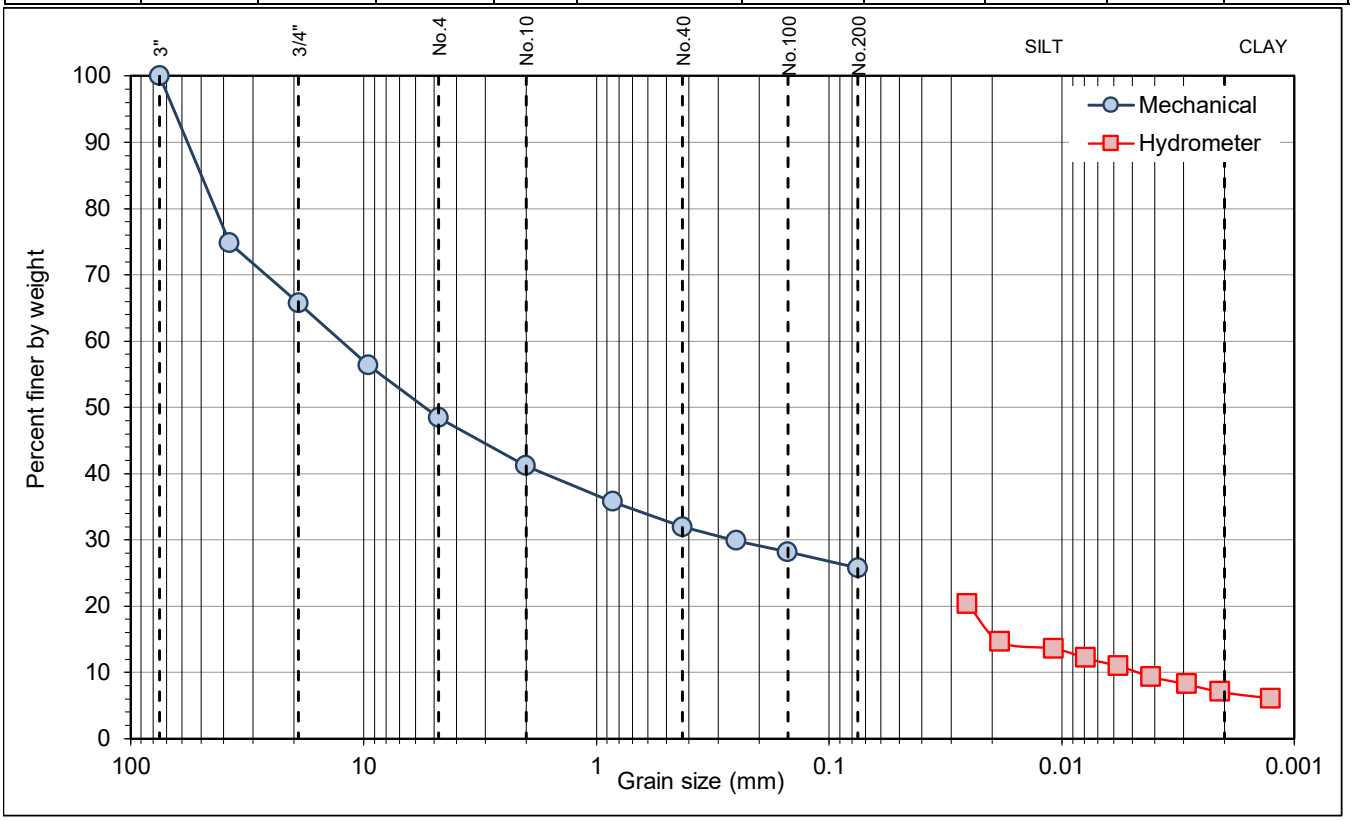
Reviewed by: JC

Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	1237.63	1179.38
+3" Coarse fraction (g):		
-3" Split fraction (g):	1237.63	1179.38
Hydrometer fraction (g):	100.02	99.95
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	1382.61	224.79
Dry soil + tare (g):	-	1324.36	224.77
Tare (g):	-	144.98	196.59
Moisture content (%):	0.00	4.94	0.07

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	41.14
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer		Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
12"	300	-	-		2	21.0	55	5.2	0.02534	20.28
8"	200	-	-		5	21.0	41	5.2	0.01838	14.58
6"	150	-	-		15	21.0	38.5	5.2	0.01084	13.57
4"	100	-	-		30	20.9	35	5.2	0.00789	12.13
3"	75	-	100.0	<=Split	60	21.0	32	5.2	0.00570	10.92
1.5"	37.5	298.03	74.7		120	21.2	28	5.1	0.00414	9.32
3/4"	19	404.72	65.7		250	22.0	25	4.9	0.00290	8.19
3/8"	9.5	515.59	56.3		500	22.5	22	4.7	0.00208	7.02
No.4	4.75	608.62	48.4		1440	20.9	20	5.2	0.00126	6.02
No.10	2	694.22	41.1	<=Split hyd.						
No.20	0.85	13.07	35.8							
No.40	0.425	22.42	31.9							
No.60	0.25	27.41	29.9							
No.100	0.15	31.53	28.2							
No.200	0.075	37.39	25.7							



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]1

Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-02

No: 23072 (23-1725) **Depth:** 44.5-47 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: lt bn - bn gravel

Reduced by: AT Comments:

Reviewed by: JC

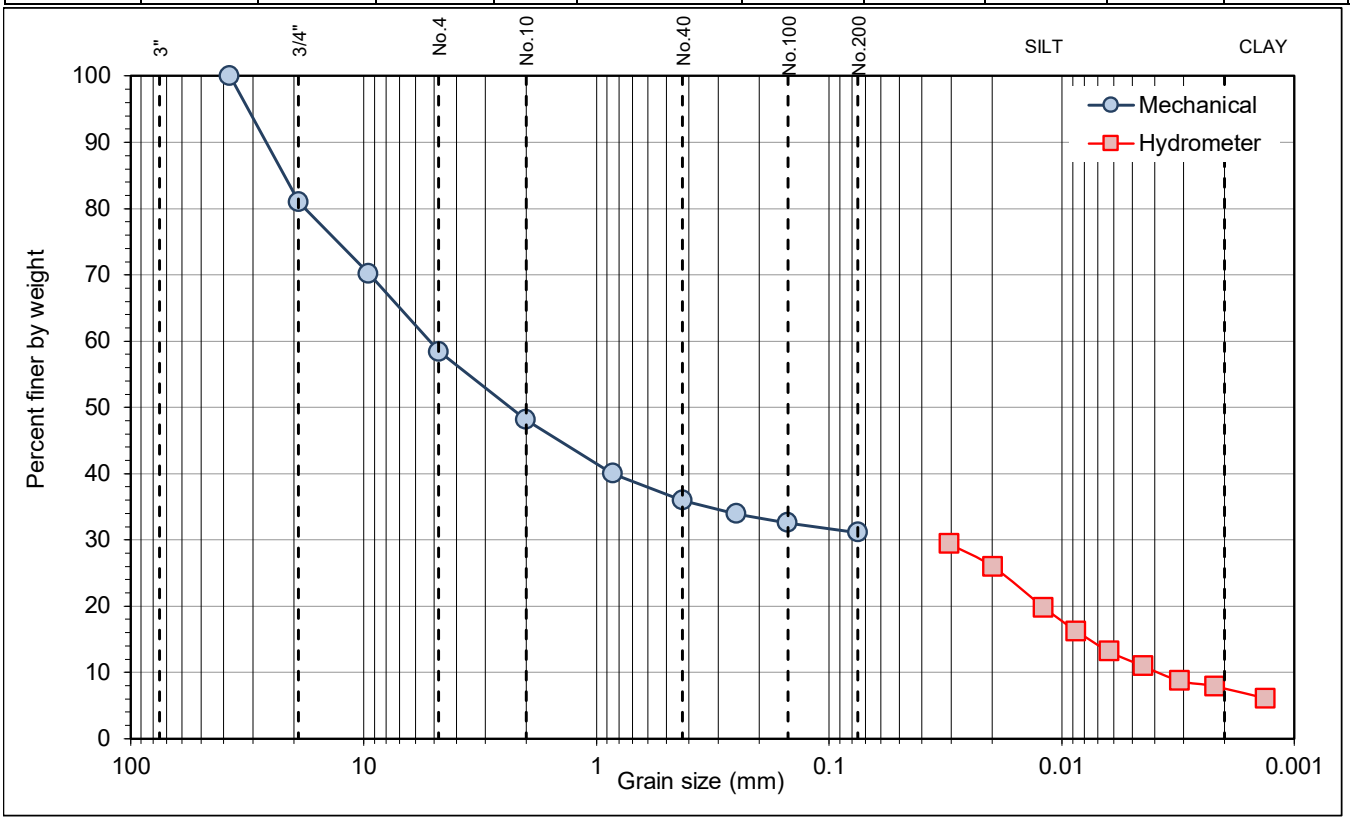
Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	446.03	423.48
+3" Coarse fraction (g):		
-3" Split fraction (g):	446.03	423.48
Hydrometer fraction (g):	50.04	50.01
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	572.96	229.12
Dry soil + tare (g):	-	550.41	229.10
Tare (g):	-	126.93	195.70
Moisture content (%):	0.00	5.32	0.06

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	48.08
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer
12"	300	-	-
8"	200	-	-
6"	150	-	-
4"	100	-	-
3"	75	-	-
1.5"	37.5	-	100.0
3/4"	19	80.60	81.0
3/8"	9.5	126.26	70.2
No.4	4.75	176.21	58.4
No.10	2	219.86	48.1
No.20	0.85	8.39	40.0
No.40	0.425	12.64	35.9
No.60	0.25	14.77	33.9
No.100	0.15	16.16	32.5
No.200	0.075	17.67	31.1

	Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
	2	20.8	36.1	5.2	0.03034	29.35
	5	20.8	32.5	5.2	0.01973	25.93
	15	20.8	26	5.2	0.01193	19.75
	30	20.8	22.25	5.2	0.00865	16.19
<=Split	60	20.9	19	5.2	0.00623	13.12
	120	21.4	16.5	5.1	0.00445	10.88
	250	22.1	14	4.9	0.00310	8.69
	500	22.6	13	4.7	0.00219	7.88
	1448	20.9	11.5	5.2	0.00133	5.99
<=Split hyd.						



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]2

Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10

No: 23072 (23-1725) **Depth:** 15-17 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: ol bn - yl bn clay

Reduced by: AT Comments:

Reviewed by: JC

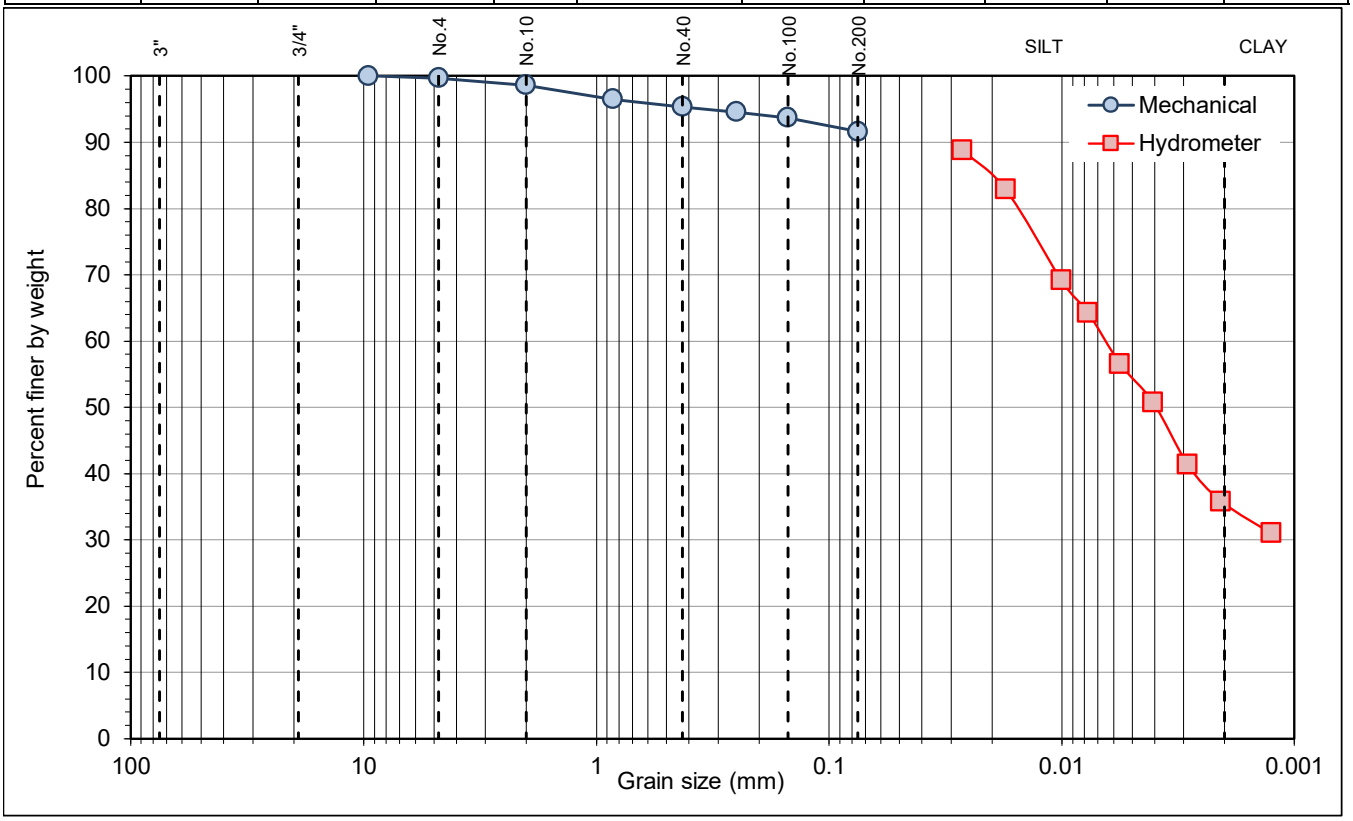
Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	133.83	114.98
+3" Coarse fraction (g):		
-3" Split fraction (g):	133.83	114.98
Hydrometer fraction (g):	50.01	49.74
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	250.79	239.17
Dry soil + tare (g):	-	231.94	238.94
Tare (g):	-	116.96	196.69
Moisture content (%):	0.00	16.39	0.54

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	98.62
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer
12"	300	-	-
8"	200	-	-
6"	150	-	-
4"	100	-	-
3"	75	-	-
1.5"	37.5	-	-
3/4"	19	-	-
3/8"	9.5	-	100.0
No.4	4.75	0.38	99.7
No.10	2	1.59	98.6
No.20	0.85	1.06	96.5
No.40	0.425	1.66	95.3
No.60	0.25	2.04	94.6
No.100	0.15	2.49	93.7
No.200	0.075	3.54	91.6

	Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
	2	20.8	50.5	5.2	0.02667	88.77
	5	20.8	47.5	5.2	0.01737	82.88
	17	20.8	40.5	5.2	0.01004	69.16
	30	20.8	38	5.2	0.00772	64.26
<=Split	60	21.0	34	5.2	0.00562	56.53
	120	21.2	31	5.1	0.00405	50.76
	250	22.0	26	4.9	0.00288	41.40
	500	22.5	23	4.7	0.00206	35.79
	1444	20.9	21	5.2	0.00125	30.98
<=Split hyd.						



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]3

Particle-Size Analysis of Soils with Hydrometer*

(after ASTM D422)

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-11

No: 23072 (23-1725) **Depth:** 10-12 ft

Date: 16-Nov-23 Location: -

Tested by: MGS/DBW Laboratory sample description: lt ol bn - ol bn clay

Reduced by: AT Comments:

Reviewed by: JC

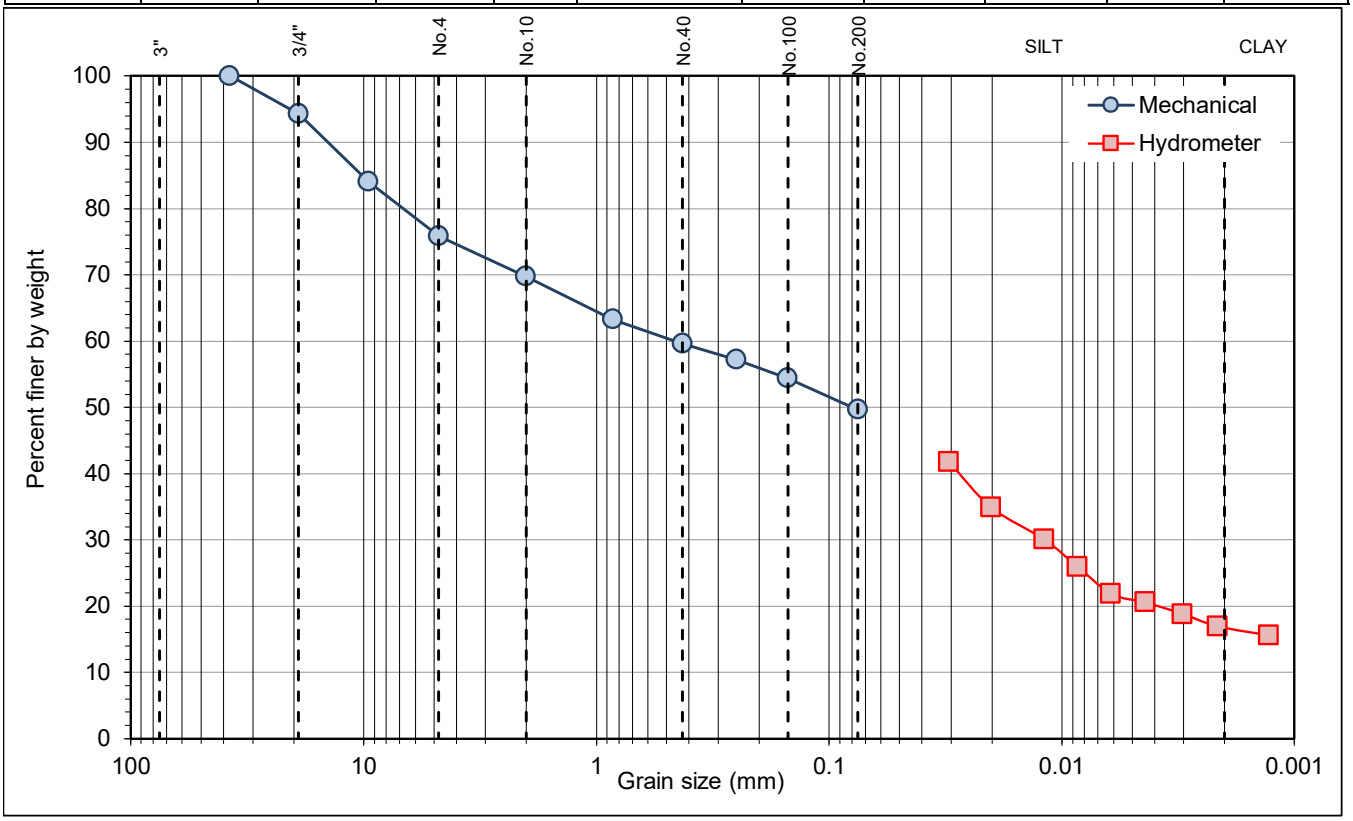
Split sieve:	Yes	
Split sieve:	3"	
	Moist	Dry
Total sample wt. (g):	621.27	566.27
+3" Coarse fraction (g):		
-3" Split fraction (g):	621.27	566.27
Hydrometer fraction (g):	50.09	50.00
Split fraction:	1.000	

Moisture data	C.F.(+3")	S.F.(-3")	Hyd.(-No.10)
Moist soil + tare (g):	-	766.77	150.52
Dry soil + tare (g):	-	711.77	150.46
Tare (g):	-	145.50	117.79
Moisture content (%):	0.00	9.71	0.18

Hydrometer data				
Hyd. split:	No.10		Slope:	-0.164
Gs:	2.7	Assumed	Intercept:	16.3
Hydrometer Seral #:	626325		a:	0.99
Dispersion period (min):	10		Hyd. fraction:	69.77
			Dispersion device:	Air-jet

Sieve	Grain Size (mm)	Accum. Wt. Ret. (g)	Percent Finer
12"	300	-	-
8"	200	-	-
6"	150	-	-
4"	100	-	-
3"	75	-	-
1.5"	37.5	-	100.0
3/4"	19	32.39	94.3
3/8"	9.5	90.42	84.0
No.4	4.75	136.85	75.8
No.10	2	171.18	69.8
No.20	0.85	4.67	63.3
No.40	0.425	7.27	59.6
No.60	0.25	9.04	57.2
No.100	0.15	11.05	54.4
No.200	0.075	14.44	49.6

	Elapsed time (min)	Temp. (°C)	Hydrometer Reading	Composite Correction	Grain Size (mm)	% Soil in Suspension
	2	20.7	35.5	5.3	0.03051	41.74
	5	20.7	30.5	5.3	0.02004	34.84
	15	20.7	27	5.3	0.01186	30.01
	30	20.8	24	5.2	0.00855	25.91
<=Split	60	21.0	21	5.2	0.00615	21.85
	120	21.2	20	5.1	0.00436	20.54
	250	22.0	18.5	4.9	0.00302	18.79
	500	22.6	17	4.7	0.00214	16.95
	1446	20.9	16.5	5.2	0.00129	15.60
<=Split hyd.						



X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot53,58_GSD-HYD.xlsm]4

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project:	**Bear Development Snow King Lot 53 and 58**	**TH/TP/Sample:**	**JG-10**
No:	**23072 (23-1725)**	**Depth:**	**12.5-14 ft**
Location:	-	Laboratory sample description:	ol bn - lt bn clay
Date:	14-Nov-23	USCS classification:	not requested
Tested by:	AT	Sample type:	Rel. undisturbed, Shelby Tube
Reduced by:	AT	Inundation stress (psf):	100, completion
Checked by:	JC	Swell pressure (psf):	408
Comments:	Gravel up to 1.5" in sample.	Test method:	B
		Preparation procedure:	trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.995	-
	90°	1.002	-
	180°	0.999	-
	270°	1.003	-
Avg Height, Havg (in)		1.000	0.887
Height, H (cm)		2.539	2.253
Dia., D (in)	0°	2.494	-
	90°	2.495	-
Avg Dia., Davg (in)		2.495	2.495
Dia., D (cm)		6.336	6.336
Wt. rings + wet soil (g)		373.54	369.19
Wt. rings (g)		216.21	216.21
Wet soil + tare (g)		1129.47	350.66
Dry soil + tare (g)		1044.36	324.68
Tare (g)		422.15	198.47
Moisture cont., w (%)		13.7	20.6
Gs, assumed		2.70	2.70
Mass total (g)		157.3	153.0
Mass of solids (g)		138.4	138.4
Volume (cm^3)		80.1	71.0
Vol. of water (cm^3)		18.9	14.6
Vol. of solids (cm^3)		51.3	51.3
Vol. of voids (cm^3)		28.8	19.8
Vol. of air (cm^3)		9.9	5.2
Area, A (cm^2)		31.5	31.5
Ht. solids, Hs (cm)		1.626	1.626
Void ratio, e		0.562	0.386
Porosity, n		0.360	0.278
Vol.moisture, T		0.236	0.205
Saturation, S (%)		66	74
Dry density (gm/cm^3)		1.729	1.949
Wet unit wt., gm (pcf)		122.7	146.7
Dry unit wt., gd (pcf)		107.9	121.6

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9998	0.0000	0.5620	0
408	0.0000	0.9997	0.0000	0.5620	120
800	0.0034	0.9964	0.0034	0.5568	131
1,600	0.0108	0.9890	0.0108	0.5452	207
3,200	0.0278	0.9719	0.0278	0.5185	480
6,400	0.0528	0.9470	0.0528	0.4796	369
12,800	0.0843	0.9154	0.0843	0.4303	269
25,600	0.1173	0.8825	0.1173	0.3787	334
51,200	0.1513	0.8484	0.1514	0.3255	480
25,600	0.1474	0.8523	0.1475	0.3316	120
6,400	0.1325	0.8672	0.1326	0.3550	240
1,600	0.1129	0.8869	0.1129	0.3856	343

C'c

(0.1514-0.0528)/[Log(51200)-Log(6400)]

0.0986/(4.71-3.81)

C'c= 0.1096

C'c = Cc/(1+e0)

0.1096 = Cc/(1+0.562)

Cc = 0.171

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

To be determined by the Geotechnical Engineer

Notes:

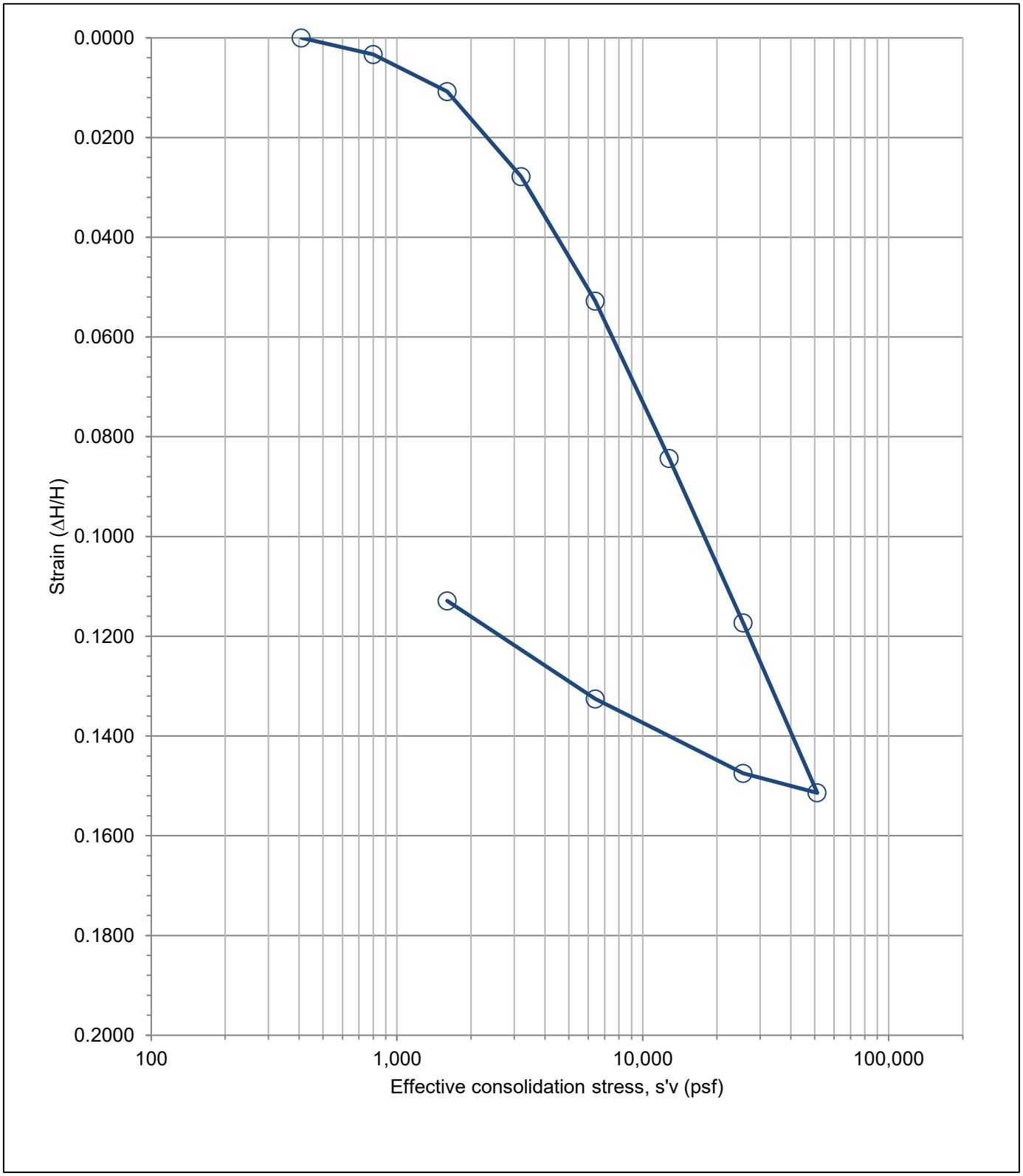
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation

[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10
No: 23072 (23-1725) **Depth:** 12.5-14 ft



One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 | **TH/TP/Sample:** JG-10
No: 23072 (23-1725) | **Depth:** 17.5-19 ft
Location: - | Laboratory sample description: ol bn - lt bn clay
Date: 14-Nov-23 | USCS classification: not requested

Tested by: AT | Sample type: Rel. undisturbed, Shelby Tube
Reduced by: AT | Inundation stress (psf): 100, completion
Checked by: JC | Swell pressure (psf): <100
Comments: | Test method: B
Preparation procedure: trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.985	-
	90°	0.987	-
	180°	0.988	-
	270°	0.989	-
Avg Height, Havg (in)		0.987	0.884
Height, H (cm)		2.508	2.245
Dia., D (in)	0°	2.487	-
	90°	2.496	-
Avg Dia., Davg (in)		2.492	2.492
Dia., D (cm)		6.328	6.328
Wt. rings + wet soil (g)		384.09	380.81
Wt. rings (g)		214.28	214.28
Wet soil + tare (g)		860.87	285.37
Dry soil + tare (g)		758.40	266.49
Tare (g)		13.83	119.06
Moisture cont., w (%)		13.8	12.8
Gs, assumed		2.70	2.70
Mass total (g)		169.8	166.5
Mass of solids (g)		149.3	149.3
Volume (cm^3)		78.9	70.6
Vol. of water (cm^3)		20.5	17.3
Vol. of solids (cm^3)		55.3	55.3
Vol. of voids (cm^3)		23.6	15.3
Vol. of air (cm^3)		3.0	-1.9
Area, A (cm^2)		31.5	31.5
Ht. solids, Hs (cm)		1.758	1.758
Void ratio, e		0.427	0.278
Porosity, n		0.299	0.217
Vol.moisture, T		0.260	0.244
Saturation, S (%)		87	113
Dry density (gm/cm^3)		1.892	2.113
Wet unit wt., gm (pcf)		134.4	148.8
Dry unit wt., gd (pcf)		118.1	131.9

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9873	0.0000	0.4267	0
100	0.0000	0.9872	0.0000	0.4267	108
200	0.0029	0.9844	0.0029	0.4225	123
400	0.0060	0.9813	0.0061	0.4181	210
800	0.0111	0.9761	0.0113	0.4106	96
1,600	0.0185	0.9687	0.0188	0.3999	176
3,200	0.0296	0.9576	0.0300	0.3839	480
6,400	0.0512	0.9360	0.0519	0.3527	89
12,800	0.0722	0.9150	0.0732	0.3223	123
25,600	0.0998	0.8875	0.1010	0.2826	155
51,200	0.1267	0.8605	0.1284	0.2436	315
25,600	0.1236	0.8637	0.1251	0.2482	120
6,400	0.1163	0.8709	0.1178	0.2586	210
1,600	0.1032	0.8840	0.1046	0.2775	980

C'c

(0.1284-0.0732)/[Log(51200)-Log(12800)]

0.0552/(4.71-4.1072)

C'c= 0.091

C'c = Cc/(1+e0)

0.091 = Cc/(1+0.427)

Cc = 0.13

Check:

Cc=(change in void ratio)/(Log change in pressure)

Cc=(0.2436-0.3223)/[Log(51200)-Log(12800)]

Cc=-0.0787/0.6028

Cc=-0.13

~~WHY DOES IT CALCULATE A NEGATIVE VALUE?~~

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

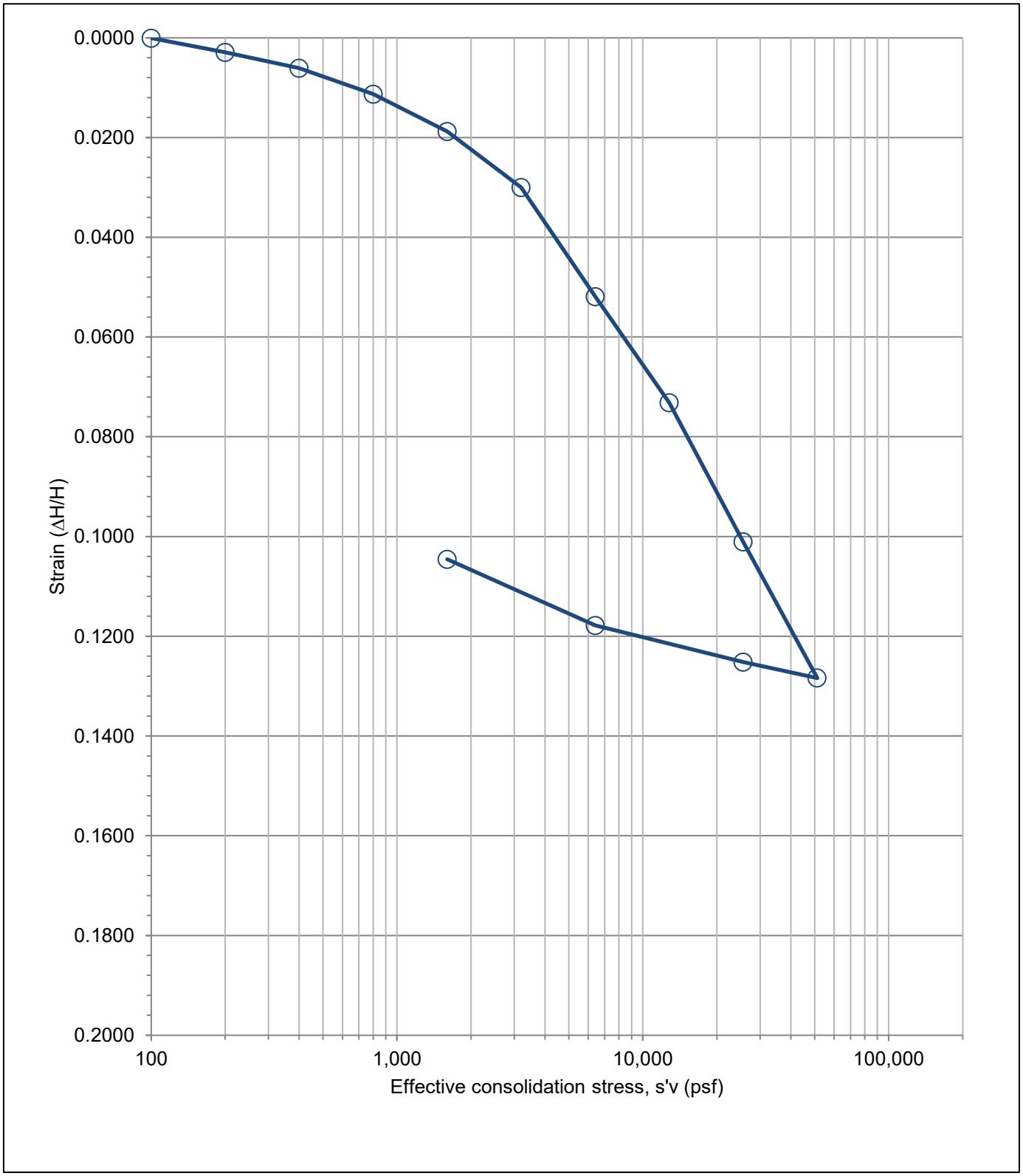
To be determined by the Geotechnical Engineer

Notes:
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation
[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 53 and 58 **TH/TP/Sample:** JG-10
No: 23072 (23-1725) **Depth:** 17.5-19 ft



Direct Shear of Soils Under Consolidated Drained Conditions, ASTM D3080

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson # 21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

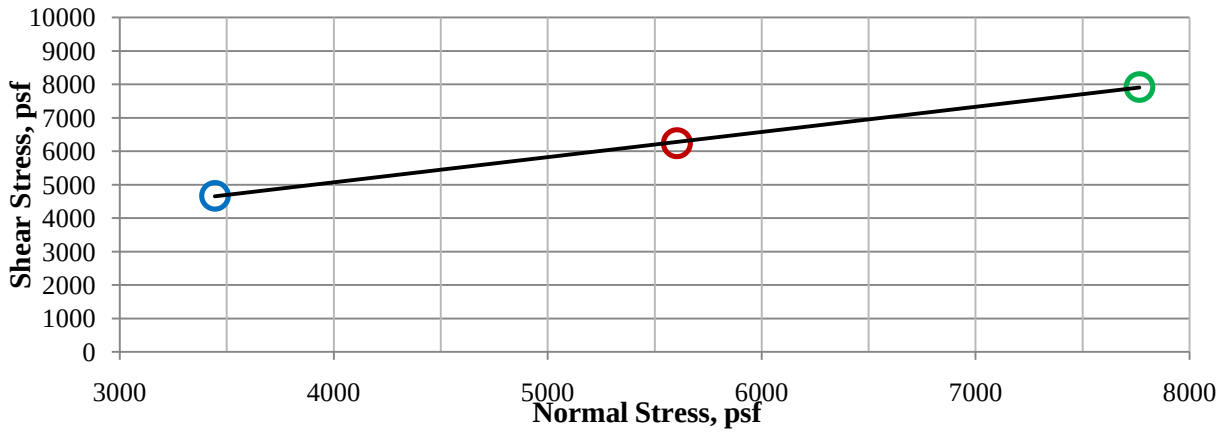
Sample Data:

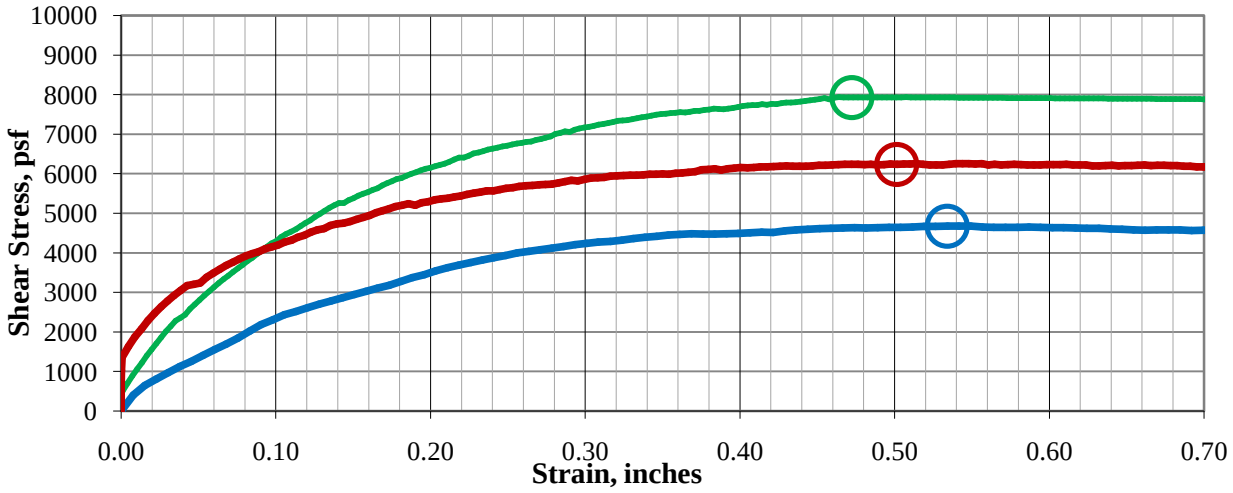
Boring: BH6-11 **Depth:** 52.5'-53' **Density:** 137.7 pcf moist

Description: Sandy Lean Clay, CL

Normal Stress, psf	Initial Moisture,%	Final Moisture,%	Consol + Collapse,%	Final Wet Density, pcf	Final Dry Density, pcf	Max Shear Stress, psf	Failure Strain,%
3444	14.4	16.2	2.2	143.1	123.1	**4673**	**22.1**
5604	14.4	15.6	3.0	143.5	124.1	**6234**	**20.7**
7764	14.4	14.7	3.8	143.6	125.2	**7924**	**19.5**

Peak Angle, ϕ° **37.0** Peak Cohesion, C, psf **2059** Strain rate, %/hour **4.1**





Remarks: Friction angle and cohesion in practice are sensitive to several other material properties, and conditions, in the field and lab. No individual lab property of a material can substitute for overall best practices in geotechnical design, construction, and field testing by qualified professionals.

Direct Shear of Soils Under Consolidated Drained Conditions, ASTM D3080

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson # 21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

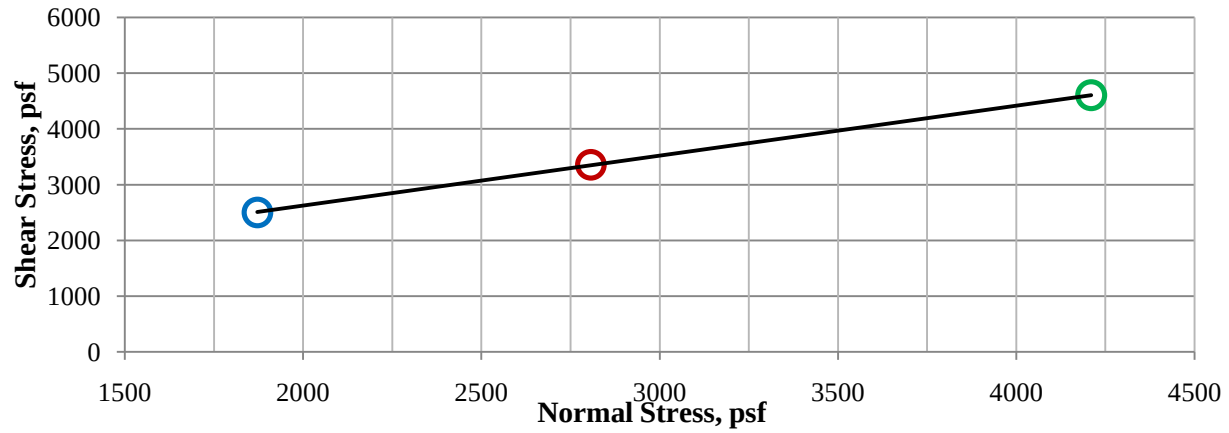
Sample Data:

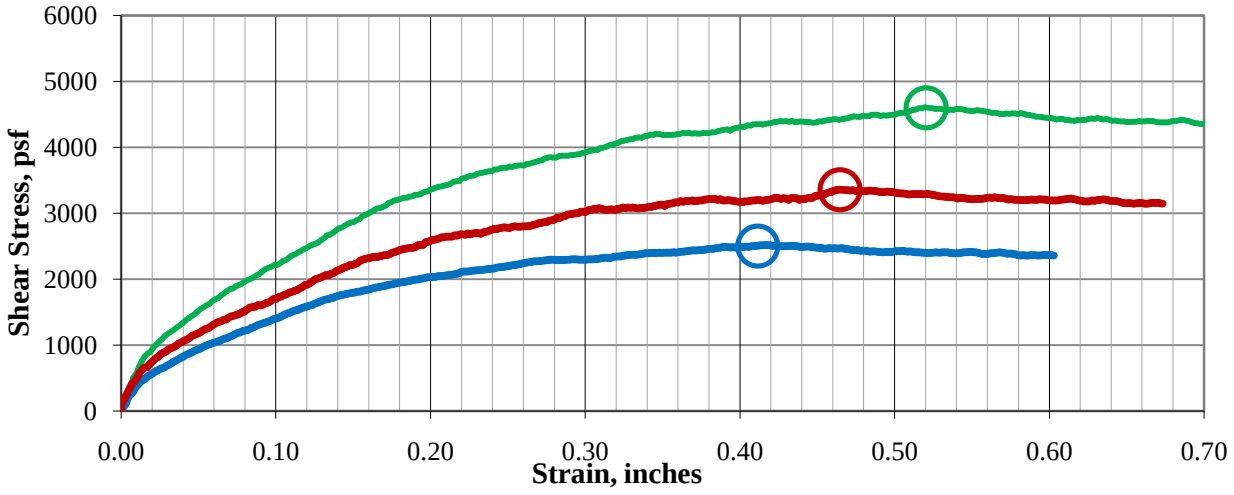
Boring: BH7-4 **Depth:** 19.5'-20' **Density:** 135.1 pcf moist

Description: Sandy Lean Clay, CL

Normal Stress, psf	Initial Moisture,%	Final Moisture,%	Consol + Collapse,%	Final Wet Density, pcf	Final Dry Density, pcf	Max Shear Stress, psf	Failure Strain,%
1871	15.5	19.5	1.5	141.9	118.7	**2505**	**17.0**
2806	15.5	17.6	2.6	141.2	120.1	**3358**	**19.2**
4210	15.5	15.8	3.6	140.5	121.3	**4602**	**21.5**

Peak Angle, ϕ° **41.9** Peak Cohesion, C, psf **835** Strain rate, %/hour **4.1**





Remarks: Friction angle and cohesion in practice are sensitive to several other material properties, and conditions, in the field and lab. No individual lab property of a material can substitute for overall best practices in geotechnical design, construction, and field testing by qualified professionals.

2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

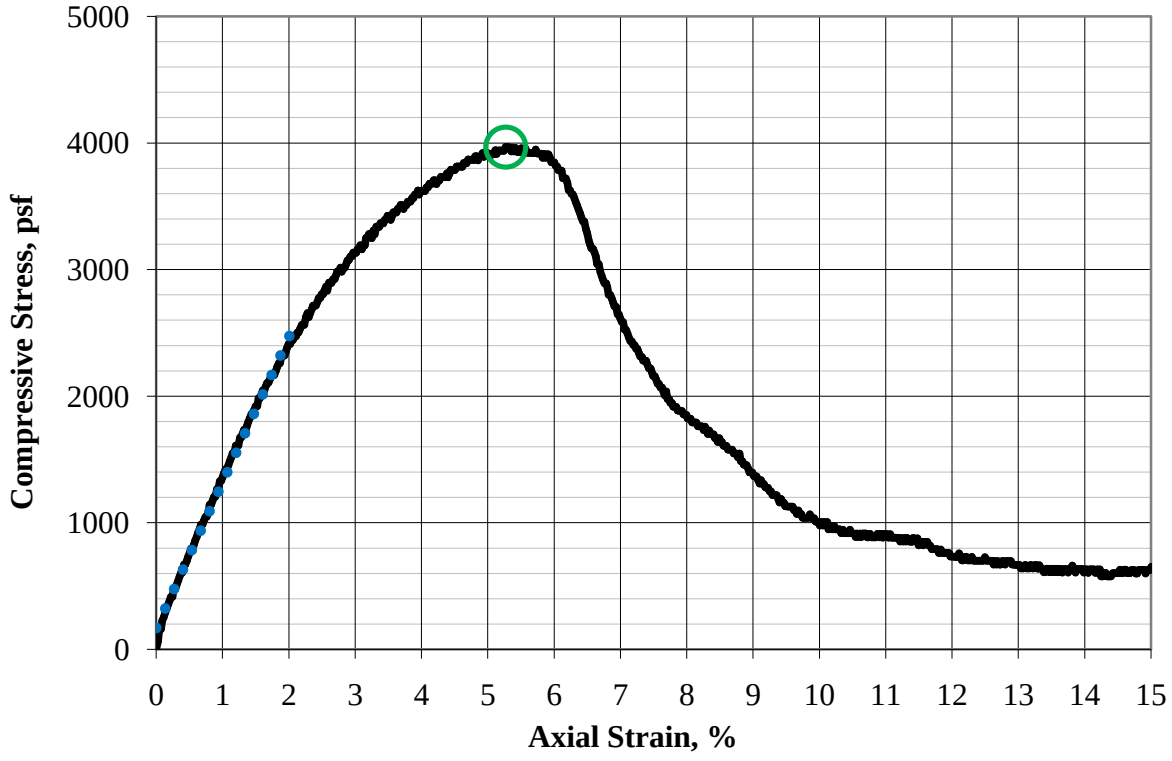
Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

Sample Data:

Boring: BH6-4B
Depth: 22.5' - 23'
Description: Lean Clay, CL

Specimen Properties:	
Average Diameter, in.	2.395
Average Height, in.	5.186
Height/Diameter (L/D)	2.17
Moisture, %	18.6
Wet density, pcf	128.5
Dry density, pcf	108.3

Undrained Unconfined Strength Properties:	
Compressive strength, psf	3968
Shear strength, psf	1984
Axial elastic modulus, psi	798
Failure strain, %	5.3
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

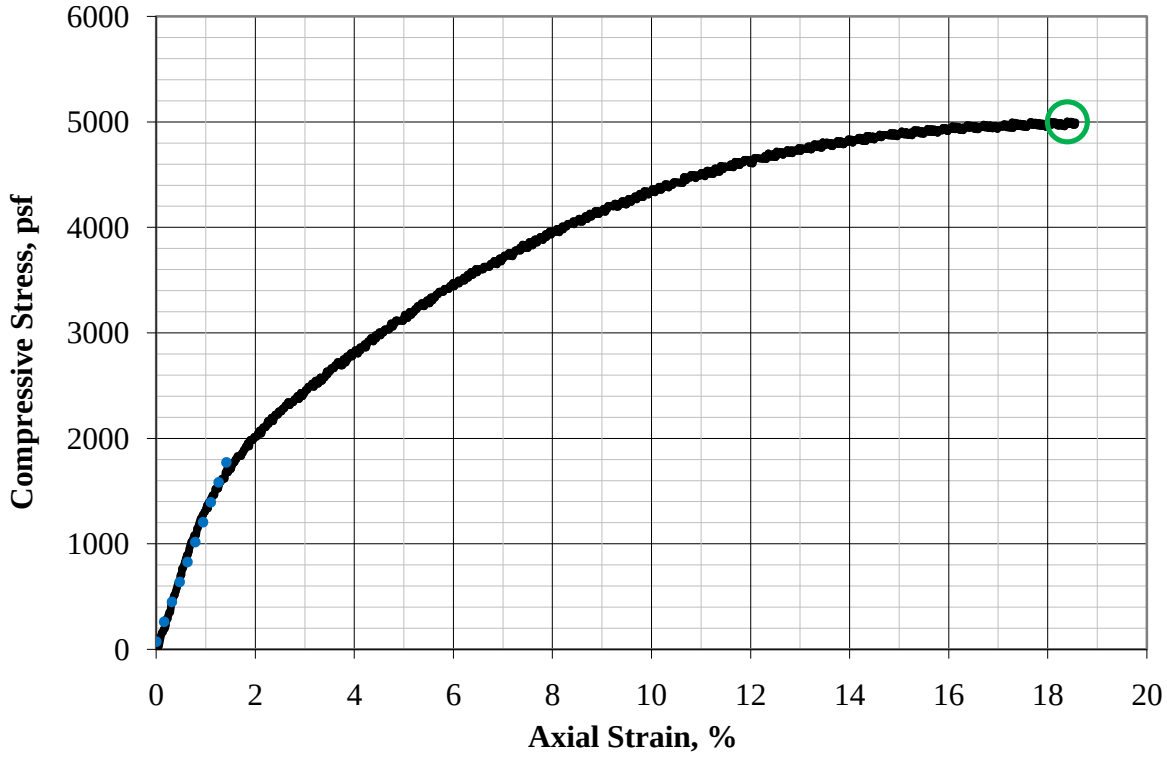
Sample Data:

Boring: BH7-6 Depth: 26' - 26.5'

Description: Lean Clay w/Sand, CL

Specimen Properties:	
Average Diameter, in.	2.389
Average Height, in.	6.044
Height/Diameter (L/D)	2.53
Moisture, %	25.6
Wet density, pcf	126.6
Dry density, pcf	100.8

Undrained Unconfined Strength Properties:	
Compressive strength, psf	5002
Shear strength, psf	2501
Axial elastic modulus, psi	834
Failure strain, %	18.4
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

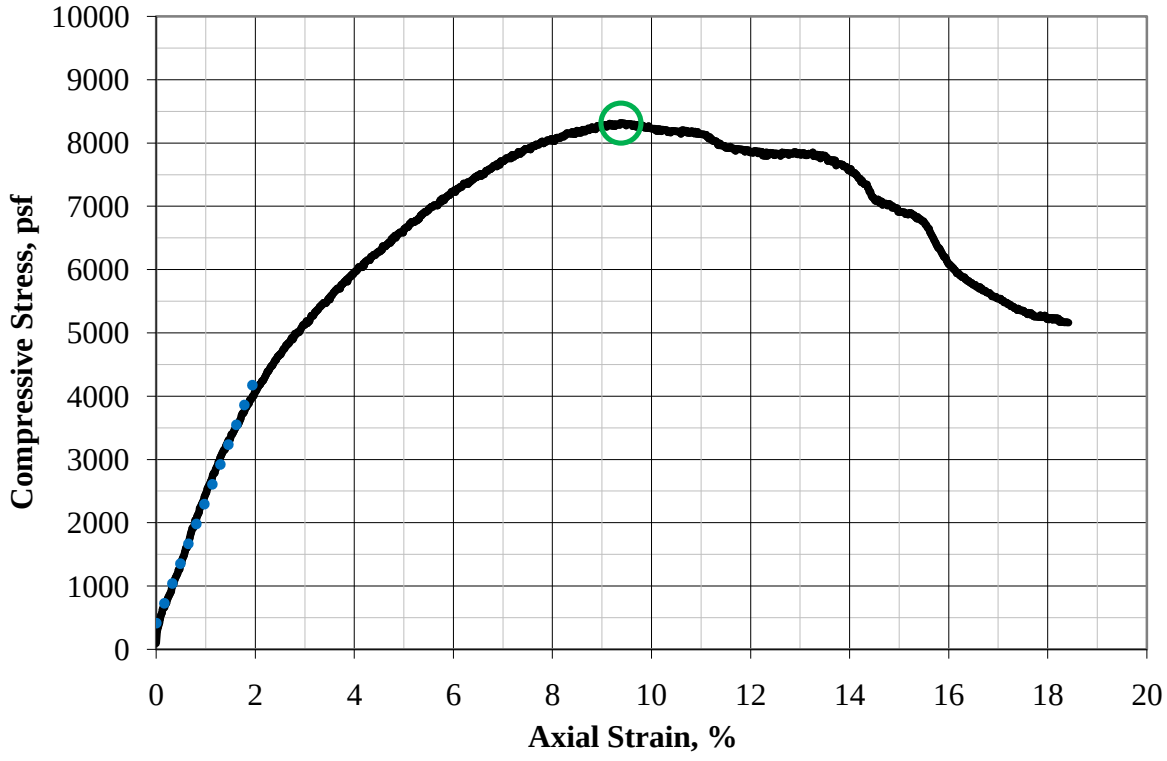
Sample Data:

Boring: BH7-13 Depth: 59.5' - 60'

Description: Sandy Lean Clay, CL

Specimen Properties:	
Average Diameter, in.	2.407
Average Height, in.	5.987
Height/Diameter (L/D)	2.49
Moisture, %	17.1
Wet density, pcf	133.3
Dry density, pcf	113.8

Undrained Unconfined Strength Properties:	
Compressive strength, psf	8315
Shear strength, psf	4158
Axial elastic modulus, psi	1346
Failure strain, %	9.4
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH1-4 Depth (ft): 29.75'-31.75'

Unified Soils Classification
SC (Clayey Sand with Gravel)

Gravel	22%
Sand	56%
Fines	23%

Liquid Limit:	27
Plastic Limit:	12
Plasticity Index:	15

In-Situ Moisture Content	10.2%

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	115.1	115.1	0.0	0%	100%
1"	25	115.1	115.1	0.0	0%	100%
3/4"	18.75	115.1	143.7	28.6	7%	93%
#4	4.75	115.1	174.2	59.1	22%	78%
#10	2.00	115.1	130.4	15.3	25%	75%
#40	0.425	115.1	131.8	16.7	29%	71%
#200	0.075	115.1	310.1	195.0	77%	23%
Pan	0	115.1	208.2	93.1	100%	0%
		Total Weight of Sample (g)		407.8		

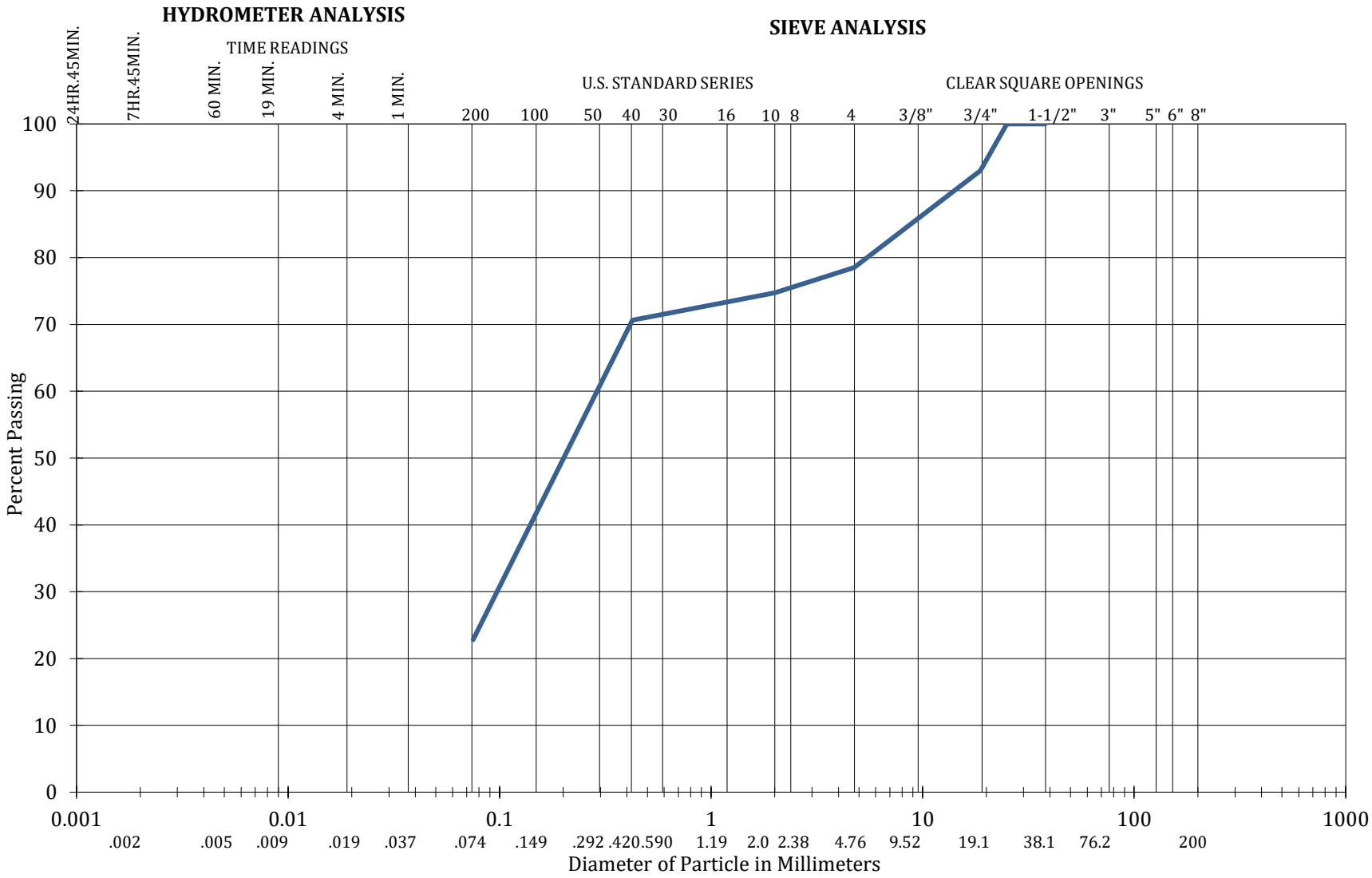
Moisture Content	
Wet Wt + Tare (g)	563.0
Dry Wt. + Tare (g)	521.6
Wt of Water (g)	41.4
Tare Wt. (g)	113.8
Dry Wt. (g)	407.8
Moisture Content	10.2%
Wash	
Wet Wt. + Tare (g)	563.0
Pre Wash Dry (g)	407.8
Post Wash Dry (g)	314.7
Tare Wt. (g)	113.8
Wt.Of Minus #200 =	93.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Brown Clayey Sand w/Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	12/7/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH1-4

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH1-5 Depth (ft): 40'-42'

Unified Soils Classification
SC (Clayey Sand)

Gravel	14%
Sand	57%
Fines	28%

Liquid Limit:	19
Plastic Limit:	4
Plasticity Index:	15

In-Situ Moisture Content	11.6%

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	115.1	115.1	0.0	0%	100%
1"	25	115.1	115.1	0.0	0%	100%
3/4"	18.75	115.1	127.5	12.4	2%	98%
#4	4.75	115.1	186.5	71.4	14%	86%
#10	2.00	115.1	144.7	29.6	19%	81%
#40	0.425	115.1	127.2	12.1	21%	79%
#200	0.075	115.1	411.2	296.1	72%	28%
Pan	0	115.1	282.0	166.9	100%	0%
		Total Weight of Sample (g)		588.5		

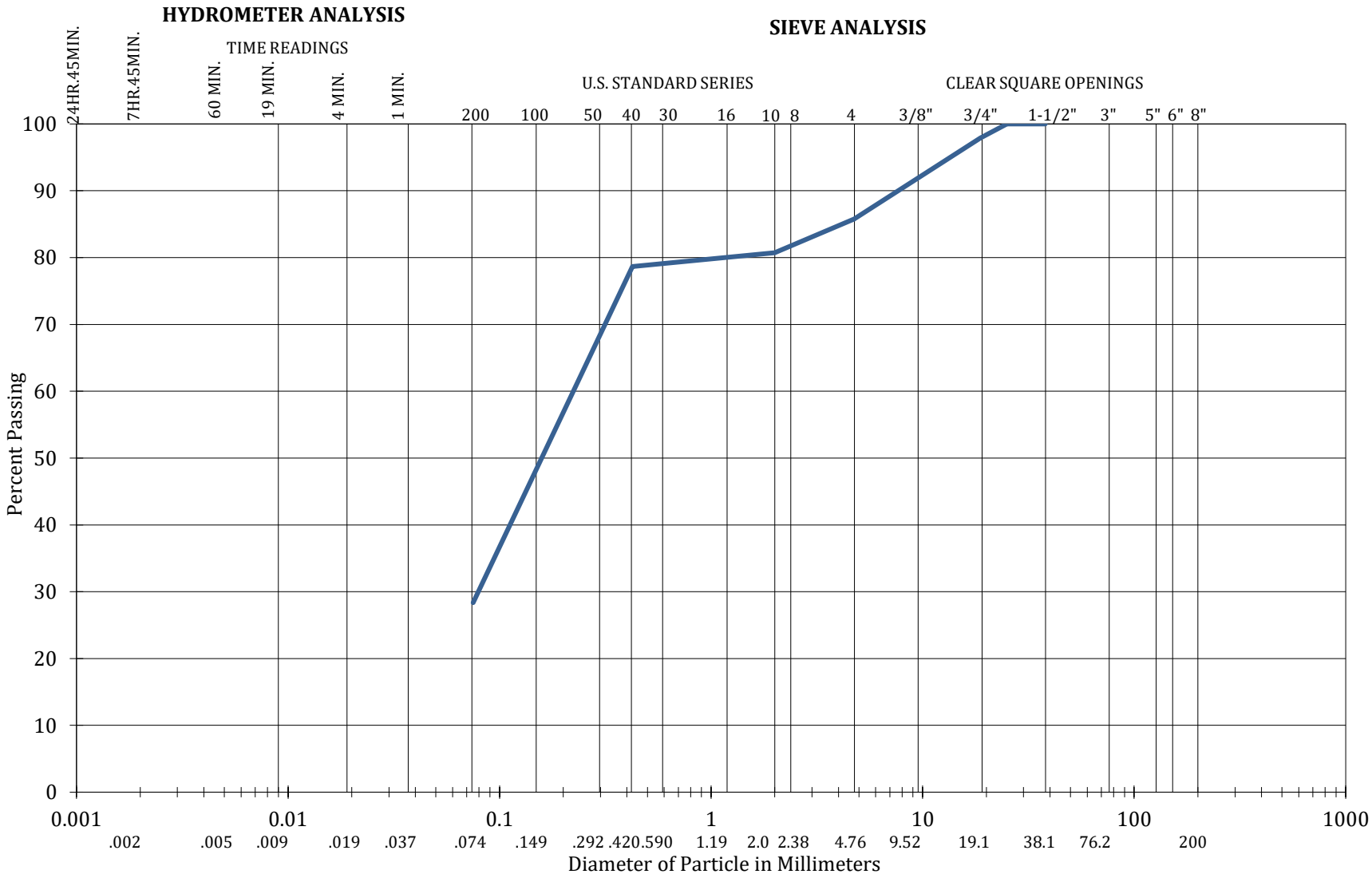
Moisture Content	
Wet Wt + Tare (g)	770.5
Dry Wt. + Tare (g)	702.3
Wt of Water (g)	68.2
Tare Wt. (g)	113.8
Dry Wt. (g)	588.5
Moisture Content	11.6%
Wash	
Wet Wt. + Tare (g)	770.5
Pre Wash Dry (g)	588.5
Post Wash Dry (g)	421.6
Tare Wt. (g)	113.8
Wt.Of Minus #200 =	166.9

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Brown Sandy Clay

Sampled By:	PG
Date:	
Tested By:	AP
Date:	12/7/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH1-5

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH1-6 Depth (ft): 45'-47'

Unified Soils Classification
SC (Clayey Sand)

Gravel	0%
Sand	66%
Fines	34%

Liquid Limit:	30
Plastic Limit:	6
Plasticity Index:	24

In-Situ Moisture Content	19.3%

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.7	110.7	0.0	0%	100%
1"	25	110.7	110.7	0.0	0%	100%
3/4"	18.75	110.7	110.7	0.0	0%	100%
#4	4.75	110.7	110.7	0.0	0%	100%
#10	2.00	110.7	110.7	0.0	0%	100%
#40	0.425	110.7	129.9	19.2	2%	98%
#200	0.075	110.7	622.1	511.4	66%	34%
Pan	0	110.7	382.8	272.1	100%	0%
		Total Weight of Sample (g)		802.7		

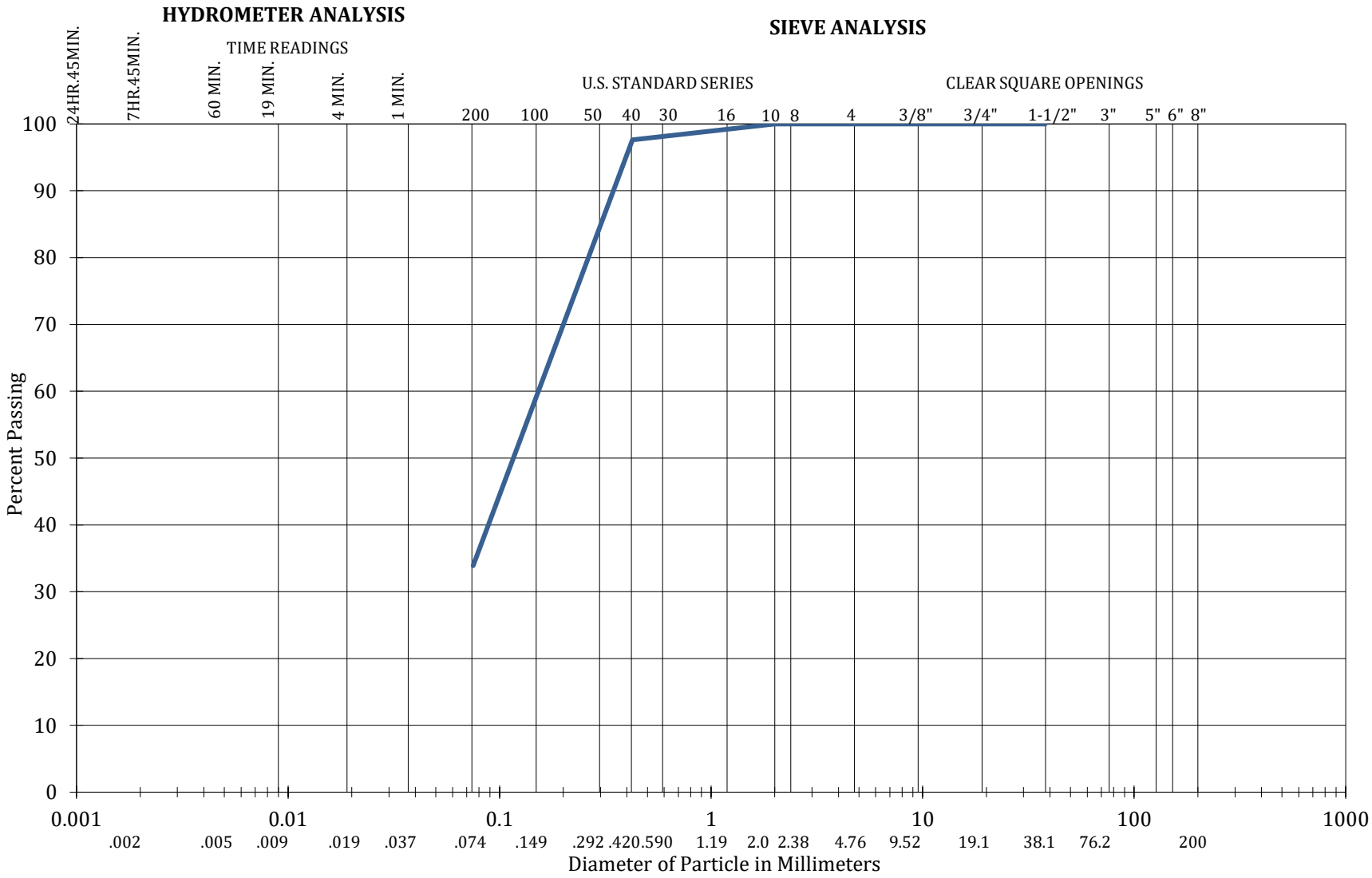
Moisture Content	
Wet Wt + Tare (g)	1067.4
Dry Wt. + Tare (g)	912.6
Wt of Water (g)	154.8
Tare Wt. (g)	109.9
Dry Wt. (g)	802.7
Moisture Content	19.3%
Wash	
Wet Wt. + Tare (g)	1067.4
Pre Wash Dry (g)	802.7
Post Wash Dry (g)	530.6
Tare Wt. (g)	109.9
Wt.Of Minus #200 =	272.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Brown Clayey Sand

Sampled By:	PG
Date:	
Tested By:	AP
Date:	12/7/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH1-6

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH5 @ 23'-28' Depth (ft): 23'-28'

Unified Soils Classification
SC (Clayey Sand)

Gravel	7%
Sand	55%
Fines	38%

Liquid Limit:	29
Plastic Limit:	4
Plasticity Index:	25

In-Situ Moisture Content	N/A

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.1	110.1	0.0	0%	100%
1"	25	110.1	110.1	0.0	0%	100%
3/4"	18.75	110.1	110.1	0.0	0%	100%
#4	4.75	110.1	147.1	37.0	7%	93%
#10	2.00	110.1	134.6	24.5	11%	89%
#40	0.425	110.1	145.4	35.3	18%	82%
#200	0.075	110.1	343.2	233.1	62%	38%
Pan	0	110.1	316.3	206.2	100%	0%
		Total Weight of Sample (g)		536.1		

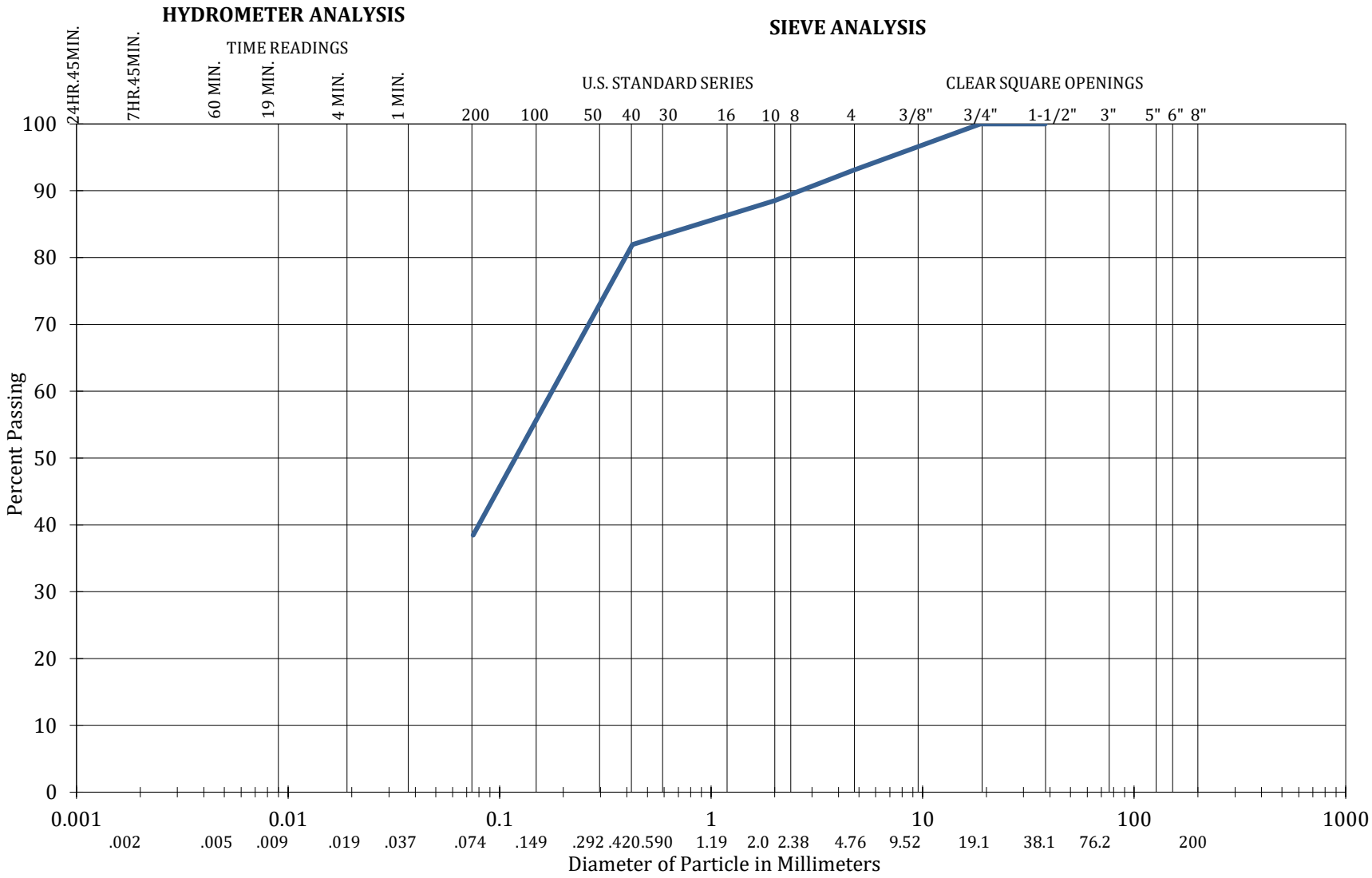
Moisture Content	
Wet Wt + Tare (g)	-
Dry Wt. + Tare (g)	-
Wt of Water (g)	-
Tare Wt. (g)	-
Dry Wt. (g)	-
Moisture Content	-
Wash	
Wet Wt. + Tare (g)	
Pre Wash Dry (g)	536.1
Post Wash Dry (g)	329.9
Tare Wt. (g)	109.9
Wt.Of Minus #200 =	206.2

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Tan Clayey Sand with Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	1/8/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH5 @ 23'-28'

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH5 @ 37'-41' Depth (ft): 37'-41'

Unified Soils Classification
SC (Clayey Sand)

Gravel	7%
Sand	68%
Fines	25%

Liquid Limit:	28
Plastic Limit:	12
Plasticity Index:	16

In-Situ Moisture Content	N/A

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.1	110.1	0.0	0%	100%
1"	25	110.1	110.1	0.0	0%	100%
3/4"	18.75	110.1	110.1	0.0	0%	100%
#4	4.75	110.1	163.8	53.7	7%	93%
#10	2.00	110.1	139.7	29.6	11%	89%
#40	0.425	110.1	196.8	86.7	23%	77%
#200	0.075	110.1	502.4	392.3	75%	25%
Pan	0	110.1	298.2	188.1	100%	0%
		Total Weight of Sample (g)		750.4		

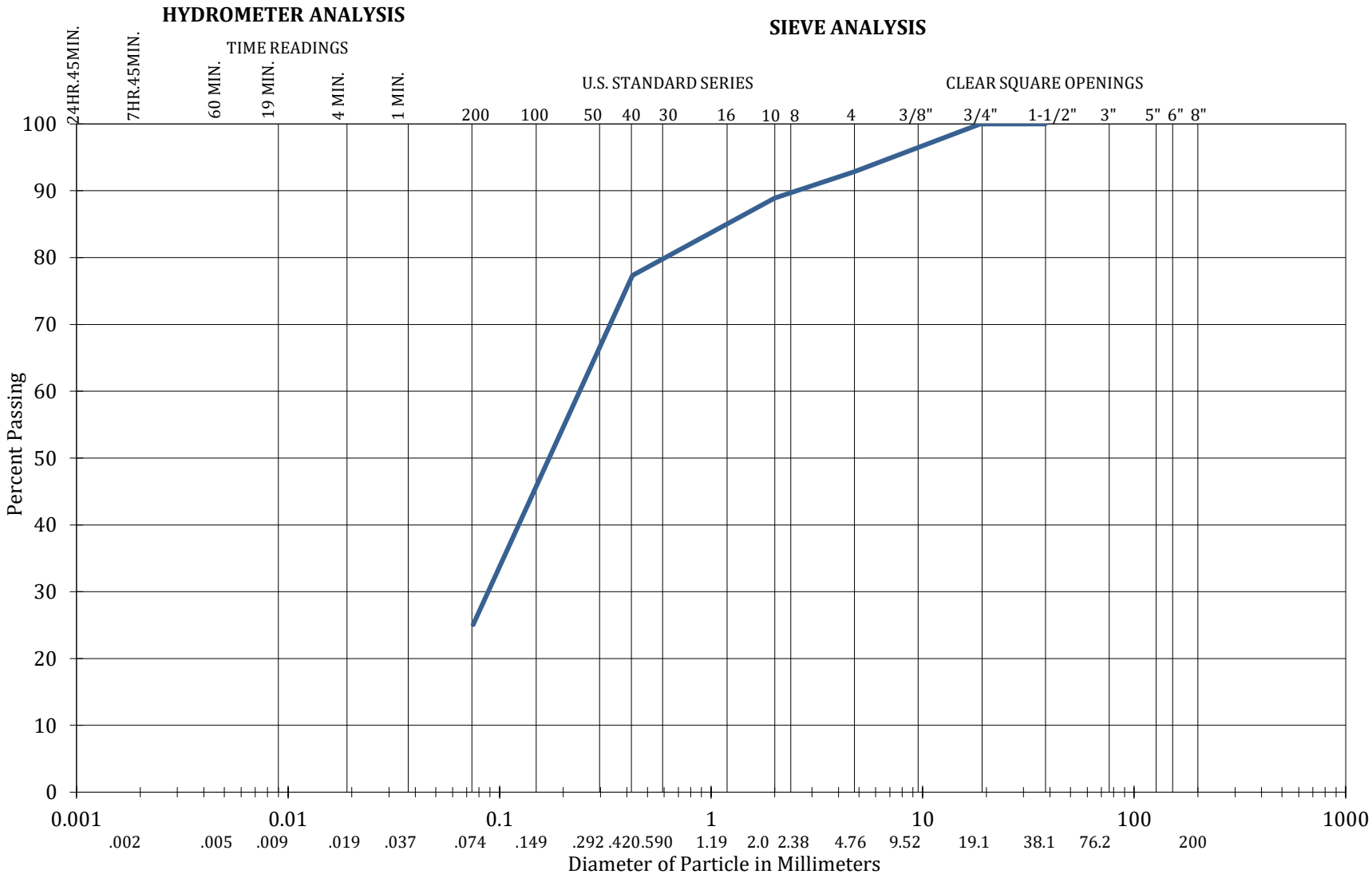
Moisture Content	
Wet Wt + Tare (g)	-
Dry Wt. + Tare (g)	-
Wt of Water (g)	-
Tare Wt. (g)	-
Dry Wt. (g)	-
Moisture Content	-
Wash	
Wet Wt. + Tare (g)	
Pre Wash Dry (g)	750.4
Post Wash Dry (g)	562.3
Tare Wt. (g)	114.3
Wt.Of Minus #200 =	188.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Gray Clayey Sand with Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	1/8/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH5 @ 37'-41'

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH6-4B Depth (ft): 22'-23'

Unified Soils Classification
Lean Clay, CL

Gravel	**0%**
Sand	**12%**
Fines	**87%**

Liquid Limit:	**33**
Plastic Limit:	**15**
Plasticity Index:	**18**

In-Situ Moisture Content	**17.5%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.2	292.2	0.0	0%	100%
1"	25	292.2	292.2	0.0	0%	100%
3/4"	18.75	292.2	292.2	0.0	0%	100%
3/8"	9.5	292.2	292.2	0.0	0%	100%
#4	4.75	292.2	293.3	1.0	0%	100%
#10	2.00	292.2	293.3	1.1	1%	99%
#40	0.425	292.2	304.0	11.8	5%	95%
#100	0.15	292.2	301.3	9.1	9%	91%
#200	0.075	292.2	303.4	11.2	13%	87%
Pan	0	292.2	527.4	235.2	100%	0%
		Total Weight of Sample (g)		**269.3**		

Moisture Content	
Wet Wt + Tare (g)	940.7
Dry Wt. + Tare (g)	825.9
Wt of Water (g)	114.8
Tare Wt. (g)	170.9
Dry Wt. (g)	654.9
Moisture Content	17.5%
Wash	
Wet Wt. + Tare (g)	940.7
Pre Wash Dry (g)	269.3
Post Wash Dry (g)	34.2
Tare Wt. (g)	292.2
Wt.Of Minus #200 =	235.2

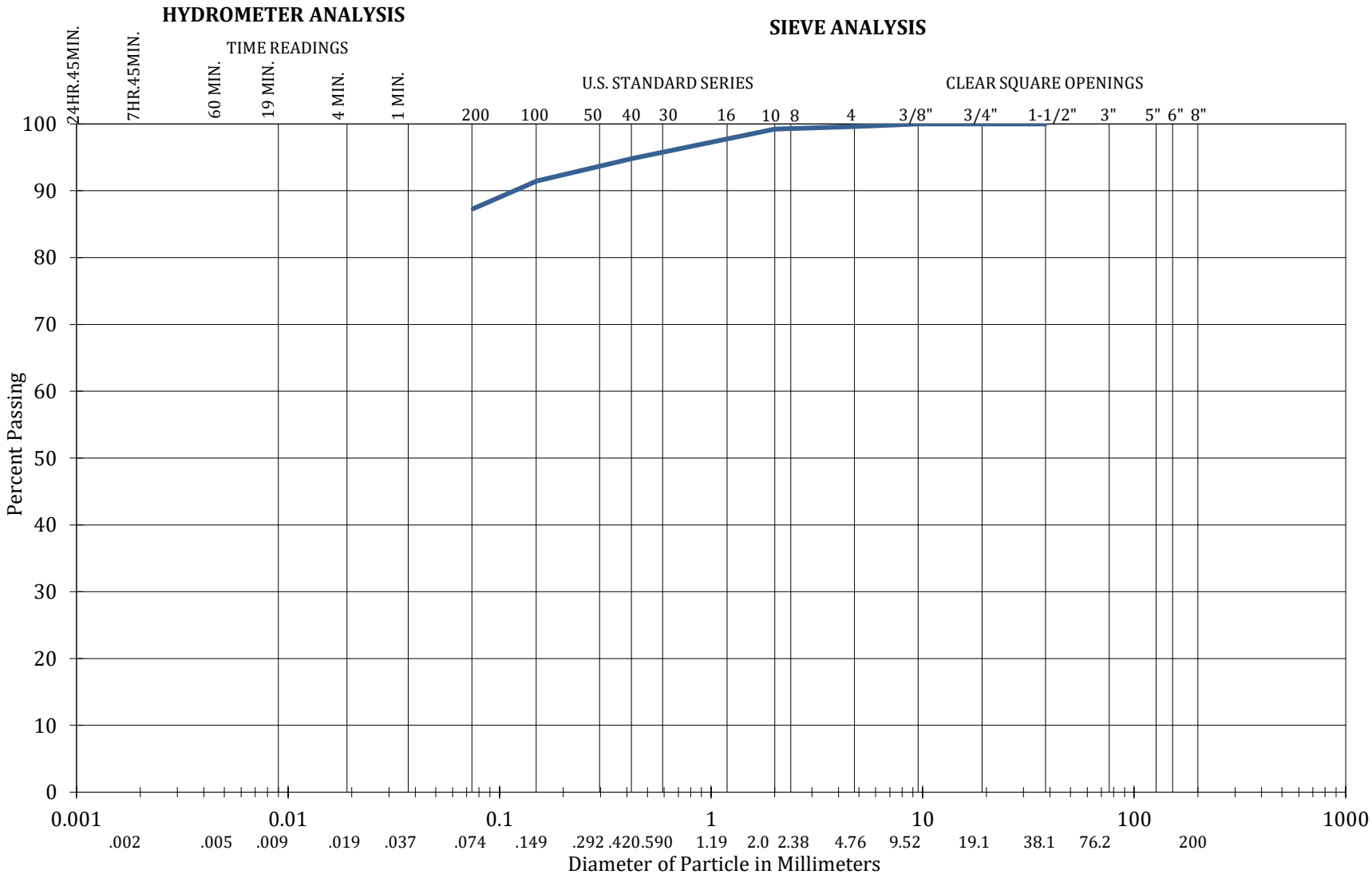
Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Olive Green Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/2/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION SIEVE CHART

WWW.NELSONENGINEERING.NET



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH6-4B

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH6-11 Depth (ft): 52'-53'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**9%**
Sand	**25%**
Fines	**66%**

Liquid Limit:	**25**
Plastic Limit:	**11**
Plasticity Index:	**14**

In-Situ Moisture Content	**16.5%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	171.0	171.0	0.0	0%	100%
1"	25	171.0	171.0	0.0	0%	100%
3/4"	18.75	171.0	171.0	0.0	0%	100%
3/8"	9.5	171.0	205.5	34.5	5%	95%
#4	4.75	171.0	206.3	35.3	9%	91%
#10	2.00	171.0	231.4	60.4	17%	83%
#40	0.425	171.0	226.7	55.7	25%	75%
#100	0.15	171.0	200.2	29.2	29%	71%
#200	0.075	171.0	213.6	42.7	34%	66%
Pan	0	171.0	661.8	490.9	100%	0%
		Total Weight of Sample (g)		**748.7**		

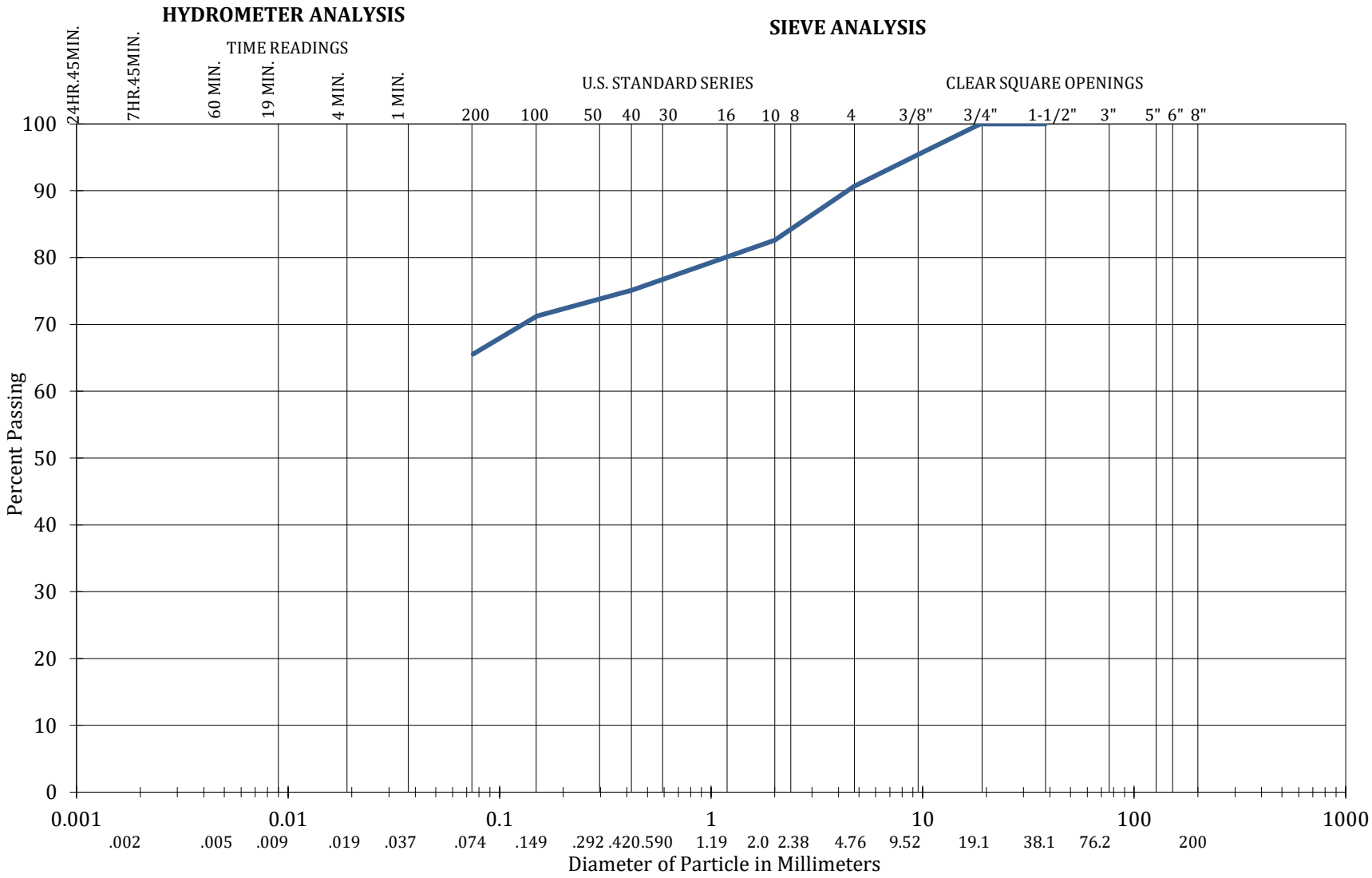
Moisture Content	
Wet Wt + Tare (g)	851.2
Dry Wt. + Tare (g)	754.8
Wt of Water (g)	96.4
Tare Wt. (g)	170.8
Dry Wt. (g)	584.0
Moisture Content	16.5%
Wash	
Wet Wt. + Tare (g)	851.2
Pre Wash Dry (g)	748.7
Post Wash Dry (g)	257.8
Tare Wt. (g)	170.4
Wt.Of Minus #200 =	490.9

Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Sandy Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/7/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH6-11

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH7-4 Depth (ft): 19'-20'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**9%**
Sand	**27%**
Fines	**64%**

Liquid Limit:	**25**
Plastic Limit:	**14**
Plasticity Index:	**11**

In-Situ Moisture Content	**13.2%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.3	292.3	0.0	0%	100%
1"	25	292.3	292.3	0.0	0%	100%
3/4"	18.75	292.3	292.3	0.0	0%	100%
3/8"	9.5	292.3	301.7	9.5	3%	97%
#4	4.75	292.3	307.6	15.4	9%	91%
#10	2.00	292.3	310.8	18.5	16%	84%
#40	0.425	292.3	311.2	18.9	23%	77%
#100	0.15	292.3	306.4	14.1	28%	72%
#200	0.075	292.3	313.4	21.1	36%	64%
Pan	0	292.3	467.0	174.8	100%	0%
		Total Weight of Sample (g)		**272.2**		

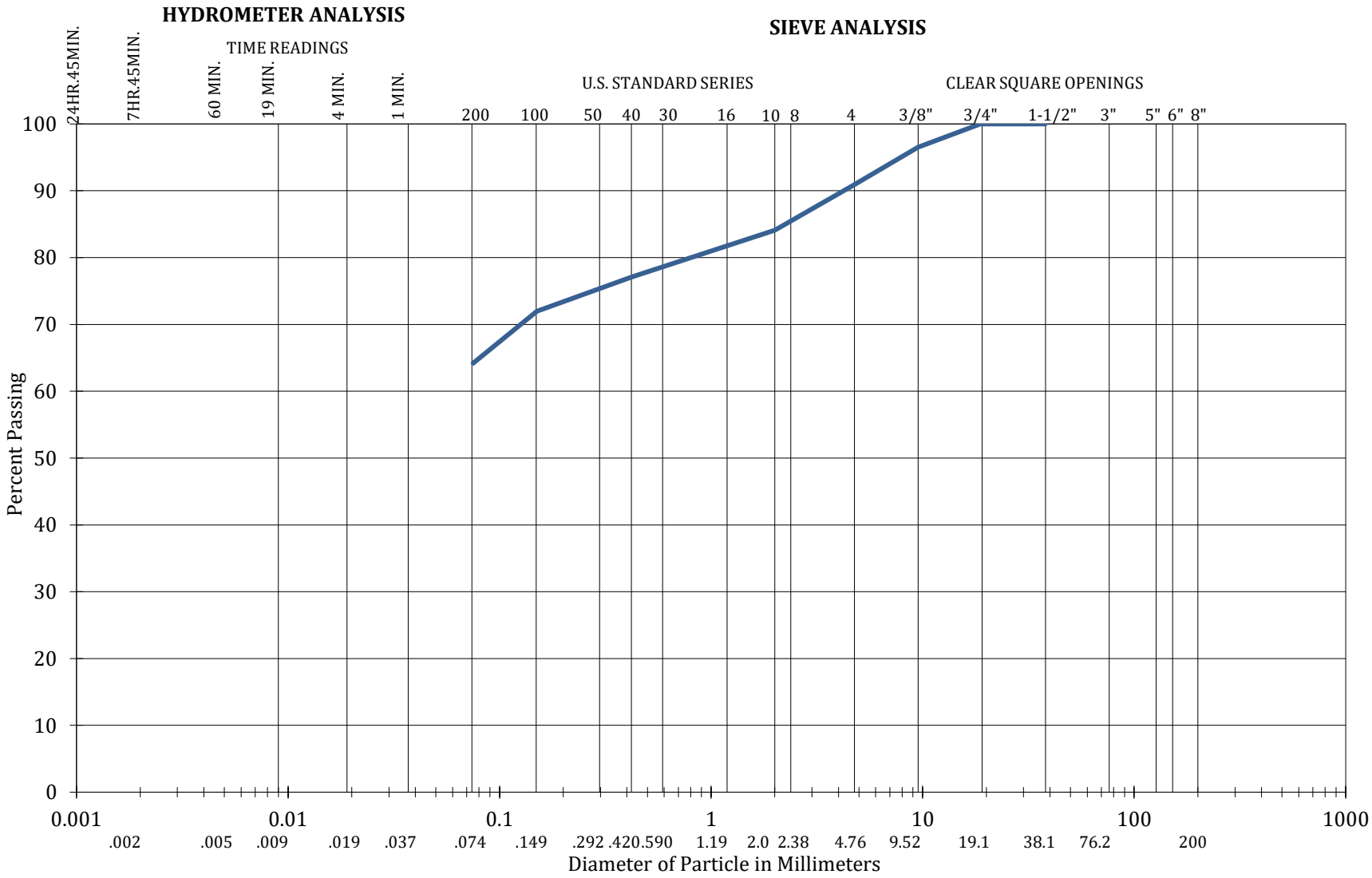
Moisture Content	
Wet Wt + Tare (g)	1193.5
Dry Wt. + Tare (g)	1074.5
Wt of Water (g)	118.9
Tare Wt. (g)	170.9
Dry Wt. (g)	903.7
Moisture Content	13.2%
Wash	
Wet Wt. + Tare (g)	1193.5
Pre Wash Dry (g)	272.2
Post Wash Dry (g)	97.5
Tare Wt. (g)	292.3
Wt.Of Minus #200 =	174.8

Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Sandy Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/2/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH7-4

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH7-6 Depth (ft): 25.5'-26.5'

Unified Soils Classification

Lean Clay with Sand, CL

Gravel	**4%**
Sand	**15%**
Fines	**81%**

Liquid Limit:	**35**
Plastic Limit:	**17**
Plasticity Index:	**18**

In-Situ Moisture Content	**20.6%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.3	292.3	0.0	0%	100%
1"	25	292.3	292.3	0.0	0%	100%
3/4"	18.75	292.3	292.3	0.0	0%	100%
3/8"	9.5	292.3	298.7	6.4	2%	98%
#4	4.75	292.3	297.1	4.8	4%	96%
#10	2.00	292.3	296.7	4.4	5%	95%
#40	0.425	292.3	300.0	7.7	8%	92%
#100	0.15	292.3	302.7	10.4	12%	88%
#200	0.075	292.3	312.9	20.6	19%	81%
Pan	0	292.3	531.7	239.4	100%	0%
		Total Weight of Sample (g)		**293.8**		

Moisture Content	
Wet Wt + Tare (g)	1304.2
Dry Wt. + Tare (g)	1110.3
Wt of Water (g)	193.9
Tare Wt. (g)	170.6
Dry Wt. (g)	939.7
Moisture Content	20.6%
Wash	
Wet Wt. + Tare (g)	1304.2
Pre Wash Dry (g)	293.8
Post Wash Dry (g)	54.4
Tare Wt. (g)	292.3
Wt.Of Minus #200 =	239.4

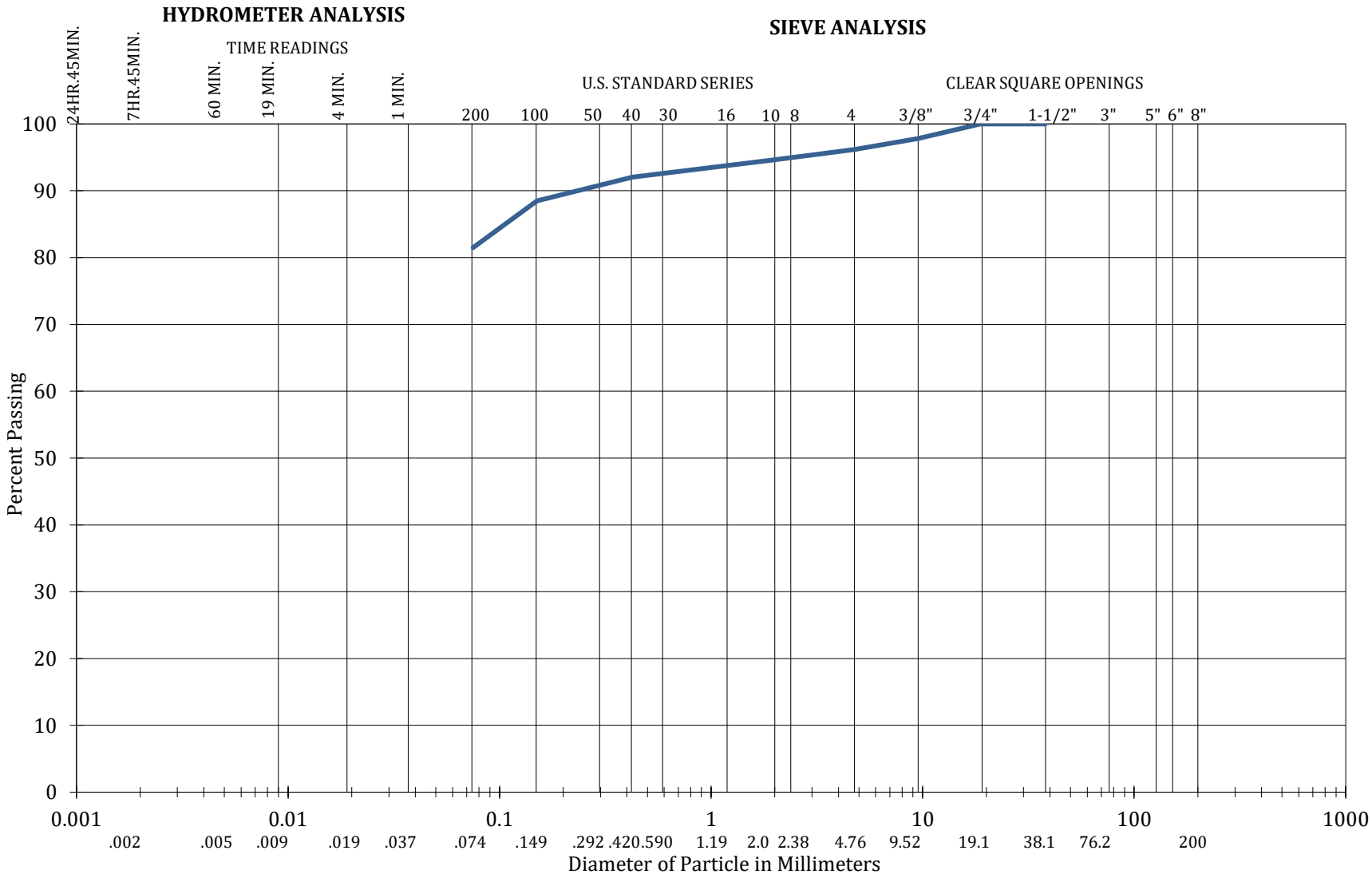
Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/1/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION SIEVE CHART

WWW.NELSONENGINEERING.NET



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH7-6

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH7-13 Depth (ft): 59'-60'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**11%**
Sand	**22%**
Fines	**67%**

Liquid Limit:	**29**
Plastic Limit:	**15**
Plasticity Index:	**14**

In-Situ Moisture Content	**17.9%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.2	292.2	0.0	0%	100%
1"	25	292.2	332.0	39.8	6%	94%
3/4"	18.75	292.2	292.2	0.0	6%	94%
3/8"	9.5	292.2	306.5	14.2	8%	92%
#4	4.75	292.2	311.7	19.4	11%	89%
#10	2.00	292.2	325.3	33.1	16%	84%
#40	0.425	292.2	327.0	34.8	21%	79%
#100	0.15	292.2	319.8	27.6	25%	75%
#200	0.075	292.2	344.3	52.0	33%	67%
Pan	0	292.2	748.9	456.6	100%	0%
		Total Weight of Sample (g)		**677.5**		

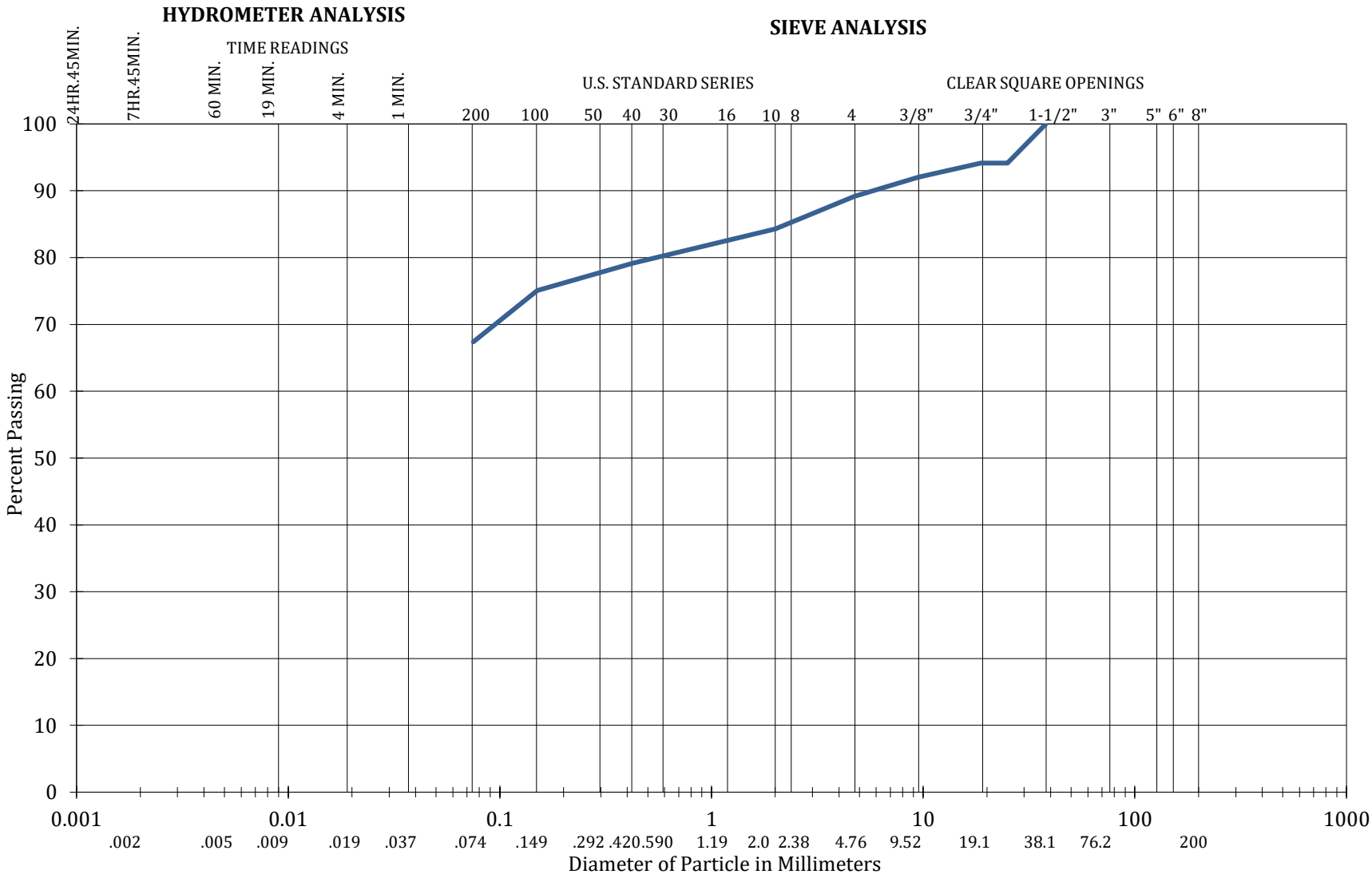
Moisture Content	
Wet Wt + Tare (g)	1000.2
Dry Wt. + Tare (g)	873.8
Wt of Water (g)	126.4
Tare Wt. (g)	169.7
Dry Wt. (g)	704.2
Moisture Content	17.9%
Wash	
Wet Wt. + Tare (g)	1000.2
Pre Wash Dry (g)	677.5
Post Wash Dry (g)	220.9
Tare Wt. (g)	169.7
Wt.Of Minus #200 =	456.6

Project:	Lot 58 Gand View Lodges
Job Number	21-222-02
Visual ID:	Gray Lean Clay with Sand

Sampled By:	AP
Date:	6/25/2021
Tested By:	AE
Date:	7/1/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

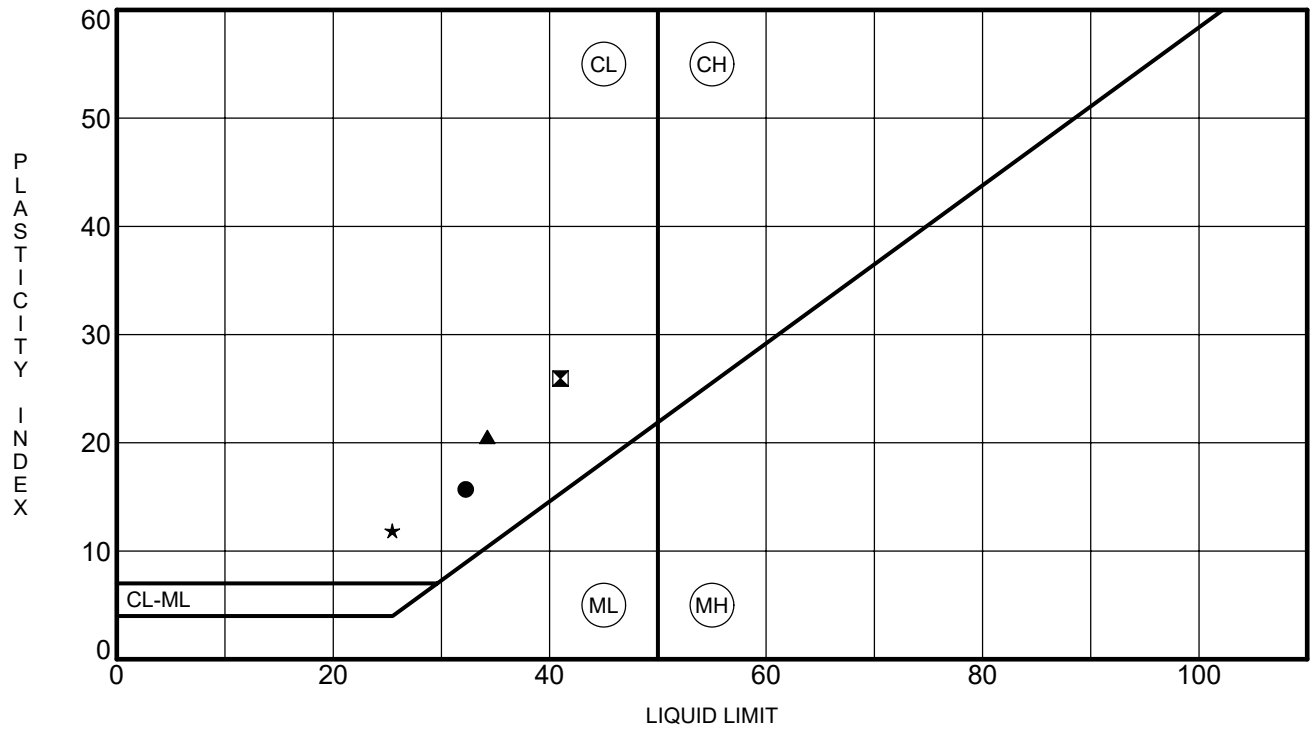
USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH7-13

Lot 58 Grand View Lodges



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**TP-1**	**9.0**	**32**	**17**	**15**		
⊠	**TP-1**	**10.0**	**41**	**15**	**26**		
▲	**TP-1**	**25.0**	**34**	**14**	**20**		
★	**TP-1**	**27.5**	**25**	**14**	**11**		

Womack & Associates, Inc.
P.O. Box 12650
Jackson, WY 83002
Telephone: (307)733-7209
Fax:

ATTERBERG LIMITS' RESULTS

Project: TOJ - Snow King Water Tank

Location: Jackson, Wyoming

Number:

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX D

Soil-Engineering Parameters

Engineering parameters for site soils were evaluated based on a variety of methods, including:

- direct laboratory testing (shear strength and consolidation),
- correlations with index tests,
- empirical relationships between SPT N-values and shear strength, and
- visual classification and empirical estimates.

Due to the chaotic and random nature of the soils (i.e., mixture of fine-grained and coarse-grained soils), collecting relatively undisturbed shelby tube samples of fine-grained soil layers during the drilling effort to perform shear tests and consolidation tests on was difficult. Therefore, very limited soil parameters for soil unit weight, consolidation values, and shear strength values were directly determined from their respective tests. Most of the samples that underwent lab testing were disturbed samples collected during SPT sampling and sonic drilling, of which their results were used to estimate the soil parameters based on correlations. Jorgensen Geotechnical (JG) was able to submit two relatively undisturbed Shelby tube samples to undergo consolidation testing, while the 2021 Nelson Engineering Report presented shear testing results from five relatively undisturbed Shelby tube samples, which were reviewed.

A discussion regarding the selection of soils parameters is found below.

Soil Unit Weight

Two consolidation tests were performed which produced dry unit weights, while five shear test results presented in the Nelson Engineering report produced dry unit weights. These direct unit weight measurements, SPT blow counts, and observations made in the open test pits were used to estimate the in-situ unit weight of the soils. Estimated unit weights are presented below in Table D-1.

Table D-1: Estimated Soil Unit Weight Values

Soil Layer	Unit Weight (Pounds per cubic foot)
CL – Lean Clay	115
SC – Clayey Sand	120
GC – Clayey Gravel	125
SC – Weathered Bedrock	140

Consolidation Parameters

Two consolidation tests were performed on samples collected during the drilling effort performed by JG. No consolidation tests were presented in the Nelson Engineering or Womack and Associates, reports. Coefficients of consolidation, C_c, were calculated based on the direct consolidated test results, as well as methods recommended by Skempton (1944), Nagaraj and Murthy (1985), Wroth and Wood (1978), and Kulhawy and Mayne (1990). These calculation methods use index properties such as the Liquid Limit and the Plasticity Index to estimate the coefficients of consolidation. The results presented below are the average of all C_c, values calculated from the direct results and correlation calculations.

Table D-2: Estimated Coefficients of Consolidation

Soil Layer	Coefficient of Consolidation
CL – Clay	0.20
SC – Clayey Sand	0.18
GC – Clayey Gravel	0.16

Strength Parameters

Internal Friction Angle (phi)

Strength parameters used in the slope stability model were selected by examining direct shear results, calculations based on SPT blow count values, as recommended by Hatanaka and Uchida (1996) and Schmertmann (1975), and calculated based on index properties as recommended by Duncan (1989). Minimum, maximum, and average internal friction angles (phi) are summarized in the table below.

Table D-3: Estimated Internal Friction Values (Degrees)

	Minimum	Maximum	Average	Standard Deviation	Selected phi[1]
CL – Clay	30.0	56.3	37.3	7.2	35
SC – Clayey Sand	27.5	54.2	37.9	9.4	37
GC – Clayey Gravel	29.0	63.3	47.5	9.7	40
SC – Weathered Bedrock	--	--	--	--	60

1. Dashes indicate a refusal condition was met during SPT samples, therefore phi value was estimated

As summarized in the table above, the minimum and maximum calculated internal friction angles for a single soil layer sometimes varied by over 20-degrees. Therefore, internal friction angles were selected by reviewing all calculated values, as well as reviewing suggested values in Chapter 9 of the Pit Slope Manual (1982).

Soils that have undergone movement are assumed to be in a residual strength state; i.e., weaker than the strength of the soils prior to the movement. Though the published geologic maps and our observations in the field classified the origin of the soils as landslide debris, no direct shear zones were observed and no signs of previous shearing (i.e., slickensides) were observed. Additionally, loess, typically formed from windblown glacial silt, was observed overlying the landslide deposit, therefore it is assumed the landslide occurred prior to or during the Pinedale Glaciation approximately 10 to 30 thousand years ago. If the soils observed in the boreholes and test pits were once in a residual state following failure, it is assumed since their mobilization in the failure event, they have been naturally consolidating and therefore regaining strength. Therefore, residual shear strengths were not used for the slope stability model and peak shear strengths were used.

Cohesion

Cohesion was added to the material models in the slope stability model to avoid selecting slip surfaces representing the “infinite slope” solution. Cohesion values used in the slope stability models can be found in Appendix F.

Compression Index (C_c) Calculation Spreadsheet

							Skempton	*Nagaraj*	*Wroth*	*Kulhawy*				
Project	**BH**	**Depth**	**LL**	**PL**	**PI**	**Consol Results**	**Compression Index (Cc)**				**Average**	**Median**	**Std Dev**	**Classification**
Bear Development - Snow King Loop Lots 53 and 58	JG-10	12.5-14.0	39	15	24	0.17	*0.26*	*0.24*	*0.32*	*0.32*	0.29	0.29	0.04	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-10	17.5-19.0	32	14	18	0.13	*0.20*	*0.20*	*0.24*	*0.24*	0.22	0.22	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	18-19	31	16	15		*0.19*	*0.19*	*0.20*	*0.20*	0.20	0.20	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	27-29	28	16	12		*0.16*	*0.18*	*0.16*	*0.16*	0.17	0.16	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	54.5-57	33	15	18		*0.21*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	67-69	26	16	10		*0.14*	*0.16*	*0.14*	*0.14*	0.14	0.14	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	72.5-75	38	17	21		*0.25*	*0.24*	*0.28*	*0.28*	0.26	0.27	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	7-8.5	20	15	5		*0.09*	*0.13*	*0.07*	*0.07*	0.09	0.08	0.03	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-02	14.5-16	31	15	16		*0.19*	*0.19*	*0.22*	*0.22*	0.20	0.21	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	22-25	29	15	14		*0.17*	*0.18*	*0.19*	*0.19*	0.18	0.19	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	32-35	21	16	5		*0.10*	*0.13*	*0.07*	*0.07*	0.09	0.08	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	38.5-40	29	17	12		*0.17*	*0.18*	*0.16*	*0.16*	0.17	0.17	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	52-55	16	4	12		*0.05*	*0.10*	*0.16*	*0.16*	0.12	0.13	0.05	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	60-62	37	23	14		*0.24*	*0.23*	*0.19*	*0.19*	0.21	0.21	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	64.5-67	31	17	14		*0.19*	*0.19*	*0.19*	*0.19*	0.19	0.19	0.00	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-02	69.5-72	21	16	5		*0.10*	*0.13*	*0.07*	*0.07*	0.09	0.08	0.03	SC
Bear Development - Snow King Loop Lots 53 and 58	JG-03	4.5-7	33	14	19		*0.21*	*0.21*	*0.26*	*0.26*	0.23	0.23	0.03	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-03	14.5-17	30	15	15		*0.18*	*0.19*	*0.20*	*0.20*	0.19	0.20	0.01	SC
Bear Development - Snow King Loop Lots 53 and 58	JG-03	22-25	35	15	20		*0.23*	*0.22*	*0.27*	*0.27*	0.25	0.25	0.03	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-03	30-33	29	15	14		*0.17*	*0.18*	*0.19*	*0.19*	0.18	0.19	0.01	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-04	7-8.5	34	16	18		*0.22*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-04	14.5-17	19	14	5		*0.08*	*0.12*	*0.07*	*0.07*	0.08	0.07	0.02	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-04	22-25	31	17	14		*0.19*	*0.19*	*0.19*	*0.19*	0.19	0.19	0.00	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-04	30-33	33	15	18		*0.21*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-10	7.5-9	25	16	9		*0.14*	*0.16*	*0.12*	*0.12*	0.13	0.13	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-10	15-17	38	21	17		*0.25*	*0.24*	*0.23*	*0.23*	0.24	0.23	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-11	7.5-9	22	15	7		*0.11*	*0.14*	*0.09*	*0.09*	0.11	0.10	0.02	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-12	5-6.5	27	15	12		*0.15*	*0.17*	*0.16*	*0.16*	0.16	0.16	0.01	GC
Bear Development - Snow King Loop Lots 53 and 58	JG-12	10-11.5	27	17	10		*0.15*	*0.17*	*0.14*	*0.14*	0.15	0.14	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-12	20-21.5	26	14	12		*0.14*	*0.16*	*0.16*	*0.16*	0.16	0.16	0.01	SC
Nelson 53&58	BH1	29.75	27	12	15		*0.15*	*0.17*	*0.20*	*0.20*	0.18	0.19	0.02	SC
Nelson 53&58	BH1	40	19	4	15		*0.08*	*0.12*	*0.20*	*0.20*	0.15	0.16	0.06	SC
Nelson 53&58	BH1	45	30	6	24		*0.18*	*0.19*	*0.32*	*0.32*	0.25	0.26	0.08	SC
Nelson 53&58	BH5	23	29	4	25		*0.17*	*0.18*	*0.34*	*0.34*	0.26	0.26	0.09	SC
Nelson 53&58	BH5	37	18	2	16		*0.07*	*0.11*	*0.22*	*0.22*	0.15	0.16	0.07	SC
Nelson 53&58	BH6	22	33	15	18		*0.21*	*0.21*	*0.24*	*0.24*	0.23	0.23	0.02	CL
Nelson 53&58	BH6	52	25	11	14		*0.14*	*0.16*	*0.19*	*0.19*	0.17	0.17	0.03	CL
Nelson 53&58	BH7	19	25	14	11		*0.14*	*0.16*	*0.15*	*0.15*	0.15	0.15	0.01	CL
Nelson 53&58	BH7	25.5	35	17	18		*0.23*	*0.22*	*0.24*	*0.24*	0.23	0.23	0.01	CL
Nelson 53&58	BH7	59	29	15	14		*0.17*	*0.18*	*0.19*	*0.19*	0.18	0.19	0.01	CL
Womack Water Tank	TP-1	9	32	17	15		*0.20*	*0.20*	*0.20*	*0.20*	0.20	0.20	0.00	CL
Womack Water Tank	TP-1	10	41	15	26		*0.28*	*0.26*	*0.35*	*0.35*	0.31	0.32	0.05	CL
Womack Water Tank	TP-1	25	34	14	20		*0.22*	*0.21*	*0.27*	*0.27*	0.24	0.24	0.03	CL
Womack Water Tank	TP-1	27.5	25	14	11		*0.14*	*0.16*	*0.15*	*0.15*	0.15	0.15	0.01	CL

Phi Calculation Spreadsheet

Shear Strength Correlation Summary - Peak Friction Angle

					Hatanaka and Uchida (1996)	*Schmertmann (1975)*						Duncan, 1989							
Project	**BH**	**Sample**	**Depth (ft)**	**(N1)60**	**Peak Phi (N160)**	**Peak Phi (N160)**	**Phi (Direct Shear)**	**LL**	**PI**	**Overburden**	**% Clay**	**Peak Phi**	**Classification**	**Unit Weight (pcf)**	**Cohesion**	**Min**	**Max**	**Average**	**Std Dev**
Bear Dev - 53&58	**JG-01**	**D-8**	18	--	--	--		31	15			34	CL	115	0	24.0	26.0	25.0	1.4
Bear Dev - 53&58	**JG-01**	**D-12**	27	38	47	53		28	12			35	CL	115	0				
Bear Dev - 53&58	**JG-01**	**D-17**	37	94	63	60				4300	7		GC	120	0	31.0	32.0	31.5	0.7
Bear Dev - 53&58	**JG-01**	**D-26**	47	84	61	59							GC	120	0				
Bear Dev - 53&58	**JG-01**	**D-27**	54.5	--	-	-		33	18			32	CL	115	0				
Bear Dev - 53&58	**JG-01**	**D-31**	67	56	53	54							CL	115	0	21.0	27.0	23.7	3.1
Bear Dev - 53&58	**JG-01**	**D-32**	67	--	-	-		26	10			36	CL	115	0				
Bear Dev - 53&58	**JG-01**	**D-36**	72.5	--	-	-		38	21			31	CL	115	0				
Bear Dev - 53&58	**JG-01**	**D-39**	80	35	47	48							GC	120	0				
Bear Dev - 53&58	**JG-02**	**D4**	7	-	-	-		20	5			37	GC	120	0	31.0	31.0	31.0	
Bear Dev - 53&58	**JG-02**	**D8**	14.5	-	-	-		31	16			32	CL	115	0				
Bear Dev - 53&58	**JG-02**	**D9**	17	6	31	31							CL	110	0				
Bear Dev - 53&58	**JG-02**	**D11**	22	-	-	-		29	14			30	CL	110	0	23.0	31.0	26.0	3.6
Bear Dev - 53&58	**JG-02**	**D13**	27	24	42	47							CL	110	0				
Bear Dev - 53&58	**JG-02**	**D16**	32	-	-	-		21	5			37	CL	110	0				
Bear Dev - 53&58	**JG-02**	**D18**	37	24	42	46		29	12			35	CL	110	0				
Bear Dev - 53&58	**JG-02**	**D22**	44.5	-	-	-				5500	8		GC	125	0	31.0	32.0	31.5	0.7
Bear Dev - 53&58	**JG-02**	**D23**	47	45	50	52							GC	125	0				
Bear Dev - 53&58	**JG-02**	**D26**	52	-	-	-		16	12			35	CL	110	0				
Bear Dev - 53&58	**JG-02**	**D28**	57	45	50	52							CL	125	0				
Bear Dev - 53&58	**JG-02**	**D30**	60	-	-	-		37	14			30	CL	125	0	23.0	26.0	24.0	1.7
Bear Dev - 53&58	**JG-02**	**D32**	64.5	-	-	-		31	14			30	CL	125	0				
Bear Dev - 53&58	**JG-02**	**D33**	67	66	56	56							CL	125	0				
Bear Dev - 53&58	**JG-02**	**D35**	69.5	-	-	-		21	5			37	SC	125	0	31.0	31.0	31.0	
Bear Dev - 53&58	**JG-02**	**D40**	80	59	54	54							SC	125	0				
Bear Dev - 53&58	**JG-03**	**D3**	4.5	-	-	-		33	19				CL	110	0	21.0	21.0	21.0	
Bear Dev - 53&58	**JG-03**	**D4**	7	7	31	33							CL	110	0				
Bear Dev - 53&58	**JG-03**	**D8**	14.5	-	-	-		30	15			34	SC	120	0	24.0	24.0	24.0	
Bear Dev - 53&58	**JG-03**	**D9**	17	33	46	51							SC	120	0				
Bear Dev - 53&58	**JG-03**	**D12**	22	-	-	-		35	20			31	GC	120	0				
Bear Dev - 53&58	**JG-03**	**D14**	27	22	41	45							GC	120	0	23.0	21.0	22.0	1.4
Bear Dev - 53&58	**JG-03**	**D19**	35	17	38	40		29	14			30	GC	120	0				
Bear Dev - 53&58	**JG-04**	**D4**	7	8	33	35		34	18			32	CL	110	0	23.0	23.0	23.0	
Bear Dev - 53&58	**JG-04**	**D8**	14.5	-	-	-		19	5			37	GC	125	0	31.0	31.0	31.0	
Bear Dev - 53&58	**JG-04**	**D9**	17	49	51	55							GC	125	0				
Bear Dev - 53&58	**JG-04**	**D12**	2	-	-	-		31	14			30	CL	115	0	23.0	23.0	23.0	
Bear Dev - 53&58	**JG-04**	**D14**	27	21	40	44							CL	115	0				
Bear Dev - 53&58	**JG-04**	**D17**	30	-	-	-		33	18			32	GC	125	0	23.0	23.0	23.0	
Bear Dev - 53&58	**JG-04**	**D19**	35	83	61	59							GC	125	0				
Bear Dev - 53&58	**JG-10**	**D-1**	2.5	4	29	28		25	9			36	SC	110	0	26.0	26.0	26.0	
Bear Dev - 53&58	**JG-10**	**D-2**	5	11	35	38							CL	110	0				
Bear Dev - 53&58	**JG-10**	**D-3**	7.5	9	33	34							CL	110	0				
Bear Dev - 53&58	**JG-10**	**D-4**	10	18	39	43							CL	115	0				
Bear Dev - 53&58	**JG-10**	**U1**	12.5	-	-	-		39	24			31	CL	110	0	18.0	24.5	21.8	2.4
Bear Dev - 53&58	**JG-10**	**D-5**	15	11	35	37		38	17	4200	36	33	CL	110	0				
Bear Dev - 53&58	**JG-10**	**U2**	17.5	-	-	-		32	18			32	CL	110	0				
Bear Dev - 53&58	**JG-10**	**D-6**	20	14	37	38							CL	110	0				
Bear Dev - 53&58	**JG-11**	**D-1**	2.5	16	43	49							GC	115	0				
Bear Dev - 53&58	**JG-11**	**D-2**	5	50	52	56							GC	125	0				
Bear Dev - 53&58	**JG-11**	**D-3**	7.5	20	40	45		22	7			37	GC	115	0				
Bear Dev - 53&58	**JG-11**	**D-4**	10	16	38	41				3600	17		GC	115	0	31.0	27.0	29.7	2.3
Bear Dev - 53&58	**JG-11**	**D-5**	12.5	33	46	50							GC	125	0				
Bear Dev - 53&58	**JG-11**	**D-6**	15	31	45	49							GC	120	0				
Bear Dev - 53&58	**JG-11**	**D-7**	17.5	79	60	59							GC	125	0				
Bear Dev - 53&58	**JG-11**	**D-8**	19	77	59	59							GC	125	0				
Bear Dev - 53&58	**JG-12**	**D-1**	2.5	5	30	29							GC	110	0				
Bear Dev - 53&58	**JG-12**	**D-2**	5	55	53	57		27	12			35	GC	125	0	26.0	26.0	26.0	
Bear Dev - 53&58	**JG-12**	**D-3**	7.5	78	59	59							GC	125	0				
Bear Dev - 53&58	**JG-12**	**D-4**	10	15	37	40		27	10			36	CL	115	0	27.0	27.0	27.0	
Bear Dev - 53&58	**JG-12**	**D-5**	12.5	17	39	42							CL	115	0				
Bear Dev - 53&58	**JG-12**	**D-6**	15	41	49	53							GC	120	0				
Bear Dev - 53&58	**JG-12**	**D-7**	17.5	45	50	53							GC	120	0	26.0	26.0	26.0	
Bear Dev - 53&58	**JG-12**	**D-8**	20	20	40	43		26	12			35	GC	120	0				
Nelson 53&58	**BH1**	4	29.75	10	32			27	15			34	SC	115					
Nelson 53&58	**BH1**	5	40	30	38			19	15			34	SC	125					
Nelson 53&58	**BH1**	6	45	16	33			30	24			31	SC	120		20	32	26.8333	
Nelson 53&58	**BH5**	-	23	-	-			29	25			30	SC	120					
Nelson 53&58	**BH5**	-	37	-	-			18	16			32	SC	120		20	32	26.5	
Nelson 53&58	**BH6**	4	22	15	32			33	18			32	CL	108.3					
Nelson 53&58	**BH6**	11	52	-	-		37	25	14			30	CL	115		22	30	26.5	
Nelson 53&58	**BH7**	4	19	-	-		41.9	25	11			36	CL	100					
Nelson 53&58	**BH7**	6	25.5	21	35			35	18			32	CL	100.8					
Nelson 53&58	**BH7**	13	59	21	35			29	14			30	CL	113.8		23	31	27.3333	
Womack Water Tank	**TP-1**		9					32	15			34	CL	110					
Womack Water Tank	**TP-1**		10					41	26			30	CL	110					
Womack Water Tank	**TP-1**		25					34	20			31	CL	110					
Womack Water Tank	**TP-1**		27.5					25	11			36	CL	110		20	30	25.625	

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX E

Calculations

Settlement Methodology

The settlement calculations assume the soil layer of concern comprises 100% compressible soil by volume. Though, some soils at the site only partially comprise the fine-grained soils by mass, as described in the borehole logs. Based on lab testing and visual classification, the clayey sand soils contain a maximum of 45% fines by mass. To convert the assumed mass to volume, we have used a scaling factor of 1.25, resulting in an assumed percent fines by volume of 55%.

Because the settlement is anticipated to only occur in the potentially compressible, fine-grained soils, the total settlement calculation was reduced by 55%.

Lateral Pressures Methodology

Seismic coefficients were calculated based on recommendation from NCHRP Report 611 “Seismic Analysis and Desing of Retaining Walls, Buried Structures, Slopes and Embankments” and FHWA NHI Course No 130094 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, as described below and illustrated in the equations. For our calculations, we used an average wall height of 30’ to account for the retaining wall at the site, and since the retaining wall is considered a brittle system with negligible allowable displacement, we used an r value of 1 (FHWA, 2011). In summary, the seismic coefficient (ks) is determined by applying a scaling factor (α) to the modified peak ground acceleration (PGAm).

Settlement Calculation Spreadsheet

Project: Bear Development
Project Number: 23072
Engineer: HC
Soil Sample: Average Cc value CL
Scenario: Direclty on poor soil

Settlement analysis of in-situ soil (only analyzing a maximum of 2B worth of soil below footing)

Key:

Manual Input
Calculation

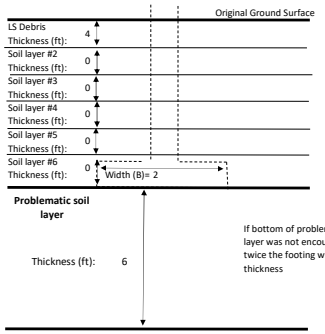
Step 1:

In-Situ Soil Properties of Problematic Soil			
	Soil Description: Lean Clay AF		
	Source of Soil Properties: SK Lab tests		
	Dry unit Weight:	15	pcf
	Moisture Content:	10.0%	
	Moist unit weight:	16.5	pcf
(Avergae 0.4 to 0.7)	Initial Void Ratio (e_0):	0.427	Vv/Vs
(Average 0.2 to 0.5)	Coefficient of Consol. (C_c):	0.2	

Step 2:

Original Overburden Pressure on Soil Element Identified in Step #1			
Soil Layer #1	Unit Weight	135	**PCF**
LS Debris	Thickness	4	**Ft.**
Soil Layer #2	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #3	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #4	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #5	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #6	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Problematic Soil Layer	Unit Weight	125	**PCF**
Below Footing	Thickess (H_0)	6	**Ft.**
Total Original Overburdern Pressure on Soil Element:		915	**PSF**

Pre-construction status. Footing is superimposed.



If bottom of problematic soil layer was not encountered, use twice the footing width for thickness

Step 3:

Foundation Characteristics		
Footing load:	3,000	psf
Estimated Footing Width (B):	2	ft
Footing Depth (D_f):	3	ft
Applied footing load applied to soil element (assuming 2V:1H)	1200	PSF

Step 4:

Backfill Soil Properties		
Dry Unit Weight:	120	pcf
Moisture Content:	12.0%	
Moist Unit Weight:	134.4	pcf
Backfill Depth:	3	ft

Step 5:

Settlement Calculation at Soil Element Identified in Step #2		
Thickness of Problematic Soil Layer (H_0):	6	ft
Depth to soil element below **OG**:	7	ft
Depth to soil element below footing:	3	ft
Original Overburden (σv_0):	915.0	psf
Applied foundation load at soil element :	1200.0	psf
Post Construction pressure at soil element (σv):	1978.2	
Change in presure at soils element:	1063	psf
$(\sigma v_f)/(\sigma v_0)$	2.162	
$Log[(\sigma v_f)/(\sigma v_0)]$	0.335	
$1+e_0$	1.427	
$H_0/(1+e_0)$	4.205	
Inches per foot:	12	
Settlement:	3.38	inches

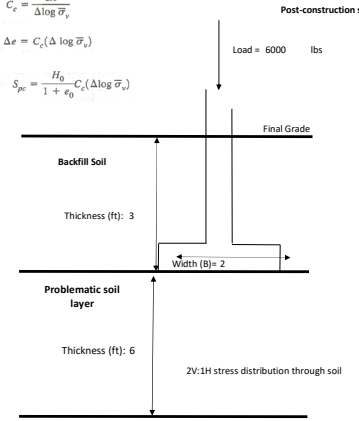
Settlement: $\text{Settlement} = S_{pc} = H_0\left(\frac{\Delta e}{1+e_0}\right)$

Compression Index: $C_c = \frac{\Delta e}{\Delta \log \overline{\sigma}_v}$

Rearranging gives: $\Delta e = C_c(\Delta \log \overline{\sigma}_v)$

Subistituting in gives: $S_{pc} = \frac{H_0}{1+e_0} C_c(\Delta \log \overline{\sigma}_v)$

Post-construction status



This formula is only valid for footings PLACED DIRECTLY ON PROBLEMATIC SOIL LAYER

$$S_{pc} = \frac{H_0}{1+e_0} C_c(\log \overline{\sigma}_{v_f} - \log \overline{\sigma}_{v_o}) = \frac{H_0}{1+e_0}(C_c)\log(\overline{\sigma}_{v_f}/\overline{\sigma}_{v_o})$$

Settlement Calculation Spreadsheet

Project: Bear Development
Project Number: 23072
Engineer: HC
Soil Sample: Average Cc value SC
Scenario: Direclty on poor soil

Settlement analysis of in-situ soil (only analyzing a maximum of 2B worth of soil below footing)

Key:

Manual Input
Calculation

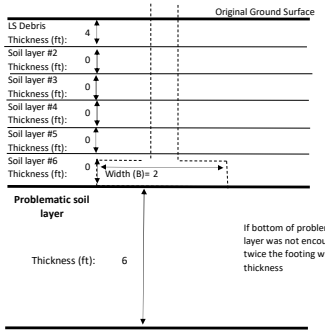
Step 1:

In-Situ Soil Properties of Problematic Soil			
	Soil Description: Lean Clay AF		
	Source of Soil Properties: SK Lab tests		
	Dry unit Weight:	15	pcf
	Moisture Content:	10.0%	
	Moist unit weight:	16.5	pcf
(Avergae 0.4 to 0.7)	Initial Void Ratio (e_0):	0.427	Vv/Vs
(Average 0.2 to 0.5)	Coefficient of Consol. (C_c):	0.18	

Step 2:

Original Overburden Pressure on Soil Element Identified in Step #1			
Soil Layer #1	Unit Weight	135	**PCF**
LS Debris	Thickness	4	**Ft.**
Soil Layer #2	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #3	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #4	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #5	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #6	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Problematic Soil Layer	Unit Weight	125	**PCF**
Below Footing	Thickess (H_0)	6	**Ft.**
Total Original Overburdern Pressure on Soil Element:		915	**PSF**

Pre-construction status. Footing is superimposed.



If bottom of problematic soil layer was not encountered, use twice the footing width for thickness

Step 3:

Foundation Characteristics		
Footing load:	3,000	psf
Estimated Footing Width (B):	2	ft
Footing Depth (D_f):	3	ft
Applied footing load applied to soil element (assuming 2V:1H)	1200	PSF

Step 4:

Backfill Soil Properties		
Dry Unit Weight:	120	pcf
Moisture Content:	12.0%	
Moist Unit Weight:	134.4	pcf
Backfill Depth:	3	ft

Step 5:

Settlement Calculation at Soil Element Identified in Step #2		
Thickness of Problematic Soil Layer (H_0):	6	ft
Depth to soil element below **OG**:	7	ft
Depth to soil element below footing:	3	ft
Original Overburden (σv_0):	915.0	psf
Applied foundation load at soil element :	1200.0	psf
Post Construction pressure at soil element (σv):	1978.2	
Change in presure at soils element:	1063	psf
$(\sigma v_f)/(\sigma v_0)$	2.162	
$Log[(\sigma v_f)/(\sigma v_0)]$	0.335	
$1+e_0$	1.427	
$H_0/(1+e_0)$	4.205	
Inches per foot:	12	
Settlement:	3.04	inches

Note: Maximum % fines by mass 45%. Scaling factor of 1.25 used to assume volume of fines, resulting in 55%.

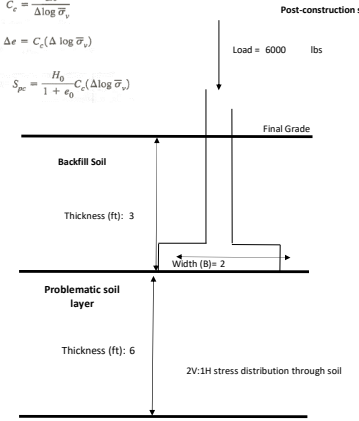
Settlement: $\text{Settlement} = S_{pc} = H_0\left(\frac{\Delta e}{1+e_0}\right)$

Compression Index: $C_c = \frac{\Delta e}{\Delta \log \bar{\sigma}_v}$

Rearranging gives: $\Delta e = C_c(\Delta \log \bar{\sigma}_v)$

Subistituting in gives: $S_{pc} = \frac{H_0}{1+e_0} C_c(\Delta \log \bar{\sigma}_v)$

Post-construction status



This formula is only valid for footings PLACED DIRECTLY ON PROBLEMATIC SOIL LAYER

$$S_{pc} = \frac{H_0}{1+e_0} C_c(\log \bar{\sigma}_{v_f} - \log \bar{\sigma}_{v_o}) = \frac{H_0}{1+e_0}(C_c)\log\left(\bar{\sigma}_{v_f}/\bar{\sigma}_{v_o}\right)$$

JORGENSEN
It's About People, Trust and Know How

Project Bear Dev | Project No. 23072
Calculated By JBJ | Date 12/20/2023
Sheet 1 of 1

Known:
$F_v = 1.5$
$S_1 = 0.336$
$k_{max} = 0.545$
$H = 30'$
$PGA = 0.454$
$r = 1.0$
$f_a = 1.2$

$\beta = (F_v S_1) / k_{max}$

$\alpha = 1 + 0.01 H [(0.5\beta) - 1]$

$k_s = r PGA \alpha$

$\beta = (1.5)(0.336) / 0.545$

$\boxed{\beta = 0.92}$

$\alpha = 1 + 0.01(30)[(0.5)(0.92) - 1]$

$\boxed{\alpha = 0.838}$

$k_s = (1.0)(0.454)(0.838)$

$k_s = 0.38$

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX F

Slope-Stability Analysis

Slope-Stability Analysis

Methodology

1. **Analyses:** Slope stability analyses were performed using the SLOPE/W stability module of GeoStudio 2023.1.2 version 23.1.2.11, produced by Bentley Systems. The Morgenstern-Price limit equilibrium method, which takes into consideration moment and force equilibrium, was used to analyze slope stability.

   Based on the existing and proposed geometry of the project and the mapped geology, we determined the project area may be subject to potential failure. Therefore, we evaluated each cross-section for existing conditions, proposed conditions, and seismic proposed conditions scenarios.

2. **Geometry:** Two cross-sections for the project were analyzed: Cross sections B-B' and C-C' (Figure 4 and Figure 5). Cross section locations are shown in Figure 2. The Cross Section B-B' Proposed Conditions model includes foundation loads for each housing unit because the applied loads from the buildings foundation elements and the change in geometry were identified as potential items that can affect the factor of safety (FS). The Cross Section C-C' Proposed Conditions also includes foundation loads for each housing unit, as well as the existing retaining wall on Lot 53. We based the external existing geometry on topographic data collected by Jorgensen Associates, Inc., proposed finished grade elevations were taken for the preliminary design documents provided by Hoyt Architects, and we based the internal geometry (material boundaries within the slope) on the results of the subsurface exploration (i.e., borehole and test pit logs), statistical correlations based on published literature, geologic conditions, and our experience with similar soils in the area.

   Subsurface conditions at the site were dominated by chaotically deposited landslide debris consisting of fine-grained Lean Clay (CL) and coarse-grained Clayey Gravels (GC) and Clayey Sands (SC). Often, soil layers identified in the SPT samples didn't correspond to similar soil layers at similar depths in the other boreholes indicating the soil layers were not continuous. To create a subsurface soil model with continuous soil layers, the discrete soil samples were interpolated and often combined between boreholes. Where discrete soil samples of different soil types were combined, an average phi value of the combined samples was applied to the entire soil layer.

3. **Materials:** We estimated the shear strength parameters used in the analyses based on correlation to index tests and direct shear testing from the previous Geotechnical Investigation Report from July 2021, provided by Nelson Engineering. See the discussion in Appendix D regarding development of the soil-engineering parameters. Final parameters used in the stability analysis are summarized below in Table F-1.

   Where two separate soil classifications were combined to one layer (i.e., GC/CL), a unit weight and phi angle were selected using a "weighted average" approach; the boreholes shown on figures 4 and 5 were reviewed and depending on the soil shown in each borehole, a weighted average value was selected.

   We used a Mohr-Coulomb strength model to define the soil parameters. Two parameters are used to describe this strength model: cohesion (c) and friction angle (φ). Cohesion is the soil's shear strength at zero overburden stress, and the friction angle expresses the relationship between overburden stress and shear stress. Mathematically, the shear strength is defined by the equation: $\tau = c + \sigma_n \tan(\varphi)$, where τ is the shear strength and σ_n represents the overburden stress. We used effective stress parameters as the soils are anticipated to drain well.

Table F-1: Soil Parameters Used for Slope Stability Analysis B-B'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (CL)	115	100[1]	35
Landslide Debris (GC)	125	50[2]	40
Landslide Debris (GC/CL)	120	100[2]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

Table F-2: Soil Parameters Used for Slope Stability Analysis C-C'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Fill/GC	125	50[1]	38
Landslide Debris (GC/CL)	120	100[1]	36
Weathered Bedrock (SC)	140	0	60

1. Cohesion added where infinite slope stability failures occurred

4. **Phreatic Surface:** Groundwater was encountered during the subsurface exploration in borehole JG-02, JG-03, and JG-04 during the subsurface exploration and are summarized below in Table F-2. Groundwater conditions encountered in the field were used in the slope stability model. It is important to note, the subsurface exploration occurred during a time of year when peak groundwater conditions are assumed to have already occurred, implying potential peak groundwater conditions are *not* shown in the model and are unknown.

Table F-3: Groundwater Conditions

Borehole	Date	Depth BGS (ft)	Approximate Elevation (ft)
JG-02	October 1 and 2, 2023	47	6,393
JG-03	October 2, 2023	27 to 30	6379 to 6376
JG-04	October 2, 2023	30	6374

5. **Seismicity:** Each post-construction scenario was evaluated in a seismic condition. Based on the ReMi and MASW results provided by Atlas Geophysics and direct shear testing data in the previous Nelson Engineering Site Investigation Report, the site is categorized as Site Class C – Very Dense Soil and Soft Rock. Seismicity was incorporated into the model using a pseudo-static limit equilibrium analysis approach where inertial forces from seismic accelerations were applied statically to the model. Seismic loads have been applied to the critical slip surface determined by static analysis for each post construction cross section, as it is assumed to be the most stressed region within the slope (Abramson et al., 2002). A seismic coefficient (k_s) of 0.163 was applied to cross section B-B' and a seismic coefficient of 0.169 was applied to cross section C-C'.

Seismic coefficients were calculated based on recommendation from NCHRP Report 611 "Seismic Analysis and Desing of Retaining Walls, Buried Structures, Slopes and Embankments" and FHWA NHI Course No 130094 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, as described below and illustrated in the equations. In summary, the seismic coefficient (k_s) is determined by applying a scaling factor (α) to the modified peak ground acceleration (PGA_m). Additionally, a seismic FS of 1.1 was used because it is assumed the system is ductile and an allowable total permanent seismic deformation of 2.0-inches is acceptable.

$$\beta=F_v \cdot S_1/PGA_m$$

$$\alpha=1+0.01H[(0.5\beta)-1]$$

$$k_s = r^* PGA_m * \alpha$$

Where:

- β = 0.92
- F_v = 1.5
- S_1 = 0.336
- PGA_m = 0.545
- α is equal to 0.595 for the B-B' seismic model, and α is equal to 0.623 for the C-C' seismic model.
- *H* is equal to the height of the critical slip surface; we used conservative values of 75' for the B-B' seismic model, and 70' for the C-C' seismic model
- r = 0.5. A value of 0.5 is used in calculating k_s when dealing with ductile systems (i.e., soils with no rigid structures) with allowable permanent seismic deformation of up to 2-inches.
- PGA is equal to 0.454, taken from ASCE 7-16 seismic design tool.

Our calculations can be found attached to this Appendix.

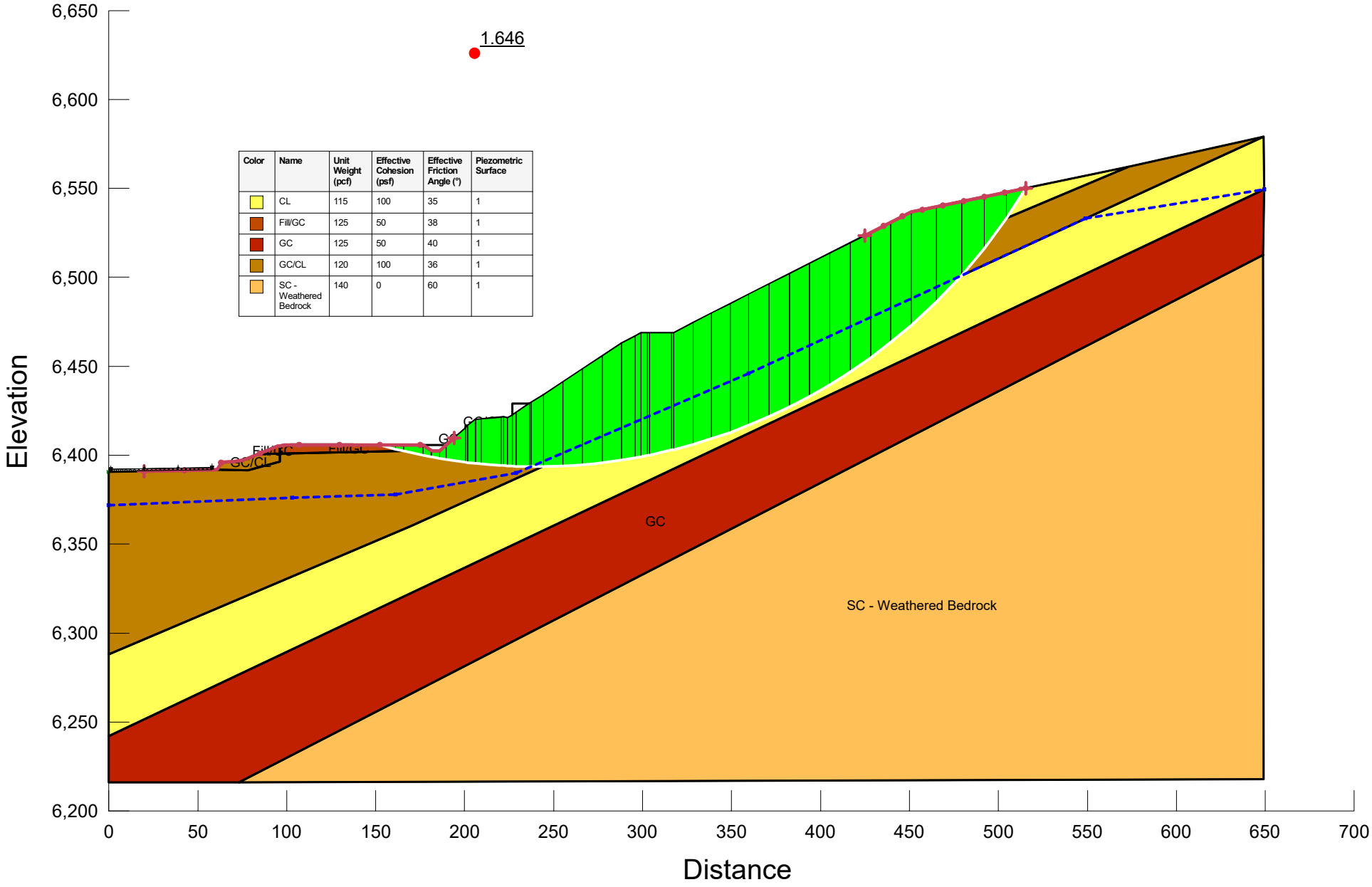
Surcharge Loads and Retaining Wall: Typical foundation loads were incorporated into the model, based on data in Section 1806 of the IBC, 2021. We use a distribution surcharge load of 2000 psf to account for the weight of any structures within the model.

The retaining wall on Lot 53 was also included in the geometry of the models. For the length of the soil nails, spacing and batter we used the Grand View, Building 53 Jackson, Wyoming Permanent Soldier Pile Wall and Temporary Soil Nail Wall Construction Drawings. Although the construction drawings show a slight variation in soil nail lengths, spacing and batter, we used the values applicable to the highest number of soil nails. In our model we used 48' soil nails, vertically spaced 9 feet, and battered -15 degrees.

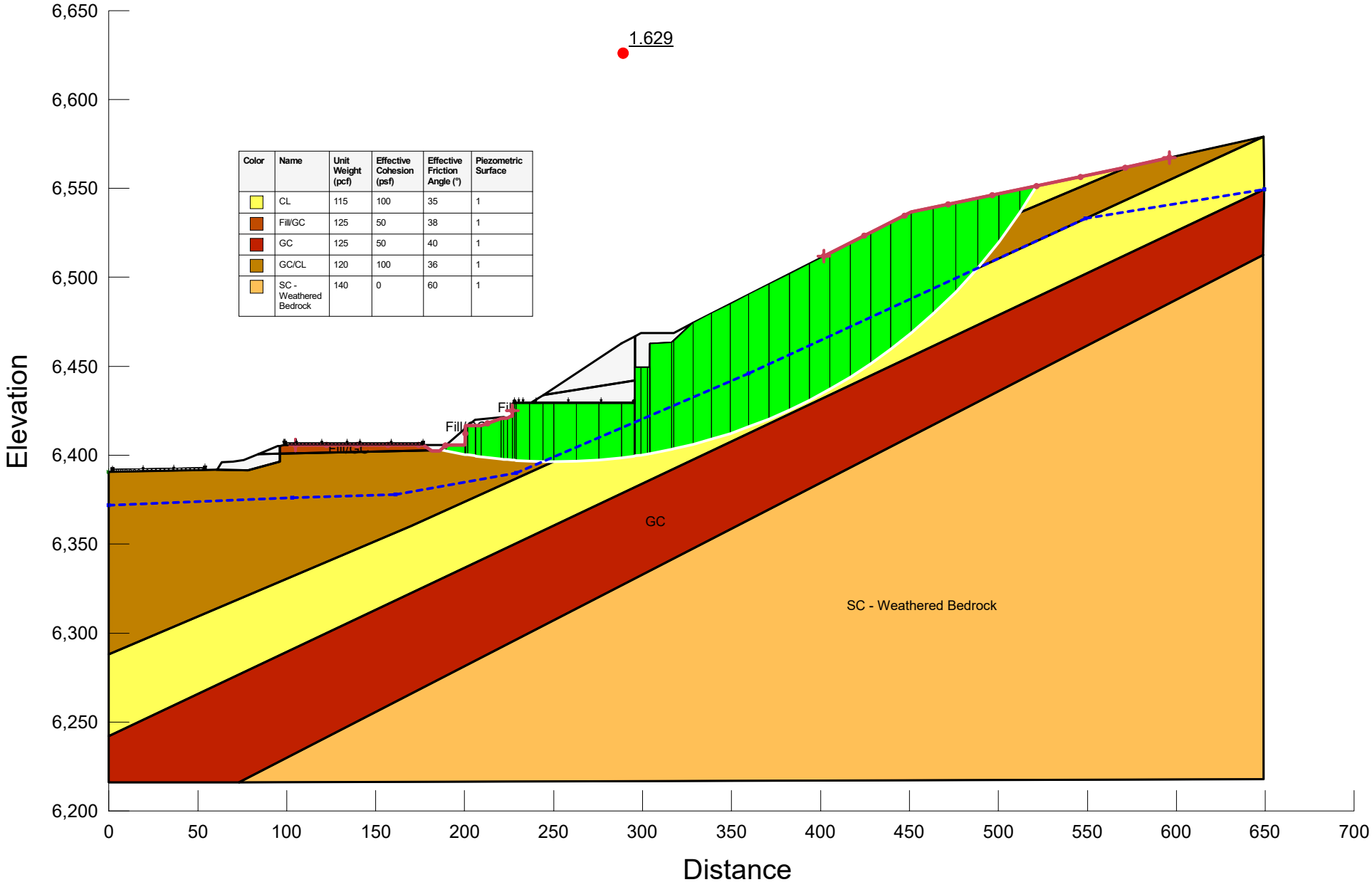
Results

We summarize factor of safety (FS) results for each cross section and analysis in Section 5.1.2 of the Report. The figures that follow are the output from each analysis. The critical slip surface and factor of safety are shown. Output files, reports, convergence data, or other data from Geostudio may be made available upon request.

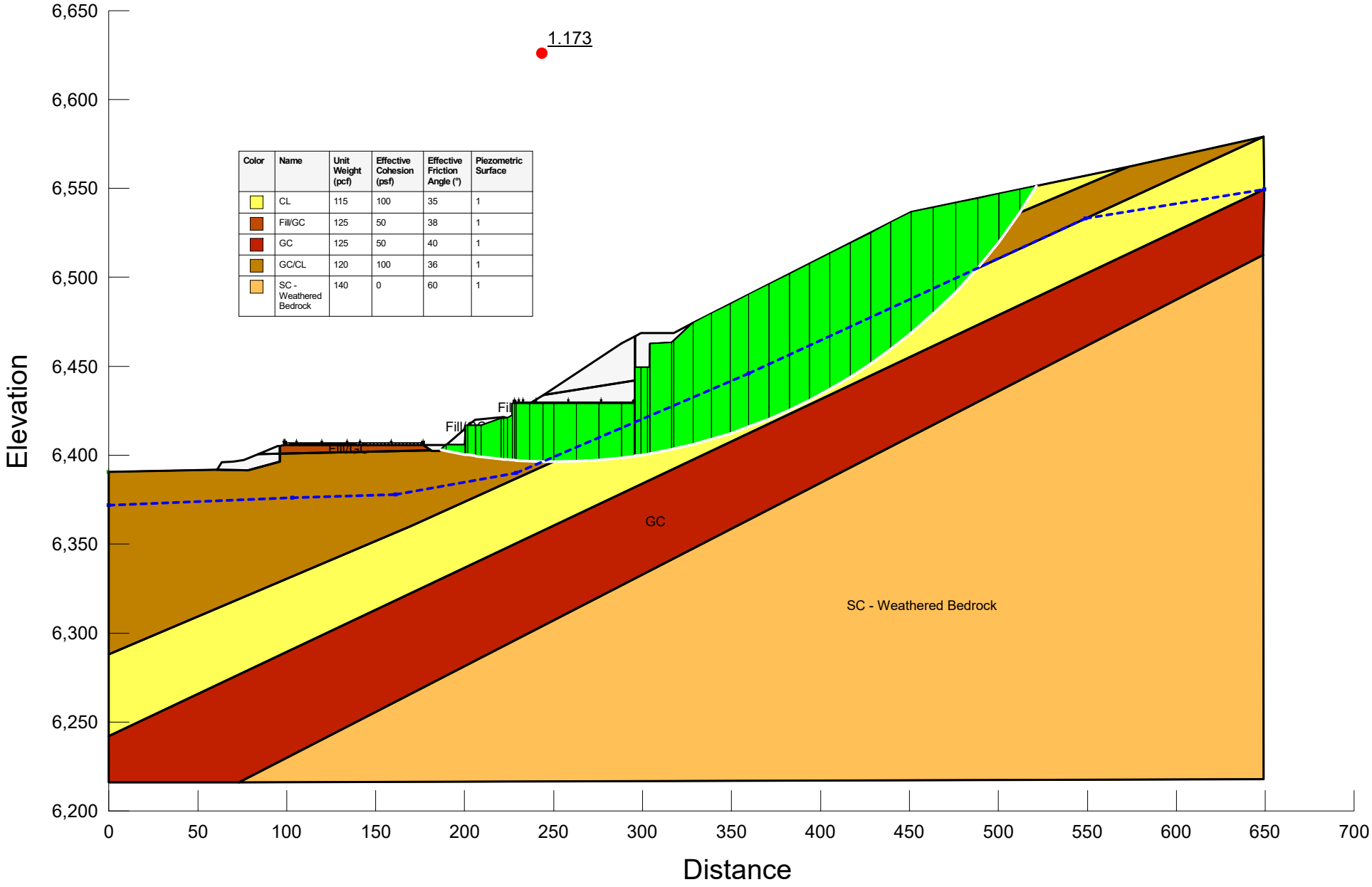
Lot 53 and 58 B-B' Existing Conditions



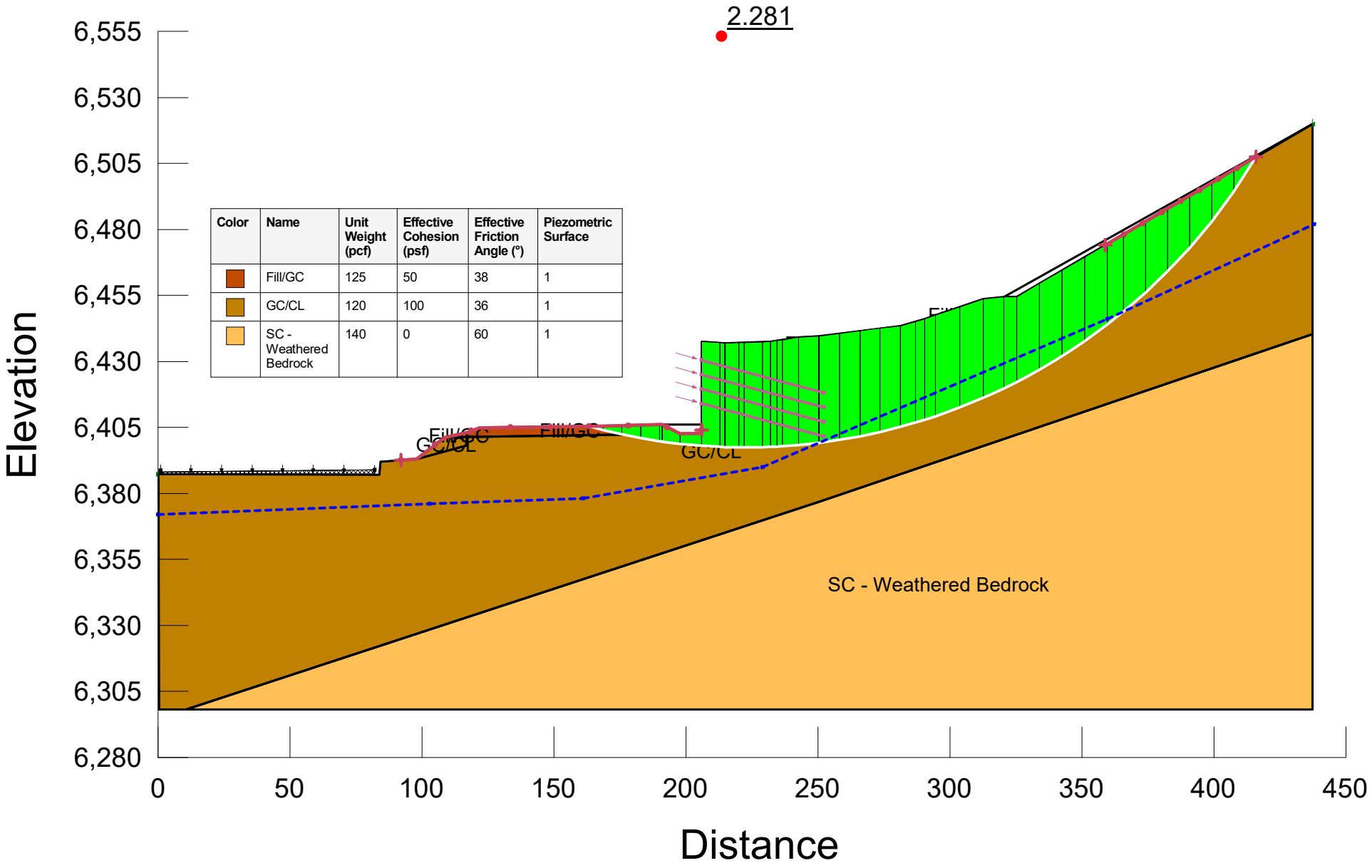
Lot 53 and 58 B-B' Proposed Conditions



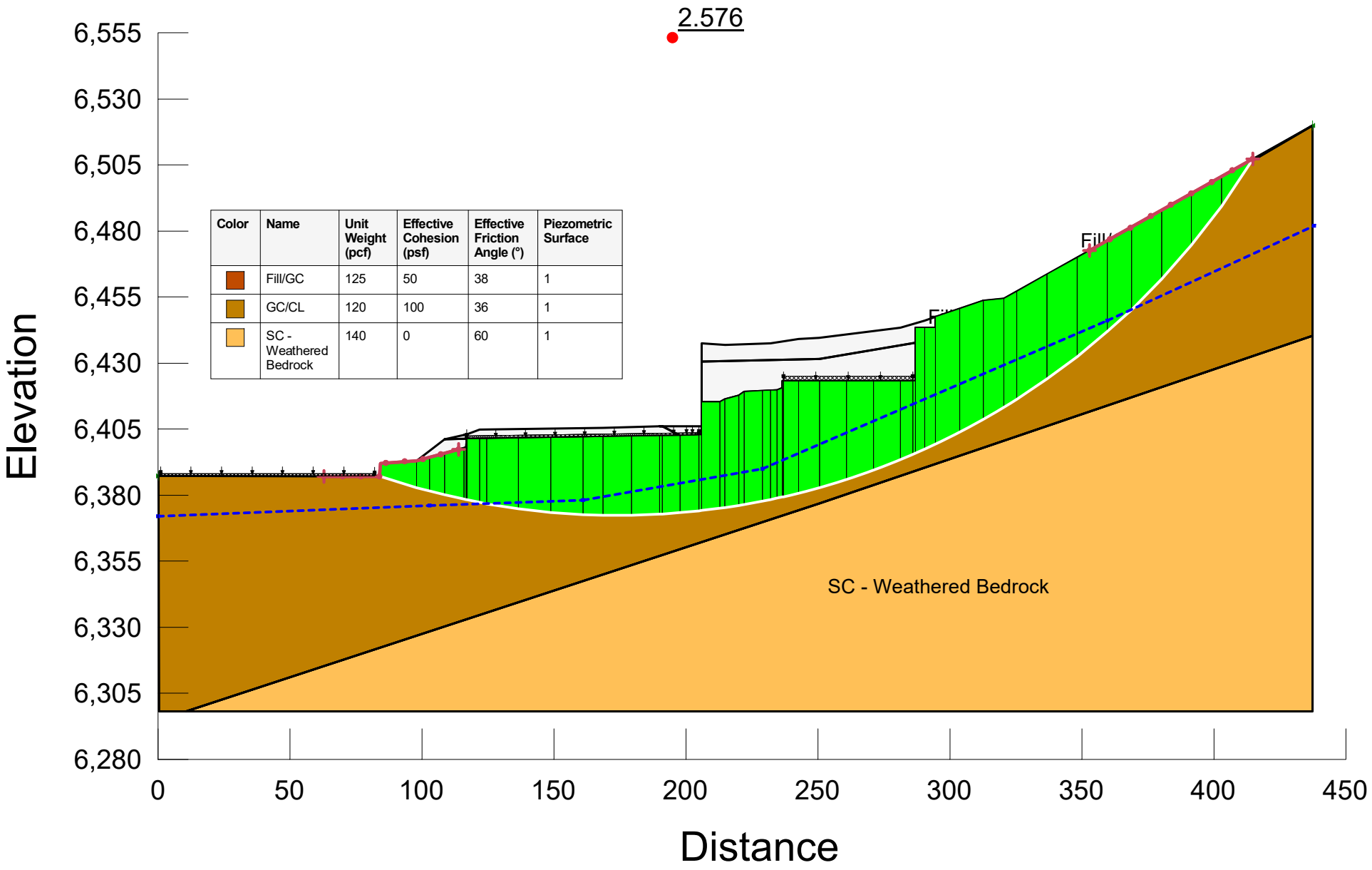
Lot 53 and 58 B-B' Proposed Conditions Siesmic



Lot 53 and 58 C-C' Existing Conditions

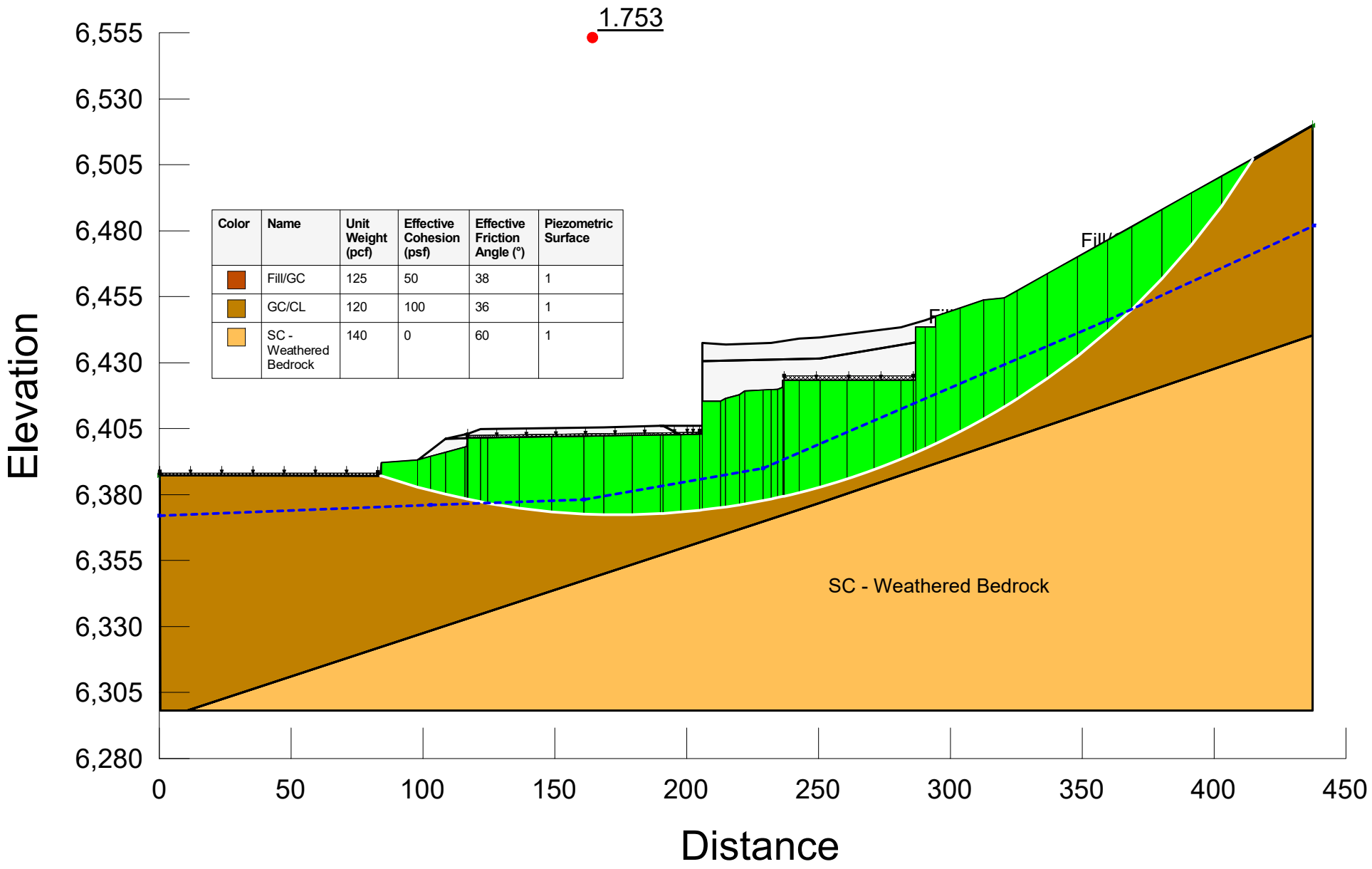


Lot 53 and 58 C-C' Proposed Conditions



Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Piezometric Surface
	Fill/GC	125	50	38	1
	GC/CL	120	100	36	1
	SC - Weathered Bedrock	140	0	60	1

Lot 53 and 58 C-C' Proposed Conditions Siesmic

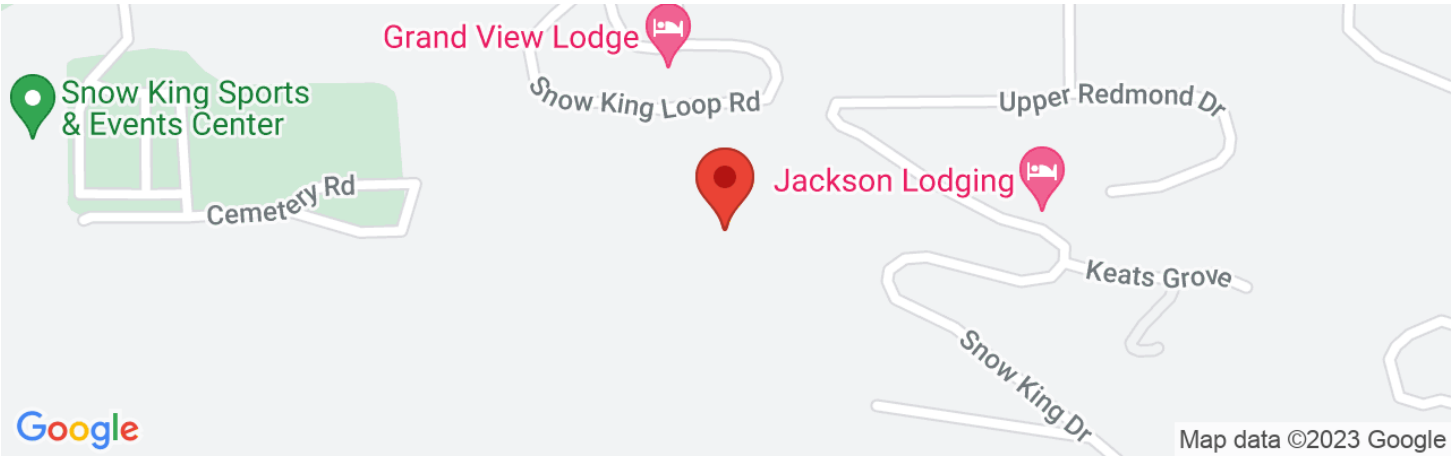


Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Piezometric Surface
	Fill/GC	125	50	38	1
	GC/CL	120	100	36	1
	SC - Weathered Bedrock	140	0	60	1

USGS web services were down for some period of time and as a result this tool wasn't operational, resulting in *timeout* error.
USGS web services are now operational so this tool should work as expected.

OSHPD

Latitude, Longitude: 43.47138391, -110.75322571



Date	20/12/2023, 15:51:56
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.024	MCE_R ground motion. (for 0.2 second period)
S_1	0.336	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.229	Site-modified spectral acceleration value
S_{M1}	0.505	Site-modified spectral acceleration value
S_{DS}	0.819	Numeric seismic design value at 0.2 second SA
S_{D1}	0.336	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.2	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.454	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.545	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.024	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.145	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.894	Factored deterministic acceleration value. (0.2 second)
S1RT	0.336	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.374	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.721	Factored deterministic acceleration value. (1.0 second)
PGAd	0.66	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.454	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.895	Mapped value of the risk coefficient at short periods

Type	Value	Description
C_{R1}	0.9	Mapped value of the risk coefficient at a period of 1 s
C_V	1.105	Vertical coefficient

DISCLAIMER

While the information presented on this website is believed to be correct, SEAOC /OSHPD and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in this web application should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. SEAOC / OSHPD do not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the seismic data provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the search results of this website.

JORGENSEN
It's About People, Trust and Know How

Project BEAR Dev - Lots 53+56 Project No. 23272
Calculated By HC Date 12/20/2023
Sheet 1/2

K_s Determination

U.S. Seismic Design Maps - Structural Engineers Association of California Design Code Reference Document - ASCE 7-16

Risk Category II
Site Class C - Very Dense Soil & Soft Rock

FHWA (2011)

$$K_{MAX} = F_{PGA} \cdot PGA \qquad (6-1)$$

PGA = 0.454
F_{PGA} = 1.20

K_{MAX} or PGA_m = 1.2(0.454) = **0.545**

K_{AV} or MHA (Maximum Average Horizontal Acceleration) = $\alpha \cdot K_{MAX}$ (6-2)

Where $\alpha = 1 + 0.01(H)[(0.5B)-1]$ (6-3)

Where $B = f_v \cdot S_1 / K_{MAX}$ (6-4)

- B Cross Section B-B'

F_v = 1.5
S_1 = 0.336
K_{MAX} = 0.545

$B = 1.5(0.336)/0.545$ (6-4)

B = 0.924

- B Cross Section C-C'

F_v = 1.5
S_1 = 0.336
K_{MAX} = 0.545

$B = 1.5(0.336)/0.545$ (6-4)

B = 0.924

JORGENSEN
It's About People, Trust and Know How

Project BEAR DEN - LOTS 53+58 Project No. 23072
Calculated By HC Date 12/20/2023
Sheet 2/2

- α Cross Section B-B'

$\beta = 0.924$
$H = 75'$

$\alpha = 1 + 0.01(75)[0.5(0.924) - 1]$ (6-3)

$\alpha = 0.597$

- α Cross Section C-C'

$\beta = 0.924$
$H = 70'$

$\alpha = 1 + 0.01(70)[0.5(0.924) - 1]$ (6-3)

$\alpha = 0.623$

- k_{AV} Cross Section B-B'

$\alpha = 0.597$
$k_{MAX} = 0.545$

$k_{AV} = 0.597\ (0.545)$ (6-2)

$k_{AV} = 0.325$

- k_{AV} Cross Section C-C'

$\alpha = 0.623$
$k_{MAX} = 0.545$

$k_{AV} = 0.623\ (0.545)$ (6-2)

$k_{AV} = 0.339$

- k_S Cross Section B-B'

$k_S = r \cdot k_{AV}$ (6-5)

$r = 0.5$ ASSUMING 2-INCHES OF ALLOWABLE PERMANENT SEISMIC DEFORMATION

$k_S = 0.5\ (0.325)$

$k_S = 0.163$

- k_S Cross Section C-C'

$k_S = r \cdot k_{AV}$ (6-5)

$r = 0.5$ ASSUMING 2-INCHES OF ALLOWABLE PERMANENT SEISMIC DEFORMATION

$k_S = 0.5\ (0.339)$

$k_S = 0.169$

MINIMUM FACTOR OF SAFETY OF 1.1 USING r OF 0.5 AND ASSUMING 2-INCHES OF ALLOWABLE PERMANENT SEISMIC DEFORMATION

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

January 25, 2024

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosh, WI 53142

RE: GEOTECHNICAL-ENGINEERING REPORT, BEAR DEVELOPMENT – SNOW KING LOOP LOT 57, TETON COUNTY, WYOMING
PROJECT NO: 23072

Dear Nick,

We are pleased to present this Geotechnical-Engineering Report on our geotechnical site exploration for the proposed development at Lot 57 on Snow King Loop in Teton County, Wyoming. This report describes site conditions observed during the subsurface exploration, presents engineering analyses and recommendations to support the design and construction of foundation elements, and presents pre-construction and post-construction slope stability analyses.

Jorgensen Geotechnical explored subsurface conditions by drilling five (5) boreholes and excavating three (3) exploratory test pits throughout Lot 57, as well as reviewing other available geotechnical data. A geophysical exploration was also performed comprising MASW and ReMi exploration techniques. In general, the site is primarily underlain by landslide debris, comprising a chaotic mixture of fined grained soils (lean clay and silt),and coarse grained soils (clayey gravels). The site sits on a mapped landslide which was likely mobilized prior to the Quaternary period. As such, we assume the soil at the site to be well consolidated. Loess, a fine-grained windblown deposit was also encountered at the site.

Building locations and foundation elevations are based on preliminary design data provided by Hoyt Architecture, dated July 19, 2023, though it is our understanding that the design is subject to substantial change. As the design progresses, we will be able to make site-specific recommendations and additionalconsulting services.

If you have any questions about this report, or if we may provide other services to you, please contact us. As the project progresses, we will be available to answer questions for you.

Respectfully submitted,
JORGENSEN GEOTECHNICAL

Bruce Jackson G.I.T.
Geotechnical Design Engineer Technician

Harrison Carter, P.E.
Geotechnical Project Manager

Dominique Brough, P.G.
Geotechnical Project Manager

Geotechnical-Engineering Report

Bear Development – Snow King Loop Lot 57 | Teton County, Wyoming



43.472019°N, -110.754636°W

January 25, 2024

PREPARED FOR

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosh, WI 53142

PREPARED BY

Jorgensen Geotechnical, LLC
PO Box 9550
1315 HIGHWAY 89 S., Ste. 201
Jackson, WY 83002

CONTENTS

1.0 INTRODUCTION 1

2.0 PROJECT DESCRIPTION 1

3.0 GEOTECHNICAL EXPLORATION 2

3.1 Description 2
3.2 Subsurface Soil Conditions 4
3.3 Groundwater 7
3.4 Earthquakes and Ground Shaking 7
3.5 Geologic and Geotechnical Hazards 8
3.5.1 Potential Settlement/Compressible Clays 8
3.5.2 Seismic and Fault Related Hazards 8
3.5.3 Slope-Related Hazards 9

4.0 GEOTECHNICAL ENGINEERING ANALYSES 9

4.1 Slope Stability Analyses 9
4.2 Settlement 10
4.3 Lateral Earth Pressures 10
4.3.1 Active Pressures 11
4.3.2 At-Rest Pressures 11
4.3.3 Passive Pressures 11

5.0 GEOTECHNICAL RECOMMENDATIONS 12

5.1 Recommendations Overview 12
5.2 Reinforced Fills 12
5.3 Engineered Aggregate Piers 12
5.4 Deep Foundation Elements 13
5.5 Earthwork 13
5.5.1 Site Preparation 13
5.5.2 Excavation and Cut Slope Stability 13
5.5.3 Final Backfilling and Grading 13
5.5.4 Compaction 14
5.5.5 Compaction Requirements 14
5.5.6 Observation during Construction 15

6.0 LIMITATIONS 15

7.0 REFERENCES 16

Note: Clicking on a desired section in the table of contents will direct the reader to that section and clicking on the Jorgensen logo in the upper left of the page will bring you back to this page.

FIGURES

Figure 1: Site Location and Geologic Map 2
Figure 2: Borehole, Test Pit and Geologic Cross Section Location Map 3
Figure 3: Geologic Cross Section A-A' 4
Figure 4: Geologic Cross Section B-B' 5
Figure 5: Geologic Cross Section C-C' 5

TABLES

Table 3-1: U.S. Seismic Design Maps Summary 8
Table 4-4: Summary of Stability Analyses Results 9
Table 4-5: Lateral Pressure Parameters for Landslide Debris 10
Table 5-1: Compaction Parameters for Stony Fill 14

APPENDICES

Appendix A: Site Exploration Procedures and Subsurface Exploration Logs
Appendix B: Figures
Appendix C: Lab Testing Results
Appendix D: Soil Engineering Parameters
Appendix E: Calculations
Appendix F: Slope Stability Analyses

1.0 INTRODUCTION

Jorgensen Geotechnical, LLC was commissioned by Bear Development, LLC to perform a subsurface surface exploration and geotechnical engineering analyses for the proposed development for Lot 57 accessed by Snow King Loop in Teton County, Wyoming. The purposes of the exploration were to provide information and geotechnical-engineering recommendations pertaining to:

- Subsurface soil conditions
- Site preparation and earthwork
- Geophysical exploration
- Seismic site classification per the International Building Code
- Evaluation of settlement and/or collapse potential
- General foundation design and construction recommendations
- Slabs-on-grade design and construction recommendations
- Lateral earth pressures for retaining structures
- Subgrade preparation
- Slope Stability Analyses
    - Existing Conditions
    - Proposed Conditions
    - Proposed Seismic Conditions

A detailed description of the subsurface exploration and graphical logs are shown in Appendix A, Figures in Appendix B, laboratory testing results are included as Appendix C, determination of soil engineering parameters in Appendix D, Calculations for settlement in Appendix E, and Slope Stability Analyses in Appendix F.

2.0 PROJECT DESCRIPTION

The project site is located in Jackson, Wyoming and is situated near the base of Snow King Resort. Preliminary plans were provided by Hoyt Architecture, dated July 19, 2023. The plans indicate the development for lot 57 will include a new four-story housing unit with a two-floor parking garage with two floors of living space above.

It is our understanding the project is in the early stages of the design, and the architectural plans are subject to substantial changes. As the project progresses, Jorgensen Geotechnical is available to consult with team members to increase design and construction efficiency based on our understanding of the subsurface conditions and the proposed design.

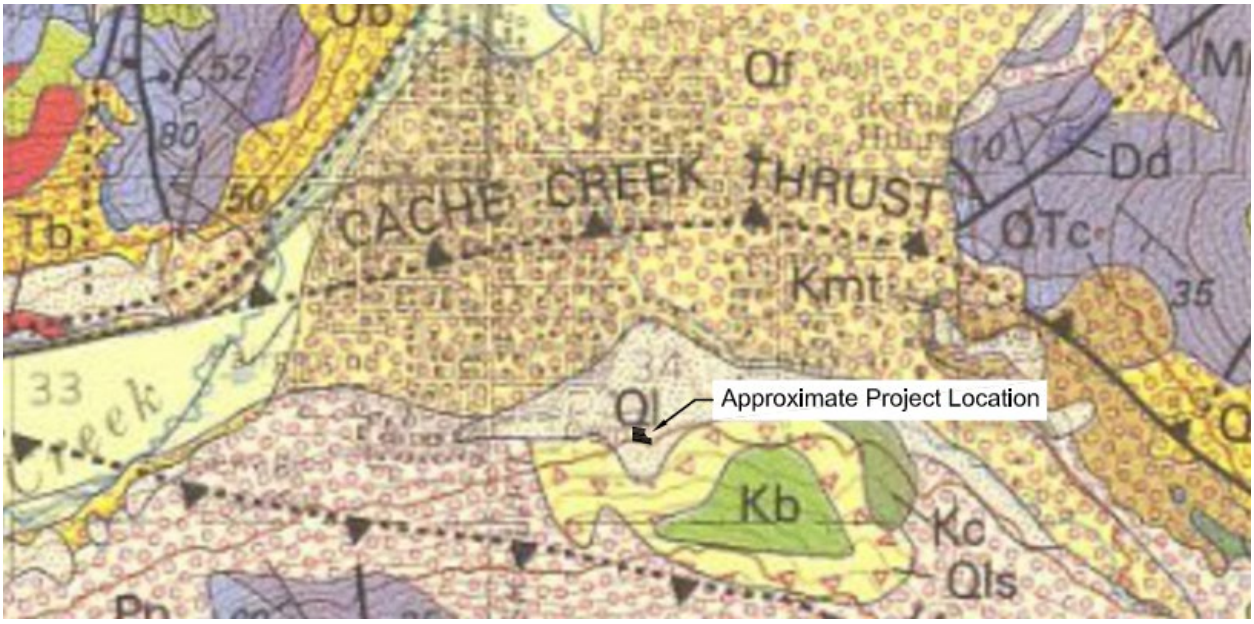


Figure 1: Site Location and Geologic Map

3.0 GEOTECHNICAL EXPLORATION

3.1 Description

JG developed the following description of the site based on field visits, meetings with the project team, our review of available historical aerial imagery, and observations made during the subsurface exploration.

Item	Description
Location and Parcel Information	• Lot 57 is located at the base of Snow King Resort and is accessed via Snow King Loop. The project area sits at a generalized latitude and longitude of 43.471°N, -110.754°W.
Existing Conditions	• The project location gently slopes from the north upwards to the south and ranges in elevation from approximately 6,370-ft Above Mean Sea Level (AMSL) on the northern boundary to approximately 6,390-ft AMSL on the southern property boundary of Lot 57. The lot is bisected by a dirt road that provides access for employees at Snow King Resort. • Lot 57 is currently being used for storage by Snow King Resort. • Current utilities at the site include power, gas, and water.
Geologic Setting	• The project location is found on the Geologic Map of Grand Teton National Park (Love et. al., 1992), in an area that contains three mapped geologic units including Loess (Ql), a fine-grained, windblown deposit, Landslide Debris (Qls), and the Bacon Ridge Sandstone (Kb). The soils observed from the subsurface exploration seem to be consistent with mapped geology.

- The project location sits on a mapped multiple slump/multiple flow landslide, and is understood to be deep seated (WSGS, Wyoming Geologic Hazards Map Tool). A portion of the project site is capped with a wind-blown deposit known as loess which was likely deposited during or after the Pinedale Glaciation Period, or between approximately 30,000 to 10,000 years ago. The mapped loess stratigraphically overlies portions of the mapped landslide unit.
- Numerous Quaternary faults (i.e., relatively young and potentially active) are mapped throughout the area. The Teton Fault is mapped approximately 8 miles northwest of the project, at the base of the eastern flank of the Teton Range (Zellman, 2019). Slip rates along the Teton fault is estimated to be between 0.2 and 1.0 mm/year. The Hoback Fault is located approximately 3 miles to the southwest of the project site but is considered old and inactive.

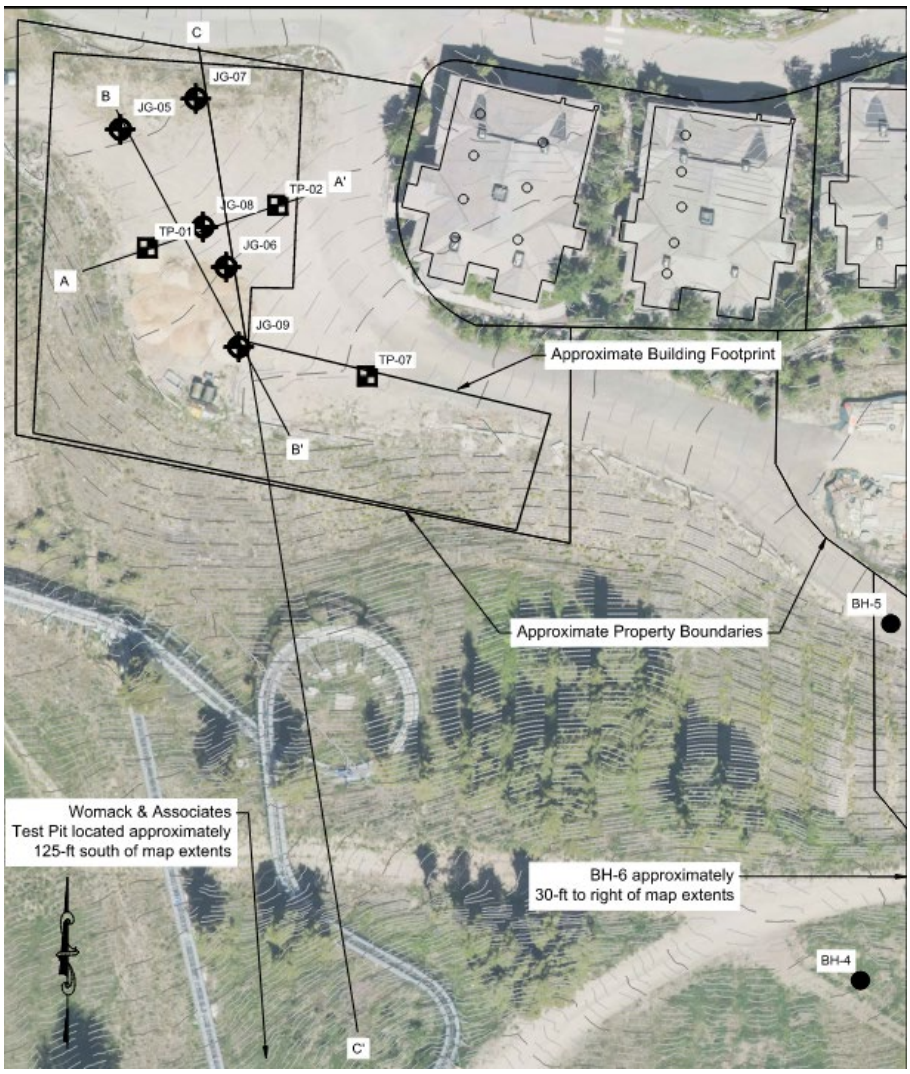


Figure 2: Borehole, Test Pit and Geologic Cross Section Location Map

3.2 Subsurface Soil Conditions

In general, two soil types were encountered during the subsurface exploration:

- **Landslide Debris** – consisting of clayey gravels (GC, GC-GM), and lean clays (CL, ML). The landslide debris soils are assumed to be derived from native colluvium and bedrock soils prior to mobilization of the landslide. These landslide debris soils exhibited chaotic composition, which is also represented in the MASW plots provided by Atlas Geophysics. These results can be found attached to Appendix A.
- **Loess** – consisting of windblown lean clay or silt with sand (CL, ML).

Below are three generalized geologic cross-sections spanning both north-south and east-west depicting the subsurface soil conditions as interpreted by Jorgensen and approximate foundation elevations for the buildings on Lot 57. Cross-section alignment locations can be found in Figure 2 and complete figures can be found in Appendix B.

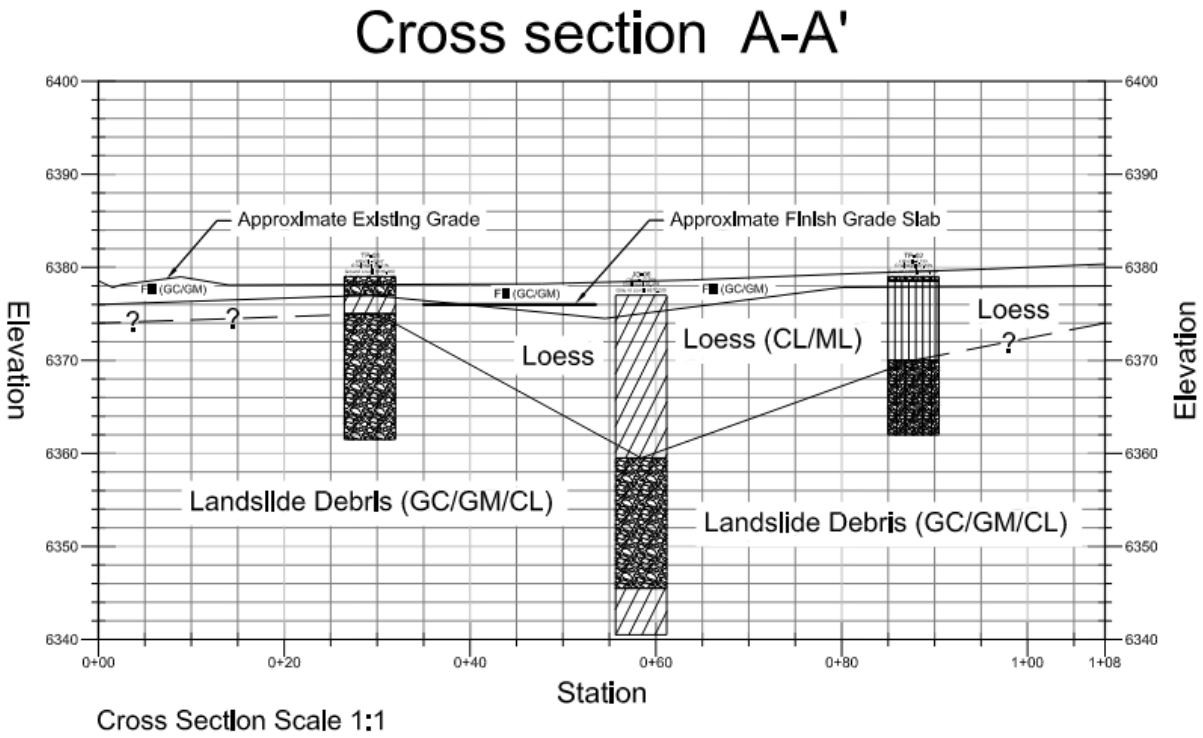


Figure 3: Geologic Cross Section A-A'

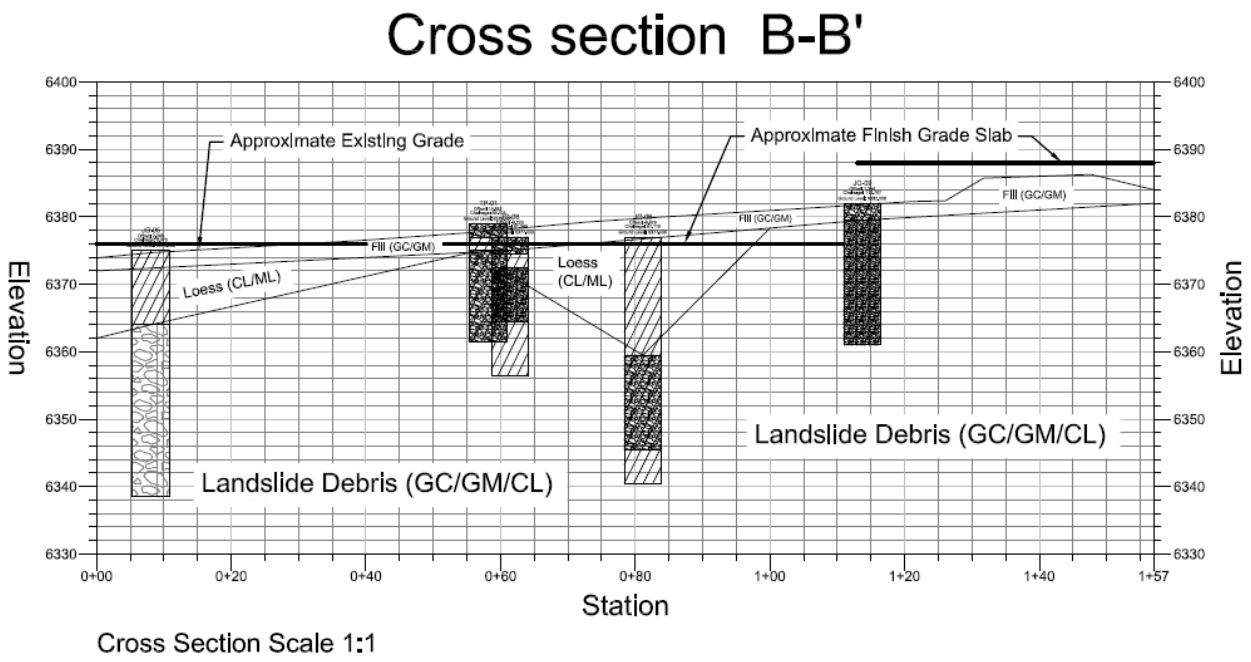


Figure 4: Geologic Cross Section B-B'

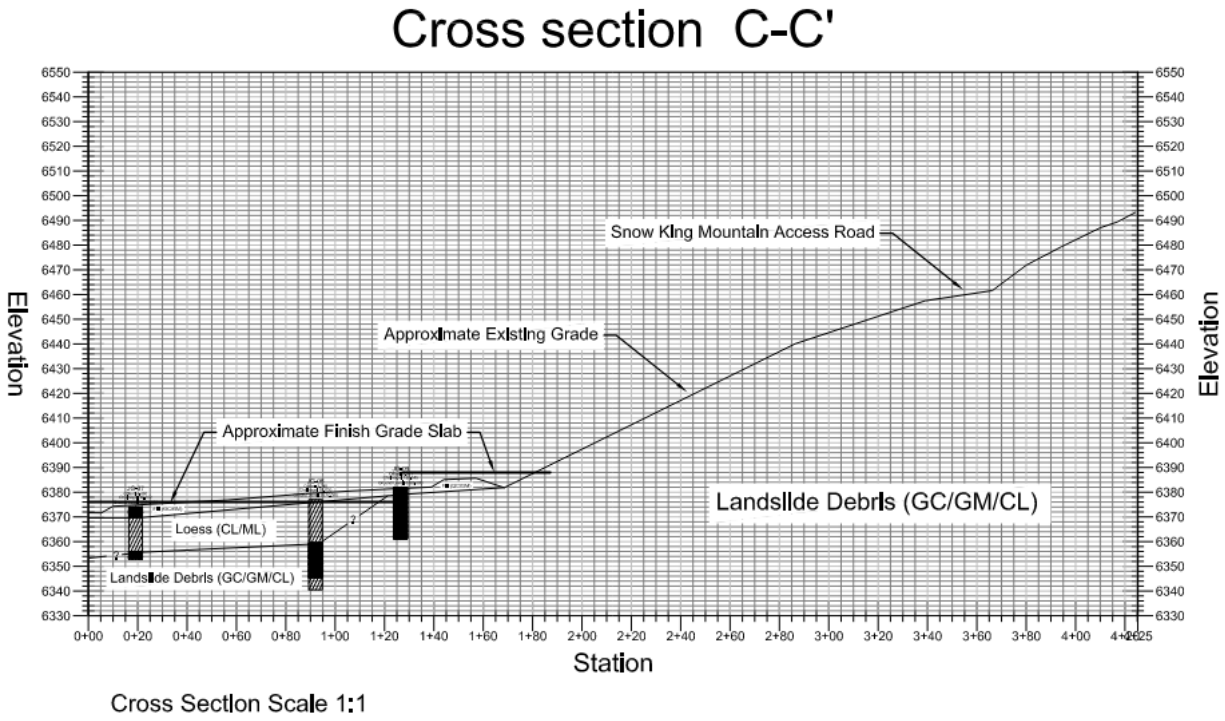


Figure 5: Geologic Cross Section C-C'

The table below describes each soil layer encountered, and detailed borehole logs are represented graphically in Appendix A. **It is important to note that** the borehole exploration techniques used either a 4-inch coring barrel or a 1.5-inch diameter split spoon sampler, limiting the soil that was collected during the drilling effort. It is likely that gravels larger and cobbles larger than 3.0-inches are present but were

unable to be logged due to the sampling method. Cobbles and boulders were encountered in the test pits.

Layer	Layer Name	Description	Geotechnical Considerations and Uses
1	**Fill (GC/GM)**	• Observed in JG-07, JG-08, JG-09, TP-01, TP-02 and TP-07 • Depths ranging from 0.5- to 4-ft bgs • Classified as a Clayey **Gravel** with Sand and silty **Gravel** with sand • The fill at the site could comprise native site soils and crushed road base • Brown to dark brown • Contains up to 15% cobbles by volume • 45-55% gravel • 25-30% sand • 20-25% clay/silt	• Undocumented construction fill should be remove from beneath foundations • Non-structural applications
2	**Loess (CL/ML)**	• Observed in all boreholes and test pits at the site except for JG-09 • Classified as **Lean Clay, Lean Clay** with sand, **Lean Clay** with Gravel, and **Silt** • Tan to light tan • Very soft to stiff • 0-25% gravel • 10-30% sand • 50-95% clay/silt	• Settlement concerns • Non-structural applications
3	**Landslide Debris (GC/GC-GM/CL/SC)**	• Observed in all boreholes and test pits • Classified as Clayey **Gravel** with Sand, **Lean Clay**, **Lean Clay** with Sand, Sandy **Lean Clay** with Gravel, • Reddish brown to brownish gray • Coarse-grained soils are loose to very dense • Fine-grained soils are soft to very stiff	• Acceptable bearing layer with appropriate subgrade improvement methods • Settlement concerns • Structural applications • Non-structural applications

		• **Chaotic deposition, including charcoal fragments** • Observed 15-25% cobbles by volume • 10-55% gravel • 15-30% sand • 25-90% Clay/Silt	

3.3 Groundwater

Groundwater was not encountered in any of the boreholes or test pits during the subsurface exploration. However, we have observed groundwater in areas near the project site and understand the subsurface to include various perched groundwater levels and seeps and springs. Approximate groundwater levels are included in the Slope Stability Analysis models, but are not shown in the cross sections as groundwater was not directly observed at the site in the boreholes.

The exploration occurred during a time of year that is considered to take place after peak groundwater levels have occurred. Groundwater levels fluctuate in response to seasonal snowmelt. Soil moisture conditions on this site are most likely influenced by surface infiltration due to precipitation, snowmelt, and uphill natural springs. One groundwater standpipe was installed in JG-08 to a total depth of 20-ft on Lot 57 as part of the subsurface exploration.

3.4 Earthquakes and Ground Shaking

Jackson, Wyoming is located within the Intermountain Seismic Belt, a zone of seismicity that extends from southern Utah through eastern Idaho, western Montana, and Western Wyoming (Smith and Arabasz, 1991). The Teton fault, located along the eastern margin of the Teton Range, approximately 8-miles northeast of the site, is considered an important structural element of the Intermountain Seismic Belt. Predicted recurrence intervals for maximum credible earthquakes have passed for most of the fault systems capable of generating magnitude 7.5 earthquakes in western Wyoming (Case, 1997), implying the risk of major earthquakes is relatively high. In the event of a large magnitude earthquake (i.e., approximately 7.5), strong ground shaking, or slope movement could potentially cause damage to structures (Smith, et al., 1993).

Shear wave velocity calculated by Atlas Technical Consulting LLC, of Salt Lake City, Utah using ReMi geophysical exploration method for the project site is 1,320 ft/s. The IBC references ASCE 7-16 to determine the ground motion accelerations. Based on subsurface soils, and the results from the geophysical exploration, the site is classified as Site Class C (“Very dense soil and soft rock”). For your convenience, Seismic Design Maps (SEAOC, 2019) values are summarized in Table 3-1: U.S. Seismic Design Maps Summary.

Table 3-1: U.S. Seismic Design Maps Summary

Maximum Considered Earthquake (MCE) Spectral Response Acceleration Parameters			
Short Period (S_s) =	1.025		
1-Second Period (S_1) =	0.337		
Site Coefficients and Adjusted MCE Spectral Response Acceleration Parameters			
F_a =	1.2	S_{MS} =	1.230
*F_v =	1.5	*S_{M1} =	0.506
Design Spectral Response Parameters			
S_{DS} =	0.820		
*S_{D1} =	0.337		

*Note: Values for F_v, S_{M1}, and S_{D1} were determined in accordance with Section 11.4.4 of ASCE 7-16. Per Section 11.4.8 of ASCE 7-16, if the proposed structure foundation will include seismic isolators or damping systems, a site response analysis shall be performed in accordance with Section 21.1.

The project site is located in an area of moderate seismic activity. The current peak horizontal acceleration (PGA) with a probability of occurrence of 2% in 50 years is approximately 0.454g (USGS, 2014). The site amplification factor at PGA is 1.2, resulting in a site modified peak ground acceleration (PGA_M) of 0.545. This has been applied for the analysis of seismic lateral loading on retaining walls Section 4.3.

The provisions of the IBC are intended to provide uniform levels of performance for structures depending on their intended use and the risk inherent to their failure. The approach adopted in the IBC is intended to provide a uniform margin of safety against collapse at the design motion. The design earthquake ground motion is selected at a ground shaking level that is 2/3 of the maximum considered earthquake (MCE) ground motion, which has a likelihood of exceedance of 2% in 50 years (corresponding to a return period of 2,500 years). The IBC is not intended to prevent damage or loss of function during a major earthquake; it is intended to reduce the risk of loss of life. Structural design should follow the level of risk tolerable by the Design team.

3.5 Geologic and Geotechnical Hazards

3.5.1 Potential Settlement/Compressible Clays

The primary geotechnical concern at the project site is differential settlement of foundation elements placed on unimproved landslide and loess deposits. Based on the borehole and test pit logs, in-situ testing, lab testing, and geophysical exploration, the subgrade soils comprise a range of chaotic mixture of soils, from compressible clays to competent stony soils. The soft clays are expected to experience moderate to severe settlement, while the stony soils ware *not* expected to experience substantial settlement. Calculated settlement values are discussed in Section 5.2 and calculation spreadsheets are shown in Appendix E.

3.5.2 Seismic and Fault Related Hazards

The owner should be aware that in the event of a large magnitude earthquake (i.e., approximately 7.5), strong ground shaking could potentially cause damage to structures (Smith et al, 1993). The owners may

wish to consider the option of carrying earthquake insurance in addition to homeowner's insurance. Older faults mapped in the immediate vicinity of the property are believed to be old and inactive. Surface rupture due to faulting is very unlikely, and no slope failure is anticipated to occur.

3.5.3 Slope-Related Hazards

In the event of an earthquake or extreme precipitation event, rock fall, debris flows, or avalanches produced from the steep slopes to the south of the development area could potentially cause damage to structures, especially following wildfires. Risk assessment of the slope related hazards was beyond the scope of this Report, but we present slope stability analyses of several slopes captured in the Geologic Cross Sections B-B' and C-C' for Lot 57. These are discussed in Section 4.1 and presented in Appendix F.

4.0 GEOTECHNICAL ENGINEERING ANALYSES

4.1 Slope Stability Analyses

The slope stability analyses were performed using SLOPE/W module of Geostudio. We analyzed two sets of geometry for global slope stability, taken from cross section C-C'. Pre-construction and post-construction external geometry was determined using topographic data provided by Jorgensen Associates and preliminary architectural plans provided by Hoyt Architects.

Determination of strength values used in the Slope Stability Model can be found in Appendix D.

Results of the stability analyses are summarized in Table 4-1. Appendix F shows the output of the stability model for Cross-Section B-B' and C-C'.

Table 4-1: Summary of Stability Analyses Results

Cross section	Analysis	FS	Change in FS[1]
C-C'	Pre-construction	1.93	0.0%
	Post-construction	1.93	
	Post-Construction Seismic	1.15	N/A

Discussion regarding accepted FS can be found in Appendix F. There does not appear to be a change in FS from existing condition to post-construction conditions based on our understanding of the proposed development. As the design process progresses, we are available to analyze the proposed design approach. Post-construction seismic conditions indicate factor of safety of 1.15, of which is above the 1.1 FS threshold for maximum allowable permanent seismic deformations of 2 inches (FHWA 2011).

Residual strength results from strain-softensing behavior; i.e., soils become weaker with shearing (as in the case of slope movement) decreasing from peak strength to residual strength. Reduced shear strength usually occurs only in soils that have been previously sheared while undisturbed soils typically exist at peak strength. It is possible that sheared soils exist on this site or nearby and exhibit behavior consistent with residual strength. In this case, seismic slope stability may result in factors of safety less than 1.0. **However, soil shearing was not observed during subsurface exploration at this site. If pockets or layers of soft, weak, or sheared soils are observed during construction, work shall cease,**

and Jorgensen Geotechnical be notified immediately to evaluate site conditions and review the stability model.

4.2 Settlement

As described in Section 3.5.1, several different soil types were encountered at the site, all of which represent different levels of settlement potential, increasing the risk of differential settlement which is particularly damaging to structures. Settlement calculations were performed for the compressible clay loess soils and the landslide debris. Because the landslide debris contain varying amounts of matrix soils (i.e., clays and sands), estimated settlement is difficult. Though, it is important to note that in general, as the matrix content increases, the risk of settlement increases.

Item	Settlement Analyses – Loess and Landslide Debris	
	Scenario 1	**Scenario 2**
Bearing Layer	**Loess** – Foundation system is placed in direct contact with the loess soils	Landslide Debris - Foundation placed in direct contact with Landslide Debris
Foundation Assumptions	Comprises typical reinforced concrete spread footings	
	Bearing pressure of 3,000 pounds per square foot	
	Buried 3-feet below finished grade	
	Spread footings is 2-feet wide	
Calculated Settlement	4.75-inches	2.37 -inches

The risk of settlement can be reduced by several subgrade improvement methods, of which are discussed below in Section 5.0.

4.3 Lateral Earth Pressures

Lateral pressures were calculated using methods suggested by Bowles (1996) for at-rest, active, and passive conditions and are presented in Table 4-2. These values assume a combination of lean clay and clayey gravel landslide debris will be used as non-structural backfill. We have assumed an estimated internal friction angle of 36° and a unit weight of 130 pcf based on experience working with similar soil deposits and laboratory testing. Calculations assume level backfill against foundation walls or retaining walls.

Table 4-2: Lateral Pressure Parameters for Landslide Debris

Condition	Coefficient of Earth Pressures	γK (equivalent fluid pressure)
Static Conditions Level Backfill	K_o = 0.41 K_a = 0.26 K_p = 3.85	54 pcf 34 pcf 501 pcf
Earthquake Conditions Level Backfill	K_{ae} = 0.33 K_{pe} = 3.60	43 pcf 468 pcf

Lateral earth pressure design will be estimated based on the concept of equivalent fluid pressures, in which the soil pressure-distribution is triangular against the foundation or retaining wall. The following sections summarize each design situation.

4.3.1 Active Pressures

Application	Retaining walls which are allowed to deflect and develop an active soil wedge
Resultant Force Calculation	½ $\gamma K_a H^2$; pounds per horizontal foot of wall
Resultant Force Location	one-third the wall height (1/3 H) above the base
Seismic Coefficient[1]	K_s = 0.25g (r·α·PGA) per the FHWA (2011)
Seismic Calculation Basis	Mononobe-Okabe equations (Bowles, 1996)
Seismic Resultant Force	½ (γK_{ae} - γK_a) H^2; pounds per horizontal foot of wall
Seismic Resultant Force Location[2]	Applied at 60% of the wall height above the base

1. Discussion and calculations for the Seismic Coefficient can be found in Appendix F.
2. Research has indicated that lateral pressures due to earthquakes are non-hydrostatic in distribution, and the resultant acts above the lower third-point of the wall (Bakeer, et al, 1990).

4.3.2 At-Rest Pressures

Application[1]	Walls which are restrained and not allowed to deflect
Resultant Force Calculation	½ $\gamma K_0 H^2$; pounds per horizontal foot of wall
Resultant Force Location	One-third the wall height (1/3 H) above the base

1. Design control of such walls shall be whichever generates the higher resultant force: at-rest pressures or active seismic pressures.

4.3.3 Passive Pressures

Application[1]	Toe of retaining walls where the wall is allowed to move into soil
Resultant Force Calculation	½ $\gamma K_p H^2$; pounds per horizontal foot of wall
Resultant Force Location	One-third the wall height (1/3 H) above the base
Design Control	k_s = 0.25g (r·α·PGA) per the FHWA (2011)
Seismic Calculation Basis	Mononobe-Okabe equations (Bowles, 1996)
Seismic Resultant Force Location	One-third the wall height (1/3 H) above the base

1. Passive pressure design should neglect loose fill and soil located within the frost zone.

5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 Recommendations Overview

The fine-grained soils encountered at the site exhibit moderate settlement potential as described above in Section 4.2. Typical spread footings are likely to experience settlement greater than 1-inch if placed above the compressible soils. The risk of settlement can be reduced by **ground improvement techniques** such as geosynthetic reinforced fills, or engineered aggregate piers (EAPs). The risk of settlement can also be reduced by incorporating **deep foundation elements** such as driven piles or micropiles into the foundation design. Subgrade improvement methods to reduce the risk of future differential settlement are discussed in Sections 5.2, 5.3, and 5.4, below.

If a construction shoring system is needed,, the shoring system will need to be extended at or below the over-excavation limit, increasing the overall height of the shoring system mass excavation (i.e., over-ex and replace with geosynthetic reinforced fill) is selected. Deep foundation elements and aggregate piers would negate the need for mass excavation below the shoring system.

It should be noted that different subgrade improvement methods correspond with different levels of risk reduction. Any subgrade improvement method that leaves problematic soil beneath foundation systems has a higher level of risk than those that do not. Similarly, deep foundation elements greatly reduce the risk of settlement by transferring the foundation load past the problematic soils and into the underlying competent soils. Typically, the cost of a foundation system correlates to the risk reduction (i.e., the more expensive foundation system the more risk reduction).

5.2 Reinforced Fills

Reinforced fill comprise imported soil compacted and interbedded with a pre-determined geosynthetic. The reinforced fill will better distribute the foundation load thereby reducing the load applied to the fine-grained, compressible and reducing the amount of future potential settlement. Exact thickness of a reinforced fill is currently unknown due to the limited design data available, though it can be expected to be four to six fee thick with a geosynthetic layer placed at every 1-ft increment.

5.3 Engineered Aggregate Piers

Engineered aggregate piers are a ground improvement technique that utilize compacted aggregate to reinforce potentially problematic soils. The piers are predrilled with an auger to the full design-depth (or to a refusal condition on competent rock/soil), a select aggregate is dumped into the predrilled hole from the surface, and the aggregate is then compacted with a down hole compactor attached to an excavator. The compaction effort not only compacts the imported aggregate, but also densifies the surrounding native soils. The increased density of the select aggregate as well as the surrounding native soils reduces the potential of future foundation settlement. One major benefit of EAPs compared to deep foundation elements, is the EAPs are a ground improvement technique, therefore the foundation footings do not need to be designed as grade beams as it would need to be for deep foundation elements, but typical spread footings.

Aggregate piers are typically designed and installed by a design-build contractor. Such as Keller or Geotech Foundation Company West. Jorgensen is available to provide design values and recommendations to the selected contractor for final design and price estimates.

5.4 Deep Foundation Elements

Foundations consisting of grade beams supported by deep foundation elements, such as driven piles or micropiles, typically allow very little vertical movement of structural elements. This option represents the lowest risk of future foundation settlement.

Both micropiles and driven piles are typically designed and installed by a design-build contractor. Jorgensen is available to provide design values and recommendations to the selected contractor for final design and price estimates.

5.5 Earthwork

5.5.1 Site Preparation

Prior to the placement of any fill, concrete slabs, or foundation elements, the site should be cleared and stripped of topsoil and all organic debris. No brush, roots, frozen material, or other deleterious or unsuitable materials shall be incorporated in the foundation subgrade or structural fill. All exposed subgrade surfaces should be free of mounds and depressions which could prevent uniform compaction. If unexpected fills or obstructions are encountered during site clearing or excavation, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

During the excavation, the equipment may disturb and loosen the surface of the subgrade soils. All disturbed areas should be compacted with a smooth-drum vibratory roller, in vibratory mode with a minimum of three passes, prior to the placement of structural fill and footing construction. The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed and approved by a representative of this office.

5.5.2 Excavation and Cut Slope Stability

OSHA regulations (29CFR1926) appear to classify the coarse-grained at the site as Type C soil. For planning and design purposes, simple cut slopes should be no steeper than 1.5H:1V. According to OSHA, any cut slope greater than 20 feet in height requires additional analysis. Shallow groundwater conditions at the site may impact shoring requirements. These recommendations are based on observations made at the time of the site exploration. The contractor shall be responsible for adherence to OSHA and other safety regulations by observing soil conditions at the time of construction.

The design of a temporary construction shoring system is beyond the scope of this report. Jorgensen Geotechnical is available to coordinate with shoring contractors to provide design parameters and local expertise to the project and deliver the most efficient shoring option.

5.5.3 Final Backfilling and Grading

Properly compacted backfill and site drainage are very important to protect subgrade soils and prevent water from flowing to undesirable locations (i.e., to the highway). All soils at the site are acceptable for use as backfill and general site grading. Compaction guidelines for both soil types can be found in Section 5.5.4.

5.5.4 Compaction

Based on our borehole logs, compaction of the on-site soils during construction can be measured by performing a Standard Proctor test per ASTM D698 and performing nuclear density gauge testing during the compaction process. Site soils should be moisture-conditioned and placed in lifts and compacted to a predetermined percentage (typically either 92% or 95%) of the maximum dry density as determined by Standard Proctor testing. Soil should be moisture conditioned to between -2% and +2% of the optimum moisture content (OMC). Fine-grained soils require a sheepsfoot or padfoot roller.

It is important to note, the on-site soils contain fine-grained soils which become difficult to compact if moisture contents become too high. Moisture management of the compacted soils will be paramount to reach adequate densities. Additionally, groundwater may impact the ability to compact the soils during construction.

If imported "pit-run" is used as structural fill or if soils at the site contain more oversized clasts (greater than 3-inches) compaction testing with a nuclear density gauge is usually problematic due to the presence of stones. Therefore, we recommend compacting stony soils using a **method specification**, for which Table 5-1 provides initial guidelines.

Table 5-1: Compaction Parameters for Stony Fill

Compactor Type	Lift Thickness	Maximum Particle Size	Minimum Number of Passes[1]
5-ton vibratory	12 inches	9-inch[2]	3
1.5-ton vibratory	9 inches	6-inch	5
Hand-held	4 inches	4-inch	5

1. The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.
2. Occasional clasts to 12-inch are permitted, if encountered, but should not be nested.

The method specification may be established as follows:

- The contractor will place fill in loose lifts no greater than specified in the above table for whichever class of compactor is used.
- Fill will be compacted with the *minimum* number of passes specified above. The actual number of passes should be determined by observing compaction after each pass to determine if the surface is non-yielding. If the fill surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.
- Once the number of passes is determined, this **method** (unique to the material type, compactor, lift thickness, and number of passes) may be continued for the rest of the project as long as fill material properties and subgrade soil conditions remain the same.

It is important to establish a method specification as early in the construction as possible and apply it consistently for the entirety of the project. JG should observe lift thickness, number of passes, and equipment used during compaction. Additional guidance on construction observations may be found in Section 5.5.6.

5.5.5 Compaction Requirements

We recommend the following requirements for engineered fill materials:

Material Type and Location	Minimum Compaction Requirement	Moisture
Stony soils[1]: All Locations (Structural and Non-Structural Applications)	Non-yielding Condition	Usually 6-8%[2]
Non-stony soils	92% or 95% maximum dry density	+2-2% OMC

1. Stony soil may be imported or site-derived
2. Clean, stony soils are typically moisture insensitive and field observations are usually adequate to estimate when soils achieve the proper moisture.

We recommend compaction of fills be observed and tested during construction. If stony fill is not observed to be in a non-yielding condition or non-stony fills do not achieve the recommended compaction requirements, the area represented by the test should be reworked and retested as required to meet the requirements.

5.5.6 Observation during Construction

Recommendations in this report are contingent upon our involvement. If any unexpected soils or conditions are revealed during construction, this office should be notified immediately to survey the conditions and make necessary modifications. All excavations and foundation subgrades should be observed by a representative of JG prior to fill or concrete placement, especially if questionable materials are exposed. Notice shall be provided at a minimum of 24 hours before the requested observation.
We are able to provide the most value observing site conditions at the following times:

1. Upon completion of site preparation to verify all organics and unsuitable material have been removed, and to verify stony alluvial soils have been reached and structural fills have been prepared in accordance with Sections 5.5.1 and 5.5.4.
2. we can observe placement and compaction of fill and aid in the development of a method specification, Section 5.5.4.
3. We can perform density testing by means of proof rolls and with the use of a Nuclear Density Gauge for structural and non-structural soils.

6.0 LIMITATIONS

This report has been prepared based on a limited amount of data. Actual site conditions may vary. These services have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty is made or implied.

This report is site-specific and has been prepared in support of the proposed project. The report is for the sole use of the current property owner and their design and construction team and shall be considered non-transferable to future property owners without the written consent of Jorgensen Geotechnical. Under no circumstances are the figures and text to be used separately.

7.0 REFERENCES

American Concrete Institute, 1997, Guide for Concrete Floor and Slab Construction: ACI302.1R-896.

American Society of Civil Engineers, Minimum Design Loads for Building and Other Structures: ASCE/SEI Standard 7-16.

Bakeer, R.M., S.K. Bhatia, and I. Ishibashi, 1990, Dynamic Earth Pressure with Various Gravity Wall Movements *in* Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen, ed.): ASCE Geotechnical Special Publication 25, p. 887-899.

Bowles, J.E., 1996, Foundation Analysis and Design, 5th Ed. : McGraw Hill.

Case, J.C., 1997, Earthquakes and Active Faults in Wyoming; Wyoming State Geological Survey, Preliminary Hazards Report 97-2.

Das, B., 2011, Principles of Foundation Engineering, 7th edition, Cengage Learning, Stamford, CT, USA.

Duncan, J.M., Horz, R.C., and Yang, T.L., 1996, Shear Strength Correlations for Geotechnical Engineering, Virginia Tech, Department of Civil Engineering, Blacksburg, Virginia, pp. 86.

FHWA (1996) "Design Guidance: Geotechnical Earthquake Engineering for Highways," Geotechnical Engineering Circular No. 3, Federal Highway Administration, Vol. 1 and Vol. 2, Reports No. FHWA-SA-97-076 and FHWA-SA-97-077

FHWA (2011) "LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations," Geotechnical Engineering Circular No. 3, Report No. FHWA-NHI-11-032, 592 p"

Gilbert, J.D., D. Ostenaa, and C. Wood, 1983, Seismotectonic Study Jackson Lake Dam and Reservoir, Minidoka Project, Idaho-Wyoming: Seismotectonic Report 83-8, US Bur. Reclam.

Hatanaka, M. and Uchida, A., 1996, Empirical Correlation Between Penetration Resistance and Internal Friction Angle of Sandy Soils, Soils and Foundations, Vol. 36, No. 4, pp. 1-9, https://doi.org/10.3208/sandf.36.4_1.

Holland, J.A., and W. Walker, 1998, Controlling Curling and Cracking in Floors to Receive Coverings: Concrete Construction Publication Number C980603.

Hynes-Griffin, M.E., and Franklin, A.G., 1984, Rationalizing the Seismic Coefficient Method: U.S. Army Corps of Engineers, Waterways Experiment Station, Miscellaneous Paper GL-84-13.

International Building Code, 2021.

Kelly, D., 2006, Seismic Site Classification for Structural Engineers, Structure Magazine, pp. 21-24.

Kulhawy, F.H., and Mayne, P.W., 1990, Manual of Estimating Soil Properties for Foundation Design, Electric Power Research Institute, Palo Alto, California.

Love, J.D., & Albee, H.F., Geologic Map of the Jackson Quadrangle, Teton County, Wyoming, 2004.

Machette, M.N, Pierce, K.L., McCalpin, J.P., Haller, K.M., and Dart, R.L., 2001, Map and Data for Quaternary faults and folds in Wyoming, United States Geological Survey, Open-File Report 01-461.

McCalpin, J.P., Machette, M.N., and Haller, K.M., compilers, 1994, Fault number 726a, Grand Valley fault, Swan Valley section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed October 30, 2023.

Nagaraj, T.S., and Murthy, B.R.S., 1985, Prediction of the Preconsolidation Pressure and Recompression Index of Soils, Geotechnical Testing Journal, American Society for Testing and Materials, Vol. 8, No. 4, pp.199-202.

NCHRP 12-70 (2008) "Seismic Analysis and Design of Retaining Walls, Buried Structures, Slopes and Embankments," NCHRP Report 611, Transportation Research Board, Washington, DC (2 volumes)

O'Connell, D.R.H., Wood, C.K., Ostenaa, D.A., Block, L.V., and LaForge, R.C., 2003, Final Report, Ground Motion Evaluation for Jackson Lake Dam, Minidoka Project, Wyoming: U.S. Bureau of Reclamation Report 2003-2.

Pack, John S., P.E., 2020, Simplified Design and Inspection Guide, copyright Heli-Pile, published March 2020, Denver, Colorado.

Pampeyan, E.H., Schroeder, M.L., Schell, E.M., and Cressman, E.R., 1967, Geologic map of the Driggs quadrangle, Bonneville and Teton Counties, Idaho, and Teton County, Wyoming, U.S. Geological Survey, Mineral Investigations Field Studies Map MF-300, 1:31,680.

Pit Slope Manual, 1982, Chapter 9, Waste Embankments: Mining Research Laboratories, CANMET Report 77-01.

Schmertmann, J.M., 1975, Measurement of in-situ shear strength, Proceedings of Conference on In Situ Measurement of Soil Properties, Raleigh, NC, USA, June.

Skempton, A. W., 1944, Notes on the Compressibility of Clays, Quarterly Journal of Geological Society, London, Vol. C, pp: 119-135.

Smith, R.B. and Arabasz, W.J., 1991, Seismicity of the Intermountain Seismic Belt, in Slemmons, D.B., Engdahl, E.R., Zoback, M.L., and Blackwell, D.D., editors, Neotectonics of North America: Geological Society of America, Decade Map Volume 1, p. 185-228.

Smith, R.B., Byrd, J.O.D., and Susong, D.D., 1993, The Teton fault, Wyoming: Seismotectonics, Quaternary History, and Earthquake Hazards, in Snoke, Q.W., Steidtmann, J.R., and Roberts, S.M., editors, Geology of Wyoming; Geological Survey of Wyoming Memoir No. 5, p. 628-667.

Structural Engineers Association of California, U.S. Seismic Design Maps, accessed October 30, 2023, from SEAOC website: https://seismicmaps.org/

Suprenant, B.A., and Malisch, 1998, Where to Place the Vapor Retarder: Concrete Construction Publication Number C980427.

Suprenant, B.A., and Malisch, 1999, Don't Use Loose Sand under Concrete Slabs: Concrete Construction Publication Number C99C0223.

Terzaghi, K., R.B. Peck, and G. Mesri, 1996, Soil Mechanics in Engineering Practice, 3rd Ed.: John Wiley & Sons.

U.S. Geological Survey Earthquake Hazards Program, 2014, Unified Hazard Tool, accessed October 30, 2023 from USGS website: https://earthquake.usgs.gov/hazards/interactive/

U.S. Geological Survey, 2006, Quaternary Fault and Fold Database for the United States, accessed October 30, 2023 from USGS website: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

Whitman, R.V., 1990, Seismic Design and Behavior of Gravity Retaining Walls in Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen ed): ASCE Geotechnical Special Publication 25, p. 817-842.

Wroth, C.P., and Wood, D.M., 1978, The Correlation of Index Properties with Some Basic Engineering Properties of Soils, Canadian Geotechnical Journal, Vol. 15, No. 2, pp. 137-145.

Zellman, M.S., DuRoss, C.B., and Thackray, G.D., 2019, The Teton fault—Teton County, Wyoming: Wyoming State Geological Survey Open File Report 2019-1, scale 1:75,000.

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX A

Site Exploration Procedures and Subsurface Exploration Logs

Field Exploration

Borehole Locations and Elevations

Borehole and test pit locations were determined by Jorgensen Geotechnical (JG) staff to bracket the approximate location of the proposed development. Approximate locations of the boreholes and test pits are presented in Figure 2. The approximate location of each borehole and test pit were estimated based on relative proximity to landmarks identifiable on aerial photography as well as approximate GPS coordinates which were collected in the field. Approximate elevations were based on topographic data from Jorgensen Associates.

Subsurface Exploration Procedure

JG conducted a site exploration at the proposed project site utilizing two different subsurface exploration techniques: geotechnical boreholes and open test pits. During the exploration effort, several disturbed samples from SPTs and continuous disturbed samples from the sonic drilling were collected. Bulk disturbed grab samples were collected during the test pit excavation. Shelby tubes were used to collect relatively undisturbed samples of soft material for consolidation testing, shear testing, and index testing. The samples were tested at Gerhart Cole, Inc. (GCI) in Salt Lake City, Utah, and the results are presented in Appendix B. Soil-engineering properties were based on visual classification, direct lab testing results, and accepted correlations based on index test results and SPT blow counts and are discussed further in Appendix D. The subsurface exploration techniques are described below.

Sonic Boreholes

On October 2, 2023, JG directed and oversaw the drilling of two boreholes, JG-05 and JG-06, to 35-feet below the ground surface (bgs) using a sonic drill rig operated by Cascade Drilling of West Jordan, Utah. Sonic drilling utilizes high frequency vibrations to advance a core barrel or casing into the subsurface soils while collecting one continuous disturbed sample. At predetermined intervals, standard penetration tests (SPT) were performed to generate blow count values and collect additional disturbed samples.

Hollow Stem Auger Boreholes

Three additional boreholes, JG-07, JG-08 and JG-09, were completed each to approximately 20-feet bgs on October 24, 2023 using a hollow stem auger (HSA) drilling technique with a Diedrich D120 drill rig operated by SK Geotechnical of Billing, Montana. The HSA drilling technique utilized a 4.25-inch inside diameter hollow auger with a solid stem rod in the center that is removed to perform standard penetration tests every 2.5-feet.

Open Test Pits

On October 31, 2023, JG directed and oversaw the excavation of three open test pits, TP-01, TP-07, and TP-08. The test pits were excavated using a Hitachi Zaxis 160 steel tracked excavator operated by FCExcvation and ranged in depth from 16 to 17.5-feet bgs. Disturbed bulk samples were collected from pertinent soil layers.

Borehole and Test Pit Logs

Field data were collected in the field digitally using the application pLog on a tablet for both Boreholes and Test Pits. Draft logs were reviewed in the office, and final versions are presented below. Blow counts for SPT (field N-values) were adjusted to a standard hammer efficiency of 60% and overburden pressure of one atmosphere as suggested by Youd and Idriss (1997) and Fang (1991), to obtain the adjusted (N1)60 values in blows per foot. Soil type, thickness, consistency, and relative moisture content were observed and documented by Jorgensen

Geotechnical staff. The final logs represent JG's interpretation of the subsurface soil conditions. Site soil conditions may differ from those presented in the boreholes.

In addition to borehole and test pit logs produced by Jorgensen Geotechnical, borehole logs presented in a report produced by Nelson Engineering dated July 28, 2021 were also reviewed to aid in determining subsurface soil conditions and are presented below. Approximate borehole locations performed by Nelson Engineering are presented in Figure 2. Test pit logs presented in a report prepared by Womack and Associated dated June 4, 2012 for the water tank due south of the proposed project site were also reviewed, but are not shown in Figure 2 due to their distance from the project site.

Geophysical Exploration

Jorgensen Geotechnical contracted with Atlas Technical Consultants LLC of Salt Lake City to perform a geophysical evaluation at the project site. The primary purpose of the geophysical study was to develop subsurface shear-wave velocity profiles using Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Waves (MASW). The geophysical exploration was performed on October 23 and 24th 2024. One ReMi line (RL-1) and one MASW line (ML-1) were performed at the specific project site (Lot 57), while the other ReMi and MASW lines were performed to the east of the project site on Lots 53 and 58.

The ReMi study extended to a maximum depth of 100-ft below the ground surface, allowing us to select a Site Class based on the results. Shear wave velocity for the ReMi line RL-1 performed at Lot 57 produced a shear wave velocity of 1,320 ft/s, classifying the site as a Site Class C per ASCE 7-16.

The MASW line ML-1 performed at the project site indicates the upper approximately 25-feet are softer (i.e., slower shear wave velocity), and the soils become denser at approximately 30 to 40-feet below the ground surface. Though the soils appear to become denser at 30-feet, the soils at the site appear to chaotic and have portions that are dense, and portions that are soft, consistent with the observations made in the boreholes and test pits.

The full draft version of the Geophysical Evaluation Report – Snow King – Jackson, Wyoming dated January 2, 2024 from Atlas is attached.



Photo 1: Typical Hollow Stem Auger drilling setup/JG--07



Photo 2: Typical sonic drilling bulk sample/Landslide Debris (GC/CL)



Photo 3: Typical SPT sample/JG-05 D4



Photo 4: Typical test pit excavation setup/TP-07



Photo 5: Landslide Debris (GC)/TP-01



Photo 6: Loess (CL/ML)/TP-02

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-05

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.472132 **Longitude:** -110.754770 **Elevation:** 6375.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1			D1				LEAN CLAY, LEAN CLAY with Sand (CL): slightly moist, brownish tan, medium stiff, 0-5% gravel, 10-15% sand, 80-90% fines [LOESS]					
2												
3			D2									
4												
5			D3									
6												
7			D4	73	8-9-15 22							
8												
9			D5									
10			D6					14		39	14	25
11			D7				SILTY CLAYEY GRAVEL, SILTY CLAYEY GRAVEL with Sand (GC-GM): slightly moist, brownish tan, medium dense to very dense, approximately 25% angular cobbles by volume, matrix supported, 40-65% angular gravel, 10-35% sand, 20-25% fines [LANDSLIDE DEBRIS]					
12												
13												
14			D8									
15												
16			D9									
17												
18			D10 a									
19			D10 b									

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-05

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.472132 **Longitude:** -110.754770 **Elevation:** 6375.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	SPT N1(60) / MC (%) / PL & LL (%) / Fines Content (%)
21			D11				SILTY CLAYEY GRAVEL, SILTY CLAYEY GRAVEL with Sand (GC-GM): slightly moist, brownish tan, medium dense to very dense, approximately 25% angular cobbles by volume, matrix supported, 40-65% angular gravel, 10-35% sand, 20-25% fines [LANDSLIDE DEBRIS]						
22													
23			D12					6		26	15	11	● ⊢
24													
25			D13										
26													
27			D15	87	13-40-50								
28			~~D14~~		76								
29			D16										
30													
31			D17										
32													
33			D18										
34													
35			D19	67	28-25-12			2					● ▲
36					19								
37													
38													
39													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-06

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471972 **Longitude:** -110.754598 **Elevation:** 6377.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
1			D1				LEAN CLAY, LEAN CLAY with Sand, SANDY LEAN CLAY with Gravel (CL): slightly moist, brown, medium stiff to stiff, 0-25% angular gravel, 5-25% sand, 50-95% fines [LOESS]						
2													
3													
4			D2					27		38	19	19	● ⊢
5													
6			D3	87	10-10-25 31								▲
7			D4										
8													
9			D5										
10													
11			D6	60	6-6-9 12								▲
12													
13			D8					10		32	13	19	● ⊢
14			D9										
15													
16			D10	20	10-15-15 26								▲
17													
18			D11				CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, medium dense to dense, approximately 25% angular cobbles by volume, matrix supported, 45-50% angular gravel, 25-30% sand, 20-25% fines [LANDSLIDE DEBRIS]						
19													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-06

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 02 2023 **Completed:** Oct 02 2023
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Equipment: Sonic Drill Rig
Hammer Type: Automatic

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 36.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471972 **Longitude:** -110.754598 **Elevation:** 6377.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21			D12	100	8-12-17 26		CLAYEY GRAVEL with Sand (GC): slightly moist, brownish tan, medium dense to dense, approximately 25% angular cobbles by volume, matrix supported, 45-50% angular gravel, 25-30% sand, 20-25% fines [LANDSLIDE DEBRIS]	5		18	14	4
22			D13									
23			D14									
24												
25			D15	87	20-28-50 66							
26			D16									
27												
28			D17									
29												
30			D18	73	12-30-34 54							
31												
32			D19				LEAN CLAY with Sand (CL): slightly moist, brownish tan, medium stiff, 10% angular gravel, 15-20% sand, 70-75% fines [LANDSLIDE DEBRIS]					
33			D20					15		28	15	13
34												
35			D21	100	12-10-12 18							
36												
37												
38												
39												

Atterberg Limits

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-07

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 24 2023 **Completed:** Oct 24 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 21.0 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.472169 **Longitude:** -110.754649 **Elevation:** 6374.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
1–4			D-1	20	4-3-1 2		CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, very loose, 55% sub-rounded gravel, 25% sand, 20% fines [FILL]					
4–6			U-1 D-2	73	3-2-4 5		LEAN CLAY, Sandy LEAN CLAY (CL): tan, very soft to stiff, 0-10% angular gravel, 10-30% sand, 60-90% fines, medium plasticity, [LOESS]	14		31	20	11
7–9			D-3	73	2-2-2 3							
9–11			U-2 D-4	80	4-16-25 32	2.25		23		33	18	15
12–14			D-5	80	18-23-21 36							
15–16			D-6	87	14-13-14 23							
17–19			D-7	113	50/5" 82		CLAYEY GRAVEL with Sand (GC): dry, whitish tan, dense, approximately 25% angular cobbles by volume, matrix supported, 65% angular gravel, 15% sand, 20% fines [LANDSLIDE DEBRIS]	13		29	15	14

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-07

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 24 2023 **Completed:** Oct 24 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 21.0 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.472169 **Longitude:** -110.754649 **Elevation:** 6374.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
21			D-8	60	10-7-28 31		CLAYEY GRAVEL with Sand (GC): dry, whitish tan, dense, approximately 25% angular cobbles by volume, matrix supported, 65% angular gravel, 15% sand, 20% fines [LANDSLIDE DEBRIS]						▲
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-08

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 24 2023 **Completed:** Oct 24 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 20.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.472019 **Longitude:** -110.754636 **Elevation:** 6377.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-1 installed to Total depth of 20ft bgs.

Depth	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
0					CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, very loose, 55% sub-angular gravel, 25% sand, 20% fines [FILL]					
3		D-1	67	4-7-10 15	GRAVELLY LEAN CLAY with Sand (CL): slightly moist, tan, medium stiff, 15% angular gravel, 15% sand, 70% fines [LOESS]					
5		D-2	67	8-13-17 25	Poorly Graded GRAVEL with silt and Sand, SILTY CLAYEY GRAVEL with Sand (GP-GM, GC): dry, whitish brown, medium dense to dense, approximately 25% angular cobbles by volume, matrix supported, 65-75% angular gravel, 15-20% sand, 10-20% fines, [LANDSLIDE DEBRIS]					
8		D-3	87	6-13-15 23						
10		D-4	80	13-24-20 31		2				
13		D-5	50	8-9-16 21	Gravelly LEAN CLAY with Sand (CL): dry, reddish tan, medium stiff to very stiff, 20-25% sub-angular to angular gravel, 10-15% sand, 60-65% fines, medium plasticity [LANDSLIDE DEBRIS]	10		32	15	17
15		D-6	60	12-29-14 23						
18		D-7	100	46-14-15 23						
19		D-8	0	50/3" 79						

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-08

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 24 2023 **Completed:** Oct 24 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 20.5 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.472019 **Longitude:** -110.754636 **Elevation:** 6377.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings. MW-1 installed to Total depth of 20ft bgs.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
21							Gravelly LEAN CLAY with Sand (CL): dry, reddish tan, medium stiff to very stiff, 20-25% sub-angular to angular gravel, 10-15% sand, 60-65% fines, high plasticity, [LANDSLIDE DEBRIS]					
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												

▲ SPT N1(60) 8 16 24 32
● MC (%)
⊢ PL & LL (%) 20 40 60 80
☐ Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-09

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 24 2023 **Completed:** Oct 24 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 21.0 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471879 **Longitude:** -110.754577 **Elevation:** 6382.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index
0							CLAYEY GRAVEL with Sand (GC): slightly moist, reddish brown, very loose, 55% sub-rounded to rounded gravel, 25% sand, 20% fines [FILL]					
3			D-1	50	3-5-6 9		SILTY GRAVEL with Sand (GC): dry to slightly moist, brown, loose to very dense, approximately 25% angular cobbles by volume, matrix supported, 30-45% angular gravel, 20-30% sand, 30-40% silty fines, [LANDSLIDE DEBRIS]					
5			D-2	83	9-11-15 21							
8			D-3	100	8-15-15 24			7		17	16	1
10			D-4	100	12-19-18 28							
13			D-5	100	8-18-19 31							
15			D-6	87	9-18-24 34			6				
18			D-7	111	5-13-50/4" 50							
19			D-8	0	50/2" 78							

SPT N1(60) 8 16 24 32
MC (%)
PL & LL (%) 20 40 60 80
Fines Content (%) 20 40 60 80

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Borehole ID: JG-09

Client: Bear Development, LLC
Project Number: 23072
Date Started: Oct 24 2023 **Completed:** Oct 24 2023
Drilling Contractor: SK Geotechnical
Drilling Method: 4-1/4" Hollow stem auger
Equipment: Diedrich D120
Hammer Type: Automatic hammer

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Total Depth: 21.0 ft
Logged By: Bruce Jackson **Checked By:** HC
Latitude: 43.471879 **Longitude:** -110.754577 **Elevation:** 6382.00
Notes: No groundwater encountered. Stopped at target depth. Backfilled with cuttings.

Depth	Graphic	Sampler Type	Number	Recovery % RQD	SPT Blow Count (N1)60	Pocket Pen. (tsf)	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	▲ SPT N1(60) 8 16 24 32 / ● MC (%) / ⊢ PL & LL (%) 20 40 60 80 / □ Fines Content (%) 20 40 60 80
21							SILTY GRAVEL with Sand (GC): dry to slightly moist, brown, loose to very dense, homogeneous, approximately 25% angular cobbles by volume, matrix supported, 30-45% angular gravel, 20-30% sand, 30-40% silty fines, [LANDSLIDE DEBRIS]						
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-01

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471994
Longitude: -110.754725
Elevation: 6379.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

Notes:
No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
1						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, dense, homogeneous, 15% cobbles by volume, remaining 45% gravel, 30% sand, 25% fines by mass [FILL]						
2												
3						LEAN CLAY with Sand (CL): slightly moist, light tan, pinholed, 5% gravel, 15% sand, 80% fines, medium plasticity, Some gravels present [LOESS]						
4												
5						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, clast supported, 15-25% angular cobbles and boulders by volume, 55% angular gravel, 20% sand, 25% fines, [LANDSLIDE DEBRIS]						
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-02

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.472045
Longitude: -110.754516
Elevation: 6379.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

Notes:
No groundwater encountered. Stopped at target depth and limits of excavator. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
0						(GM): dry to slightly moist, brown, homogeneous, 10% cobbles by volume, remaining 45% gravel, 30% sand, 25% fines by mass, [FILL]						
1						SILT (ML): slightly moist, light tan, pinholed, 6.5% sand, 93.5% fines, Some sand present [LOESS]						
2												
3												
4												
5												
6			U-1				18					
7												
8												
9						SILTY GRAVEL with Sand (GM): dry to slightly moist, brown, clast supported, 25% angular cobbles by volume, remaining 55% angular gravel, 20% sand, 25% fines by mass, More cobbles than TP-1 [LANDSLIDE DEBRIS]						
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												

JORGENSEN GEOTECHNICAL, LLC
1315 HWY 89 S., Suite 201 - Jackson, WY 83002
Telephone: 307.733.5150

Test Pit ID: TP-07

Project Name: Bear Development - Snow King Loop Lot 57
Project Location: Jackson, WY
Client: Bear Development, LLC
Logged By: Bruce Jackson
Checked By: HC
Project Number: 23072
Latitude: 43.471846
Longitude: -110.754370
Elevation: 6384.00
Date Started: Oct 31 2023
Completed: Oct 31 2023
Contractor: FCE
Equipment: Hitachi Zaxis 160

Notes:
No groundwater encountered. Stopped due to large boulder. Pit walls remained vertical. Backfilled with spoils.

Depth	Graphic	Sampler Type	Number	Pocket Pen (tsf)	Classification	Material Description	Moisture Content (%)	Dry Unit Wt. (pcf)	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Well
0						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, homogeneous, 15% cobbles by volume, remaining 45% gravel, 30% sand, 25% fines by mass, Frozen [FILL]						
2						LEAN CLAY with Sand (CL): slightly moist, light tan, pinholed, 5% gravel, 15% sand, 80% fines, medium plasticity, Some gravels present [LOESS]						
3						CLAYEY GRAVEL with Sand (GC): dry to slightly moist, brown, clast supported, 25% cobbles by volume, remaining 55% gravel, 20% sand, 25% fines by mass, Increased amount of cobbles with depth. Encountered large Boulder at total depth [LANDSLIDE DEBRIS]						

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-4**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **10/22/05 10/23/05**	DRILLER: **PIEDMONT**	
LOGGED BY: **GYR**	DRILL TYPE: **TRACK MOUNT B-50**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6487.8**	HOLE DIAMETER: **4"**	
	HAMMER TYPE: **140#**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
	ABUNDANT GRAVEL TO COBBLE AND BOULDER SIZE CLASTS THROUGHOUT	1						*BORING LOCATED ON UNDISTURBED GROUND. SOILS EXPOSED 50' HIGH CUT SLOPE DOWNSLOPE TO THE NORTH ARE GENERALLY STIFF TO HARD/DENSE SILT/FINE SAND/SILTY CLAY, CLAY MIXTURES WITH FREQUENT LIMESTONE CLASTS FROM COBBLE TO BOULDER SIZE (6' M.D.) SEEPS ARE EVIDENT IN AREA OF CUT FACE DOWNSLOPE OF BORING.*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-6' ARE ROCK CHIPS AND MOIST SILTY CLAYEY SAND*						
		4												*CUTTINGS MOISTURE % INCREASING FROM 6' FEWER ROCKS AND FREQ. BIT PLUGGING.*
		5												
		6												
		7												
		8												
		9	X			BH4-1 2.5" SS	79	*MOIST LT TAN GREEN SILTY SAND, TRACE CLAY, TRACE COAL, HARD.*			35			
		10	X											
		11												
		12												
		13												
		14	X			BH4-2 2" SS	50	*MOIST TO WET RED SILTY CLAYEY GRAVEL W/SAND, MED. PLASTICITY, STIFF TO V. STIFF. MOIST. CHAOTIC, NOT STRATIFIED*			17			*DRILLING WITH 3.75" ø TRICONE AND WATER FROM 15'*
		15	X											
		16												
		17												
		18												
		19												
		20												*DR ROCK 19.5-20.2'*
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

S:\PROJECTS\06-07\TRANSFER STATION GEOTECH\TRANSFER MAIN BUILDING BORING LOGS.DWG GINT-D MAR 14 2005 01:31:31 PM PLOTTED BY:

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-4* PAGE: *2 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*DR SOFT 20.5–22 DR 50% ROCK WITH 4"–8" INTERVALS OF SOFTER MATERIAL BETWEEN 22–29'*
		23												
		24												
		25												
		26												
		27												
		28												
		29												
▼		30												*WATER LEVEL 11/3/05*
		31												
		32												
		33												
		34						*AT 34' ATTEMPTED SPLIT SPOON, BORING CAVED TO 29' DRILLING WITH CASED 3.75" TRICONE FROM 34' DR SMOOTHER DRILLING AT 35'*						
		35												
		36												
		37												
		38												
		39				BH4-3 2" SS	92	*MOIST TO WET SILT, ML, TAN, MED PLASTICITY. SEAMS .5–1" THICK MAY BE SATURATED. STIFF.*			8			
		40												
		41												*DR COBBLES FROM 39.5 LOSING WATER FROM 40.5*
		42												
		43												
		44												

S:\STANDARD\BORERS\NE_BOREHOLE.DWG (BOREHOLE PLT) JUN 20 2002 09:35:53 AM PLOTTED BY: GREEN

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-4* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44						*DR CONT FRACTURED ROCKY DRILLING FROM 39' CUTTINGS ARE ANGULAR LIMETONE/SANDSTONE GRAVEL SIZE FRAGMENTS*						
		45												
		46												
		47												
		48												
		49												
		50												
		51												
		52												
		53						*DR CONT FRACTURED ROCKY DRILLING FROM 39' CUTTINGS ARE ANGULAR BLUE BLACK LIMESTONE/SANDSTONE GRAVEL SIZE FRAGMENTS*						
		54						*MAJORITY OF WATER LOST, 39'–BOH*						
		55						*BOH =55.75*						
		56						*SET PIEZO (¾"PVC) BOTTOM AT 36.1' SLOTTED BOTTOM 6' BENTONITE IN HOLE TO 36.1, SAND TO 20' FILLED ANNULUS WITH SAND TO 38'*						
		57												
		58												
		59												
		60												
		61												
		62												
		63												
		64												
		65												
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJ\2002\130-12 GRAND VIEW GEOTECH\BH\BORINGLOGS.DWG (BH-4 (3)) FEB 13 2006 11:07:07 AM PLOTTED BY: GVR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**		**DRILL HOLE No.** BH-5	PAGE: 1 OF 4
DATE STARTED / FINISHED: 10/24/05 10/25/05		DRILLER: PIEDMONT	
LOGGED BY: GYR/ROLFE		DRILL TYPE: TRACK MOUNT B-50	
BOREHOLE LOCATION/ELEVATION: SEE LOCATION MAP/6409.9		HOLE DIAMETER: 4"	
		HAMMER TYPE: 140#	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		1						*BORING LOCATED AT BASE OF 60' PLUS CUT SLOPE*						*DRILLING W/DOWNHOLE PNEUMATIC HAMMER*
		2												
		3						*CUTTINGS 0-10' ARE MOIST TO WET LT BROWN CLAY, SILTY CLAY WITH SOME GRAVEL FRAGMENTS.*						
		4						*DRILLING INDICATES OCCASIONAL COBBLES*						
		5						*MOIST TO WET PLASTIC SOIL CAUSING FREQ. PLUGGING FROM 4'*						
		6												
		7												
		8												
		9												
		10						*DR ROCK 9.5-11'*						
		11						*WET FROM 11' FREQ. HAMMER PLUGGING*						
		12												
		13												*NO WATER IN HOLE @13' AFTER 28 HOURS*
		14												
		15						*NQ CORING FROM 15' RETURN LOGGED AS IN"/IN"*						
		16					10/36	*MOIST LT BROWN CLAYEY SAND W. GRAVEL, COBBLE FRAG. IN SHOE. V. STIFF TO HARD PP> 3.0 TSF*						
		17												
		18												*18-23 LITTLE WATER LOSS SMOOTH DRILLING W/OCCASIONAL COBBLES*
		19					10/60	*AS ABOVE*						
		20												
		21												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *2 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		22												*MINIMAL WATER LOSS 23–28'*
		23												
		24												
		25					19/60	*COBBLE IN BIT. MOIST BROWN CLAYEY SAND, SC, SANDS FINE, CLAY FRACTION MED. TO HIGH PLASTICITY, TRACE GRAVELS, HARD*	29	4				
		26												*SOME WATER LOSS @29' REGAINED BY 30'*
		27												
		28												
		29												*DRILLING IND. SAT. SOFT/LOOSE ZONE 30'±1 28–33 SMOOTH DRILLING W/SOME COBBLES LOWER PORTION*
		30					51/60	*AS ABOVE W/COBBLES TO 6", MOIST TAN BROWN SILTY CLAY W/GRAVELS*						
▼		31						*DRILLER REPORTS SAND LENSE "PUSHING IN ON HOLE" AT 30' HOLE CASED TO 33'*						
		32												
		33												
		34												
		35					18/36	*ALL GRAVEL AND COBBLE FRAGMENTS, LITTLE FINE GRAINED MATERIAL*						*MIN. WATER LOSS 33–40'*
		36						*36–38' MOIST TAN BROWN CLAYEY SAND, SC, TRACE GRAVEL, MED. PLASTIC*						
		37					13/24	*ABUNDANT GRAVEL MOIST TAN TO GREY CLAYEY SAND W/GRAVEL, SC, MED. PLASTICITY*						*DRILLING IND. HIGHER GRAVEL FRACTION THAN IN RETURN FROM 33'*
		38												
		39					15/17	*MOIST BROWN CLAYEY SAND, SC, SANDS FINE, FINES MED. PLASTIC, V.STIFF TO HARD, TRACE GRAVEL*	28	12				
		40												
		41					9/43	*MOIST GREY CLAYEY SAND, W/ GRAVEL AND COBBLES, SC, V. STIFF TO HARD*						
		42												
		43												
		44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

S:\PROJECTS\2006\126-02 GRAND VIEW LODGES\CAD\BHSBORINGLOG.DWG (BH-5C2) JAN 06 2006 10:56:56 AM PLOTTED BY CYR

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *3 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44												
		45					21/60	*MOIST TAN SILTY TO SANDY CLAY W/GRAVEL, CL, MED. PLASTICITY, V. STIFF TO HARD*						*TAN BROWN RETURN*
		46												
		47												
		48												
		49					13/24	*AS ABOVE*						
		50												*GOOD RETURN*
		51												
		52					15/36	*MOIST TAN BROWN SILTY CLAYEY SAND W/GRAVEL, SC-SM COAL IN SHOE @53' V/ STIFF TO HARD*						
		53												
		54					30/30	*MOIST TAN BROWN SILTY CLAY W/GRAVEL, INTERBEDDED COAL STRATA, V. STIFF, SOME MOTTLEING*						
		55												
		56												
		57					27/30	*AS ABOVE*						
		58												
		59												
		60					14/60	*MOIST BROWN SANDY SILTY CLAY W/GRAVEL, CL-ML, VERY STIFF*						
		61												
		62												
		63												
		64						*63-68 SOME KNOCKING, SOME FAST DRILLING*						
		65						*ORGANICS AT 65'*						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-5* PAGE: *4 OF 4*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		67					34/60	*AS ABOVE TO 65' <u>FIBROUS ORGANIC MATERIAL @65±</u> BELOW ORGANICS IS MOIST BLUE GREY SANDY CLAY/CLAYEY SAND, STIFF TO VERY STIFF, WITH GRAVEL. BOTTOM 1' IS MOIST SILTY SAND/SANDY SILT/HARD/V. DENSE*						
		68												
		69												
		70					37/60	*SILTY SAND AS ABOVE SMOOTH DRILLING OCCASION KNOCKING, MOD FAST DRILLING*						
		71												
		72												*GOOD RETURN BLUE/GREY TO WHITE GREY*
		73												
		74						*<u>ORGANIC DEBRIS</u> MOIST BLUE GREY CLAYEY SAND W/ GRAVEL AND OCCASIONAL LARGE FRAGS OF WHITE LIMESTONE, STIFF TO VERY STIFF, CHARCOAL AND ORGANIC DEBRIS*						
		75					44/48							
		76												
		77												
		78					9/12	*MOIST BLUE GREY SANDY SILT, ML, TRACE GRAVEL LOW PLASTICITY STIFF TO VERY STIFF, CHARCOAL*						
		79												
		80					24/33	*AS ABOVE CHARCOAL IN SHOE*						
		81						*BOH AT 80.75 3/4" PIEZO INSTALLED PULLED CASING, CAVED TO 50' WATER IN BORING ABOVE 50' AS SEEN ON CLOTH TAPE. BENTONITE TO 45.5' BOTTOM OF PIEZO AT 45.5' SLOTTED TO 35.5 SAND TO 35.0' CAVED ABOVE*						
		82												
		83												
		84												
		85												
		86												
		87												
		88					18/30							
		89												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT JACKSON, WYOMING*

S:\PROJECTS\2005\05-12 GRAND VIEW LODGES\ENGINEERING\DRAWINGS\BORINGLOGS\BH-5(4).DWG FEB 13 2006 10:07:36 AM PLOTTED BY: CYR

PROJECT NAME: **LOT 58 GRAND VIEW LODGES**	**DRILL HOLE No. BH-6**	PAGE: **1 OF 3**
DATE STARTED / FINISHED: **6/24/2021 6/25/2021**	DRILLER: **IME**	
LOGGED BY: **PRUETT**	DRILL TYPE: **TRUCK-MOUNTED CME85**	
BOREHOLE LOCATION/ELEVATION: **SEE LOCATION MAP/6466.0'**	HOLE DIAMETER: **8" OD HOLLOW STEM AUGER (HSA)**	
	HAMMER TYPE: **140# AUTO**	

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES DRIVE	SAMPLES UNDISTURBED	SAMPLES BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
1						*BORING LOCATED ON CENTERLINE OF MOUNTAIN ACCESS ROAD W/GRAVEL SURFACE. UPHILL ROAD CUTS EST. 3-7' HEIGHT. STEEP GRASSY SLOPES UPHILL AND DOWNHILL. SURFICIAL SOILS ON CUT SLOPES DRY SILTY/CLAYEY GRAVEL/GRAVELLY SILT/CLAY WITH COBBLES AND BOULDERS.*						*EASY DRILLING WITH INTERMITTENT BIT GRINDING FROM 1'-10'*
2												*2 MINUTES TO DRILL 0'-5'*
3												
4												
5	5			BH6-1 2" SS	83	*5.0'-6.5' MOIST, BROWN/LT BROWN GRAVELLY SILT/SILTY GRAVEL, HARD, ANGULAR LIMESTONE AND SANDSTONE GRAVELS, FILGC*			34			
6	7											*3 MINUTES TO DRILL 5'-10'*
7	11											*HARD DRILLING IN GRAVELS FROM 7'-8'*
8												
9												
10	6			BH6-2 2" SS	61	*10.0'-11.5' MOIST, LT BROWN/GRAY SILTY GRAVEL WITH SAND, DENSE, ANGULAR LIMESTONE GRAVEL FRAGMENTS, FILGC*			34			*MODERATE DRILLING WITH CONSTANT BIT GRINDING ON GRAVELS AND COBBLES FROM 10'-21'*
11	10											*4 MINUTES TO DRILL 10'-15'*
12	12											
13												
14												
15	12			BH6-3 2" SS	67	*15.0'-16.5' SAME AS ABOVE, TRACE SAND, LIMESTONE GRAVEL LODGED IN TIP OF SS*			47			
16	17											*5 MINUTES TO DRILL 15'-20'*
17	17											
18												
19												
20	17			BH6-4 2" SS	78	*20.0'-21.5' 0"-12" SAME AS ABOVE, DENSE, ANGULAR GRAY LIMESTONE AND MINOR YELLOW SANDSTONE GRAVELS, MEDIUM PLASTICITY SILT*			32			
21	15					*12"-14" MOIST, OLIVE GREEN SILTY CLAYEY GRAVEL WITH MINOR SAND*						
	11											

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: **SNOW KING MOUNTAIN RESORT**
JACKSON, WYOMING

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
22	11											
	6			BH6-4B 3" DM	83	22.0'–23.0' MOIST, OLIVE GREEN LEAN CLAY CHAOTICALLY MIXED WITH MINOR GRAY SILTY CLAY, STIFF TO VERY STIFF, MINOR COAL FRAGMENTS, PP>4.0 TSF, ORANGE OXIDATION STAINING IN TIP OF SS	33	15	15	108	18	MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 21'–25'
23	13	X										
24												4 MINUTES TO DRILL 20'–25'
25	3											
	5			BH6-5 2" SS	83	25.0'–26.5' MOIST, GRAY GRAVELLY SILTY CLAY WITH SAND, STIFF, MEDIUM PLASTICITY SILTY CLAY, PP=1–2 TSF, ANGULAR LIMESTONE AND SANDSTONE CLASTS, SANDSTONE CLAST WITH SHELL FOSSIL, ABUNDANT ORANGE OXIDATION STAINING THROUGHOUT			13			SMOOTH EASY DRILLING FROM 25'–30'
26	6											
27												2 MINUTES TO DRILL 25'–30'
28												BIT GRINDING FROM 28'–29'
29	7			BH6-5B 3" DM	83	28.5'–29.5' MOIST, BROWN SILTY CLAYEY/CLAYEY GRAVEL WITH SAND, MEDIUM DENSE, FINE SAND, ANGULAR LIMESTONE FRAGMENTS, FILGC			16			
	14											
30	14			BH6-6 2" SS	67	30.0'–31.5' MOIST, BROWN SILTY GRAVEL WITH SAND, VERY DENSE, FINE SAND, ANGULAR LIMESTONE FRAGMENTS, FILGC, FROM 4"–8" GRAVEL WITH SILT AND SAND LENS, GRAVEL LODGED IN TIP OF SS			51			MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 30'–35'
31	23											5 MINUTES TO DRILL 30'–35'
	24											
32												
33	7											INCREASED BIT GRINDING FROM 33'–35'
	20	X		BH6-6B 3" DM	100	33.0'–34.0' MOIST, OLIVE GREEN CLAYEY GRAVEL WITH SAND, MEDIUM DENSE, ANGULAR LIMESTONE, DOLOMITE, AND SANDSTONE GRAVELS			19			
34												
35	11											HARD DRILLING WITH CONSTANT BIT GRINDING 35'–45'
	18			BH6-7 2" SS	83	35.0'–36.5' TOP HALF–MOIST, OLIVE GREEN CLAYEY GRAVEL WITH SAND BOTTOM HALF–MOIST BROWN SILTY GRAVEL WITH SAND, DENSE, ANGULAR LIMESTONE FRAGMENTS, FILGC			34			
36	16											GRINDING ON COBBLE/BOULDER FROM 39'–39.5' FOR 15 MIN W/ NO PROGRESS. MOVED BH 6' EAST (BH–6B) DRILLED TO 40.4 WHERE GRINDING ON BOULDER FOR 30 MINS W/ MINOR PROGRESS. MOVED BH 7' WEST (BH–6C/ MW) OF ORIGINAL BH
37												
38						MONITORING WELL DRY ON 6/28/2021						
39												
40	23											
	50			BH6-8C 3" DM	67	39.5'–40.5' 0"–3" PULVERIZED LIMESTONE GRAVEL/COBBLE 3"–8" MOIST, SILTY CLAYEY GRAVEL WITH COBBLES, VERY DENSE, FRACTURED GRAY SANDSTONE GRAVEL AT BOS			>50			
41												
42												
43												HARD DRILLING WITH CONSTANT BIT GRINDING 40'–45'
44												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733-2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT NAME: *LOT 58 GRAND VIEW LODGES* **DRILL HOLE No.** *BH-6* PAGE: *3 OF 3*

This log is part of a report prepared by Nelson Engineering for this project and should be read with the report. This summary applies only at the location of the boring and at the time of the drilling. Subsurface conditions may differ at other locations and may change at this location with passage of time. The data presented is a simplification of actual conditions encountered.

WELL LOG	GRAPHIC LOG	DEPTH (FT)	SAMPLES: DRIVE	SAMPLES: UNDISTURBED	SAMPLES: BULK	SAMPLE ID	RECOVERY (%)	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	SPT	DRY DENSITY (PCF)	MOISTURE (%)	REMARKS
		44												
		45	11			BH6-9 2" SS	117	*45.0'–46.5' 0"–4" MOIST, OLIVE GREEN SANDY LEAN CLAY WITH MINOR GRAVEL, PP>4.0 TSF*			34			*EASY TO MODERATE DRILLING WITH OCCASIONAL BIT GRINDING FROM 45'–47.5'*
		46	20					*4"–21" MOIST, BROWN/GRAY/OLIVE GREEN CHAOTICALLY MIXED GRAVELLY LEAN CLAY/SILTY CLAY/SILT WITH SAND, HARD, PP>4.0 TSF, MINOR ORANGE OXIDATION STAINING, VERTICAL CONTACTS IN BOTTOM 6"*						
			17											
		47												*STIFF SMOOTH DRILLING FROM 47.5'–50'*
		48												
		49												*9 MINUTES TO DRILL 45'–50'*
		50	6					*50.0'–51.5' SAME AS ABOVE, TRACE GRAVELS, VERY STIFF, COAL*						
			12			BH6-10 2" SS	122	*FRAGMENTS IN BOTTOM 6"*			26			
		51	18											*EASY TO MODERATE DRILLING WITH INCREASING BIT GRINDING FROM 50'–55'*
		52												
			15					*52.0'–53.0' SAME AS ABOVE WITH GRAVELS, HARD, COAL FRAGMENTS*						
			50	X		BH6-11 3" DM	67	*THROUGHOUT, TOP PORTION OF SAMPLE IS SATURATED DUE TO SURFACE WATER INFILTRATION FOR THUNDERSTORM INTO DRILL STRING*	25	11	>50	121	15	
		53												
		54												
		55												
			9					*55.0'–56.3' SAME AS ABOVE WITH COAL FRAGMENTS*						
			16			BH6-12 2" SS	94				>50			
		56	50/4"											*MODERATE DRILLING WITH INTERMITTENT BIT GRINDING FROM 55'–60'*
		57												
		58												*6 MINUTES TO DRILL 55'–60'*
		59												
		60	10					*60.0'–61.5' MOIST, GRAY SILTY SAND, DENSE, FINE SAND, FINE GRAVEL*						*INITIAL BORING CAVED TO 22' AFTER HSA REMOVAL*
			18			BH6-13 2" SS	89	*INTERVALS, COAL FRAGMENTS THROUGHOUT*			43			
		61	36											
		62												
			21			BH6-14 3" DM	55	*62.0'–62.9' SAME AS ABOVE, VERY DENSE*			>50			
			50/5"											
		63						*BOH = 62.9'*						
								MONITORING WELL CONSTRUCTION						
		64						*PIPE*						
								37.9 FEET OF 2" DIAMETER SCHEDULE 40 PVC CASING FROM 0.3'–18.2', 20–SLOT SCREEN FROM 18.2'–38.2'						
		65						*BACKFILL*						
								BENTONITE– 0.5'–1.5', SPOILS– 1.5'–16.5', BENTONITE– 16.5'–17.5', SILICA SAND– 17.5'–40', BENTONITE– 40'–49', SPOILS– 49'–62.9'						
		66												

NELSON ENGINEERING
P.O. BOX 1599, JACKSON WYOMING (307) 733–2087

CLIENT: *SNOW KING MOUNTAIN RESORT*
JACKSON, WYOMING

PROJECT: Town of Jackson, Snow King Water Tank

PIT LOCATION: Southwest of center of tank

TEST PIT: TP- 1

Approximate Pit Dimensions (feet): Length: 40 Width: 15 Depth: 31.5

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6740' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① Clayey GRAVEL and COBBLE: Slightly moist to moist, dark brown, loose to medium dense, ~40% sandy clay is moderately plastic, ~60% angular gravel and cobbles up to 6" diameter, some silt, grades into below over 10" [COLLUVIUM]

② Silty sandy GRAVEL with clay and cobbles: Slightly moist, yellow tan, very slightly plastic, medium dense, few clasts up to 12" diameter, limestone clasts angular to subangular, grades into below [COLLUVIUM]

③ GRAVEL and COBBLE: Dry to slightly moist, reddish gray, fractures/voids lined with calcium carbonate, abundant voids, very loose, limestone, follows topography, consistently overlies olive sandy layer below, calcium carbonate mineralization on clasts, abundant raveling, bottom contact ~35-45 degrees [TALUS]

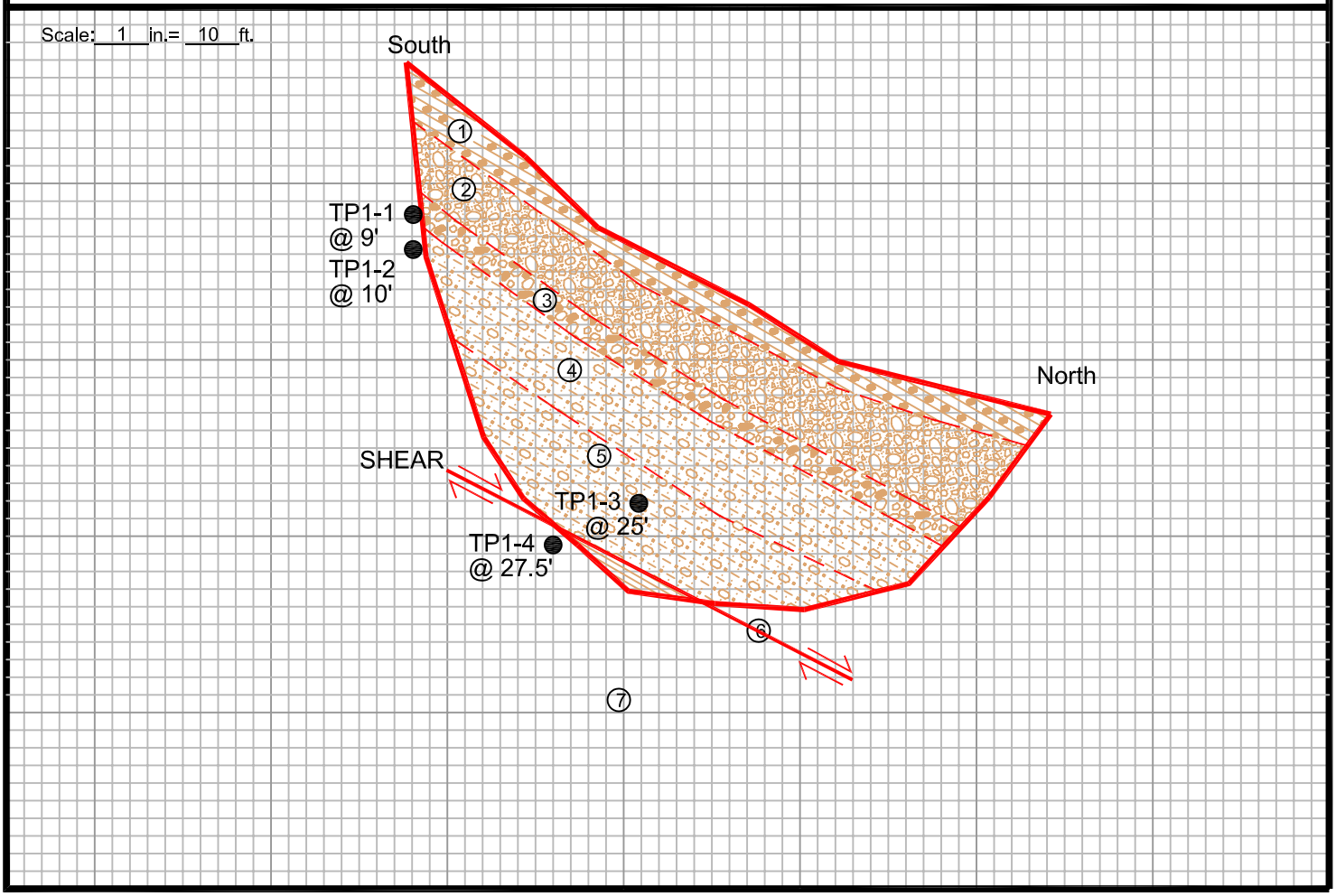
④ Sandy CLAY with gravel and cobble: Slightly moist, olive green, stiff to very stiff, moderately to highly plastic, abundant polished surfaces, irregularly follows silty sandy gravel, cobbles and boulders below contact with material below, varies, ~20% sand, ~15% gravel, ~15% cobble, ~50% sand [LANDSLIDE DEBRIS]

⑤ CLAY and sandy silty GRAVEL and COBBLE: Yellow tan to gray green, intervals of claye and sandy silty gravel and cobbles, few boulders, multiple irregular planar (~bedding) surfaces, angular to subangular boulders up to 2' diameter (mostly limestone), medium dense/very stiff, combination of the olive green sandy clay and the yellow tan silty sandy gravel with clay and cobbles, little consistency with shear orientations, abundant limestone fragments, very irregular contacts [LANDSLIDE DEBRIS]

⑥ CLAY: Pale blue gray, up to 1" thick, soft, moderately plastic, slickensided, dip 30° north [SHEAR ZONE]

⑦ CLAY with sand: Moist, gray, massive, heavily sheared, abundant polished surfaces, highly plastic, darker irregular beds throughout, wavy sheared zone, lots of slickensided surfaces, few coal beds, stiff [LANDSLIDE DEBRIS]

Note: No groundwater observed. Backfilled with spoils. Underlain by stony sandy clay.
Note: Soil Classifications (USCS) based on field descriptions



PROJECT: Town of Jackson, Snow King Water Tank

PIT LOCATION: ~20' northwest of northeast BH-3 (NE 2009)

TEST PIT: TP- 2

Approximate Pit Dimensions (feet): Length: 16 Width: 15 Depth: 12.6

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6711' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① 0.0-1.6ft Clayey sandy GRAVEL and COBBLES: Moist to very moist, medium to dark brown, abundant organics, moderately plastic, angular clasts up to 6" diameter, massive, medium dense [FILL]

② 1.6-2.6ft Sandy CLAY with gravel and cobble: Very moist, dark gray, medium stiff, massive, ~60% clay, ~40% gravel and cobbles up to 6" diameter [TOPSOIL]

③ 2.6-4.8ft Clayey sandy GRAVEL: Very moist, pale brown, medium dense, ~50% fine gravel [COLLUVIUM]

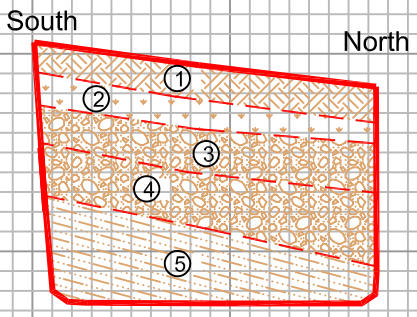
④ 4.8-7.0ft Clayey SAND and GRAVEL: Very moist, pale brown, medium dense, ~50% fine gravel [COLLUVIUM]

⑤ 7.0-12.6ft Sandy CLAY: Moist, green, slightly mottled yellow brown, very stiff, massive, abundant angular to subangular limestone clasts to 1' diameter (most up to 2" diameter) [LANDSLIDE DEBRIS]

Note: No groundwater observed. Backfilled hole with spoils.

Note: Soil Classifications (USCS) based on field descriptions

Scale: 1 in.= 10 ft.



PROJECT: Town of Jackson, Snow King Water Tank

TEST PIT: TP- 3

PIT LOCATION: ~25' east of northeast BH-1 (NE 2009)

Approximate Pit Dimensions (feet): Length: 15 Width: 15 Depth: 11.0

Date: 05-10-10 Logged By: wrw/jr

Approximate Surface Elevation: 6762' Log View Direction: South to North

Excavation Contractor: Schupman Excavation Equipment: JD 240D LC

WOMACK AND ASSOCIATES, INC.
• Geotechnical Engineering • Geology
P.O. Box 12650, Jackson, Wyoming 83002
(307) 733-7209 (Fax) 733-8005

MATERIAL DESCRIPTIONS

① 0.0-1.2ft Silty CLAY with gravel: Moist to very moist, dark brown to blackish brown, abundant organics, highly plastic, soft [TOPSOIL]

② 1.2-3.5ft Gravelly silty CLAY: Buff yellow tan, stiff, ~25-35% gravel to 3" diameter [COLLUVIUM]

③ 3.5-5.0ft Silty CLAY: Moist, greenish brown with yellow mottling, very stiff [LANDSLIDE DEBRIS]

④ 5.0-6.0ft Gravelly silty CLAY: Moist, yellow tan (buff), stiff to very stiff [LANDSLIDE DEBRIS]

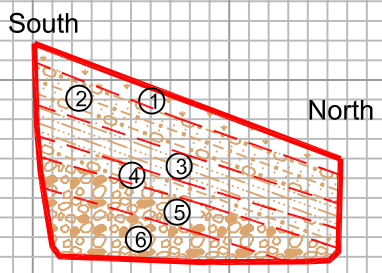
⑤ 6.0-7.5ft Rubble zone: Loose, white precipitates [TALUS]

⑥ 7.5-11.0ft Silty clayey GRAVEL and COBBLE: Yellow brown to red brown, dense, 50-60% clasts up to 8" diameter, oversize [TALUS]

Note: No groundwater observed. Hole standing OK. Backfilled hole with spoils.

Note: Soil Classifications (USCS) based on field descriptions

Scale: 1 in.= 10 ft.





GEOPHYSICAL EVALUATION

SNOW KING

Jackson, Wyoming

PREPARED FOR:

Colter Lane, P.E.
Jorgensen Geotechnical
1315 Highway 89 South, Suite 201
Jackson, Wyoming 83002

PREPARED BY:

Atlas Technical Consultants LLC
358 South 700 East, Suite B518
Salt Lake City, Utah 84102

January 2, 2024

358 South 700 East
Salt Lake City, UT 84102
(310) 951-1993 | OneAtlas.com

January 2, 2024

Atlas No. 11143

MR. COLTER LANE, P.E.
JORGENSEN GEOTECHNICAL
1315 HIGHWAY 89 SOUTH, SUITE 201
JACKSON, WYOMING 83002

Subject: Geophysical Evaluation
Snow King
Jackson, Wyoming

Dear Mr. Lane:

In accordance with your authorization, Atlas has performed a geophysical evaluation pertaining to a portion of the Snow King project located in Jackson, Wyoming. The primary purpose of our study was to develop subsurface shear-wave velocity profiles and characterize subsurface geologic conditions at select locations of the project site. This was accomplished through the collection of Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Wave (MASW) data. Our services were conducted on October 23rd and 24th, 2023. This report presents our methodology, equipment used, analysis, and findings.

We appreciate the opportunity to be of service on this project. Should you have any questions, please contact the undersigned at (310) 951-1993.

Respectfully submitted,
Atlas Technical Consultants LLC

Stephan A. Callas
Project Geophysicist

Patrick F. Lehrmann, P.G., P.Gp.
Principal Geologist/Geophysicist

SAC:ERC:PFL:ds

Distribution: Mr. Colter Lane at CLane@JorgEng.com

CONTENTS

1. INTRODUCTION 1
2. SCOPE OF SERVICES 1
3. SITE AND PROJECT DESCRIPTION 1
4. STUDY METHODOLOGY 1
   - 4.1 ReMi 1
   - 4.2 MASW 2
5. RESULTS AND CONCLUSIONS 3
   - 5.1 ReMi 3
   - 5.2 MASW 4
6. LIMITATIONS 4
7. SELECTED REFERENCES 5

FIGURES

Figure 1 Site Location Map
Figure 2 Line Location Map
Figure 3 Site Photographs
Figure 4a ReMi Results (RL-1)
Figure 4b ReMi Results (RL-2)
Figure 5a MASW Profile (ML-1)
Figure 5b MASW Profile (ML-2)

1. INTRODUCTION

In accordance with your authorization, Atlas has performed a geophysical evaluation pertaining to a portion of the Snow King project located in Jackson, Wyoming (Figure 1). The primary purpose of our study was to develop subsurface shear-wave velocity profiles and characterize subsurface geologic conditions at select locations of the project site. This was accomplished through the collection of Refraction Microtremor (ReMi) and Multichannel Analysis of Surface Wave (MASW) data. Our services were conducted on October 23rd and 24th, 2023. This report presents our methodology, equipment used, analysis, and findings.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of two one-dimensional (1-D) ReMi profiles (RL-1 & RL-2).
- Performance of two 2-D MASW profiles (ML-1 & ML-2).
- Compilation and geophysical analysis of the collected data.
- Preparation of this illustrated report presenting our methodology and findings.

3. SITE AND PROJECT DESCRIPTION

The project site is generally located just southeast of the Snow King Mountain Resort in Jackson, Wyoming (Figure 1). Specifically, the study area is located on the south side of Snow King Loop Road. The locations of the seismic traverses were generally selected by a representative of your office and adjusted when necessary to account for surface conditions. The study area was composed of two graded lots with an access road separating the two lots. The seismic traverses were performed over relatively flat terrain on the east and west sides of the access road. The surface of the site was generally covered with soil, gravel and seasonal vegetation. Additionally, several surface obstructions including construction materials, a firewood pile, snow grooming equipment, vehicles, and temporary fencing were located within the study area boundaries. Figure 2 depicts the approximate locations of the seismic traverses while Figure 3 depicts the general site conditions.

4. STUDY METHODOLOGY

As previously indicated, our evaluation included the performance of two ReMi and two MASW transects. The following sections detail the methods and instrumentations used.

4.1 ReMi

The ReMi technique uses recorded surface waves (specifically Rayleigh waves) that are contained in background noise to develop a shear-wave velocity profile of the study area down to a depth, in this case, of approximately 100 feet. The depth of exploration is dependent on the length of the line and the frequency content of the background noise. The results of the ReMi

method are displayed as a one-dimensional profile which represents the average condition across the length of the line. The ReMi method does not require an increase of material velocity with depth; therefore, low velocity zones (velocity inversions) are detectable with ReMi.

Our ReMi evaluation included the use of a 24-channel Geometrics Geode seismograph and 24, 4.5-Hz vertical component geophones. Geophones were spaced 10 feet apart for a total line length of 230 feet for each line. A total of 22 records, each 32 seconds in duration, were recorded at each location, while 10 records utilized passive data collection of ambient ground vibration noise and 12 utilized an active source. The active source data gathers included generating a seismic signal at both ends of the seismic spread, approximately 10 or 30 feet off the ends of the geophone array. Six active source files were collected at each end of the line. The recorded data was then downloaded to a field computer for post-processing. The data was later processed using Surface Plus 9.1 - Advanced Surface Wave Processing Software (Geogiga Technology Corp., 2020), which uses the refraction microtremor method (Louie, 2001), and other surface wave analysis methods. The program generates phase-velocity dispersion curves for each record and provides an interactive dispersion modeling tool to determine the best fitting model. The result is a one-dimensional shear-wave velocity model of the site with roughly 85 to 95 percent accuracy (Louie, 2001). For situations in which the shear wave velocity values are close to the limit between site class boundary values, Geotechnical consultants should consider the site's subsurface geologic stratigraphy and structure, soil mechanics, and ReMi evaluation results when assessing seismic site classification. Figures 2 and 3 depict the general site conditions in the study area.

4.2 MASW

Surface waves (specifically Rayleigh waves) were recorded along lines ML-1 and ML-2 in order to provide S-wave velocity information for portions of the site (Figure 2). The surface waves were generated by a hammer and plate (shot) and recorded using a 24-channel Geometrics Geode seismograph and 24, 4.5-Hz vertical component geophones. The geophones were coupled to the ground surface using a Geostuff Landstreamer with geophones stationed 4 feet apart and shots conducted off the end of the lines. Prior to the collection of surface wave data, near and far field effects were evaluated for several shot offset distances. The results indicated that an offset shot of 16 feet off the end of the line was optimal for our evaluation.

Three records, each one second long, were recorded at each shot location. After each shot location, the shot location and geophones were moved an integer multiple of the geophone spacing longitudinally along the profile direction and the line was reshot. The number of shots, spread length, and start and end stations are presented in Table 1.

Table 1: MASW Array Geometry

Line No.	No. of Shots	Total Spread Length (feet)	Profile Length/Start and End Stations (feet)
ML-1	21	252	160/(0-160)
ML-2	25	284	192/(0-192)

The recorded MASW data was processed using SurfSeis® (Kansas Geological Survey, 2019), a MASW software program. One dimensional (1-D) shear-wave (S-wave) velocity (Vs) profiles were generated for each shot location, which correspond to the middle of the geophone array. A two-dimensional color gradient model was then created from the 1-D models using the SurfSeis® interpolation scheme. It should be emphasized that the 2-D profile represents the area between the midpoint of the first shot location and the midpoint of the last shot location. The actual model section length and start and end stations for the sections are also listed in Table 1.

5. RESULTS AND CONCLUSIONS

As previously indicated, our evaluation consisted of performing two 1-D ReMi profiles (RL-1 & RL-2) and two 2-D MASW profiles (ML-1 & ML-2) at the project site. Figures 4a and 4b present the ReMi results for RL-1 and RL-2, respectively. Figures 5a and 5b present the MASW results for ML-1 and ML-2, respectively. The analysis of each is detailed below.

5.1 ReMi

The purpose of our ReMi evaluations were to develop shear-wave velocity profiles to be used for design and construction parameters at the project site. Table 2 and Figures 4a and 4b present the results from our ReMi evaluations. It should be noted that the ReMi results represent the average condition across the length of the line. When the 1-D ReMi surface wave velocity results (analogous to shear wave) show an IBC Vs100 velocity value that is close to the "border line" boundary between IBC Site Classes, the project geotechnical consultant of record should be consulted. The geotechnical consultant of record should also consider other existing available site information and whether obtaining additional new geotechnical evaluation data such as boreholes, surface to downhole seismic (ASTM D7400), crosshole seismic (ASTM D4428), and/or additional 1-D ReMi data collections would be needed concerning the site's subsurface geologic stratigraphy and structure, soil mechanics and soil modulus, along with the initial 1-D ReMi evaluation results when assessing the "borderline" IBC Vs100 Seismic Site Class.

Table 2: ReMi Results

Line No.	Depth (feet)	Shear Wave Velocity (feet/second)	Average Shear Wave Velocity (Vs in feet/second)	Site Class (IBC, 2019)
RL-1 (NW-SE)	0-6	618	Vs100' = 1,320 ft/s	C
	6-14	1170		
	14-25	1494		
	25-35	1435		
	35-69	1152		
	69-100	2010		

Line No.	Depth (feet)	Shear Wave Velocity (feet/second)	Average Shear Wave Velocity (Vs in feet/second)	Site Class (IBC, 2019)
RL-2 (W-E)	0-9	390	Vs100' = 1,201 ft/s	C
	9-14	799		
	14-25	1361		
	25-69	1446		
	69-100	2052		

5.2 MASW

Two MASW traverses were conducted as part of our study. Figures 5a and 5b present the S-wave velocity models generated from our analysis of lines ML-1 and ML-2, respectively. Based on the results, it appears that the project site is generally underlain by low-velocity materials in the near-surface and higher velocity materials at depth. Distinct vertical and lateral velocity variations are evident within the models. Specifically, ML-1 appears to contain pockets of low and high velocity materials in the near surface, possibly related to reported landslide deposits. At depth, ML-1 displays a high velocity contact that spans the length of the profile from northwest to southeast. This high velocity contact is generally contained towards the bottom of the profile; however, protrudes closer to the surface between 90 and 120 feet along the x-axis. This high velocity material may represent bedrock contacts. ML-2 displays slightly more homogenous material in the near surface compared to ML-1. At depth, ML-2 displays a moderately high velocity contact that spans the length of the profile from west to east. This moderately high velocity contact is generally contained within 20 and 50 feet below ground surface and may represent weathered bedrock contacts. It should be noted that there were several underground utilities present in the vicinity of ML-1, and possibly ML-2, which could be affecting the results from our evaluation. As a general rule of thumb, the S-wave velocity of a given material might be between approximately 0.4 to 0.6 of the P-wave velocity, depending on the soil/rock type and condition.

6. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Atlas should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

7. SELECTED REFERENCES

Geogiga Technology Corp., 2020, Surface Plus - Advanced Surface Wave Processing Software: Version 9.1.

Golden Software, Inc., 2022, Surfer, Surface Mapping System: Version 23.2.202.

Iwata, T., Kawase, H., Satoh, T., Kakehi, Y., Irikura, K., Louie, J.N., Abbott, R.E., and Anderson, J.G., 1998, Array Microtremor Measurements at Reno, Nevada, USA (abstract): Eos, Trans. Amer. Geophys. Union, v. 79, suppl. to no. 45, p. F578.

Kansas Geological Survey, 2019, SurfSeis© 6 MASW (Multichannel Analysis of Surface Waves): Version 6.5.4.30.

Louie, J.N., 2001, Faster, Better, Shear wave Velocity to 100 Meters Depth from Refraction Microtremor Arrays: Bulletin of the Seismological Society of America, v. 91, p. 347-364.

Mooney, H.M., 1976, Handbook of Engineering Geophysics, dated February.

Saito, M., 1979, Computations of Reflectivity and Surface Wave Dispersion Curves for Layered Media; I, Sound wave and SH wave: Butsuri-Tanko, v. 32, no. 5, p. 15-26.

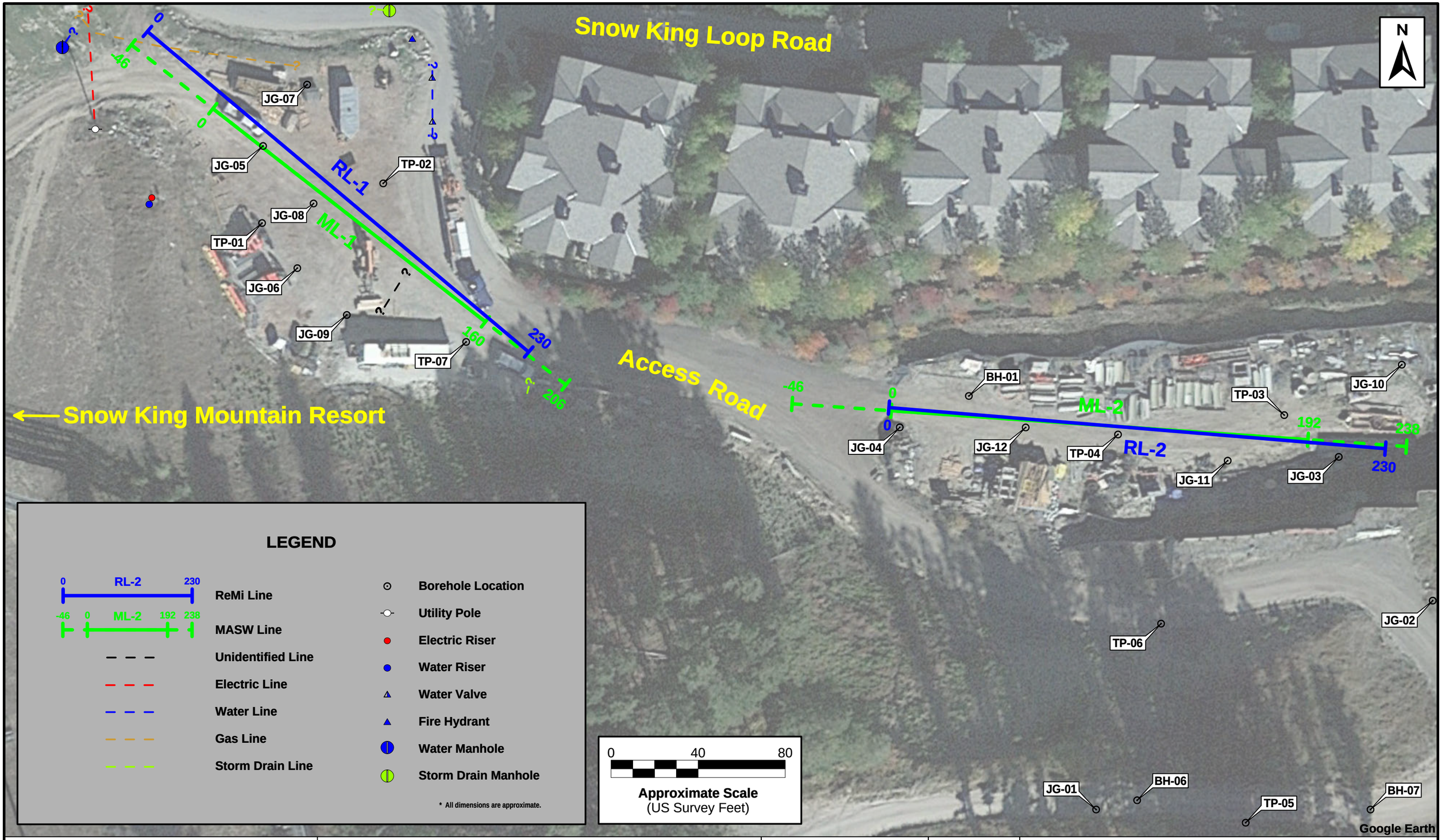
Saito, M., 1988, Compound Matrix Method for the Calculation of Spheroidal Oscillation of the Earth: Seismol. Res. Lett., v. 59, p. 29.

Telford, W.M., Geldart, L.P., Sheriff, R.E., and Keys, D.A., 1976, Applied Geophysics, Cambridge University Press.

Xia, J., Miller, R.D., and Park, C.B., 1999, Estimation of Near-Surface Shear wave Velocity by Inversion of Rayleigh Wave: Geophysics, v. 64, p. 691-7.



ATLAS	Snow King Jackson, Wyoming	Project No.: 11143 Date: 01/24	Figure 1	**SITE LOCATION MAP**



LEGEND

- RL-2 (0 – 230): ReMi Line
- ML-2 (-46, 0, 192, 238): MASW Line
- Unidentified Line
- Electric Line
- Water Line
- Gas Line
- Storm Drain Line
- Borehole Location
- Utility Pole
- Electric Riser
- Water Riser
- Water Valve
- Fire Hydrant
- Water Manhole
- Storm Drain Manhole

* All dimensions are approximate.

0 40 80

Approximate Scale
(US Survey Feet)

ATLAS

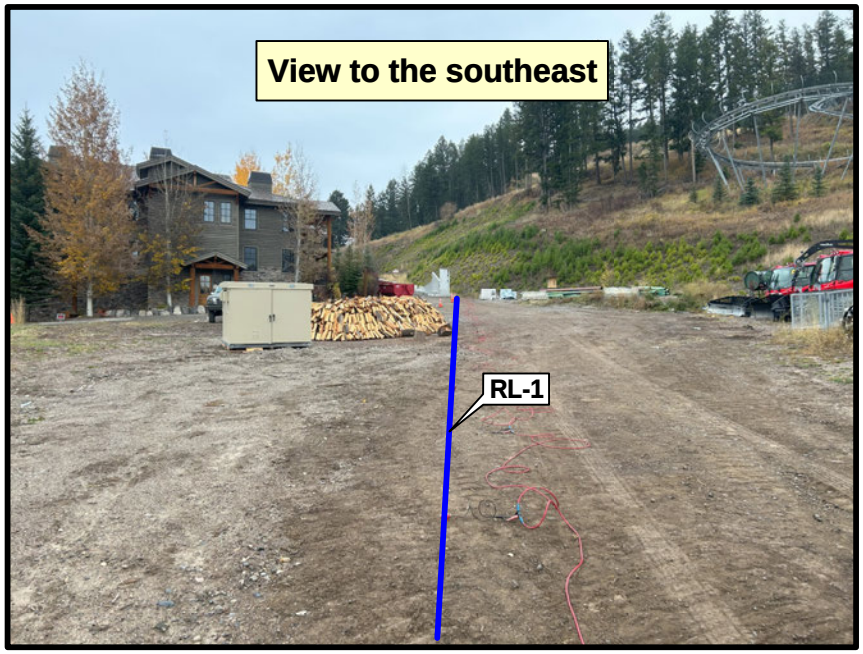
Snow King
Jackson, Wyoming

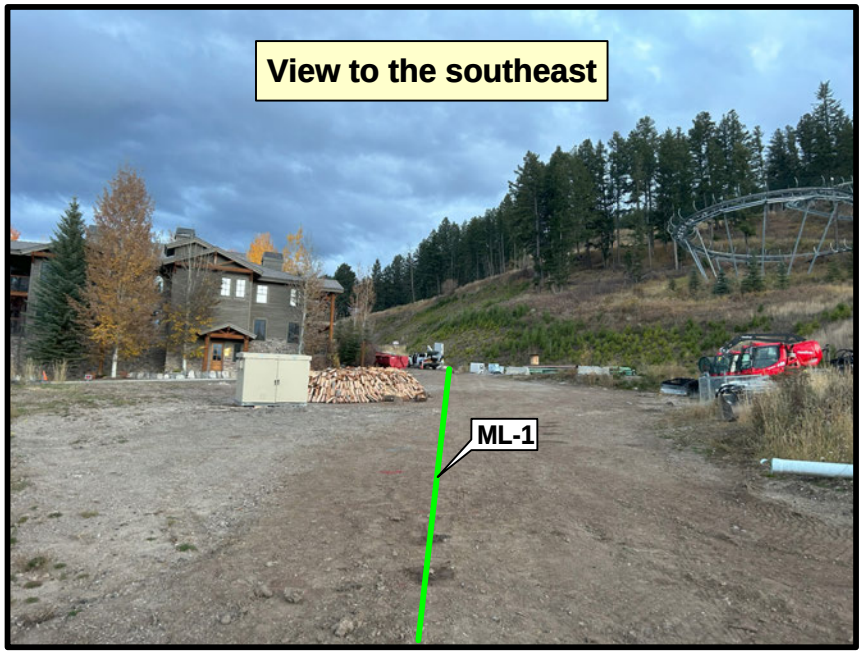
Project No.: 11143

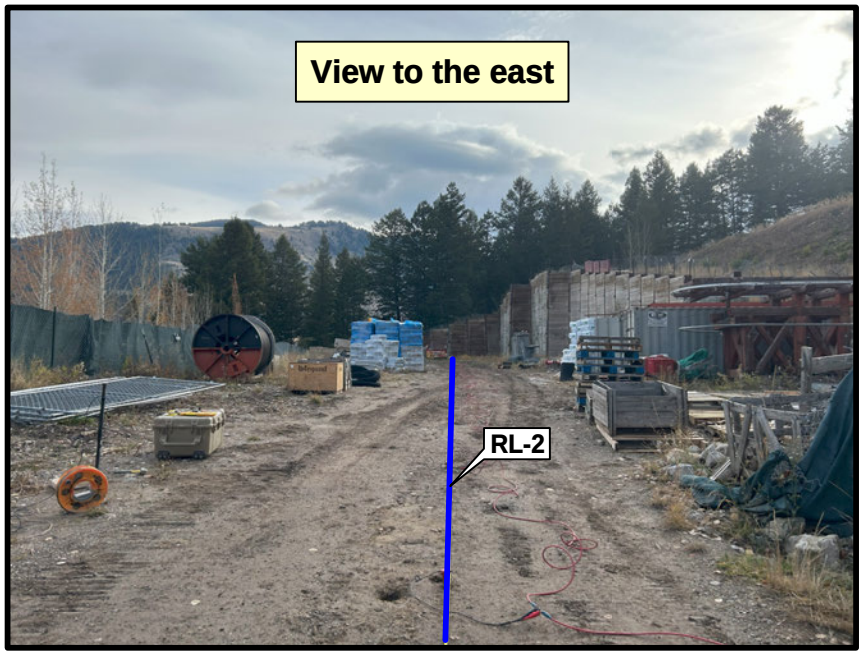
Date: 01/23

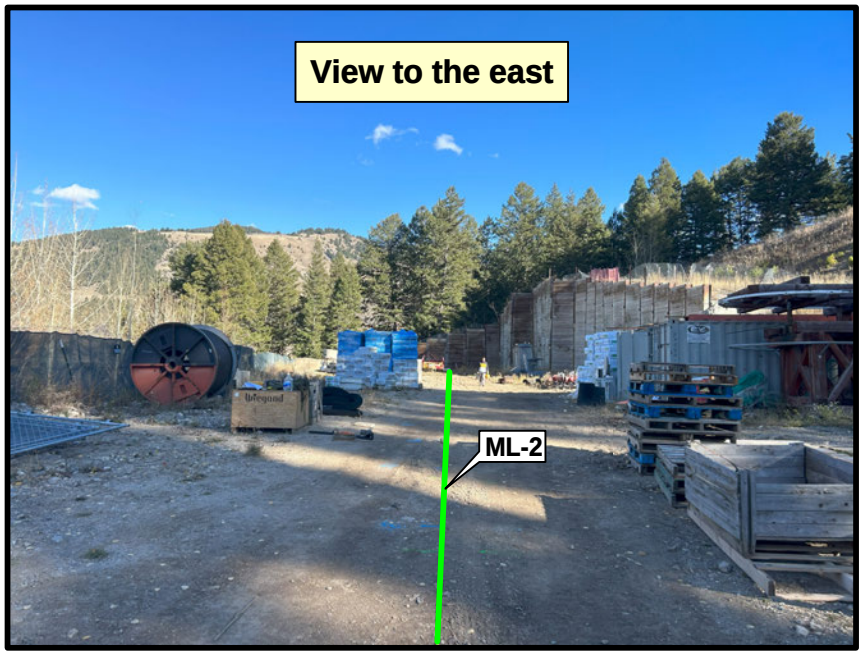
Figure 2

LINE LOCATION MAP



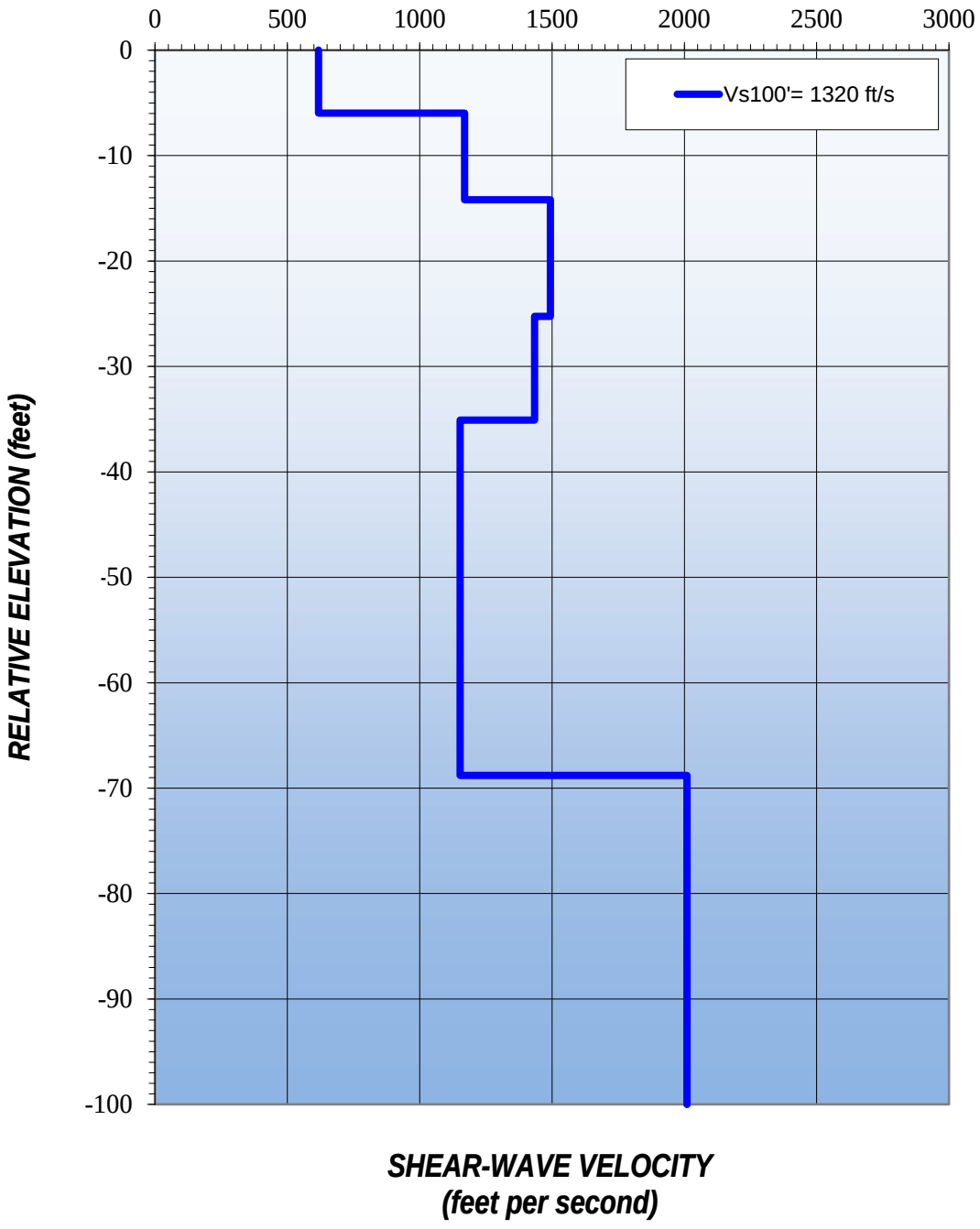




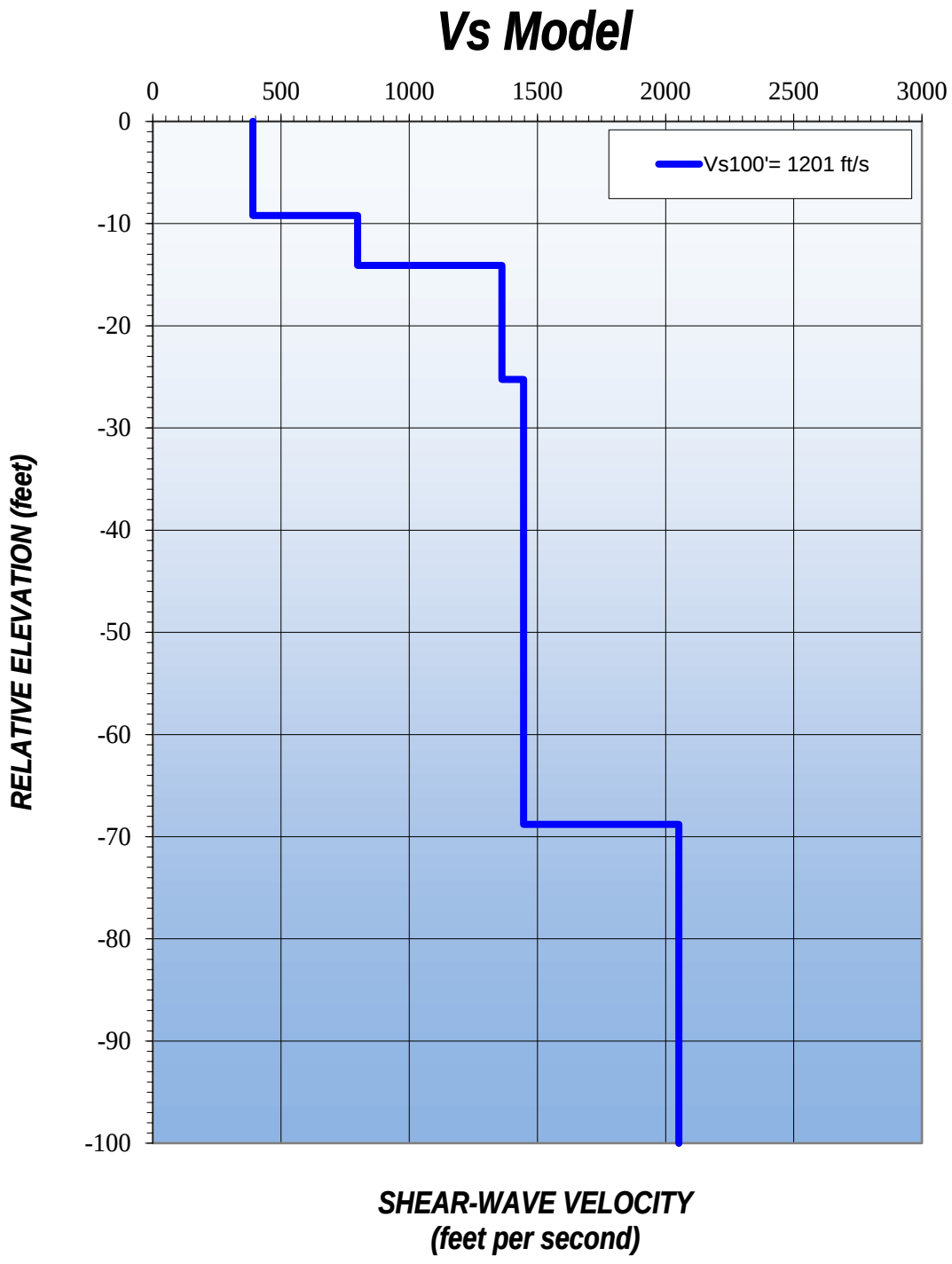


ATLAS	Snow King Jackson, Wyoming	Project No.: 11143 Date: 01/24	Figure 3	**SITE PHOTOGRAPHS**

Vs Model



ATLAS	Snow King Jackson, Wyoming	Project No.: 11143 Date: 01/24	Figure 4a	**ReMi RESULTS** **RL-1**



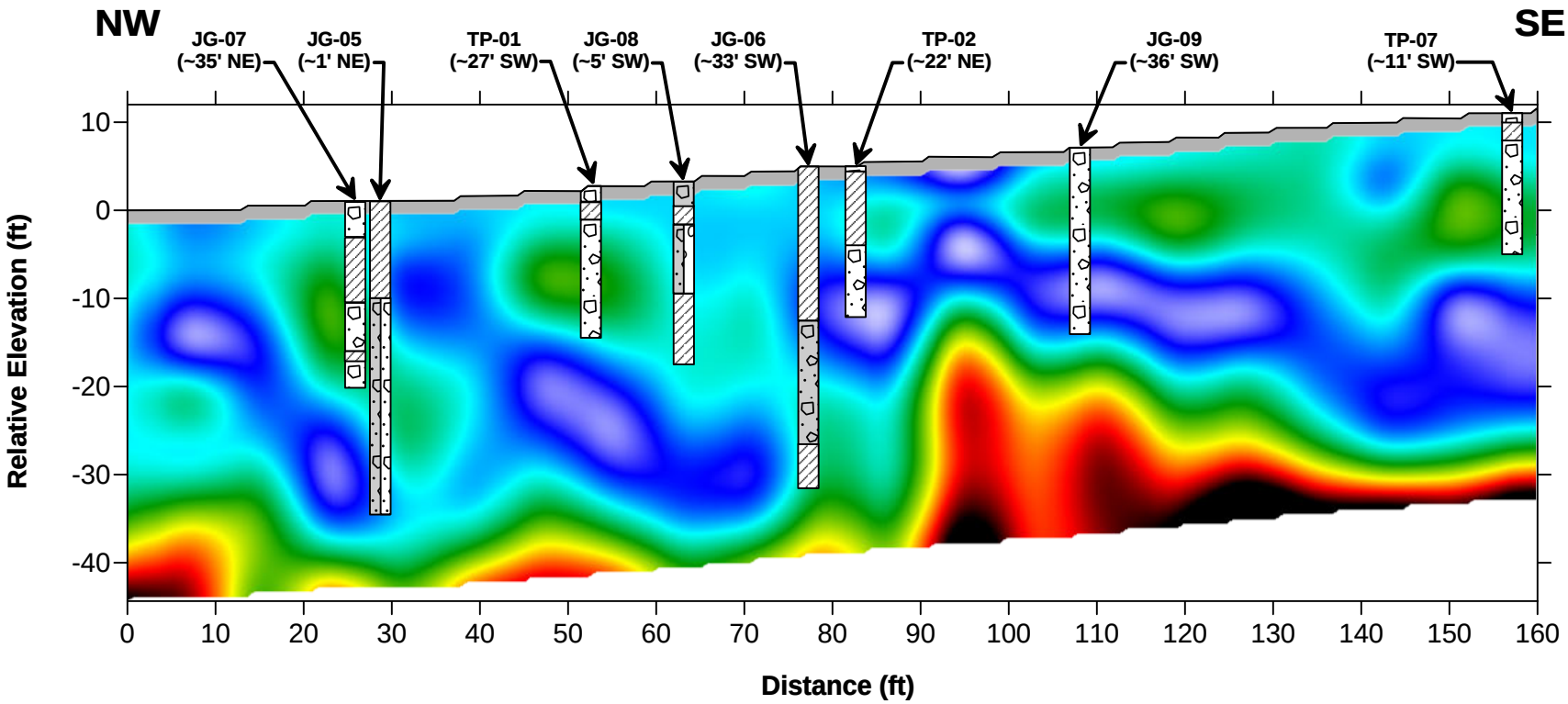
ATLAS	Snow King Jackson, Wyoming	Project No.: 11143 Date: 01/24	Figure 4b	**ReMi RESULTS** **RL-2**

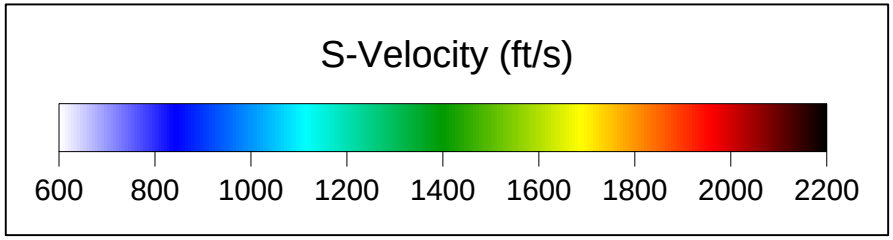
MASW PROFILE
ML-1

LEGEND

CL GM
GP GC

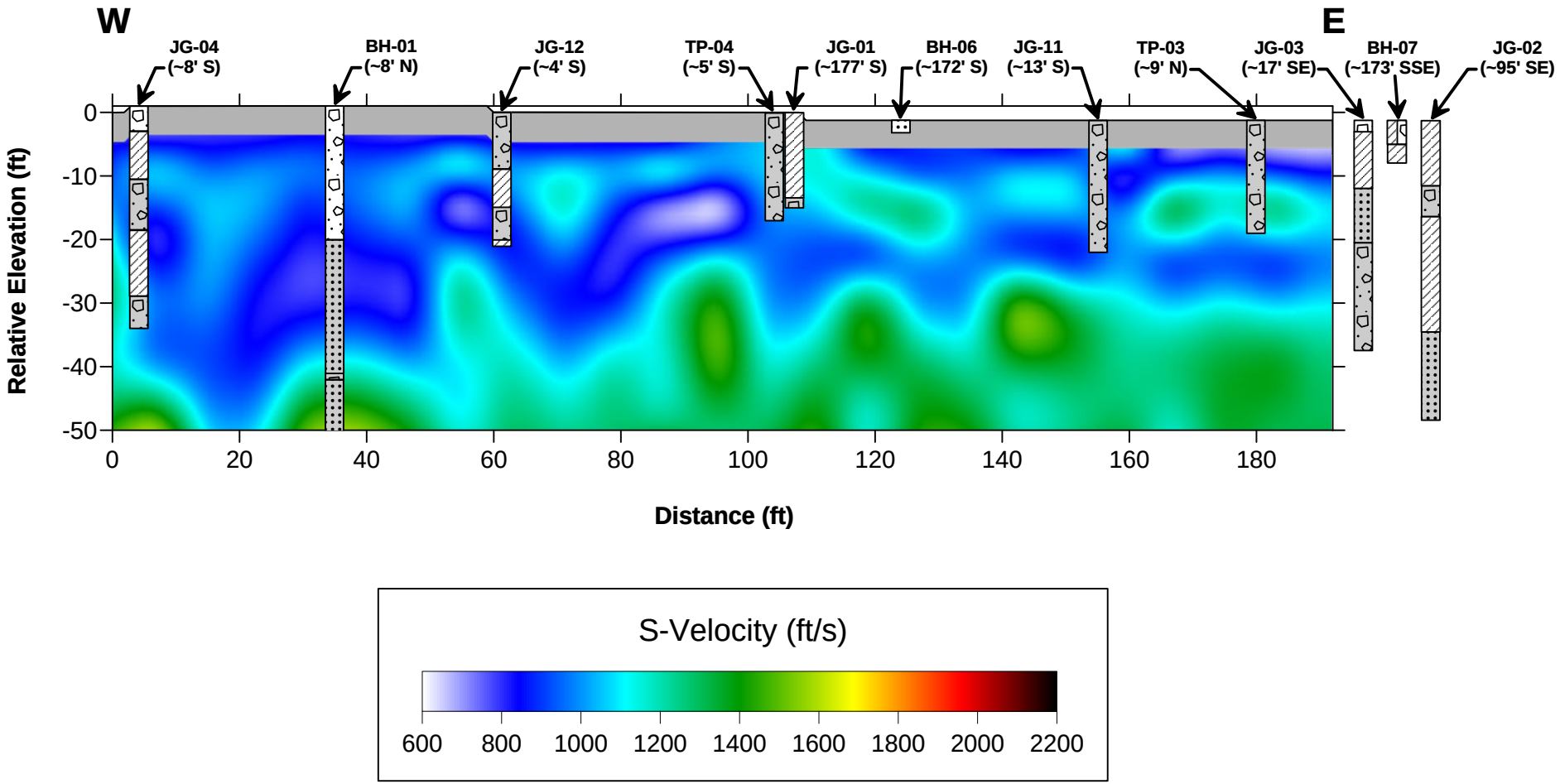
* All dimensions are approximate.
* Borehole data provided by Jorgensen.





ATLAS	Snow King Jackson, Wyoming	Project No.: 11143 Date: 01/24	Figure 5a	**MASW PROFILE ML-1**

MASW PROFILE
ML-2



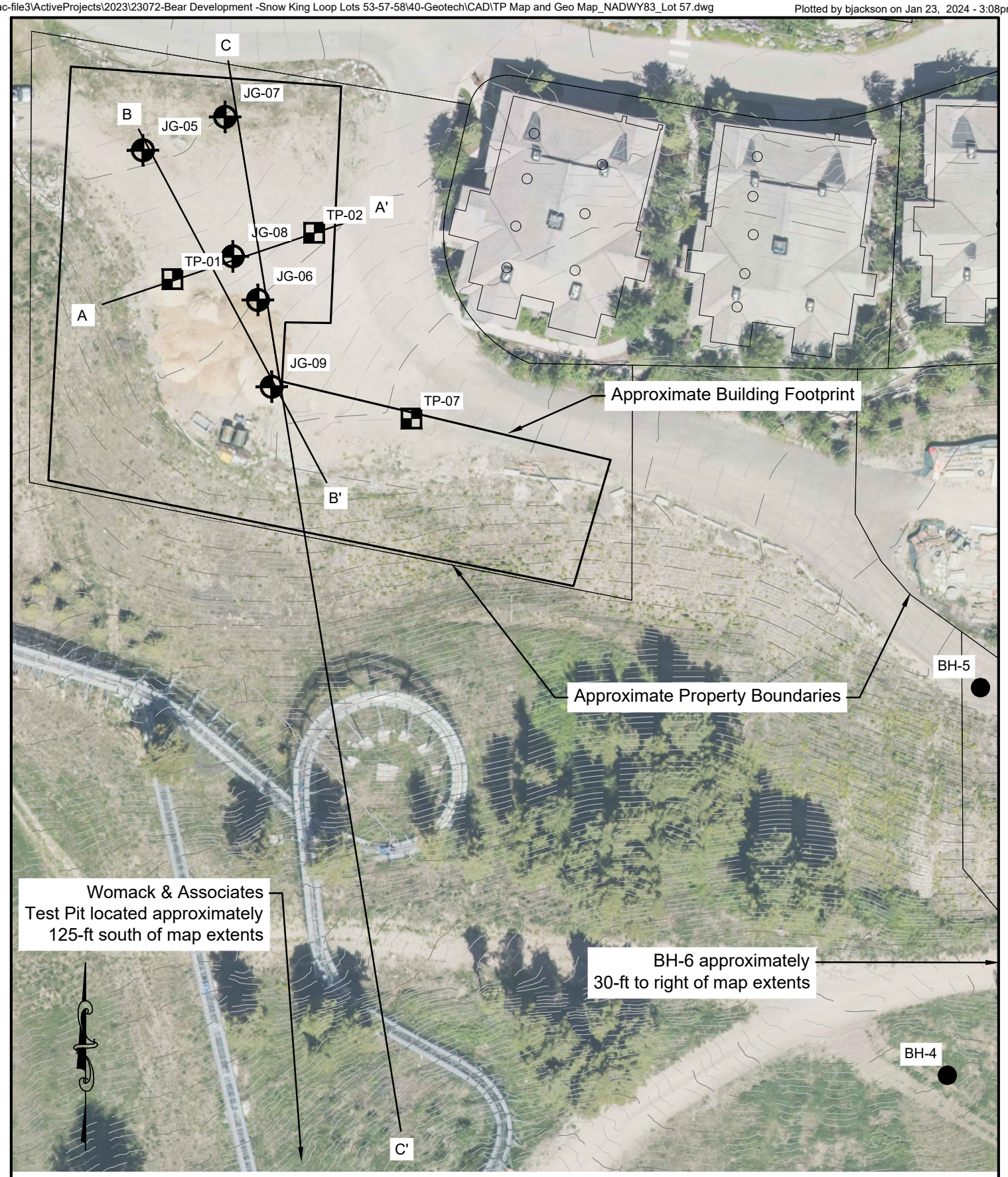
ATLAS	Snow King Jackson, Wyoming	Project No.: 11143 Date: 01/24	Figure 5b	**MASW PROFILE** **ML-2**

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX B

Figures



0 50 100

SCALE: 1 INCH = 50 FEET
THIS SCALE VALID ONLY FOR 8.5x11 PRINTS

Borehole (BH-XX), test pit (TP-XX), and Nelson Engineering boreholes (BH-X) locations are approximate and may be surveyed upon request. Existing ground surface topography provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023. Additional topographic data provided by Teton County, 2015. Aerial imagery provided by Teton County, 2019.

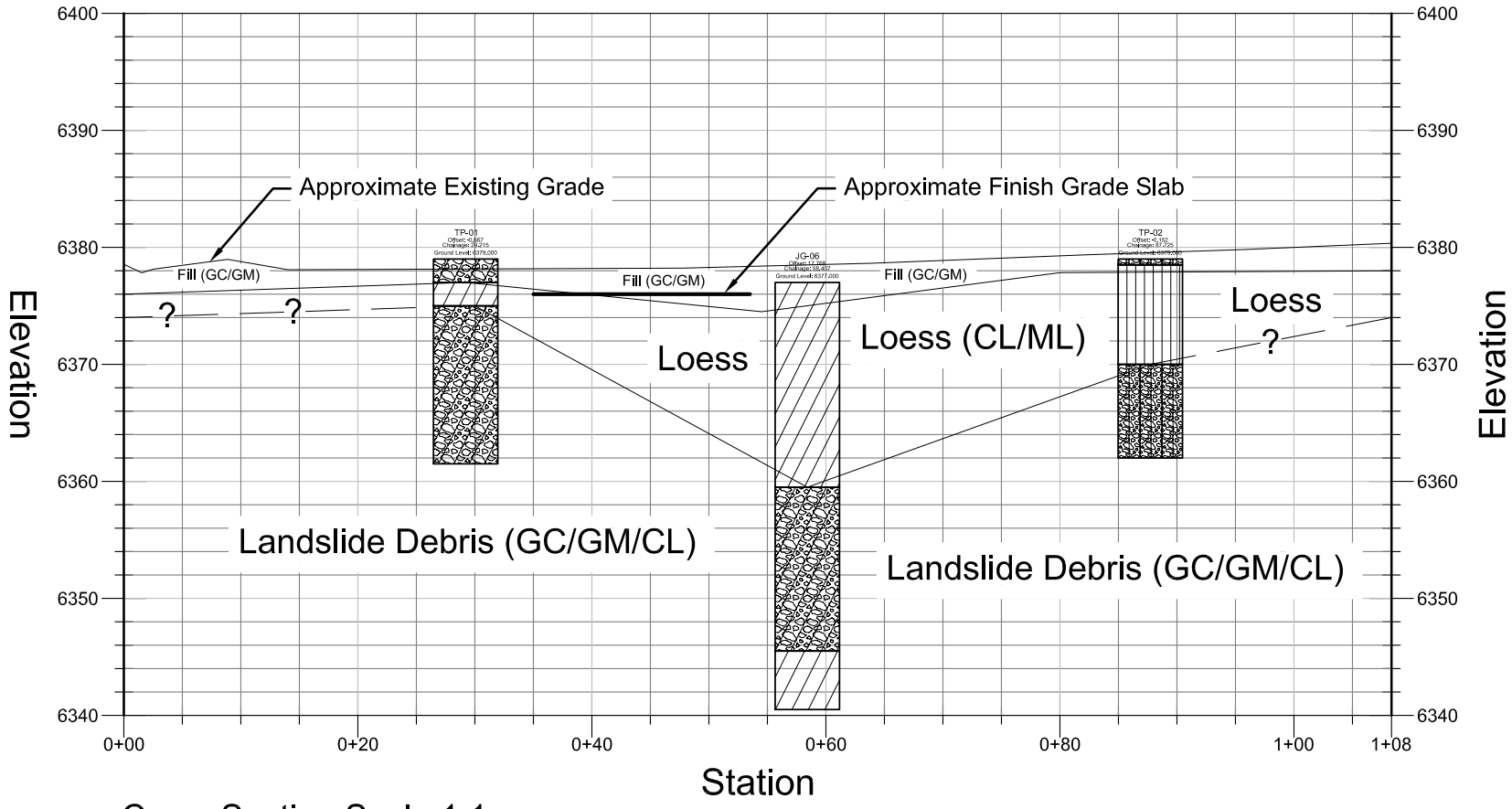
DRAFTED BY:	BJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 2
Borehole, Test Pit and Geologic Cross Section Location Map

PROJECT TITLE:
Geotechnical Engineering Report
Bear Development - Lot 57
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S, Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section A-A'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

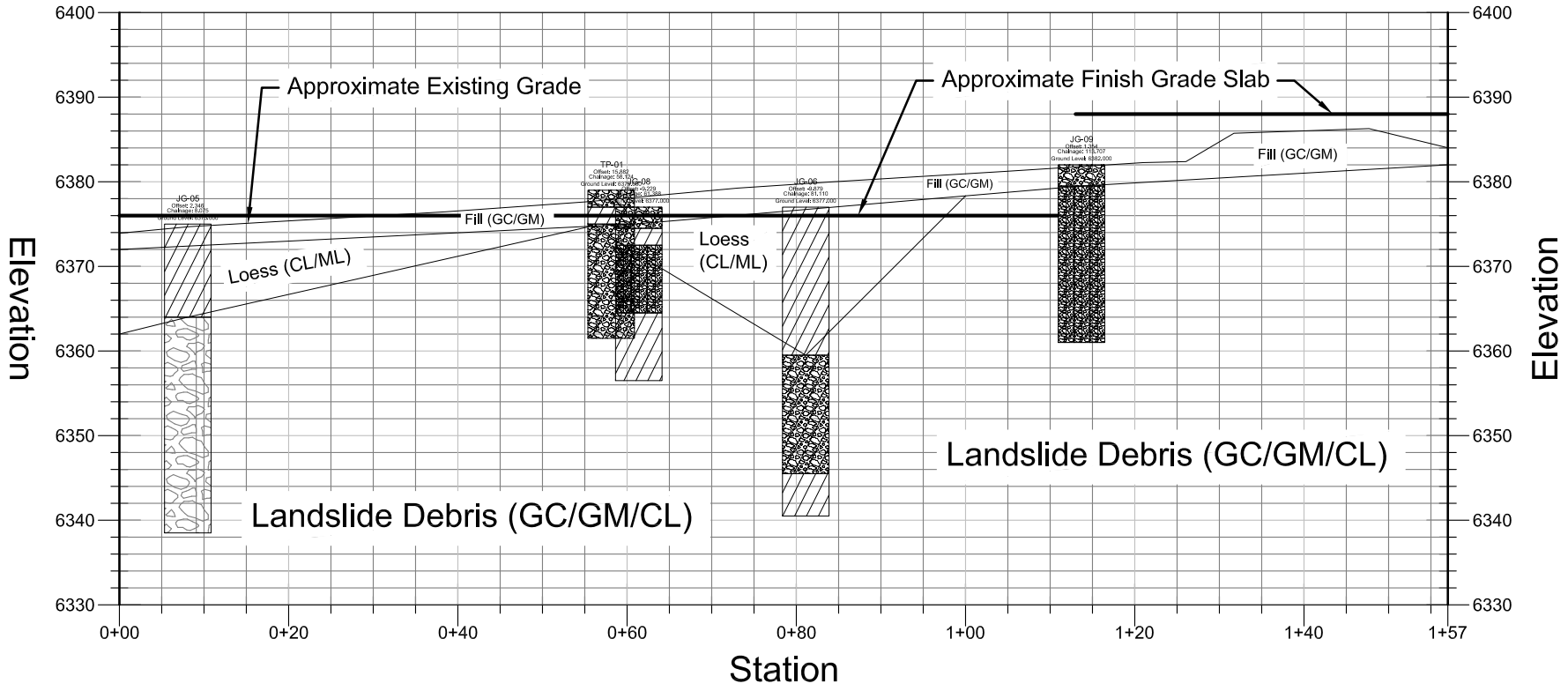
DRAFTED BY:	BJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 3
Geologic Cross Section A-A'

PROJECT TITLE:
Geotechnical Engineering Report
Bear Development - Lot 57
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section B-B'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

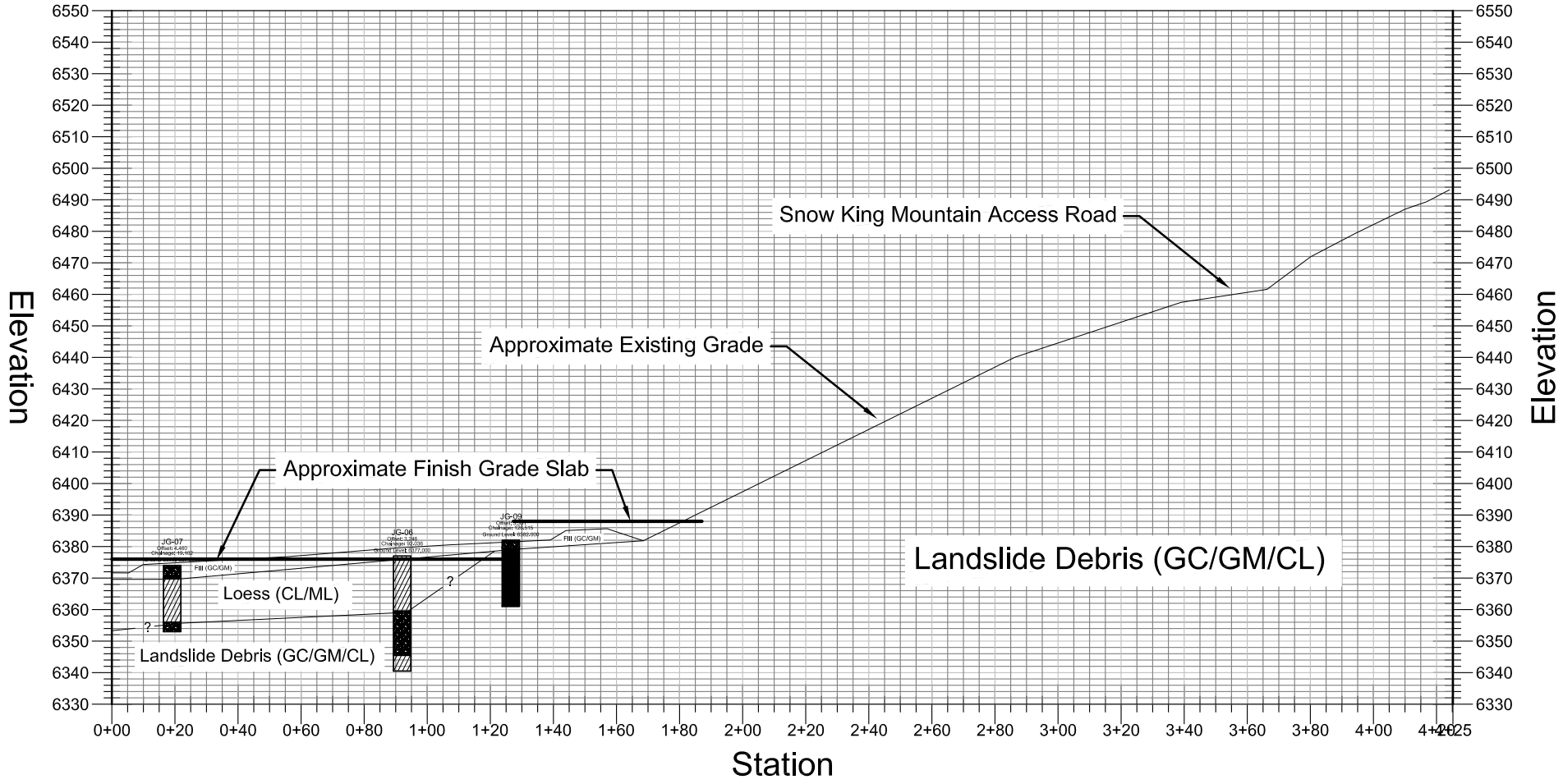
DRAFTED BY:	BJ
REVIEWED BY:	HC/DB
PROJECT NUMBER	23072

SHEET TITLE:
Figure 4
Geologic Cross Section B-B'

PROJECT TITLE:
Geotechnical Engineering Report
Bear Development - Lot 57
Teton County, Wyoming

JORGENSEN GEOTECHNICAL, LLC
PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Cross section C-C'



Cross Section Scale 1:1

Garage slab elevations provided by Hoyt Architects Preliminary Design dated July 19, 2023. Existing ground surface provided by Jorgensen Associates, taken from topographic survey completed November 1, 2023.

DRAFTED BY: BJ REVIEWED BY: HC/DB PROJECT NUMBER 23072	SHEET TITLE: Figure 5 Geologic Cross Section C-C'	PROJECT TITLE: Geotechnical Engineering Report Bear Development - Lot 57 Teton County, Wyoming	JORGENSEN GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX C

Soils Laboratory Procedures and Results

Laboratory Testing

Laboratory Testing Procedures

Lab samples were submitted for testing at GCI in Salt Lake City, Utah from boreholes JG-05, JG-06, JG-07, JG-08, JG-09, and TP-02.

During the October 2023 site exploration for the Development at Lot 57, JG collected relatively undisturbed (i.e., thin-walled Shelby tubes) and disturbed samples (i.e., split spoon (SPT) samples, sonic drilling grab samples, and test pit bulk samples). Of the samples collected, 12 disturbed samples and three relatively undisturbed samples were selected for lab analysis. Laboratory testing included natural moisture content, unit weight, Atterberg limits, grain-size distribution, hydrometer, and consolidation testing.

The laboratory testing program consisted of:

- Fifteen (15) Moisture Contents (ASTM D2937/D2216)
- Fifteen (15) Atterberg Limits (ASTM D4318)
- Fifteen (15) Grain Size Analysis (ASTM D422)
- Two (2) Direct Shear Strength (ASTM D3080)
- Three (3) One Dimension Consolidation (ASTM D2435)

We also included applicable laboratory testing data from our site exploration on the nearby Lots 53 And 58, laboratory testing results from Nelson Engineering for Lots 53 and 58, and laboratory testing data for a nearby project provided by Womack & Associates, Inc.

Combined results are shown on the following pages.

Laboratory Test Results: Detailed Summary

Laboratory testing included index testing for classification per USCS, and direct testing of strength, as well as one dimensional consolidation tests. Classification tests – including Atterberg limits and grain-size analysis – have been summarized in table 4-1, with Direct Shear tests and consolidation tests summarized in Tables 4-2 and 4-3, respectively. Full laboratory data sheets are attached.

The data herein are provided for informational purposes. Design-build contractors shall be responsible for providing their own analysis of the test results and for development of appropriate design parameters. Jorgensen is available to assist in the selection of design parameters, if requested.

Table 4-1: Classification Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	Gravel (%)	Sand (%)	Fines (%)	Moisture Content (%)	Liquid Limit	Plasticity Index
JG-05	D6	8.5	CL	1.4	12.4	86.2	13.7	39	25
JG-05	D12	22	GC	66.2	11.6	22.2	5.5	26	11
JG-05	D19	35	GM	48	32.1	19.9	1.8	NP	NP
JG-06	D2a	3.5	CL	0.4	7.3	92.3	26.8	38	19
JG-06	D8	12.5	CL	24.6	21.4	54	9.6	32	19
JG-06	D15	20	GC	48.7	27.3	24	4.7	18	4
JG-06	D20	32.5	CL	11.3	18.6	70.1	14.9	28	13
JG-07	U1	5	CL	12.9	26.9	60.2	14.1	31	11
JG-07	U2	9	CL	1.3	12.5	86.2	22.7	33	15
JG-07	D7	17.5	CL	1.9	15.4	82.7	12.6	29	14
JG-08	D4	10	GM	70.9	18	11.1	2.2	NP[1]	NP
JG-08	D5	12.5	CL	21.2	15.5	63.3	10	32	17
JG-09	D3	7.5	GC	32.3	29.2	38.6	7	17	1
JG-09	D6	15	GM	42.7	22.2	35.1	5.7	NP	NP
TP-02	U1	6	ML	0	6.5	93.5	17.5	NP	NP
BH5[2]	‘-	23	SC	7	55	38	‘-	29	25
BH5[2]	‘-	37	SC	7	98	25	‘-	28	16
BH6[2]	4B	22	CL	0	12	87	17.5	33	18
BH6[2]	‘11	52	CL	9	25	66	16.5	25	14
TP-1[3]	‘-	9	CL	‘-	‘-	‘-	‘-	32	15
TP-1[3]	‘-	10	CL	‘-	‘-	‘-	‘-	41	26
TP-1[3]	‘-	20	CL	‘-	‘-	‘-	‘-	34	20
TP-1[3]	‘-	27.5	CL	‘-	‘-	‘-	‘-	25	11

[1]NP designates non-plastic soils
[2]Designates data from Nelson Engineering
[3]Designates data from Womack & Associates, Inc.

Table 4-2: Direct Shear Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	Cohesion (c)	Peak Friction Angle (f)
JG-07	U1	9-10	CL	379	30
TP-02	U1	6-7	ML	144	34
BH-6[2]	11	52.5	CL	2059	37

[2]Designates data from Nelson Engineering

Table 4-3: Consolidation Testing Summary

Borehole	Sample ID	Depth (ft)	USCS Symbol	C_C
JG-07	U1	5-6	CL	0.17
JG-07	U2	9-10	CL	0.28
TP-02	U1	6-7	ML	0.17

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 57**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_MC.xlsx]1

Sample Info.	Sample:	JG-05	JG-05	JG-05	JG-06	JG-06	JG-06
	Depth:	8.5-11 ft	22-25 ft	35-37 ft	3.5-5 ft	12.5-14 ft	20-22 ft
	Date Sampled:	-	-	-	-	-	-
	Date tested:	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23	16-Nov-23
	Laboratory sample description:	ol bn - dk ol bn silt	lt bn - bn gravel	tn - bn sandy gravel	bn - ol bn sandy clay	bn - tn clayey gravel	bn - tn sandy gravel
Moisture	Wet soil + tare (g)	706.71	1702.45	480.97	733.41	740.83	549.20
	Dry soil + tare (g)	645.29	1614.91	474.66	619.61	693.33	529.85
	Tare (g)	195.99	13.73	116.46	194.83	197.69	117.39
	Moisture content, w (%)	13.7	5.5	1.8	26.8	9.6	4.7
Comments							
QC/QA	Tested By:	MGS	MGS	MGS	MGS	MGS	MGS
	Reduced By:	AT	AT	AT	AT	AT	AT
	Reviewed By:	MGS	MGS	MGS	MGS	MGS	MGS

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 57**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_MC.xlsx]2

Sample Info.	Sample:	**JG-06**	**JG-07**	**JG-07**	**JG-07**	**JG-08**	**JG-08**
	Depth:	**32.5-35 ft**	**5-6 ft**	**9-10 ft**	**17.5-18 ft**	**10-12 ft**	**12.5-14 ft**
	Date Sampled:	**-**	**-**	**-**	**-**	**-**	**-**
	Date tested:	**16-Nov-23**	**14-Nov-23**	**14-Nov-23**	**16-Nov-23**	**16-Nov-23**	**16-Nov-23**
	Laboratory sample description:	**lt bn - bn clay**	**lt bn - bn gravelly clay**	**lt bn - bn clay**	**lt bn - bn sandy clay**	**tn - bn sandy gravel**	**lt bn - bn sandy clay**
Moisture	Wet soil + tare (g)	764.63	708.54	398.83	282.48	584.18	467.72
	Dry soil + tare (g)	680.77	645.37	361.41	272.74	574.02	443.13
	Tare (g)	117.13	197.20	196.69	195.23	118.03	197.42
	Moisture content, w (%)	14.9	14.1	22.7	12.6	2.2	10.0
Comments							
QC/QA	Tested By:	MGS	MGS	MGS	MGS	MGS	MGS
	Reduced By:	AT	AT	AT	AT	AT	AT
	Reviewed By:	MGS	MGS	MGS	MGS	MGS	MGS

Moisture Content Determination

ASTM D2937 / D2216

Project: **Bear Development Snow King Lot 57**

No: **23072 (23-1725)**

Location: **-**

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_MC.xlsx]3

Sample Info.	Sample:	**JG-09**	**JG-09**	**TP-02**			
	Depth:	**7.5-9 ft**	**15-17 ft**	**6-7 ft**			
	Date Sampled:	**-**	**-**	**-**			
	Date tested:	**16-Nov-23**	**16-Nov-23**	**15-Nov-23**			
	Laboratory sample description:	**dk yl bn - dk bn sandy gravel**	**dk yl bn - bn sandy gravel**	**lt bn - bn silt**			
Moisture	Wet soil + tare (g)	644.83	632.20	577.49			
	Dry soil + tare (g)	610.41	604.61	508.79			
	Tare (g)	118.01	118.24	116.54			
	Moisture content, w (%)	7.0	5.7	17.5			
Comments							
QC/QA	Tested By:	MGS	MGS	AT			
	Reduced By:	AT	AT	AT			
	Reviewed By:	MGS	MGS	MGS			

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-05

No: 23072 (23-1725) **Depth:** 8.5-11 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	ol bn - dk ol bn silt
As-received water content(%):	13.7	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

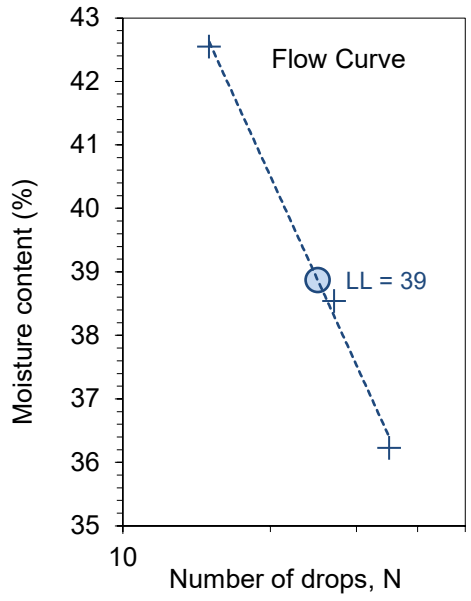
Determination No:	1	2
Wet Soil + Tare (g):	20.43	21.24
Dry Soil + Tare (g):	19.47	20.33
Moisture Loss (g):	0.96	0.91
Tare (g):	12.63	13.55
Dry Soil (g):	6.84	6.78
Moisture Content, w (%):	14.04	13.42

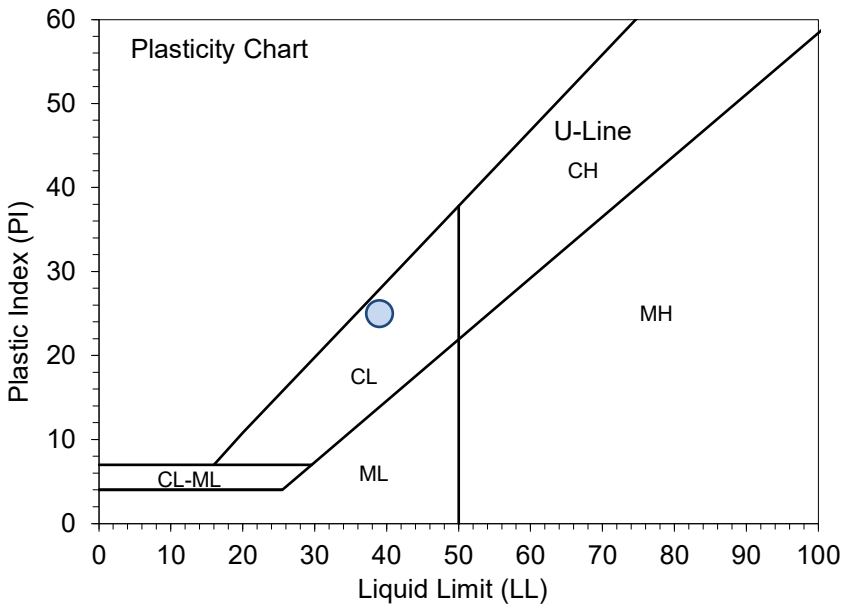
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	27	15
Wet Soil + Tare (g):	23.35	22.53	23.80
Dry Soil + Tare (g):	20.81	20.04	20.63
Moisture Loss (g):	2.54	2.49	3.17
Tare (g):	13.80	13.58	13.18
Dry Soil (g):	7.01	6.46	7.45
Moisture Content, w (%):	36.23	38.54	42.55
One-Point LL:		39	

Results

Liquid Limit, LL:	39
Plastic Limit, PL:	14
Plasticity Index, PI:	25





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]1

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-05

No: 23072 (23-1725) **Depth:** 22-25 ft

Tested by: CRC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn gravel
As-received water content(%):	5.5	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

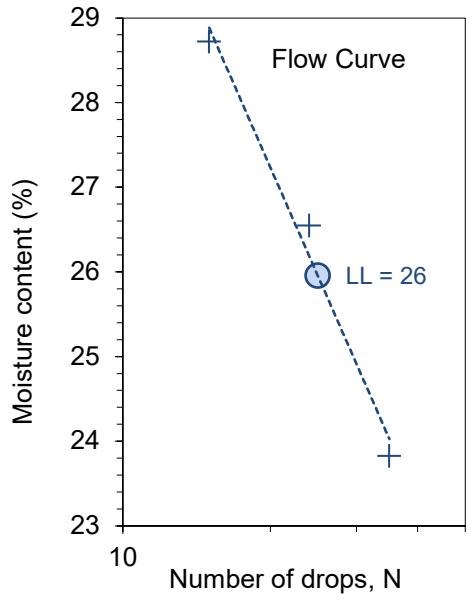
Determination No:	1	2
Wet Soil + Tare (g):	20.29	20.09
Dry Soil + Tare (g):	19.38	19.22
Moisture Loss (g):	0.91	0.87
Tare (g):	13.41	13.37
Dry Soil (g):	5.97	5.85
Moisture Content, w (%):	15.24	14.87

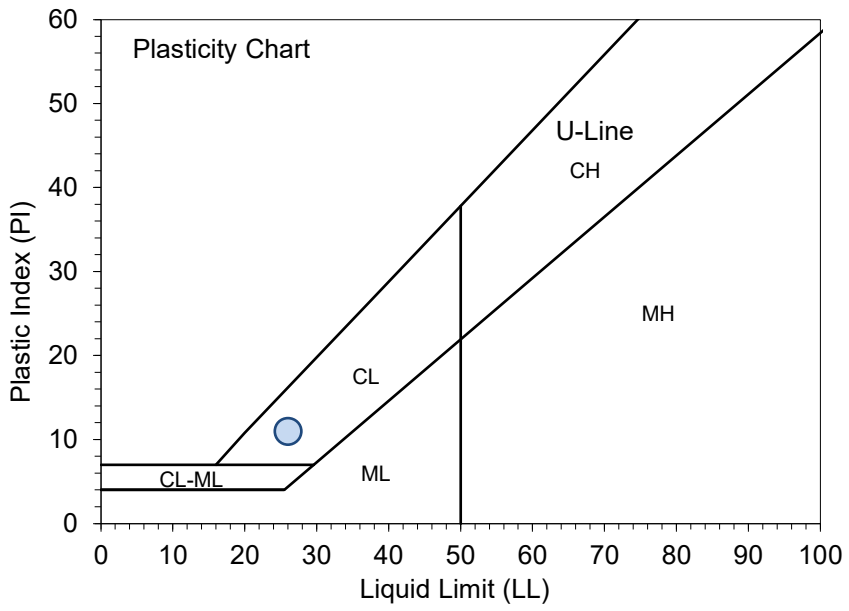
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	24	15
Wet Soil + Tare (g):	20.87	22.12	24.49
Dry Soil + Tare (g):	19.34	20.28	22.08
Moisture Loss (g):	1.53	1.84	2.41
Tare (g):	12.92	13.35	13.69
Dry Soil (g):	6.42	6.93	8.39
Moisture Content, w (%):	23.83	26.55	28.72
One-Point LL:		26	

Results

Liquid Limit, LL:	26
Plastic Limit, PL:	15
Plasticity Index, PI:	11





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]2

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 | **TH/TP/Sample:** JG-05

No: 23072 (23-1725) | **Depth:** 35-37 ft

Tested by: CML | Date: 16-Nov-23

Reduced by: CML | Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	tn - bn sandy gravel
As-received water content(%):	1.8	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid Limit:	Could not be determined (N.P.)

Plastic Limit

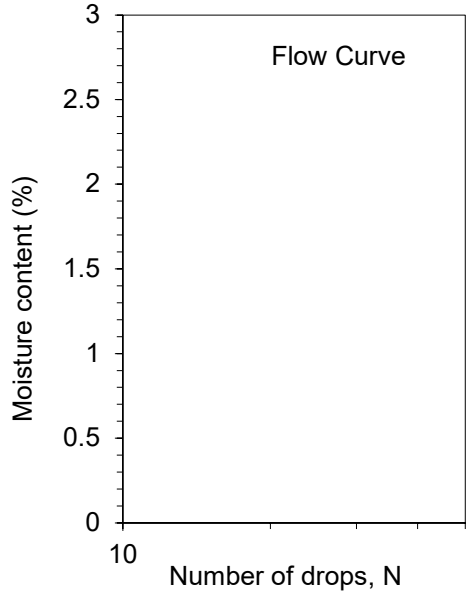
Determination No:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	

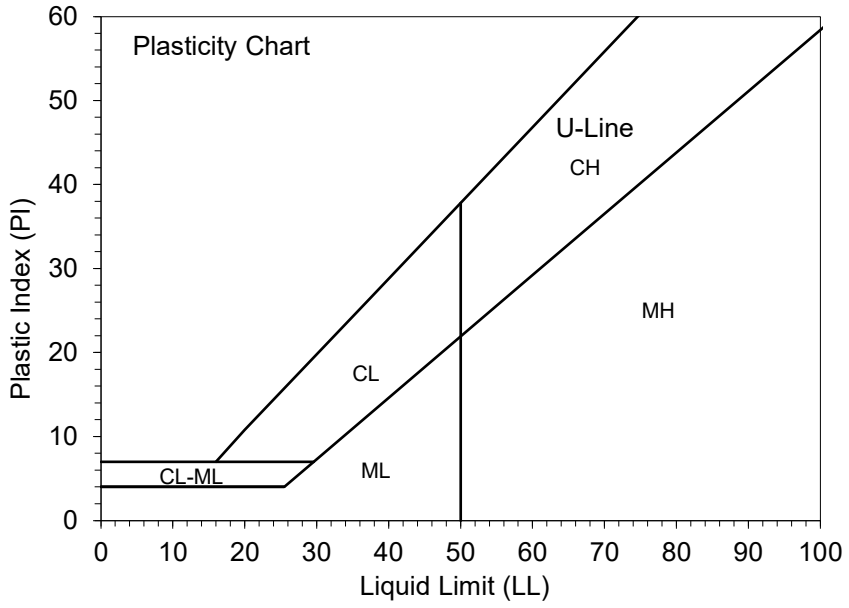
Liquid Limit

Determination No:	
Number of Drops, N:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	
One-Point LL:	

Results

Liquid Limit, LL:	Nonplastic (N.P.)
Plastic Limit, PL:	Nonplastic (N.P.)
Plasticity Index, PI:	Nonplastic (N.P.)





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]3

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 3.5-5 ft

Tested by: CRC Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - dk bn sandy clay
As-received water content(%):	26.8	Approximate maximum particle size:	No. 20
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	20
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

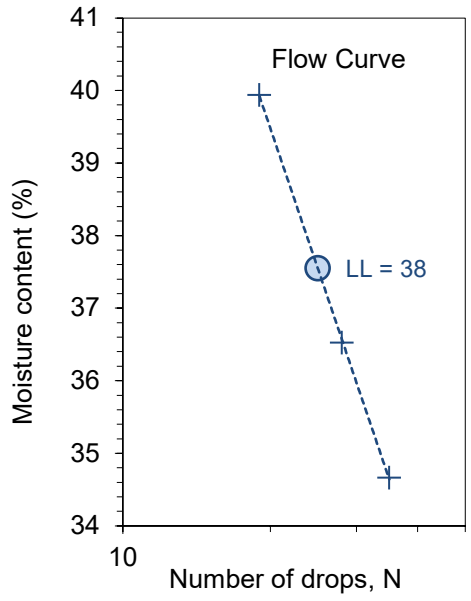
Determination No:	1	2
Wet Soil + Tare (g):	20.24	20.19
Dry Soil + Tare (g):	19.19	19.11
Moisture Loss (g):	1.05	1.08
Tare (g):	13.47	13.35
Dry Soil (g):	5.72	5.76
Moisture Content, w (%):	18.36	18.75

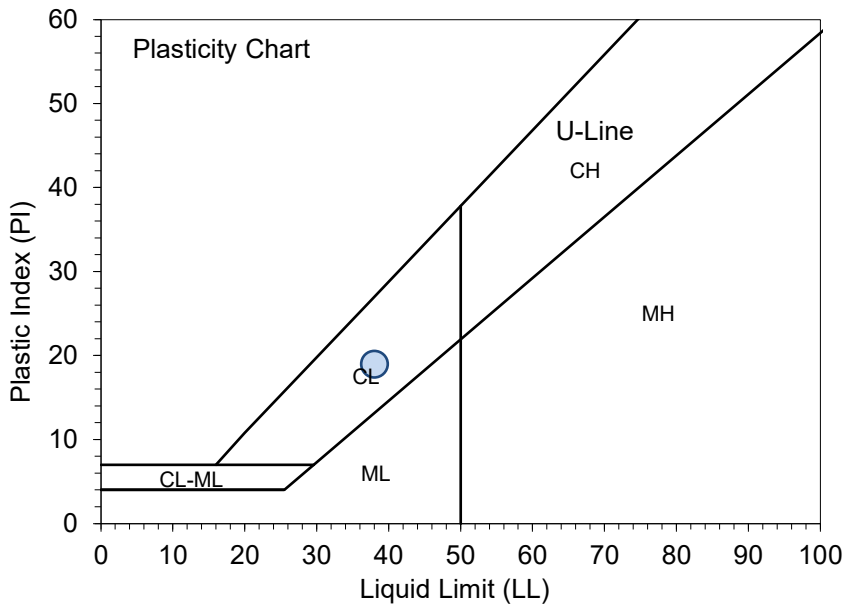
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	28	19
Wet Soil + Tare (g):	23.62	22.15	23.24
Dry Soil + Tare (g):	20.94	19.56	20.48
Moisture Loss (g):	2.68	2.59	2.76
Tare (g):	13.21	12.47	13.57
Dry Soil (g):	7.73	7.09	6.91
Moisture Content, w (%):	34.67	36.53	39.94
One-Point LL:		37	

Results

Liquid Limit, LL:	38
Plastic Limit, PL:	19
Plasticity Index, PI:	19





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]4

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - tn clayey gravel
As-received water content(%):	9.6	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

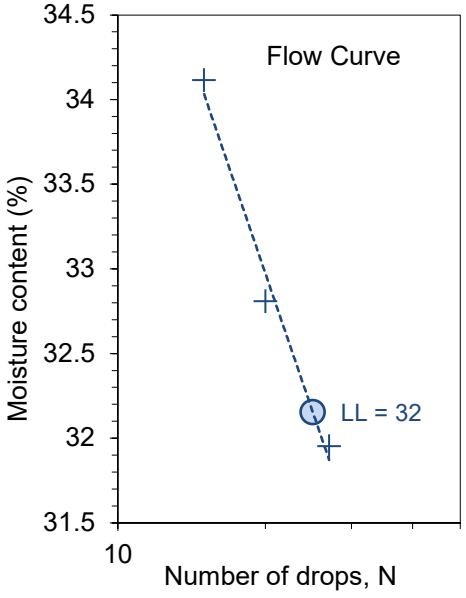
Determination No:	1	2
Wet Soil + Tare (g):	21.39	21.33
Dry Soil + Tare (g):	20.49	20.44
Moisture Loss (g):	0.90	0.89
Tare (g):	13.54	13.63
Dry Soil (g):	6.95	6.81
Moisture Content, w (%):	12.95	13.07

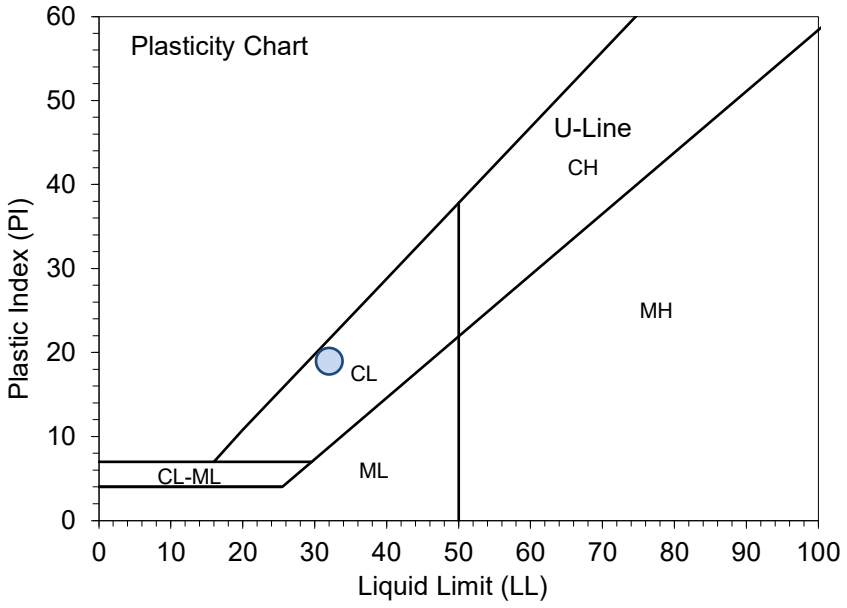
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	27	20	15
Wet Soil + Tare (g):	21.43	22.84	23.23
Dry Soil + Tare (g):	19.19	20.54	20.76
Moisture Loss (g):	2.24	2.30	2.47
Tare (g):	12.18	13.53	13.52
Dry Soil (g):	7.01	7.01	7.24
Moisture Content, w (%):	31.95	32.81	34.12
One-Point LL:	32	32	

Results

Liquid Limit, LL:	32
Plastic Limit, PL:	13
Plasticity Index, PI:	19





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]5

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 20-22 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	bn - tn sandy gravel
As-received water content(%):	4.7	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

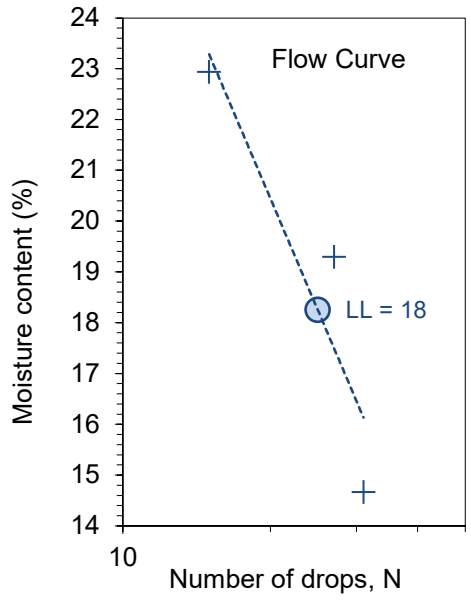
Determination No:	1	2
Wet Soil + Tare (g):	21.25	20.66
Dry Soil + Tare (g):	20.28	19.73
Moisture Loss (g):	0.97	0.93
Tare (g):	13.54	13.07
Dry Soil (g):	6.74	6.66
Moisture Content, w (%):	14.39	13.96

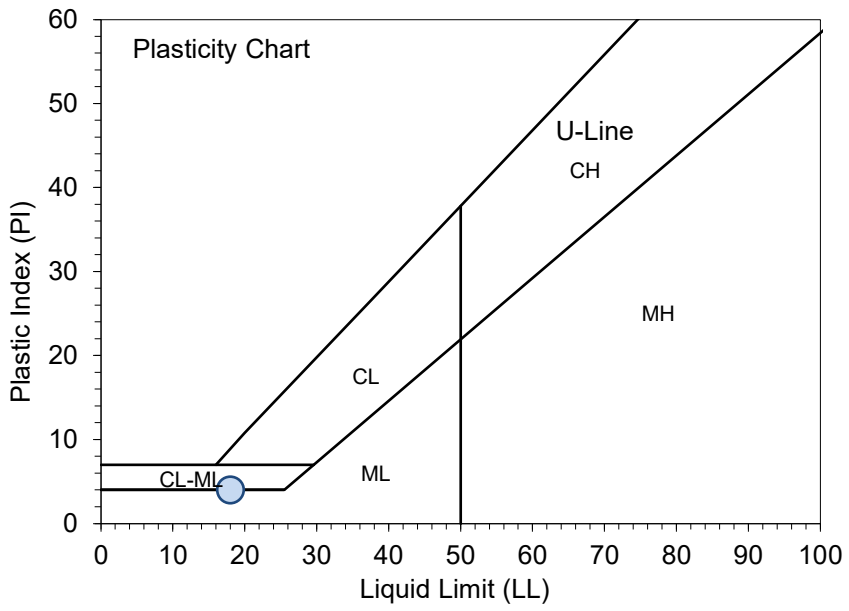
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	31	27	15
Wet Soil + Tare (g):	21.30	25.01	21.22
Dry Soil + Tare (g):	20.27	23.18	19.66
Moisture Loss (g):	1.03	1.83	1.56
Tare (g):	13.25	13.70	12.86
Dry Soil (g):	7.02	9.48	6.80
Moisture Content, w (%):	14.67	19.30	22.94
One-Point LL:		19	

Results

Liquid Limit, LL:	18
Plastic Limit, PL:	14
Plasticity Index, PI:	4





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]6

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 32.5-35 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	14.9	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	30
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

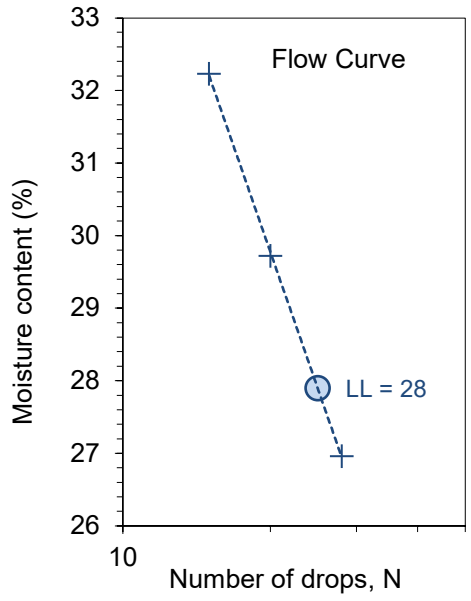
Determination No:	1	2
Wet Soil + Tare (g):	21.35	21.41
Dry Soil + Tare (g):	20.35	20.41
Moisture Loss (g):	1.00	1.00
Tare (g):	13.56	13.61
Dry Soil (g):	6.79	6.80
Moisture Content, w (%):	14.73	14.71

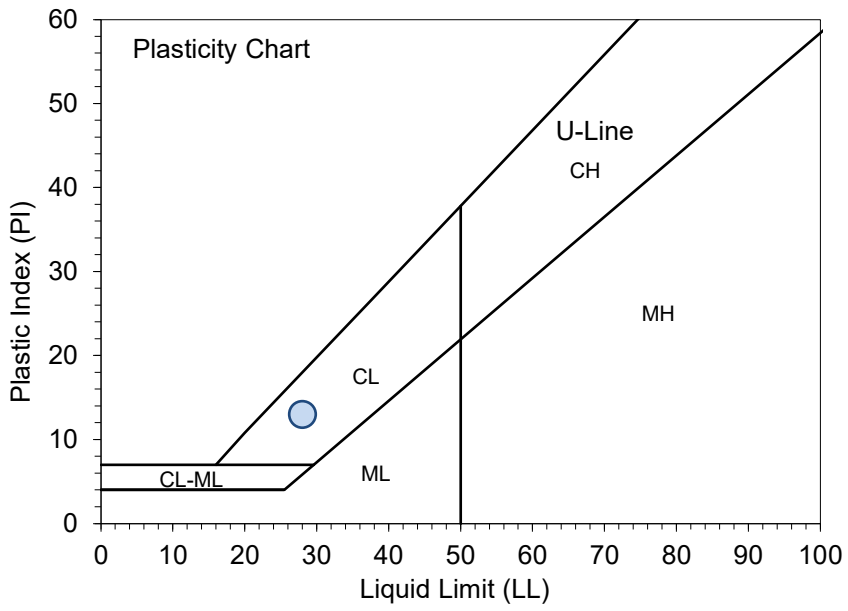
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	28	20	15
Wet Soil + Tare (g):	22.54	23.04	22.69
Dry Soil + Tare (g):	20.62	20.87	20.44
Moisture Loss (g):	1.92	2.17	2.25
Tare (g):	13.50	13.57	13.46
Dry Soil (g):	7.12	7.30	6.98
Moisture Content, w (%):	26.97	29.73	32.23
One-Point LL:	27	29	

Results

Liquid Limit, LL:	28
Plastic Limit, PL:	15
Plasticity Index, PI:	13





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]7

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 5-6 ft

Tested by: CRC Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn gravelly clay
As-received water content(%):	14.1	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	10
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

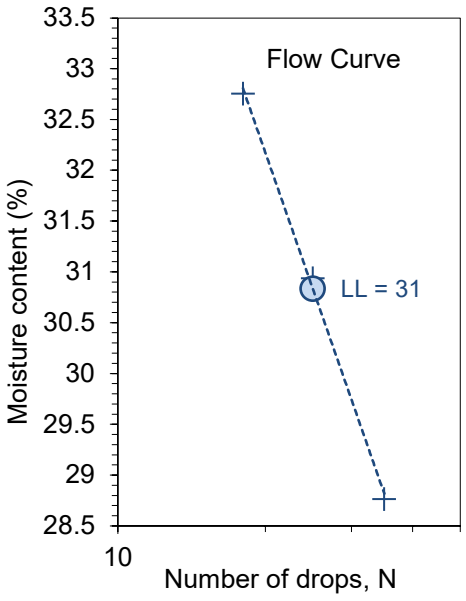
Determination No:	1	2
Wet Soil + Tare (g):	20.40	20.47
Dry Soil + Tare (g):	19.27	19.28
Moisture Loss (g):	1.13	1.19
Tare (g):	13.53	13.34
Dry Soil (g):	5.74	5.94
Moisture Content, w (%):	19.69	20.03

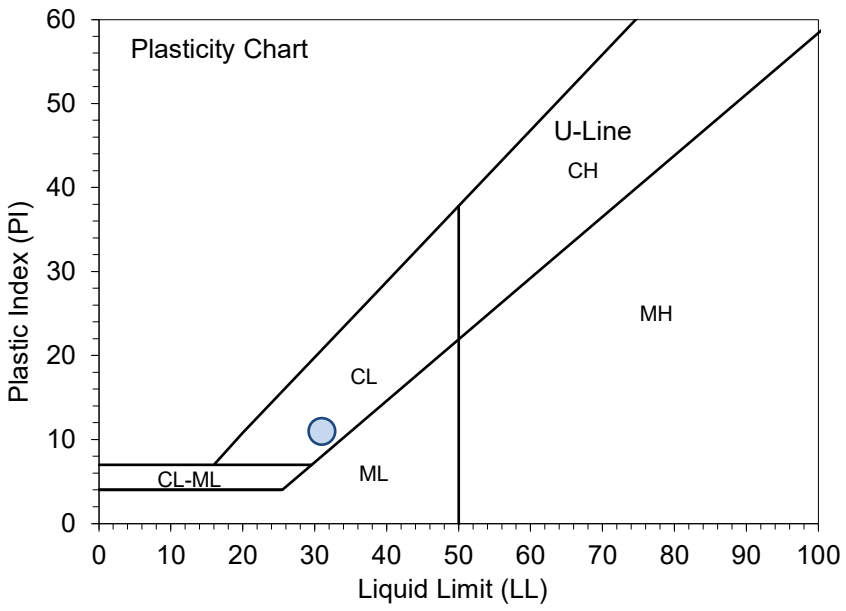
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	25	18
Wet Soil + Tare (g):	25.76	24.30	24.08
Dry Soil + Tare (g):	23.03	21.80	21.24
Moisture Loss (g):	2.73	2.50	2.84
Tare (g):	13.54	13.72	12.57
Dry Soil (g):	9.49	8.08	8.67
Moisture Content, w (%):	28.77	30.94	32.76
One-Point LL:		31	

Results

Liquid Limit, LL:	31
Plastic Limit, PL:	20
Plasticity Index, PI:	11





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]8

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 9-10 ft

Tested by: CML Date: 14-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn clay
As-received water content(%):	22.7	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

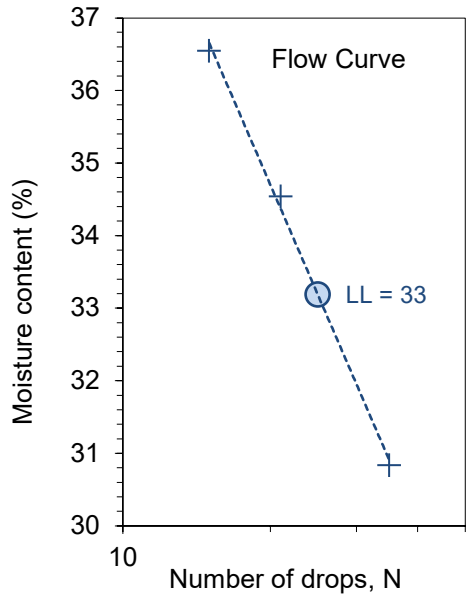
Determination No:	1	2
Wet Soil + Tare (g):	20.85	21.39
Dry Soil + Tare (g):	19.67	20.21
Moisture Loss (g):	1.18	1.18
Tare (g):	13.08	13.63
Dry Soil (g):	6.59	6.58
Moisture Content, w (%):	17.91	17.93

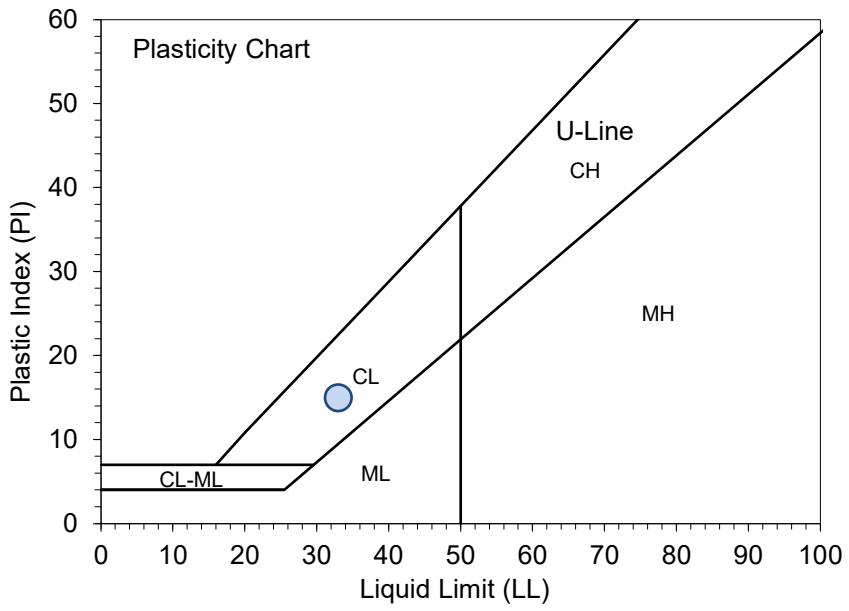
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	21	15
Wet Soil + Tare (g):	20.71	23.47	23.24
Dry Soil + Tare (g):	19.02	20.90	20.59
Moisture Loss (g):	1.69	2.57	2.65
Tare (g):	13.54	13.46	13.34
Dry Soil (g):	5.48	7.44	7.25
Moisture Content, w (%):	30.84	34.54	36.55
One-Point LL:		34	

Results

Liquid Limit, LL:	33
Plastic Limit, PL:	18
Plasticity Index, PI:	15





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]9

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 17.5-18 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn sandy clay
As-received water content(%):	12.6	Approximate maximum particle size:	3/8"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	20
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

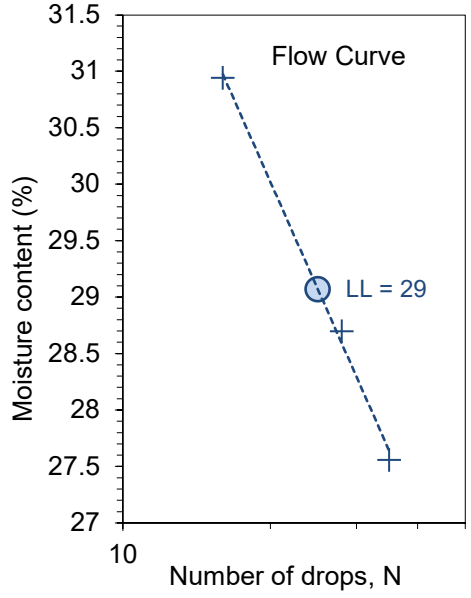
Determination No:	1	2
Wet Soil + Tare (g):	20.56	20.74
Dry Soil + Tare (g):	19.56	19.71
Moisture Loss (g):	1.00	1.03
Tare (g):	12.92	12.99
Dry Soil (g):	6.64	6.72
Moisture Content, w (%):	15.06	15.33

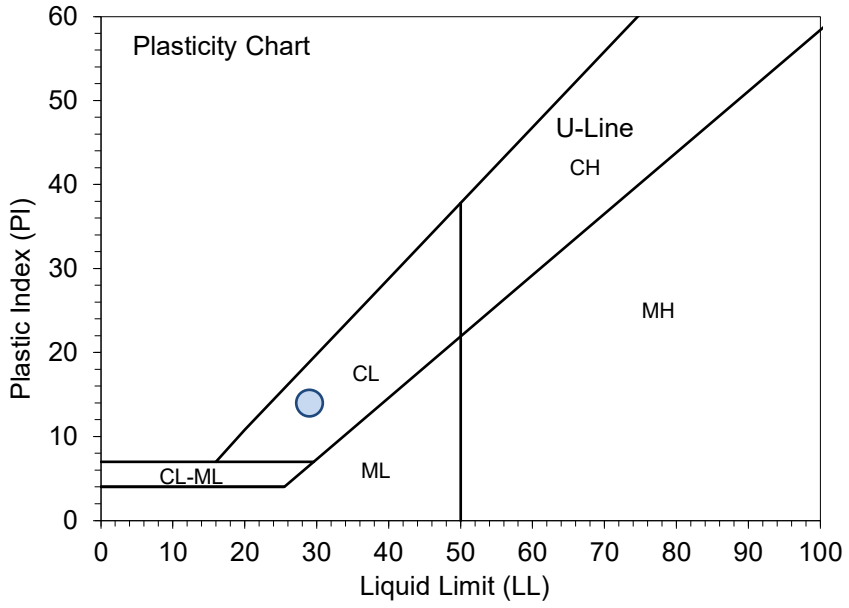
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	35	28	16
Wet Soil + Tare (g):	20.20	19.91	24.55
Dry Soil + Tare (g):	18.72	18.30	21.96
Moisture Loss (g):	1.48	1.61	2.59
Tare (g):	13.35	12.69	13.59
Dry Soil (g):	5.37	5.61	8.37
Moisture Content, w (%):	27.56	28.70	30.94
One-Point LL:		29	

Results

Liquid Limit, LL:	29
Plastic Limit, PL:	15
Plasticity Index, PI:	14





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]10

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-08

No: 23072 (23-1725) **Depth:** 10-12 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	tn - bn sandy gravel
As-received water content(%):	2.2	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	40
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid Limit:	Could not be determined (N.P.)

Plastic Limit

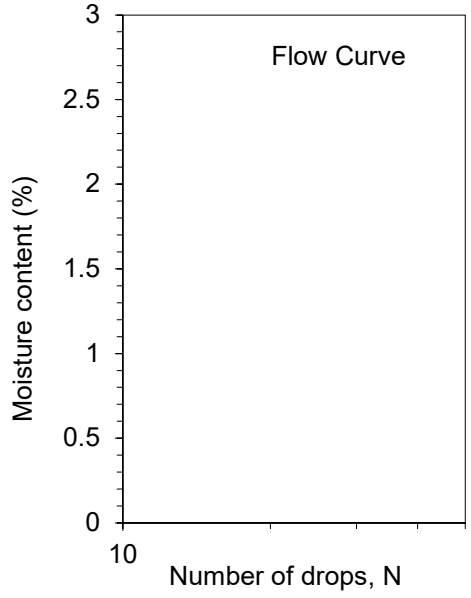
Determination No:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	

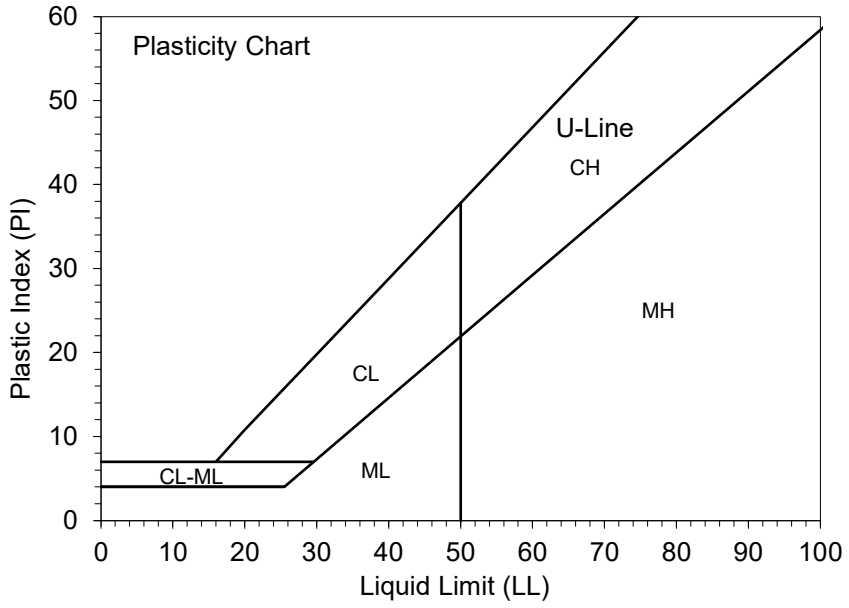
Liquid Limit

Determination No:	
Number of Drops, N:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	
One-Point LL:	

Results

Liquid Limit, LL:	Nonplastic (N.P.)
Plastic Limit, PL:	Nonplastic (N.P.)
Plasticity Index, PI:	Nonplastic (N.P.)





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]11

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-08

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	lt bn - bn sandy clay
As-received water content(%):	10.0	Approximate maximum particle size:	3/4"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	30
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

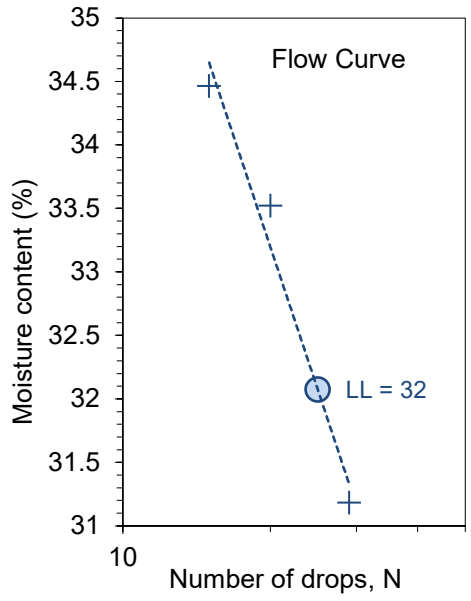
Determination No:	1	2
Wet Soil + Tare (g):	21.19	20.93
Dry Soil + Tare (g):	20.19	19.95
Moisture Loss (g):	1.00	0.98
Tare (g):	13.51	13.39
Dry Soil (g):	6.68	6.56
Moisture Content, w (%):	14.97	14.94

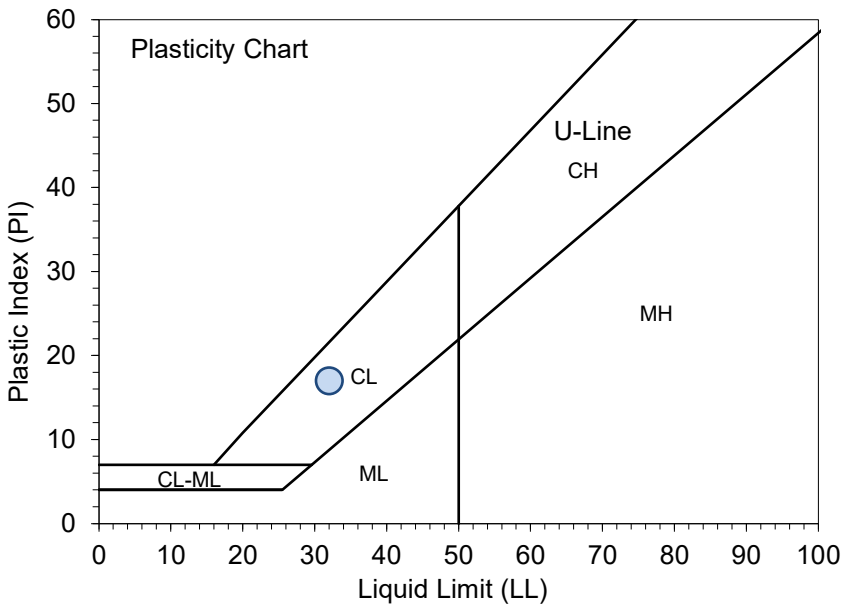
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	29	20	15
Wet Soil + Tare (g):	22.53	22.75	25.44
Dry Soil + Tare (g):	20.40	20.39	22.40
Moisture Loss (g):	2.13	2.36	3.04
Tare (g):	13.57	13.35	13.58
Dry Soil (g):	6.83	7.04	8.82
Moisture Content, w (%):	31.19	33.52	34.47
One-Point LL:	32	33	

Results

Liquid Limit, LL:	32
Plastic Limit, PL:	15
Plasticity Index, PI:	17





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]12

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-09

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: JC

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	dk yl bn - bn sandy gravel
As-received water content(%):	7.0	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	30
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid limit test method:	Multipoint

Plastic Limit

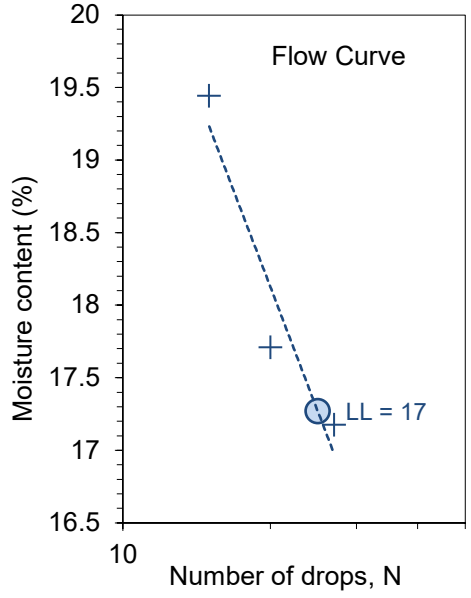
Determination No:	1	2
Wet Soil + Tare (g):	21.04	21.18
Dry Soil + Tare (g):	20.03	20.11
Moisture Loss (g):	1.01	1.07
Tare (g):	13.42	13.46
Dry Soil (g):	6.61	6.65
Moisture Content, w (%):	15.28	16.09

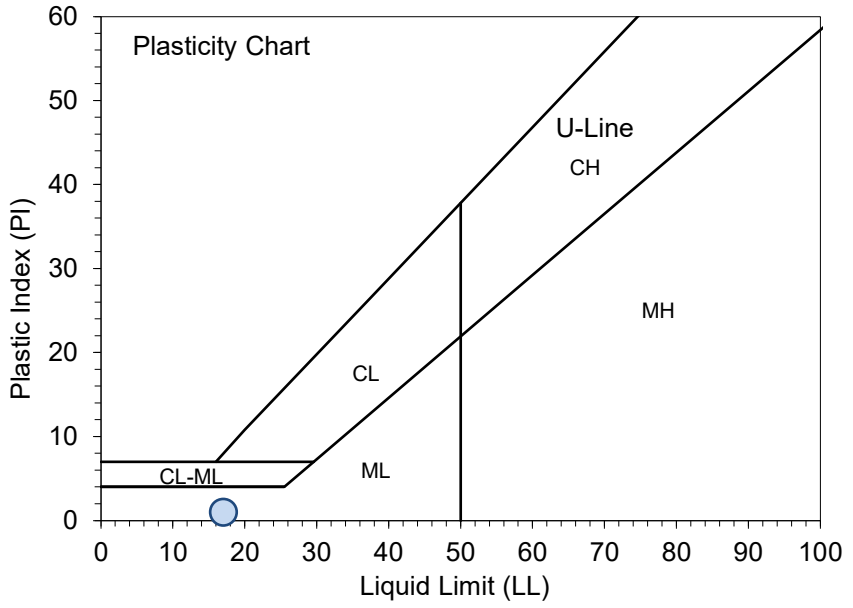
Liquid Limit

Determination No:	1	2	3
Number of Drops, N:	27	20	15
Wet Soil + Tare (g):	25.12	24.21	25.51
Dry Soil + Tare (g):	23.33	22.46	23.55
Moisture Loss (g):	1.79	1.75	1.96
Tare (g):	12.91	12.58	13.47
Dry Soil (g):	10.42	9.88	10.08
Moisture Content, w (%):	17.18	17.71	19.44
One-Point LL:	17	17	

Results

Liquid Limit, LL:	17
Plastic Limit, PL:	16
Plasticity Index, PI:	1





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]13

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-09

No: 23072 (23-1725) **Depth:** 15-17 ft

Tested by: CML Date: 16-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	dk yl bn - bn sandy gravel
As-received water content(%):	5.7	Approximate maximum particle size:	1"
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	30
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid Limit:	Could not be determined (N.P.)

Plastic Limit

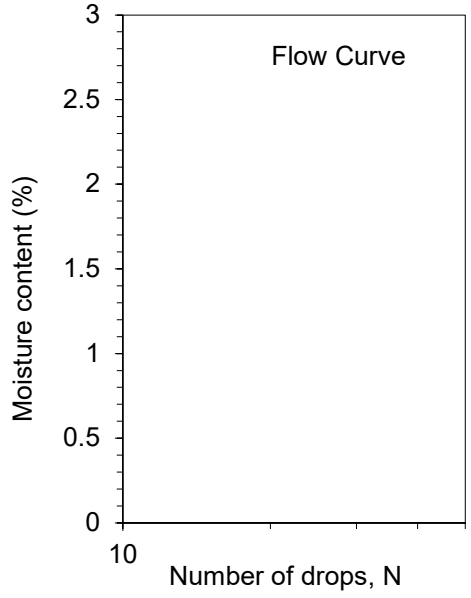
Determination No:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	

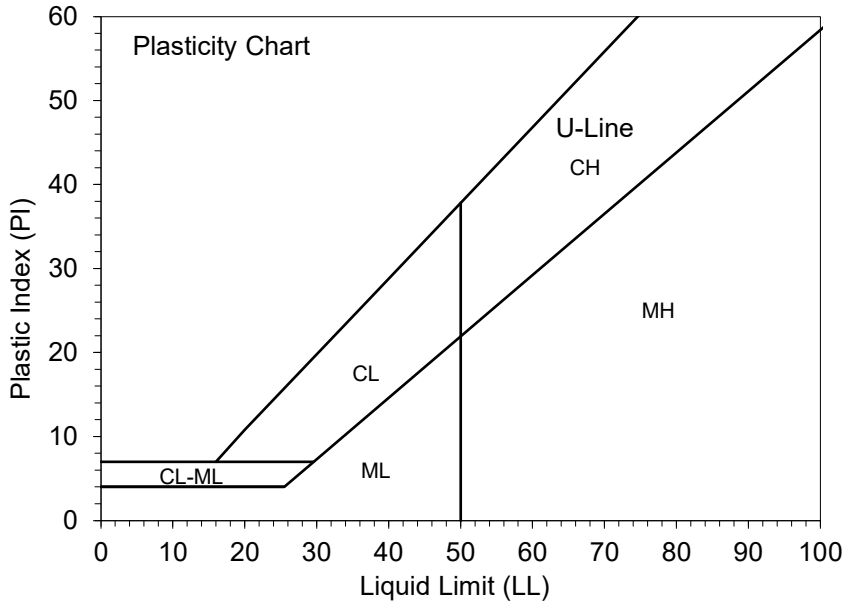
Liquid Limit

Determination No:	
Number of Drops, N:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	
One-Point LL:	

Results

Liquid Limit, LL:	Nonplastic (N.P.)
Plastic Limit, PL:	Nonplastic (N.P.)
Plasticity Index, PI:	Nonplastic (N.P.)





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]14

Liquid Limit, Plastic Limit, and Plasticity Index of Soils

(After ASTM D4318 and AASHTO T89/T90)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** TP-02

No: 23072 (23-1725) **Depth:** 6-7 ft

Tested by: CML Date: 15-Nov-23

Reduced by: CML Location: -

Reviewed by: AT

Sample Preparation

Preparation method:	Air Dry	Laboratory sample description:	It bn - bn silt
As-received water content(%):	17.5	Approximate maximum particle size:	No. 20
Liquid Limit device:	Mechanical	Estimate of % retained on No.40 sieve (%):	<5
Grooving tool:	Plastic	Method of removing > No. 40 sieve:	Hand Sieved
Testing method:	Hand rolled	Liquid Limit:	Could not be determined (N.P.)

Plastic Limit

Determination No:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	

Liquid Limit

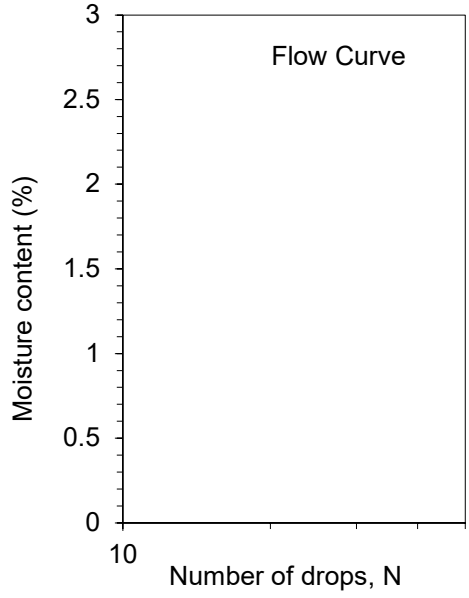
Determination No:	
Number of Drops, N:	
Wet Soil + Tare (g):	
Dry Soil + Tare (g):	
Moisture Loss (g):	
Tare (g):	
Dry Soil (g):	
Moisture Content, w (%):	
One-Point LL:	

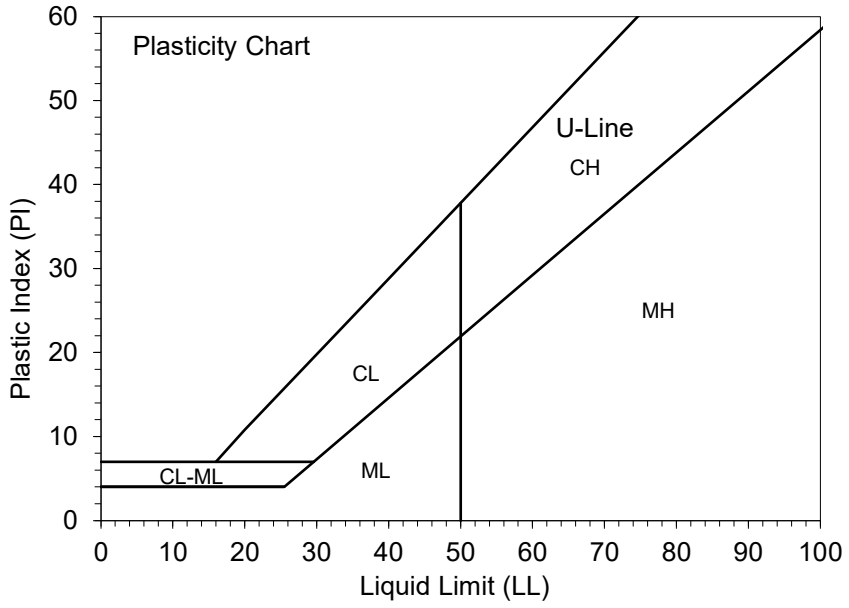
Results

Liquid Limit, LL: Nonplastic (N.P.)

Plastic Limit, PL: Nonplastic (N.P.)

Plasticity Index, PI: Nonplastic (N.P.)





X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_AL.xlsx]15

Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-05

No: 23072 (23-1725) **Depth:** 8.5-11 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: ol bn - dk ol bn silt

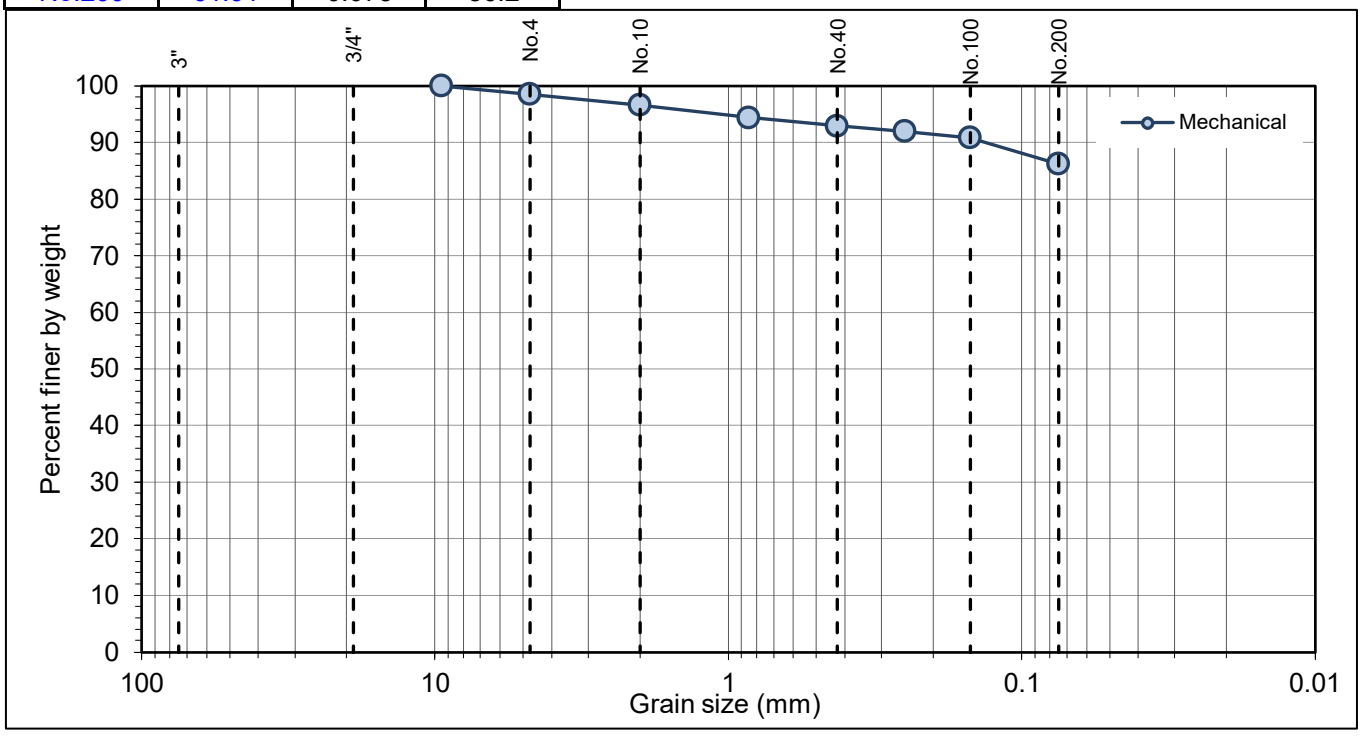
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	510.72	449.30
	-	
	510.72	449.30
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	706.71
Dry soil + tare (g):	-	645.29
Tare (g):	-	195.99
Moisture content (%):	0.0	13.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	100.0
No.4	6.47	4.75	98.6
No.10	15.15	2	96.6
No.20	25.05	0.85	94.4
No.40	31.63	0.425	93.0
No.60	36.08	0.25	92.0
No.100	41.22	0.15	90.8
No.200	61.91	0.075	86.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-05

No: 23072 (23-1725) **Depth:** 22-25 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: lt bn - bn gravel

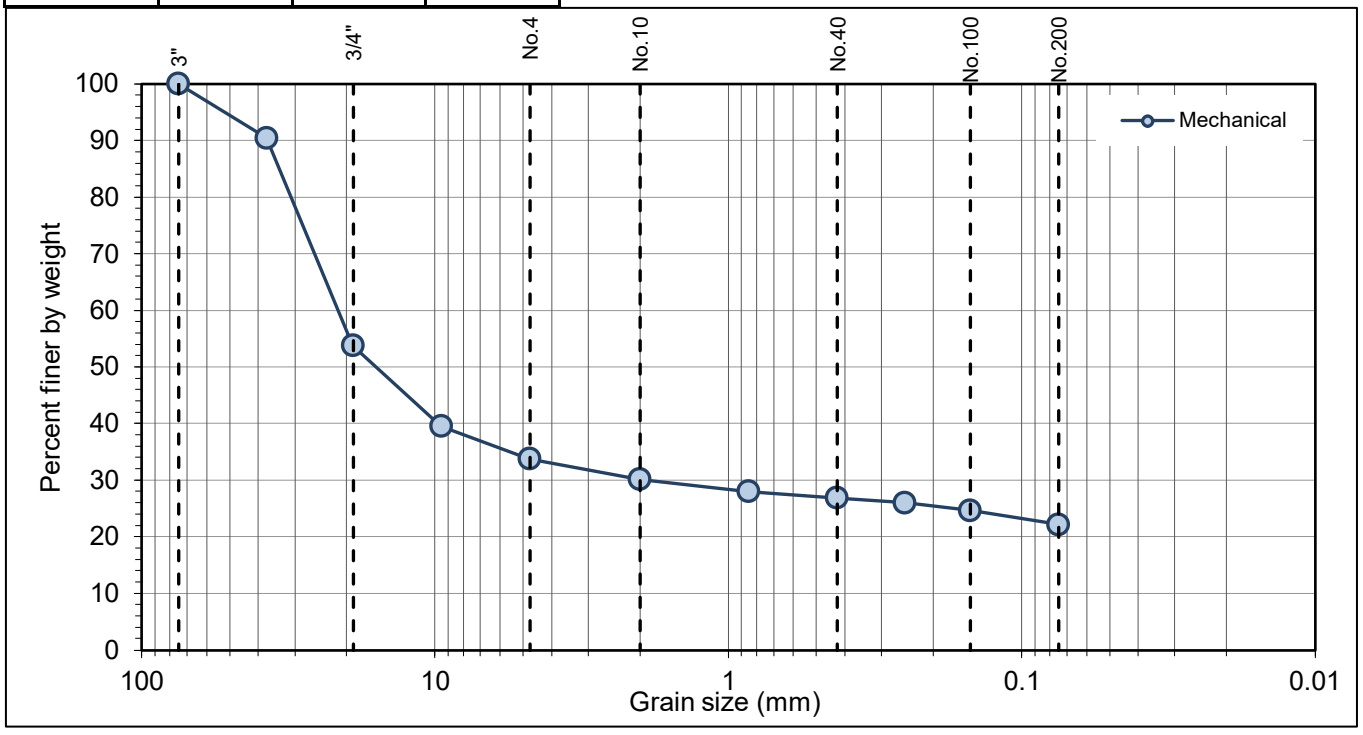
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	1688.72	1601.18
	-	
	1688.72	1601.18
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	1702.45
Dry soil + tare (g):	-	1614.91
Tare (g):	-	13.73
Moisture content (%):	0.0	5.5

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	100.0
1.5"	153.23	37.5	90.4
3/4"	740.77	19	53.7
3/8"	969.00	9.5	39.5
No.4	1060.67	4.75	33.8
No.10	1119.28	2	30.1
No.20	1153.68	0.85	27.9
No.40	1171.53	0.425	26.8
No.60	1184.79	0.25	26.0
No.100	1206.93	0.15	24.6
No.200	1246.16	0.075	22.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-05

No: 23072 (23-1725) **Depth:** 35-37 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: tn - bn sandy gravel

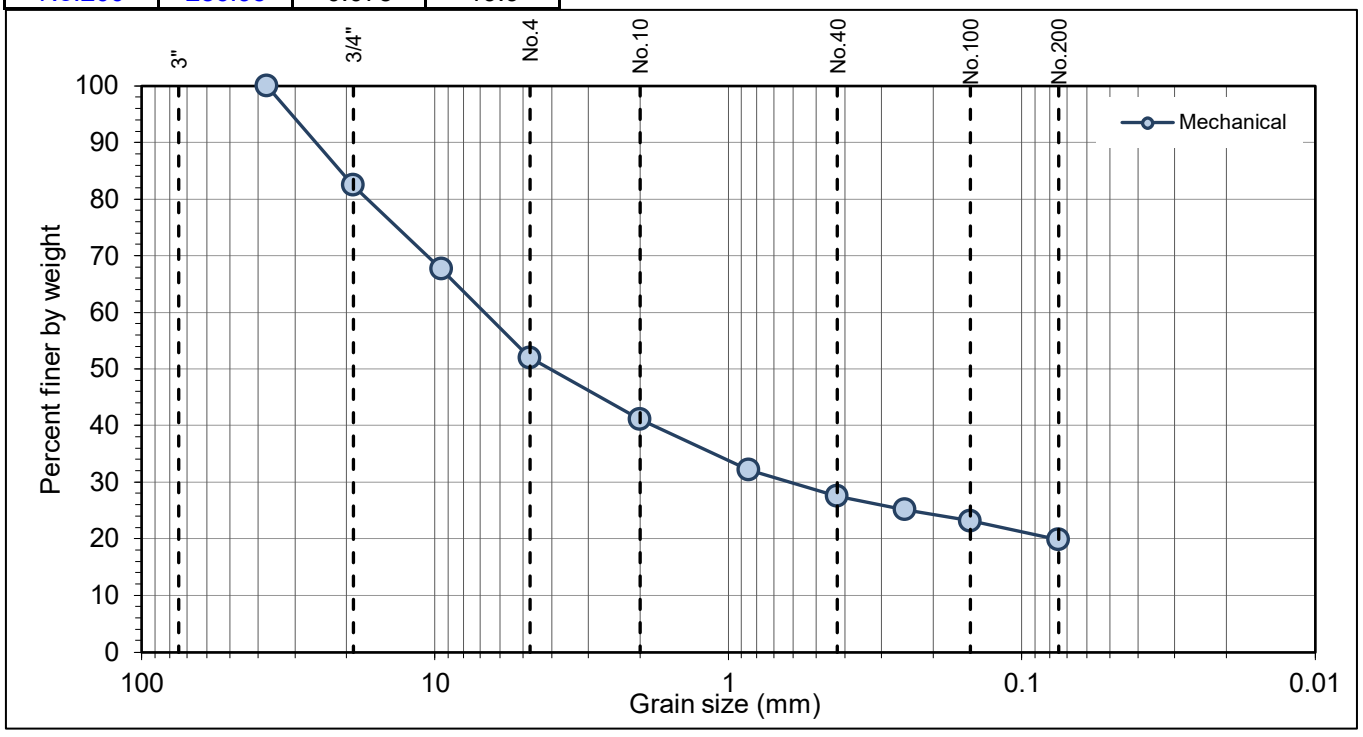
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	364.51	358.20
	-	-
	364.51	358.20
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	480.97
Dry soil + tare (g):	-	474.66
Tare (g):	-	116.46
Moisture content (%):	0.0	1.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	62.67	19	82.5
3/8"	115.82	9.5	67.7
No.4	171.91	4.75	52.0
No.10	211.10	2	41.1
No.20	243.11	0.85	32.1
No.40	259.58	0.425	27.5
No.60	268.13	0.25	25.1
No.100	275.21	0.15	23.2
No.200	286.95	0.075	19.9



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 3.5-5 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: bn - dk bn sandy clay

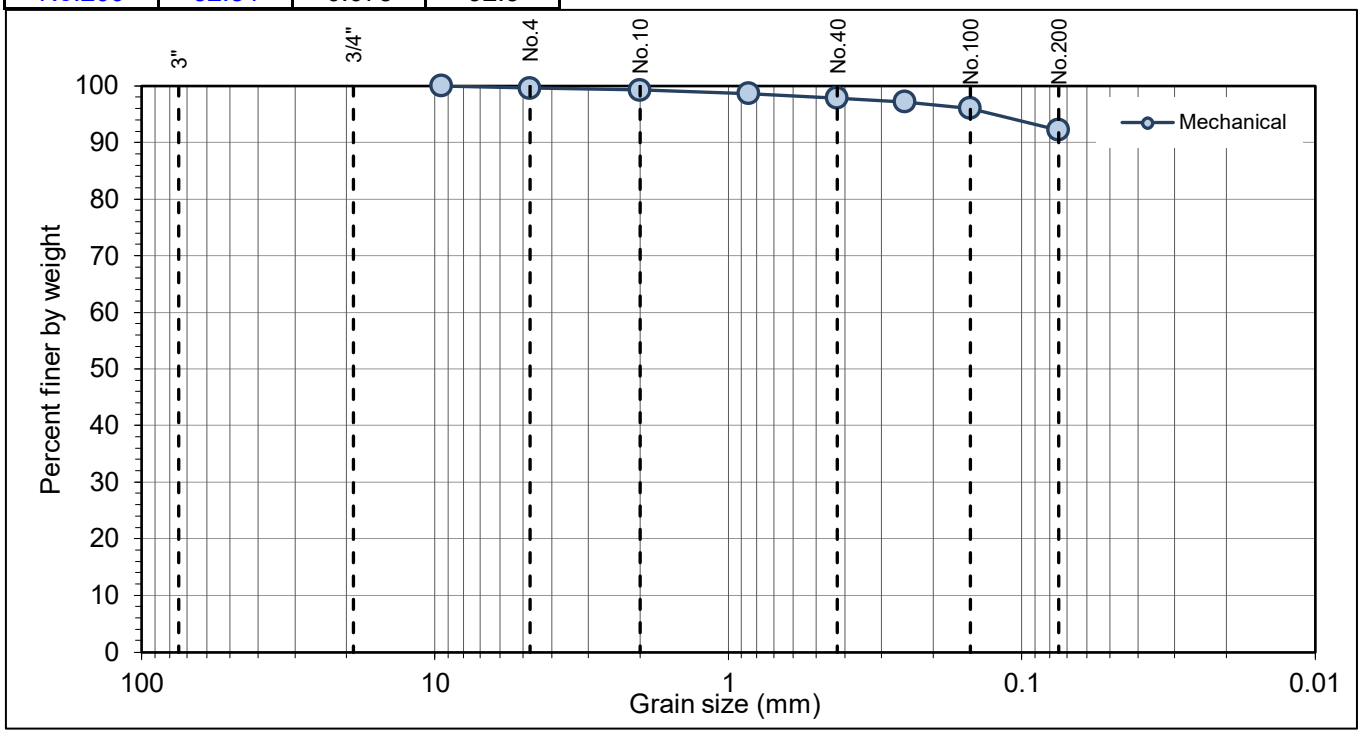
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	538.58	424.78
	-	
	538.58	424.78
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	733.41
Dry soil + tare (g):	-	619.61
Tare (g):	-	194.83
Moisture content (%):	0.0	26.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	100.0
No.4	1.68	4.75	99.6
No.10	3.01	2	99.3
No.20	5.85	0.85	98.6
No.40	9.10	0.425	97.9
No.60	11.87	0.25	97.2
No.100	16.77	0.15	96.1
No.200	32.84	0.075	92.3



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: bn - tn clayey gravel

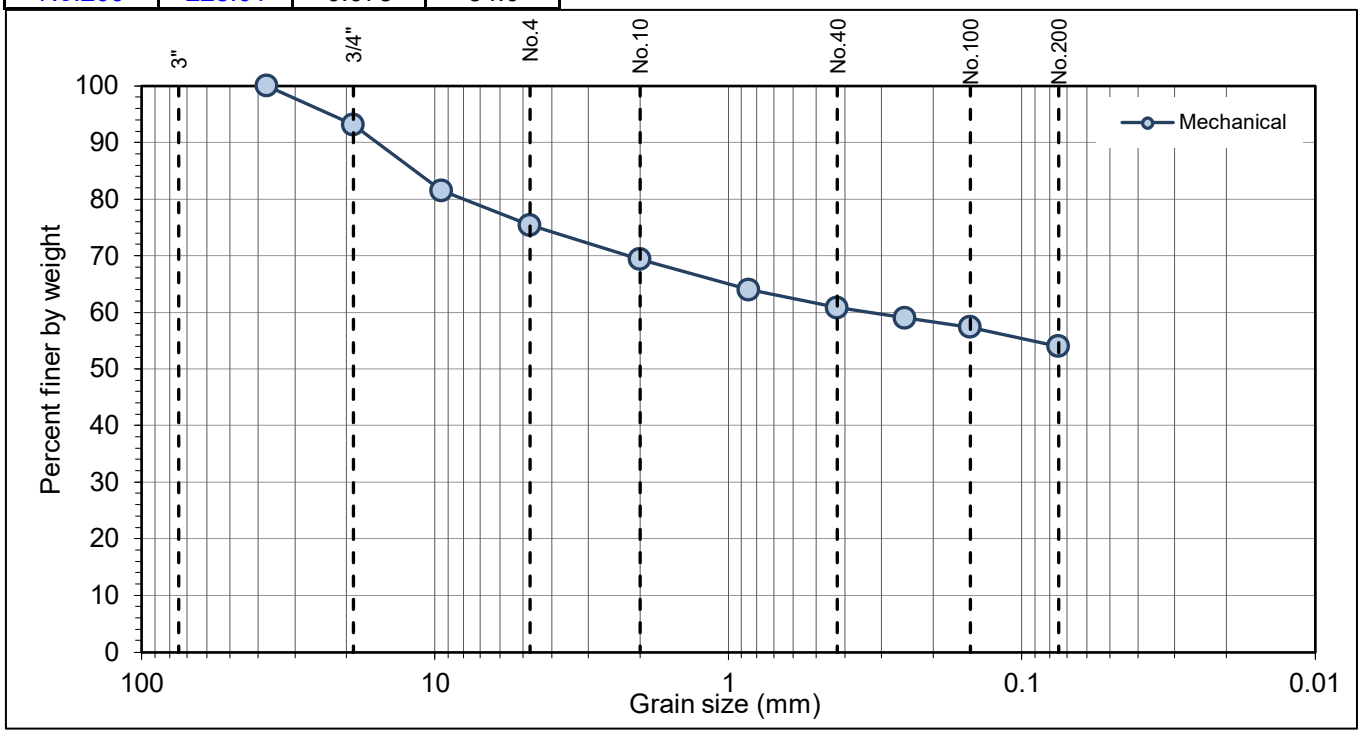
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	543.14	495.64
	-	
	543.14	495.64
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	740.83
Dry soil + tare (g):	-	693.33
Tare (g):	-	197.69
Moisture content (%):	0.0	9.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	33.86	19	93.2
3/8"	91.52	9.5	81.5
No.4	121.77	4.75	75.4
No.10	151.95	2	69.3
No.20	178.46	0.85	64.0
No.40	194.30	0.425	60.8
No.60	203.22	0.25	59.0
No.100	211.25	0.15	57.4
No.200	228.01	0.075	54.0



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 20-22 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: bn - tn sandy gravel

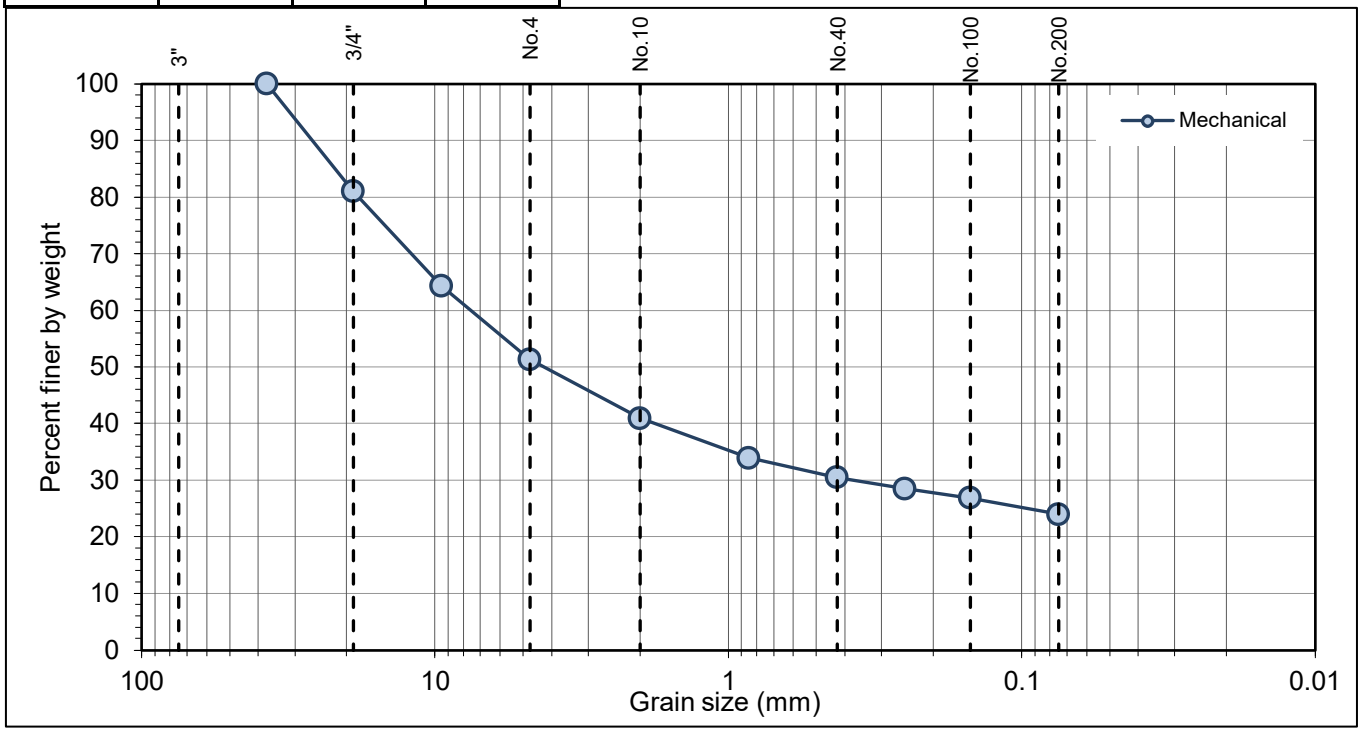
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	431.81	412.46
	-	
	431.81	412.46
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	549.20
Dry soil + tare (g):	-	529.85
Tare (g):	-	117.39
Moisture content (%):	0.0	4.7

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	78.09	19	81.1
3/8"	147.07	9.5	64.3
No.4	200.86	4.75	51.3
No.10	243.73	2	40.9
No.20	272.66	0.85	33.9
No.40	286.85	0.425	30.5
No.60	295.11	0.25	28.5
No.100	301.79	0.15	26.8
No.200	313.55	0.075	24.0



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-06

No: 23072 (23-1725) **Depth:** 32.5-35 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: lt bn - bn clay

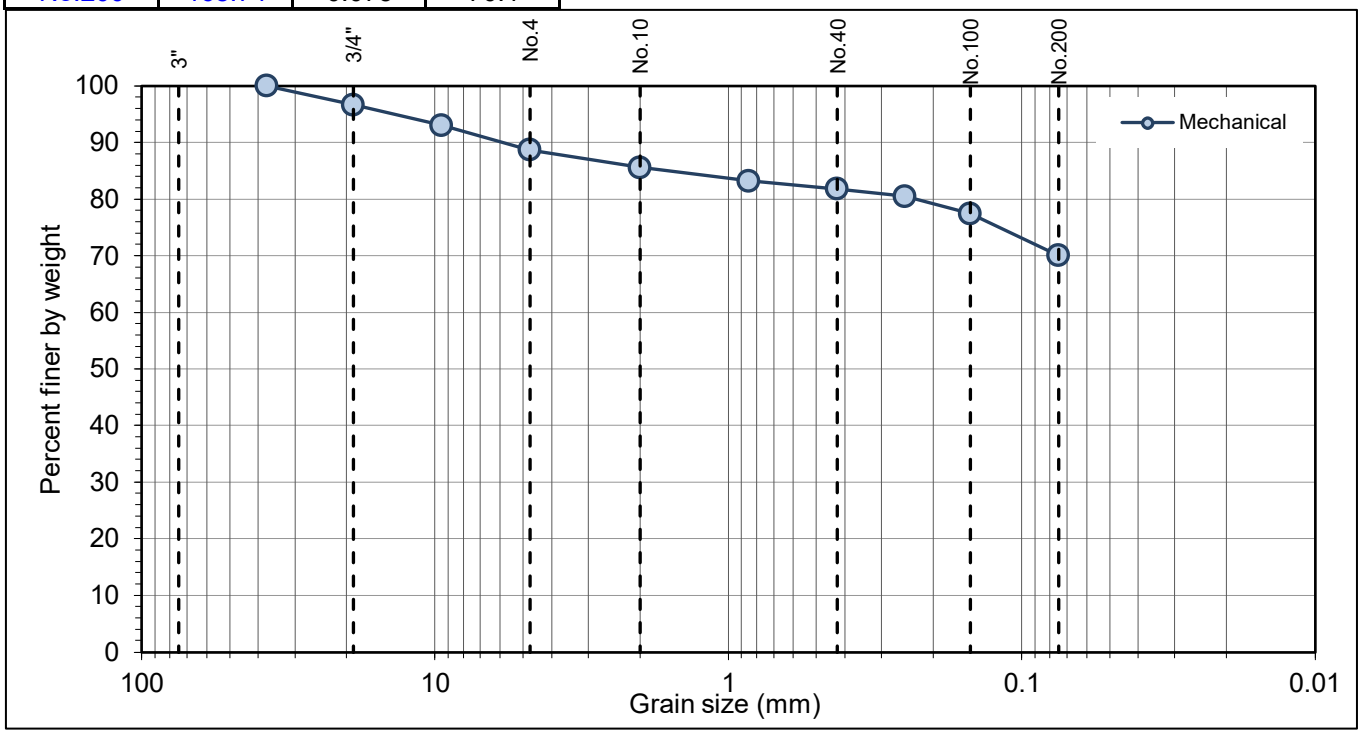
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	647.50	563.64
	-	-
	647.50	563.64
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	764.63
Dry soil + tare (g):	-	680.77
Tare (g):	-	117.13
Moisture content (%):	0.0	14.9

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	18.66	19	96.7
3/8"	39.17	9.5	93.1
No.4	63.61	4.75	88.7
No.10	81.28	2	85.6
No.20	94.55	0.85	83.2
No.40	102.61	0.425	81.8
No.60	109.80	0.25	80.5
No.100	126.97	0.15	77.5
No.200	168.74	0.075	70.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 5-6 ft

Date: 14-Nov-23 Location: -

Tested by: DW Lab soil description: lt bn - bn gravelly clay

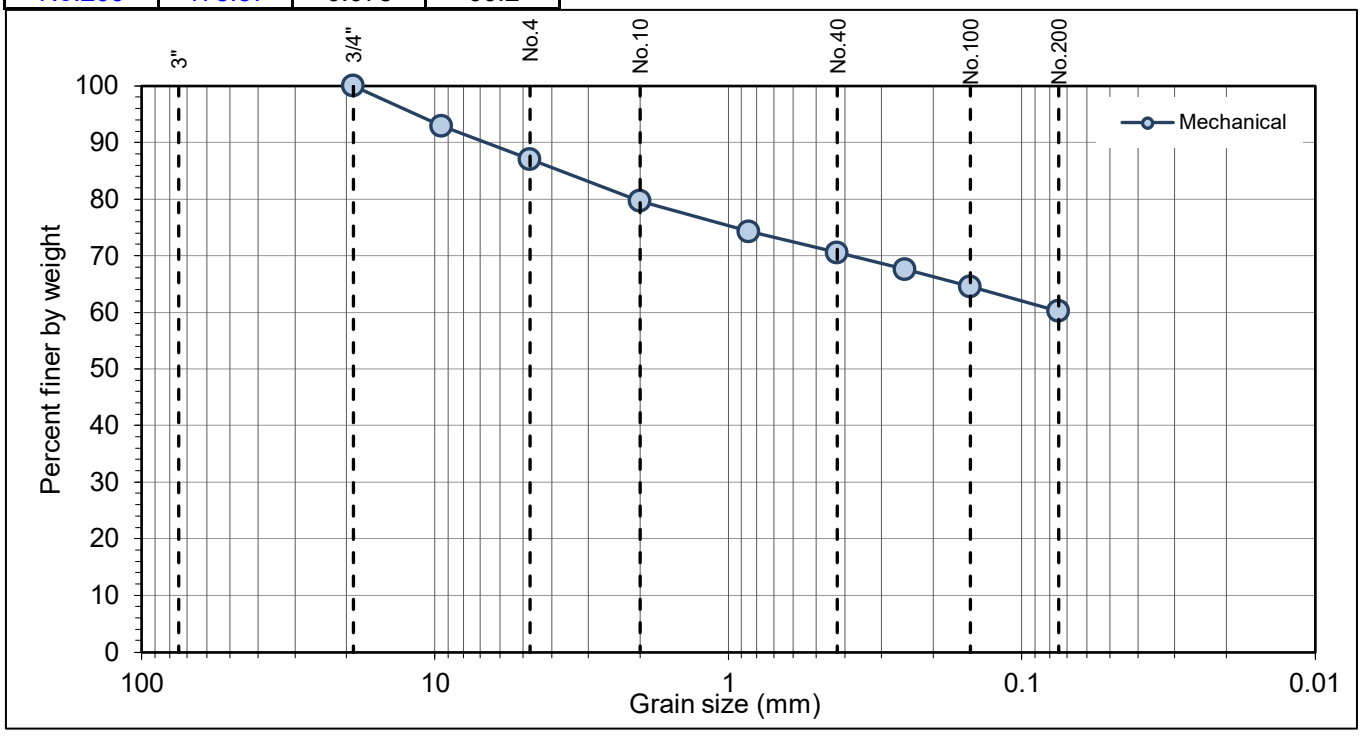
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	511.34	448.17
	-	
	511.34	448.17
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	708.54
Dry soil + tare (g):	-	645.37
Tare (g):	-	197.20
Moisture content (%):	0.0	14.1

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	100.0
3/8"	31.59	9.5	93.0
No.4	57.98	4.75	87.1
No.10	91.18	2	79.7
No.20	115.33	0.85	74.3
No.40	131.89	0.425	70.6
No.60	145.17	0.25	67.6
No.100	158.80	0.15	64.6
No.200	178.37	0.075	60.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 9-10 ft

Date: 10-Nov-23 Location: -

Tested by: JCC Lab soil description: lt bn - bn silt

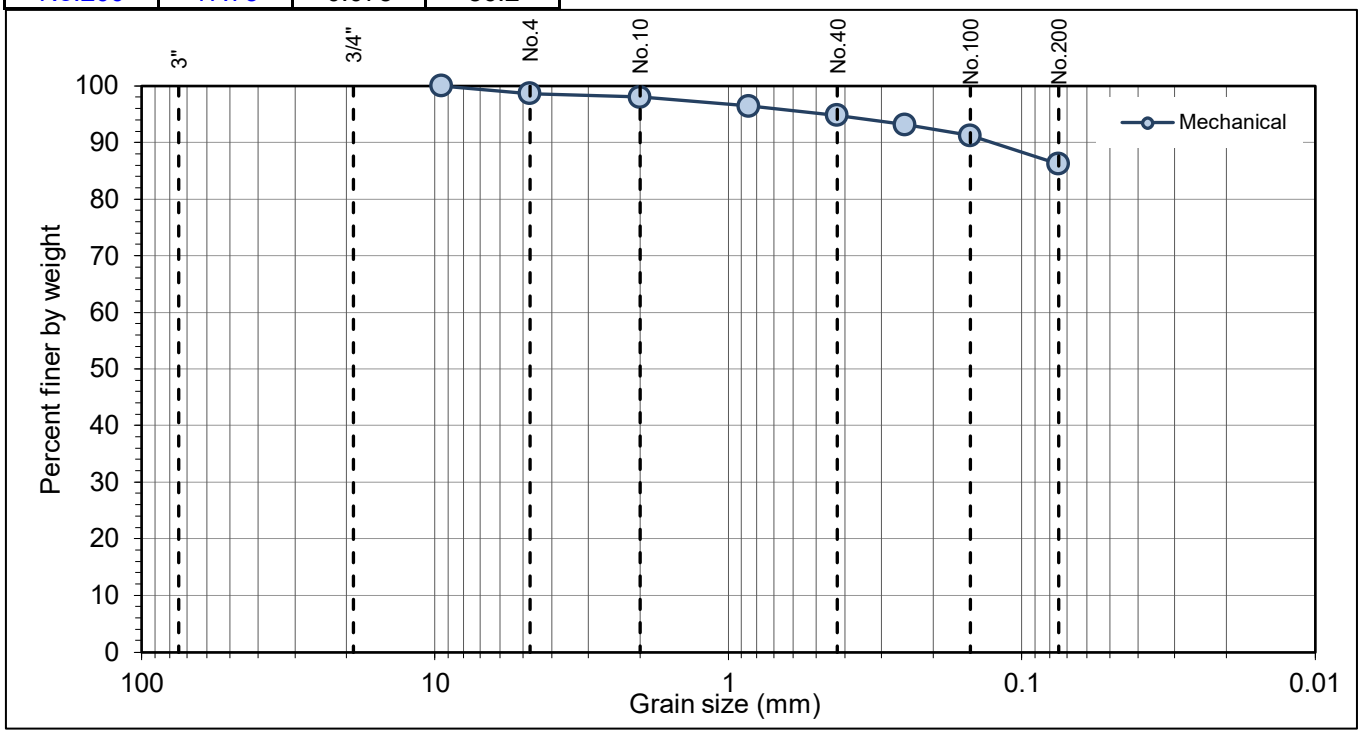
Reduced by: AT Comments:

Reviewed by: JC

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	160.04	128.80
	-	
	160.04	128.80
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	355.80
Dry soil + tare (g):	-	324.56
Tare (g):	-	195.76
Moisture content (%):	0.0	24.3

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	100.0
No.4	1.73	4.75	98.7
No.10	2.57	2	98.0
No.20	4.60	0.85	96.4
No.40	6.72	0.425	94.8
No.60	8.78	0.25	93.2
No.100	11.27	0.15	91.3
No.200	17.73	0.075	86.2



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 17.5-18 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: lt bn - bn sandy clay

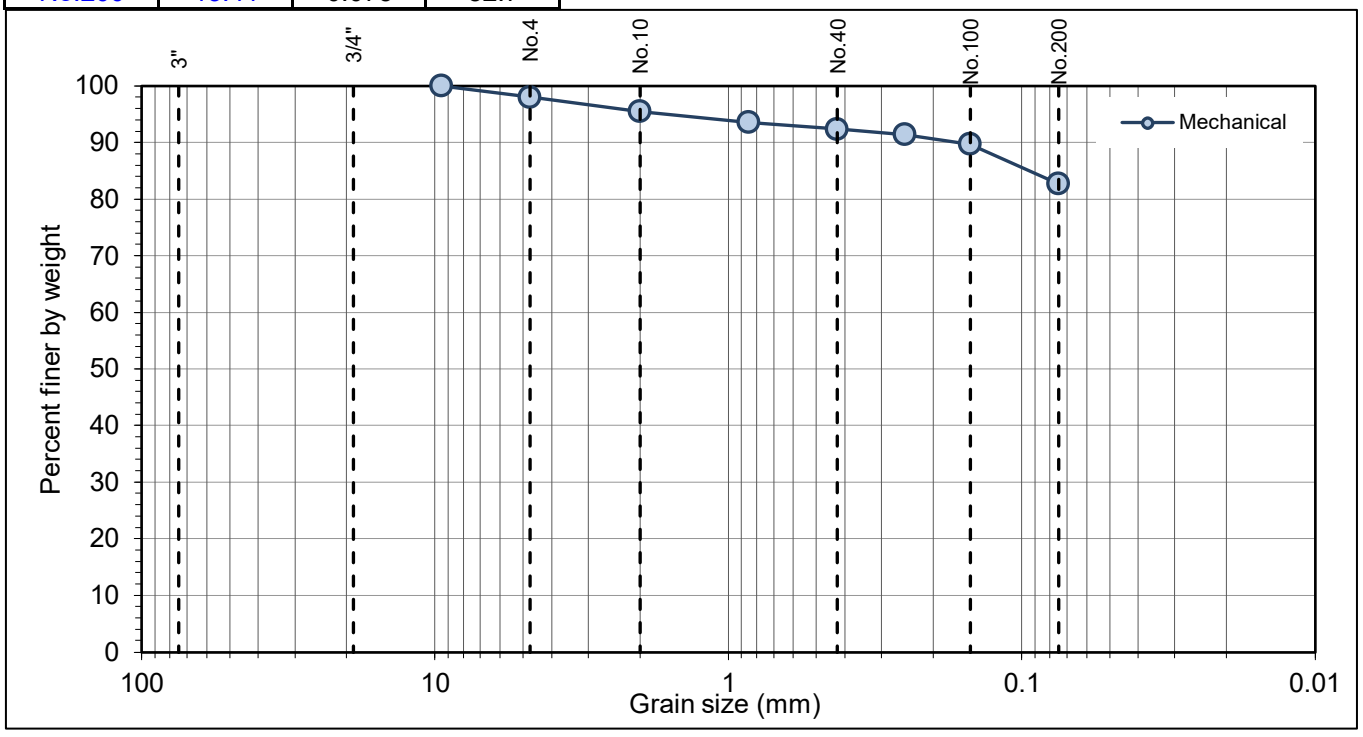
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	87.25	77.51
		-
	87.25	77.51
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	282.48
Dry soil + tare (g):	-	272.74
Tare (g):	-	195.23
Moisture content (%):	0.0	12.6

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	100.0
No.4	1.51	4.75	98.1
No.10	3.48	2	95.5
No.20	5.00	0.85	93.5
No.40	5.93	0.425	92.3
No.60	6.64	0.25	91.4
No.100	7.95	0.15	89.7
No.200	13.41	0.075	82.7



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-08

No: 23072 (23-1725) **Depth:** 10-12 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: tn - bn sandy gravel

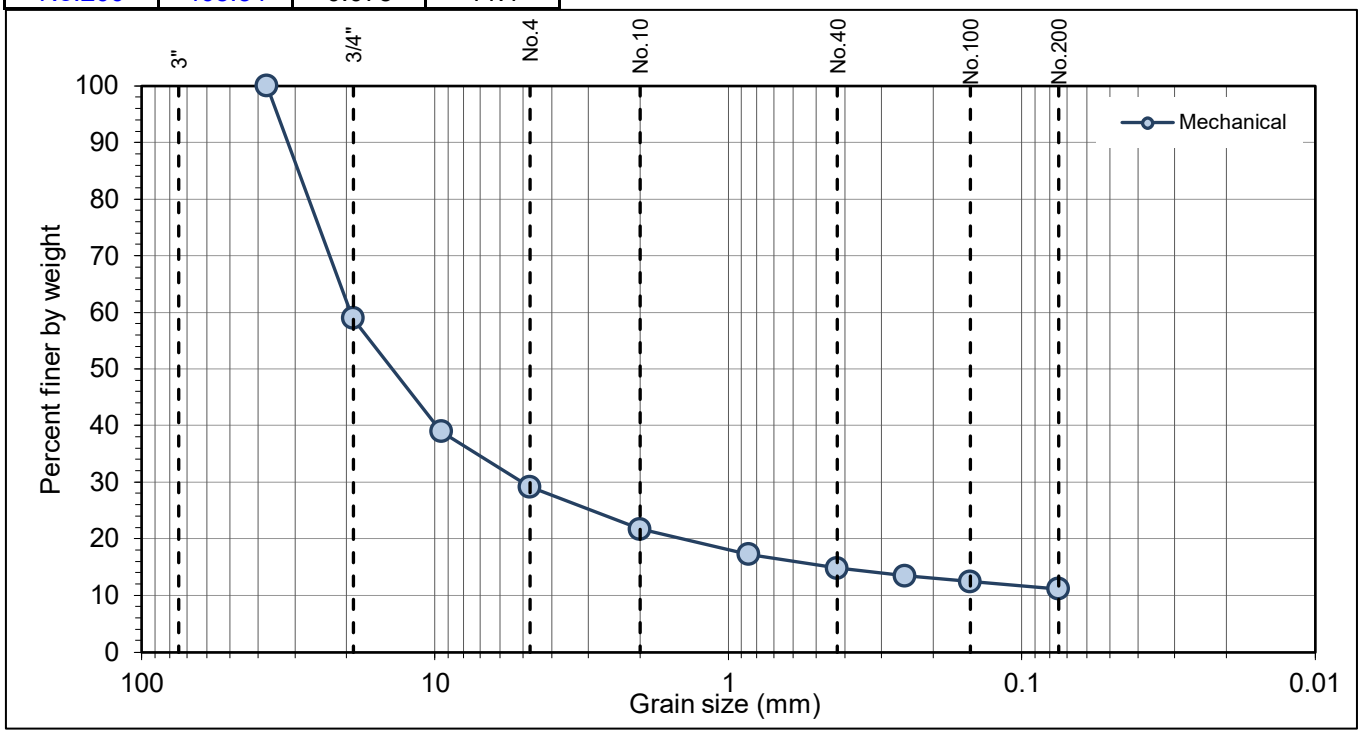
Reduced by: JC Comments:

Reviewed by: AT

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	466.15	455.99
	-	
	466.15	455.99
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	584.18
Dry soil + tare (g):	-	574.02
Tare (g):	-	118.03
Moisture content (%):	0.0	2.2

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	187.26	19	58.9
3/8"	278.45	9.5	38.9
No.4	323.16	4.75	29.1
No.10	357.01	2	21.7
No.20	377.36	0.85	17.2
No.40	388.54	0.425	14.8
No.60	394.67	0.25	13.4
No.100	399.46	0.15	12.4
No.200	405.34	0.075	11.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-08

No: 23072 (23-1725) **Depth:** 12.5-14 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: lt bn - bn sandy clay

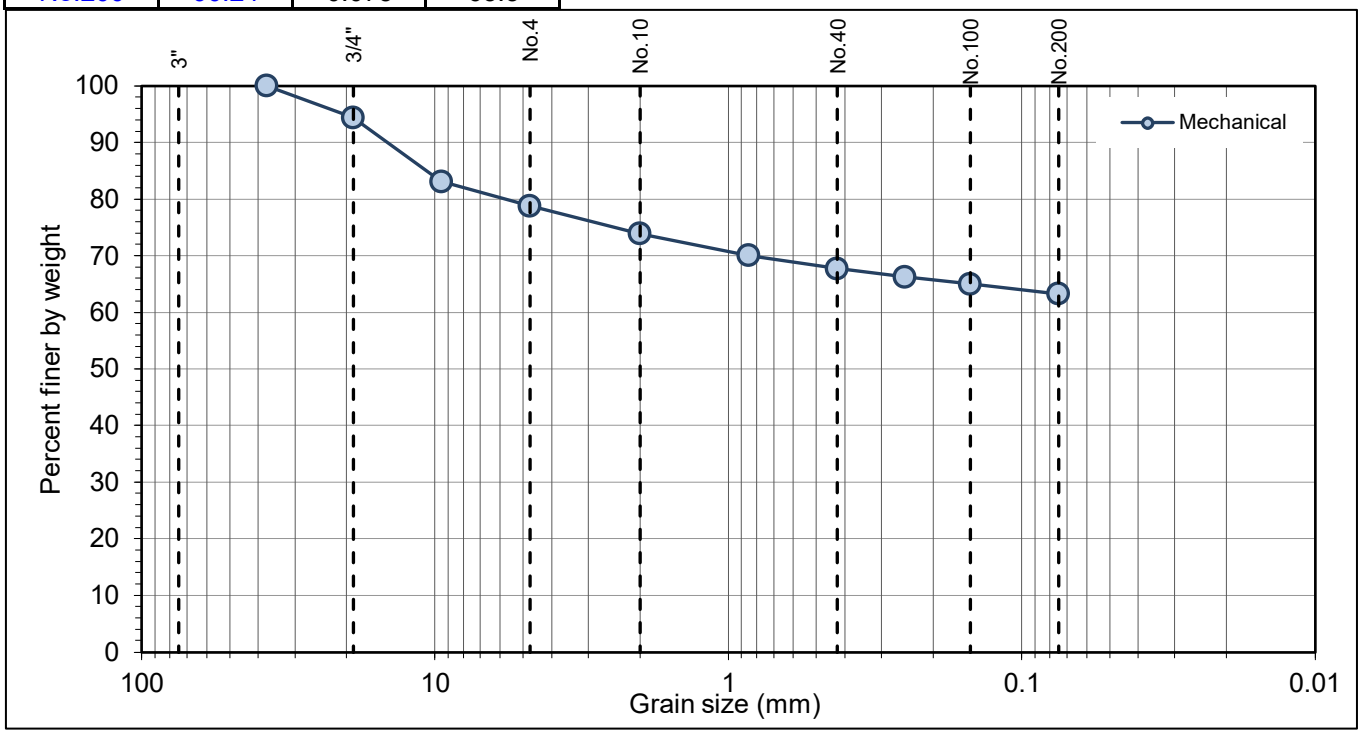
Reduced by: AT Comments:

Reviewed by: WMC

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	270.30	245.71
	-	
	270.30	245.71
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	467.72
Dry soil + tare (g):	-	443.13
Tare (g):	-	197.42
Moisture content (%):	0.0	10.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	13.71	19	94.4
3/8"	41.47	9.5	83.1
No.4	52.05	4.75	78.8
No.10	64.21	2	73.9
No.20	73.62	0.85	70.0
No.40	79.28	0.425	67.7
No.60	82.99	0.25	66.2
No.100	85.98	0.15	65.0
No.200	90.24	0.075	63.3



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-09

No: 23072 (23-1725) **Depth:** 7.5-9 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: dk yl bn - dk bn sandy gravel

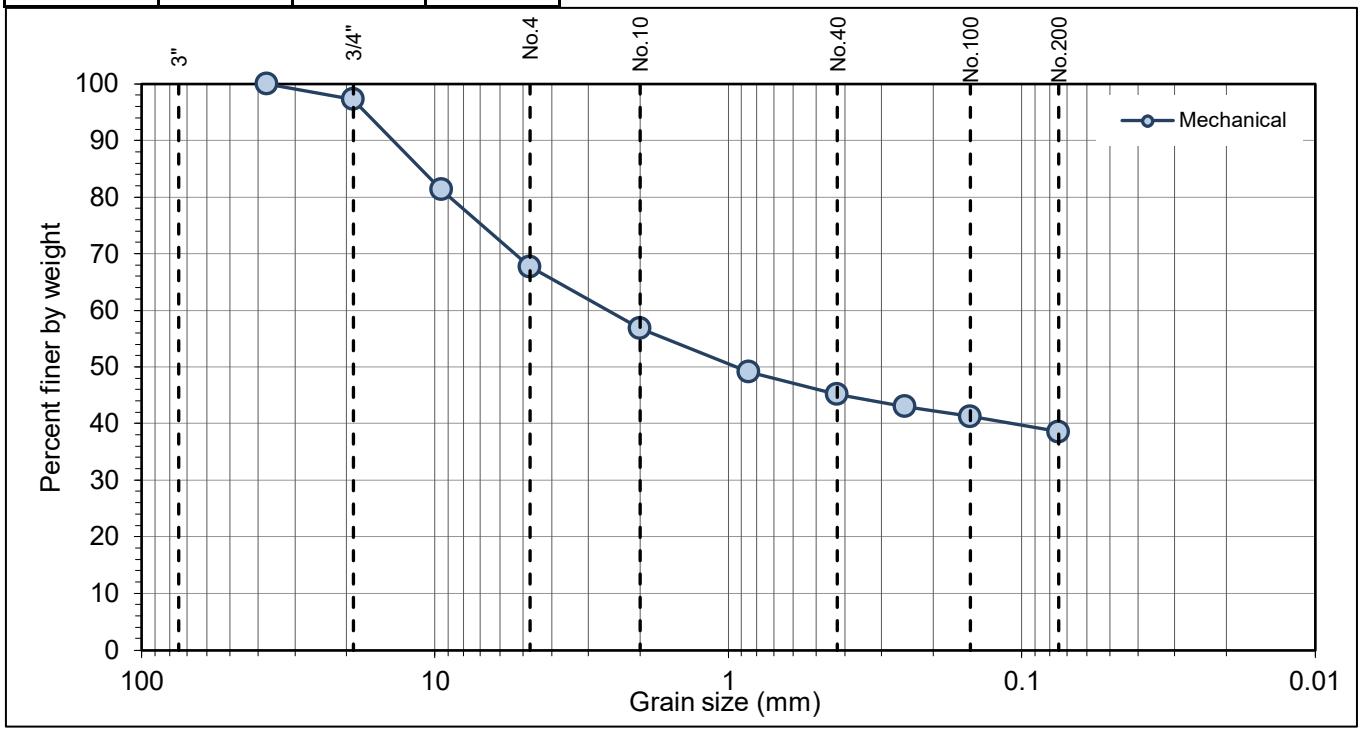
Reduced by: AT Comments:

Reviewed by: WMC

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	526.82	492.40
	-	
	526.82	492.40
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	644.83
Dry soil + tare (g):	-	610.41
Tare (g):	-	118.01
Moisture content (%):	0.0	7.0

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	13.31	19	97.3
3/8"	91.93	9.5	81.3
No.4	158.81	4.75	67.7
No.10	212.76	2	56.8
No.20	250.58	0.85	49.1
No.40	269.94	0.425	45.2
No.60	280.51	0.25	43.0
No.100	289.27	0.15	41.3
No.200	302.48	0.075	38.6



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-09

No: 23072 (23-1725) **Depth:** 15-17 ft

Date: 16-Nov-23 Location: -

Tested by: DW Lab soil description: dk yl bn - bn sandy gravel

Reduced by: AT Comments:

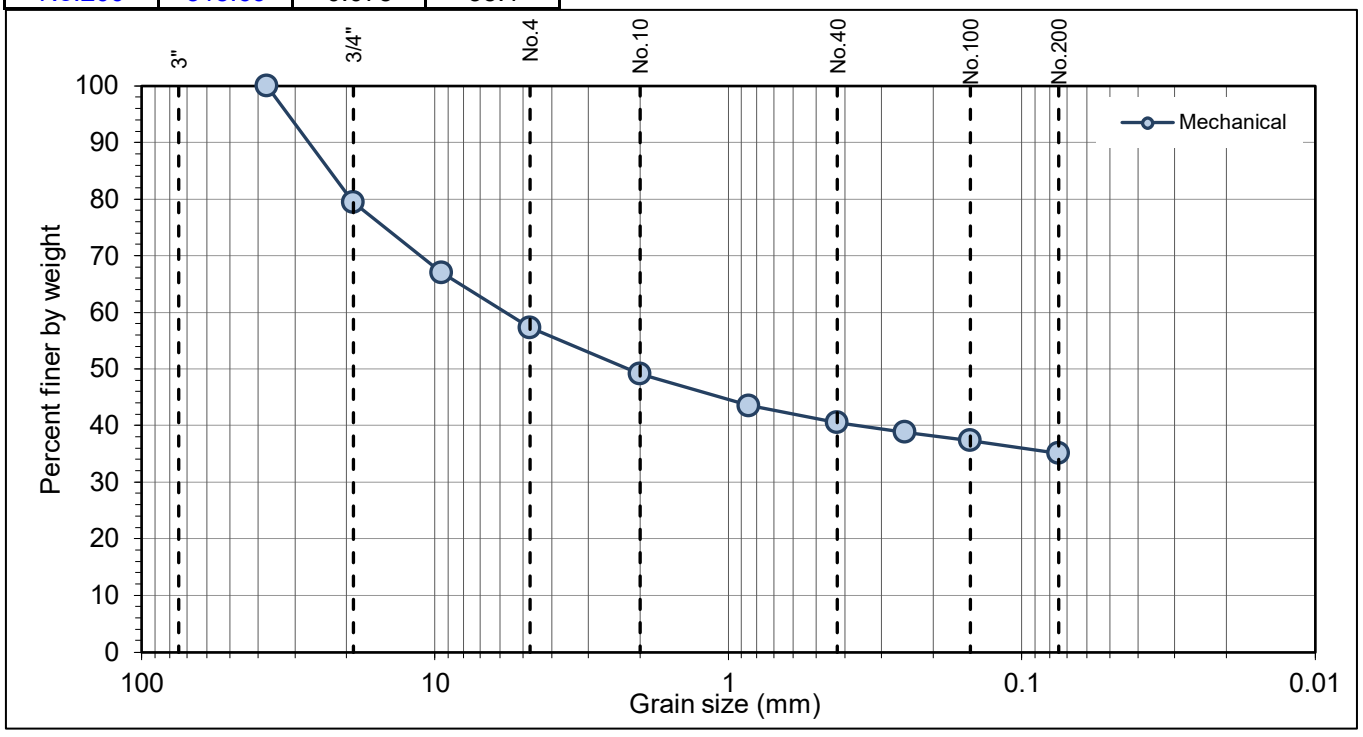
Reviewed by: WMC

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	514.46	486.37
	-	
	514.46	486.37
Split fraction:	1.000	

Moisture data

Moist soil + tare (g):	-	632.70
Dry soil + tare (g):	-	604.61
Tare (g):	-	118.24
Moisture content (%):	0.0	5.8

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	100.0
3/4"	99.92	19	79.5
3/8"	160.29	9.5	67.0
No.4	207.63	4.75	57.3
No.10	247.50	2	49.1
No.20	274.59	0.85	43.5
No.40	289.20	0.425	40.5
No.60	297.50	0.25	38.8
No.100	304.57	0.15	37.4
No.200	315.69	0.075	35.1



Particle-Size Analysis of Soils*

(after ASTM D422 and AASHTO T88)

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** TP-02

No: 23072 (23-1725) **Depth:** 6-7 ft

Date: 10-Nov-23 Location: -

Tested by: JCC Lab soil description: lt bn - bn silt

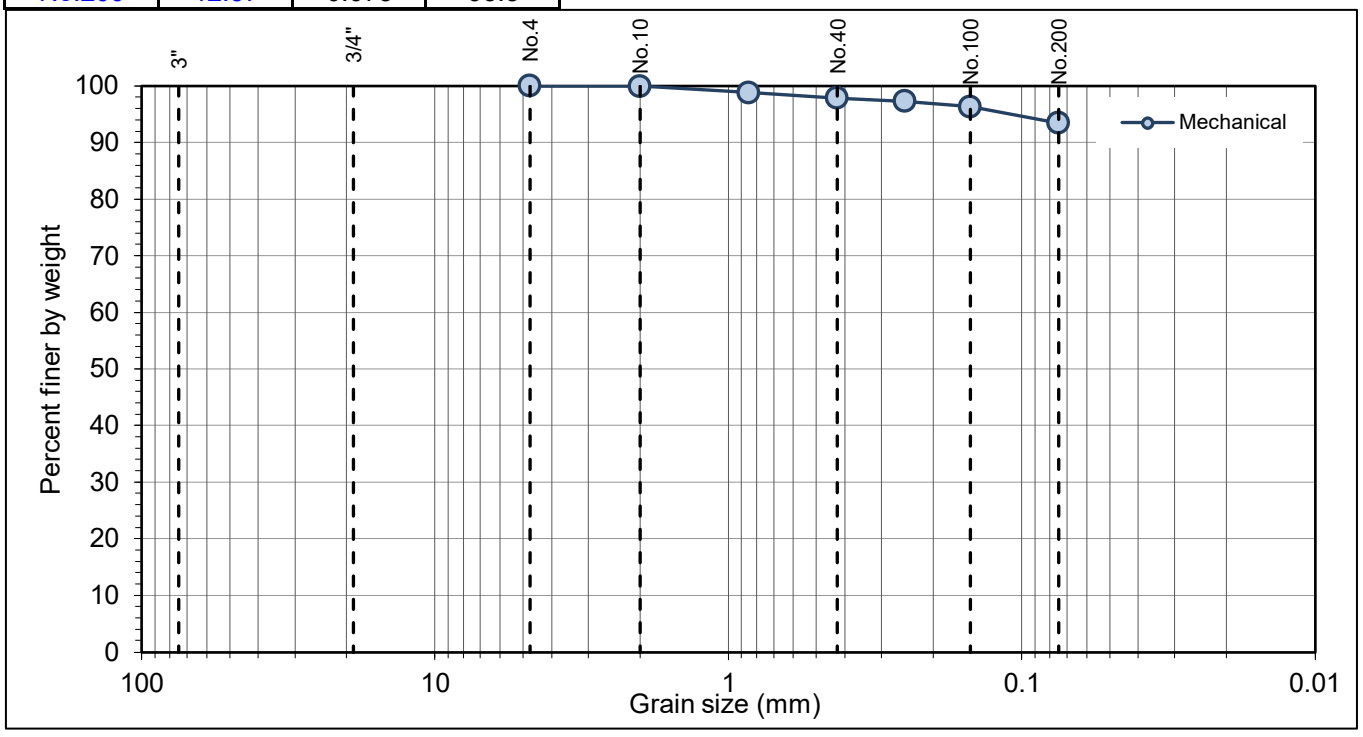
Reduced by: AT Comments:

Reviewed by: JC

Split:	No	
	-	
	Moist	Dry
Total sample wt. (g):	228.50	193.74
	-	
	228.50	193.74
Split fraction:	1.000	

Moisture data		
Moist soil + tare (g):	-	374.48
Dry soil + tare (g):	-	339.72
Tare (g):	-	145.98
Moisture content (%):	0.0	17.9

Sieve	Accum. Wt. Ret. (g)	Grain Size (mm)	Percent Finer
12"	-	300	-
8"	-	200	-
6"	-	150	-
4"	-	100	-
3"	-	75	-
1.5"	-	37.5	-
3/4"	-	19	-
3/8"	-	9.5	-
No.4	-	4.75	100.0
No.10	0.06	2	100.0
No.20	2.24	0.85	98.8
No.40	4.19	0.425	97.8
No.60	5.26	0.25	97.3
No.100	7.14	0.15	96.3
No.200	12.57	0.075	93.5



One-Dimensional Consolidation Properties of Soils

After ASTM D2435 and USBR 5700

GERHART COLE

Project:	**Bear Development Snow King Lot 57**	**TH/TP/Sample:**	**JG-07**
No:	**23072 (23-1725)**	**Depth:**	**5-6 ft**
Location:	-	Laboratory sample description:	lt bn - bn gravelly clay
Date:	14-Nov-23	USCS classification:	not requested
Tested by:	AT	Sample type:	Rel. undisturbed, Shelby Tube
Reduced by:	AT	Inundation stress (psf):	100, beginning
Checked by:	MGS	Swell pressure (psf):	179
Comments:	Gravel up to 3/8" in sample.	Test method:	B
		Preparation procedure:	trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.996	-
	90°	0.992	-
	180°	0.997	-
	270°	0.995	-
Avg Height, Havg (in)		0.995	0.876
Height, H (cm)		2.527	2.225
Dia., D (in)	0°	2.493	-
	90°	2.495	-
Avg Dia., Davg (in)		2.494	2.494
Dia., D (cm)		6.335	6.335
Wt. rings + wet soil (g)		373.57	372.12
Wt. rings (g)		216.72	216.72
Wet soil + tare (g)		708.54	351.80
Dry soil + tare (g)		645.37	331.42
Tare (g)		197.20	196.58
Moisture cont., w (%)		14.1	15.1
Gs, assumed		2.70	2.70
Mass total (g)		156.9	155.4
Mass of solids (g)		137.5	137.5
Volume (cm^3)		79.7	70.1
Vol. of water (cm^3)		19.4	17.9
Vol. of solids (cm^3)		50.9	50.9
Vol. of voids (cm^3)		28.7	19.2
Vol. of air (cm^3)		9.4	1.3
Area, A (cm^2)		31.5	31.5
Ht. solids, Hs (cm)		1.615	1.615
Void ratio, e		0.564	0.378
Porosity, n		0.361	0.274
Vol.moisture, T		0.243	0.256
Saturation, S (%)		67	93
Dry density (gm/cm^3)		1.726	1.960
Wet unit wt., gm (pcf)		122.9	140.9
Dry unit wt., gd (pcf)		107.7	122.4

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9950	0.0000	0.5644	0
179	0.0001	0.9949	0.0001	0.5642	120
400	0.0028	0.9922	0.0028	0.5601	156
800	0.0083	0.9867	0.0083	0.5514	240
1,600	0.0169	0.9781	0.0170	0.5379	233
3,200	0.0296	0.9654	0.0298	0.5179	109
6,400	0.0537	0.9413	0.0539	0.4801	144
12,800	0.0805	0.9145	0.0809	0.4378	89
25,600	0.1080	0.8870	0.1085	0.3947	85
51,200	0.1365	0.8585	0.1372	0.3498	106
25,600	0.1339	0.8611	0.1346	0.3539	54
6,400	0.1276	0.8674	0.1283	0.3637	240
1,600	0.1188	0.8762	0.1194	0.3776	631

C'c	Cc
(0.1374-0.0809)/[Log(51200)-Log(12800)]	(0.3498-0.4378)/[Log(51200)-Log(12800)]
0.0565/(4.71-4.1072)	-0.088/(4.71-4.1072)
C'c= 0.098	C'c= -0.108
C'c = Cc/(1+e0)	C'c = Cc/(1+e0)
0.098 = Cc/(1+0.564)	0.108 = Cc/(1+0.564)
Cc = 0.17	Cc = -0.17

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

To be determined by the Geotechnical Engineer

Notes:

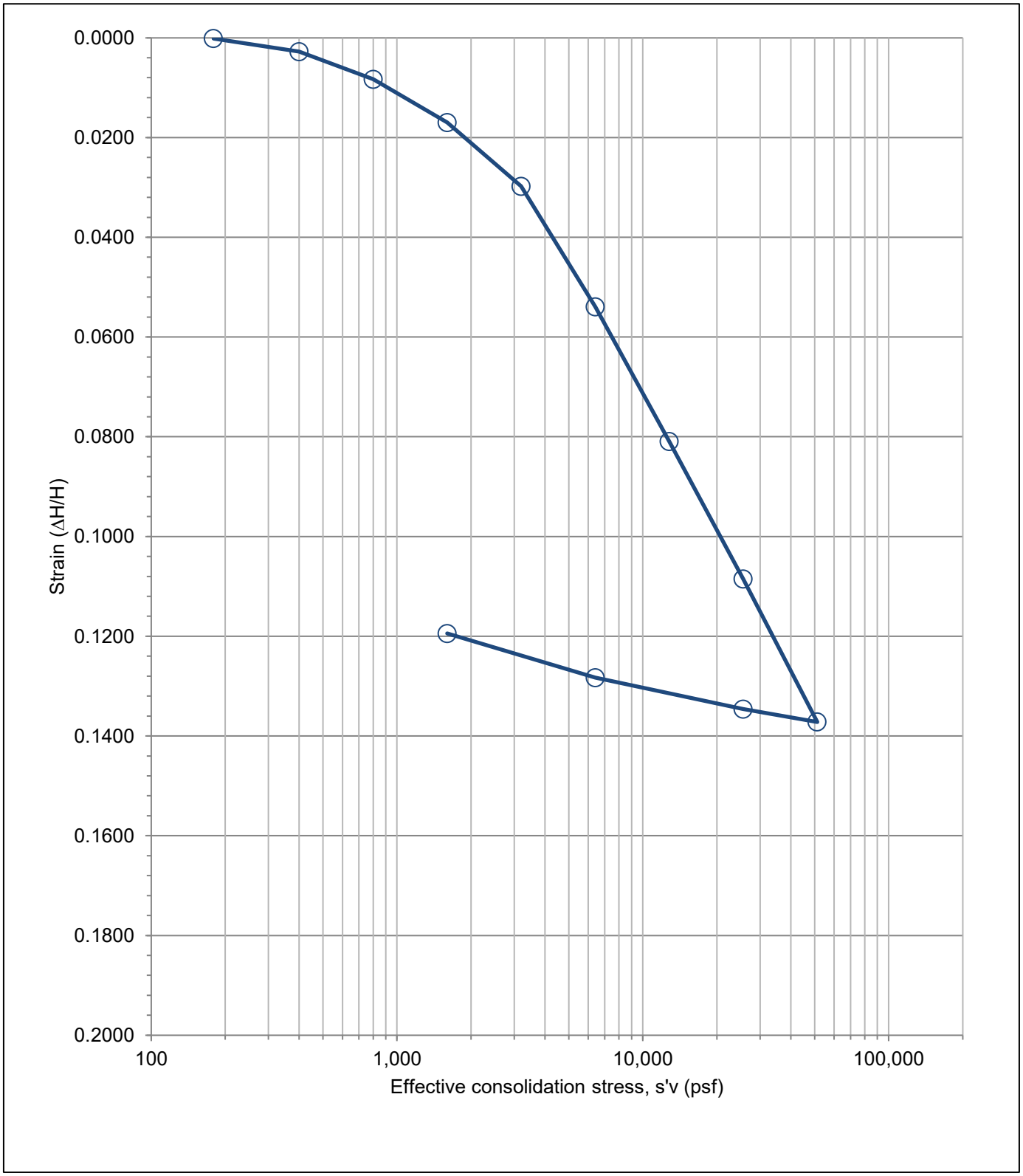
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation

[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07
No: 23072 (23-1725) **Depth:** 5-6 ft



One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 57 | **TH/TP/Sample:** JG-07
No: 23072 (23-1725) | **Depth:** 9-10 ft
Location: - | Laboratory sample description: lt bn - bn silt
Date: 13-Nov-23 | USCS classification: not requested

Tested by: AT | Sample type: Rel. undisturbed, Shelby Tube
Reduced by: AT | Inundation stress (psf): 100, completion
Checked by: MGS | Swell pressure (psf): 138
Comments: | Test method: B
Preparation procedure: trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.997	-
	90°	0.996	-
	180°	0.998	-
	270°	0.998	-
Avg Height, Havg (in)		0.997	0.806
Height, H (cm)		2.533	2.048
Dia., D (in)	0°	2.494	-
	90°	2.483	-
Avg Dia., Davg (in)		2.489	2.489
Dia., D (cm)		6.321	6.321
Wt. rings + wet soil (g)		354.85	351.75
Wt. rings (g)		216.58	216.58
Wet soil + tare (g)		355.80	330.74
Dry soil + tare (g)		324.56	305.91
Tare (g)		195.76	195.93
Moisture cont., w (%)		24.3	22.6
Gs, assumed		2.70	2.70
Mass total (g)		138.3	135.2
Mass of solids (g)		111.3	111.3
Volume (cm^3)		79.5	64.3
Vol. of water (cm^3)		27.0	23.9
Vol. of solids (cm^3)		41.2	41.2
Vol. of voids (cm^3)		38.3	23.0
Vol. of air (cm^3)		11.3	-0.8
Area, A (cm^2)		31.4	31.4
Ht. solids, Hs (cm)		1.313	1.313
Void ratio, e		0.928	0.559
Porosity, n		0.481	0.359
Vol.moisture, T		0.340	0.372
Saturation, S (%)		71	104
Dry density (gm/cm^3)		1.400	1.732
Wet unit wt., gm (pcf)		108.6	132.5
Dry unit wt., gd (pcf)		87.4	108.1

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9973	0.0000	0.9285	0
138	0.0001	0.9971	0.0001	0.9283	83
400	0.0043	0.9930	0.0043	0.9202	41
800	0.0113	0.9859	0.0113	0.9066	117
1,600	0.0213	0.9759	0.0214	0.8873	172
3,200	0.0369	0.9603	0.0370	0.8571	450
6,400	0.0615	0.9358	0.0617	0.8096	217
12,800	0.1006	0.8967	0.1008	0.7340	82
25,600	0.1550	0.8422	0.1555	0.6287	111
51,200	0.2096	0.7876	0.2102	0.5231	110
25,600	0.2070	0.7902	0.2076	0.5281	39
6,400	0.2002	0.7971	0.2008	0.5414	58
1,600	0.1910	0.8062	0.1915	0.5591	79

C'c

(0.2102-0.1008)/[Log(51200)-Log(12800)]

0.1094/(4.71-4.1072)

C'c= 0.18

C'c = Cc/(1+e0)

0.18 = Cc/(1+0.564)

Cc = 0.28

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

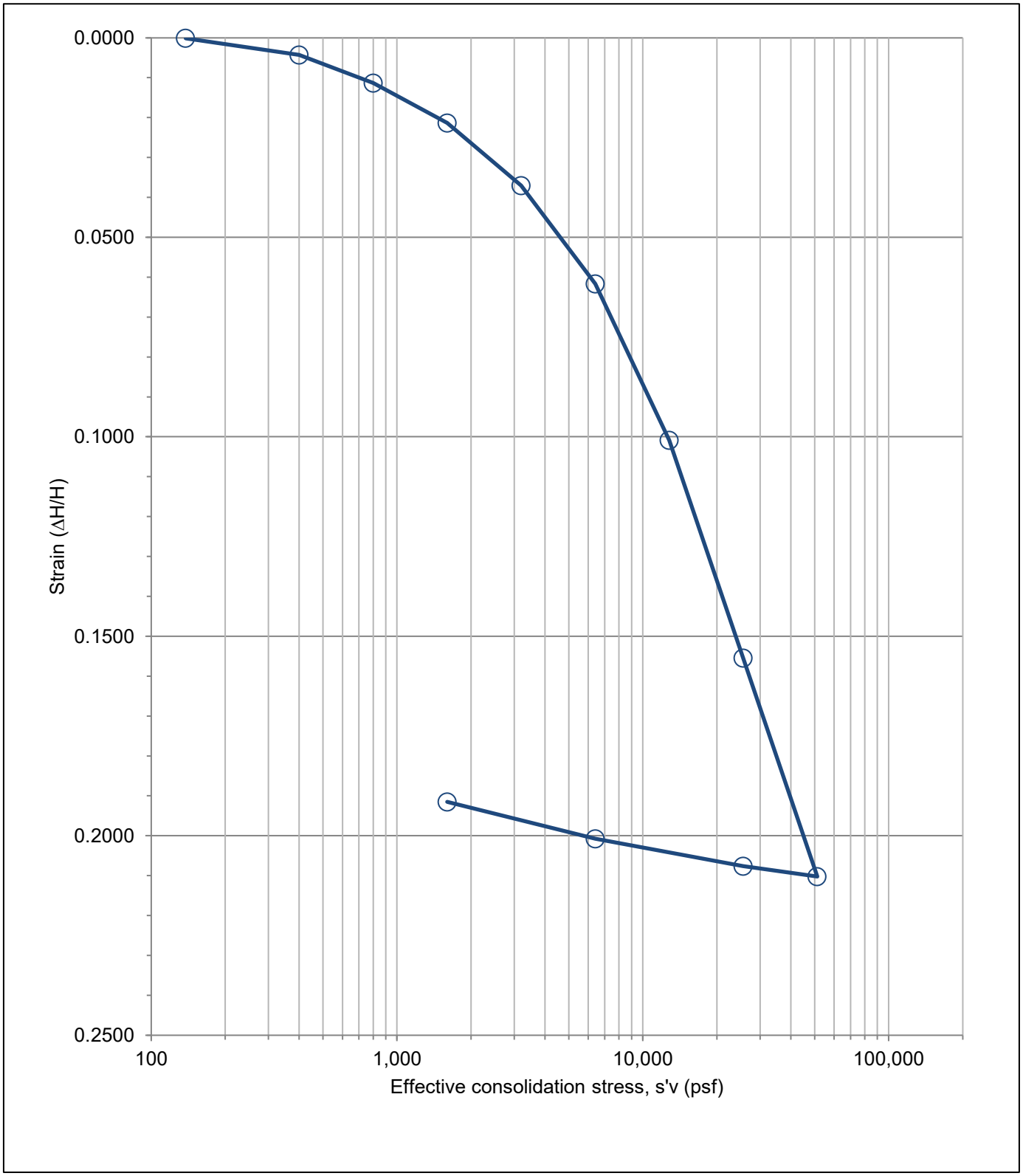
To be determined by the Geotechnical Engineer

Notes:
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation
[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** JG-07
No: 23072 (23-1725) **Depth:** 9-10 ft



One-Dimensional Consolidation Properties of Soils

After ASTM D2435 and USBR 5700

GERHART COLE

Project:	**Bear Development Snow King Lot 57**	**TH/TP/Sample:**	**TP-02**
No:	**23072 (23-1725)**	**Depth:**	**6-7 ft**
Location:	-	Laboratory sample description:	lt bn - bn silt
Date:	13-Nov-23	USCS classification:	not requested
Tested by:	AT	Sample type:	Rel. undisturbed, Shelby Tube
Reduced by:	AT	Inundation stress (psf):	100, completion
Checked by:	MGS	Swell pressure (psf):	121
Comments:	Observed fines squeezed out of ring during testing.	Test method:	B
		Preparation procedure:	trimmed

Phase Relationships

		Initial	Final
Height, H (in)	0°	0.991	-
	90°	0.989	-
	180°	0.990	-
	270°	0.990	-
Avg Height, Havg (in)		0.990	0.869
Height, H (cm)		2.515	2.208
Dia., D (in)	0°	2.494	-
	90°	2.930	-
Avg Dia., Davg (in)		2.712	2.712
Dia., D (cm)		6.888	6.888
Wt. rings + wet soil (g)		354.82	358.76
Wt. rings (g)		214.62	214.62
Wet soil + tare (g)		374.48	271.10
Dry soil + tare (g)		339.72	244.48
Tare (g)		145.98	127.16
Moisture cont., w (%)		17.9	22.7
Gs, assumed		2.70	2.70
Mass total (g)		140.2	144.1
Mass of solids (g)		118.9	118.9
Volume (cm^3)		93.7	82.3
Vol. of water (cm^3)		21.3	25.3
Vol. of solids (cm^3)		44.0	44.0
Vol. of voids (cm^3)		49.7	38.3
Vol. of air (cm^3)		28.4	13.0
Area, A (cm^2)		37.3	37.3
Ht. solids, Hs (cm)		1.181	1.181
Void ratio, e		1.129	0.869
Porosity, n		0.530	0.465
Vol.moisture, T		0.228	0.307
Saturation, S (%)		43	66
Dry density (gm/cm^3)		1.268	1.445
Wet unit wt., gm (pcf)		93.4	110.6
Dry unit wt., gd (pcf)		79.2	90.2

Vertical Stress - Deformation Results

Vert. stress (psf)	Corr. Dial, dfc [a] (in)	Hc [b] (in)	Vert. strain, ev	Void ratio, e	Load duration (min)
Seating	0.0000	0.9900	0.0000	1.1286	0
121	0.0003	0.9897	0.0003	1.1279	53
200	0.0018	0.9882	0.0018	1.1247	76
400	0.0063	0.9837	0.0064	1.1150	76
800	0.0123	0.9777	0.0124	1.1022	87
1,600	0.0203	0.9697	0.0205	1.0849	171
3,200	0.0322	0.9578	0.0325	1.0594	450
6,400	0.0484	0.9416	0.0489	1.0245	120
12,800	0.0711	0.9189	0.0719	0.9756	98
25,600	0.1006	0.8894	0.1016	0.9123	79
51,200	0.1356	0.8544	0.1370	0.8370	114
25,600	0.1340	0.8560	0.1354	0.8404	27
6,400	0.1284	0.8616	0.1297	0.8525	24
1,600	0.1207	0.8693	0.1219	0.8691	50

C'c

(0.1370-0.0719)/[Log(51200)-Log(12800)]

0.0651/(4.71-4.1072)

C'c= 0.108

C'c = Cc/(1+e0)

0.108 = Cc/(1+0.564)

Cc = 0.17

Cc

(0.8370-0.9756)/[Log(51200)-Log(12800)]

-0.14/(4.71-4.1072)

C'c= -0.108

C'c = Cc/(1+e0)

0.108 = Cc/(1+0.564)

Cc = -0.17

Data Interpretation Summary

Preconsolidation stress, s'p (psf)	---
Compression ratio, CR	---
Recompression ratio, RR	---

To be determined by the Geotechnical Engineer

Notes:

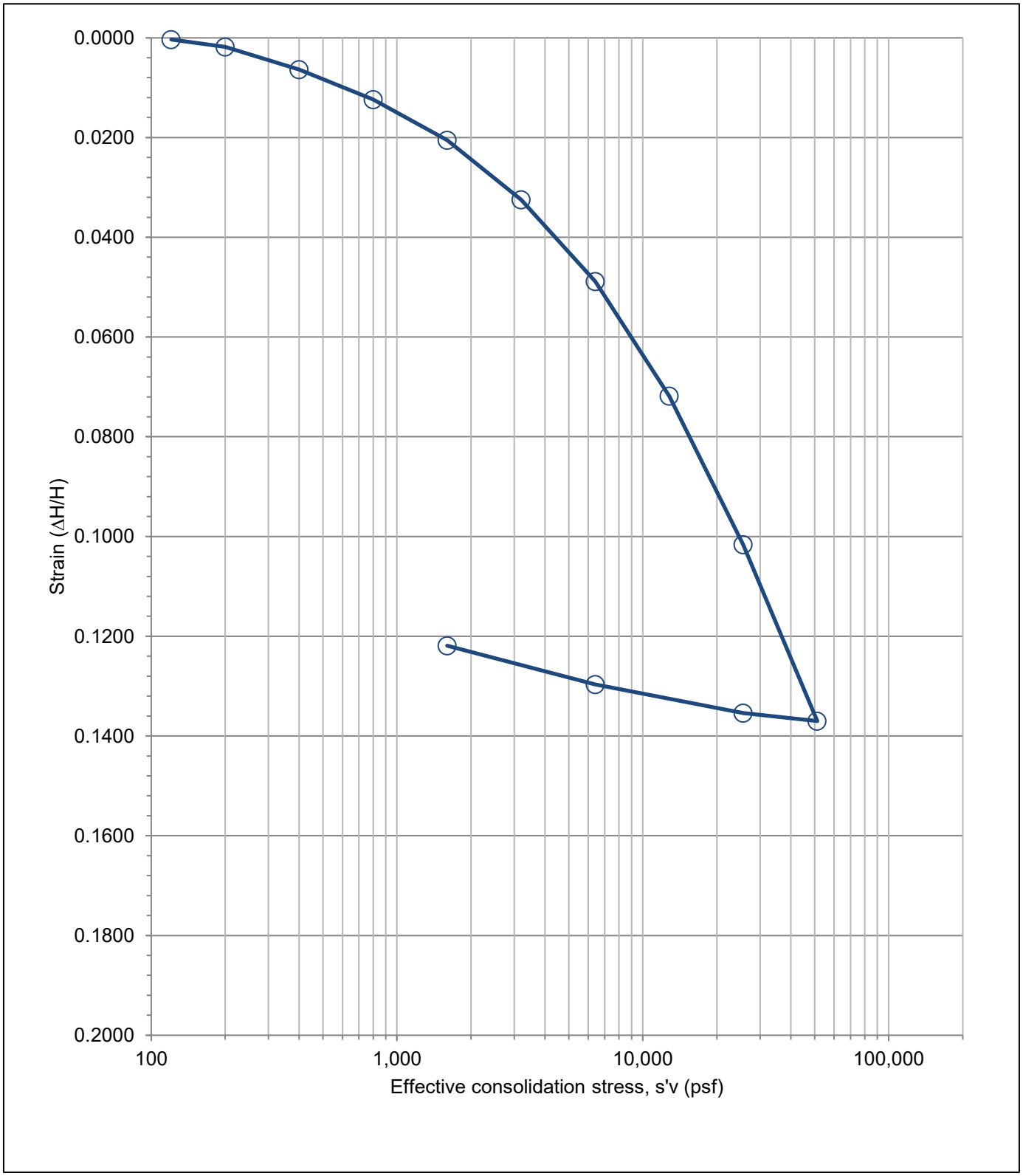
[a] Dfc = end of increment deformation corrected for machine, porous stone, and filter paper deformation

[b] Hc = height at end of consolidation of each vert. stress

One-Dimensional Consolidation Properties of Soils
After ASTM D2435 and USBR 5700

GERHART COLE

Project: Bear Development Snow King Lot 57 **TH/TP/Sample:** TP-02
No: 23072 (23-1725) **Depth:** 6-7 ft



Direct Shear Test for Soils Under Drained Conditions*

After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 9-10 ft

Location: -

Date: 14-Nov-23

Tested by: AT

Reduced by: AT

Checked by: MGS

Laboratory sample description: lt bn - bn clay

USCS classification: not requested

Comments: Gravel up to 3/8" in samples.

X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_JG-07_DS.xlsm]Sum

Sample type: Undisturbed-trimmed from shelby tul

Testing device: GeoJac-DS

Gravel (%) 1.3

Sand (%) 12.4

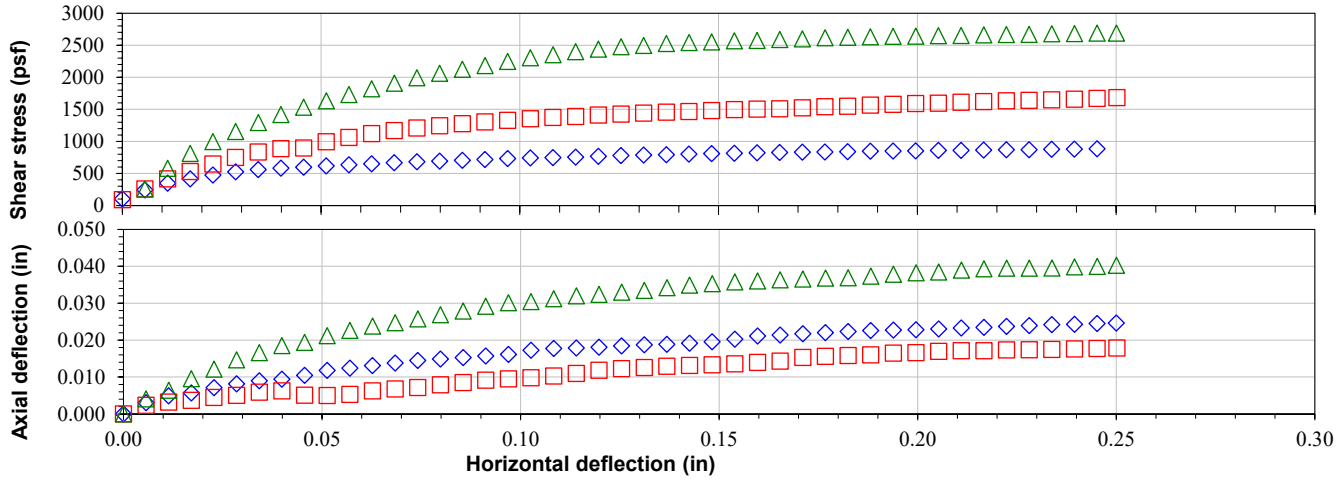
Fines (%) 86.2

LL (%): 33

PL (%): 18

Note: NP = Non-Plastic

	Test Number	Sample 1		Sample 2		Sample 3	
		Initial	Final	Initial	Final	Initial	Final
Unit weight data	Height, H (in)	1.000	0.977	1.014	0.990	1.203	1.131
	Height, H (cm)	2.540	2.482	2.576	2.515	3.056	2.872
	Dia., D (in)	2.500	2.500	2.488	2.488	2.485	2.485
	Dia., D (cm)	6.350	6.350	6.320	6.320	6.312	6.312
	Wt. rings + wet soil (g)	2064.95	2072.64	2058.40	2079.05	2106.13	2107.55
	Wt. rings (g)	1909.89	1909.89	1899.13	1899.13	1920.29	1920.29
Moisture	Wet soil + tare (g)	333.67	353.12	333.67	277.63	398.87	380.83
	Dry soil + tare (g)	311.91	322.93	311.91	248.26	361.41	345.58
	Tare (g)	194.64	197.91	194.64	117.28	196.69	197.10
	Moisture cont., w (%)	18.6	24.1	18.6	22.4	22.7	23.7
Phase Relationships	Gs, assumed	2.65	2.65	2.65	2.65	2.65	2.65
	Mass total (g)	155.1	162.8	159.3	179.9	185.8	187.3
	Mass of solids (g)	130.8	130.8	134.3	134.3	151.4	151.4
	Volume (cm^3)	80.4	78.6	80.8	78.9	95.6	89.9
	Vol. of water (cm^3)	24.3	32.0	24.9	45.6	34.4	35.9
	Vol. of solids (cm^3)	49.4	49.4	50.7	50.7	57.1	57.1
	Vol. of voids (cm^3)	31.1	29.3	30.1	28.2	38.5	32.7
	Vol. of air (cm^3)	6.8	-2.7	5.2	-17.4	4.0	-3.1
	Area, A (cm^2)	31.7	31.7	31.4	31.4	31.3	31.3
	Ht. solids, Hs (cm)	1.558	1.558	1.616	1.616	1.826	1.826
	Void ratio, e	0.630	0.593	0.594	0.556	0.673	0.573
	Porosity, n	0.386	0.372	0.372	0.357	0.402	0.364
	Vol.moisture, T	0.302	0.407	0.309	0.578	0.360	0.399
	Saturation, S (%)	78	109	83	162	89	110
	Dry density (gm/cm^3)	1.626	1.664	1.663	1.703	1.584	1.685
	Wet unit wt., gm (pcf)	120.3	128.9	123.1	130.2	121.3	130.2
	Dry unit wt., gd (pcf)	101.5	103.9	103.8	106.3	98.9	105.2
	Normal stress,Sn (psf)	1000		2000		4000	
	Peak shear stress,Tp (psf)	884		1680		2690	
	Deflection at Peak Stress (in)	0.245		0.250		0.245	
	Shear rate (in./min)	0.001		0.001		0.001	
	Consolidation time (min)	16.0		16.0		480.2	



Direct Shear Test for Soils Under Drained Conditions*

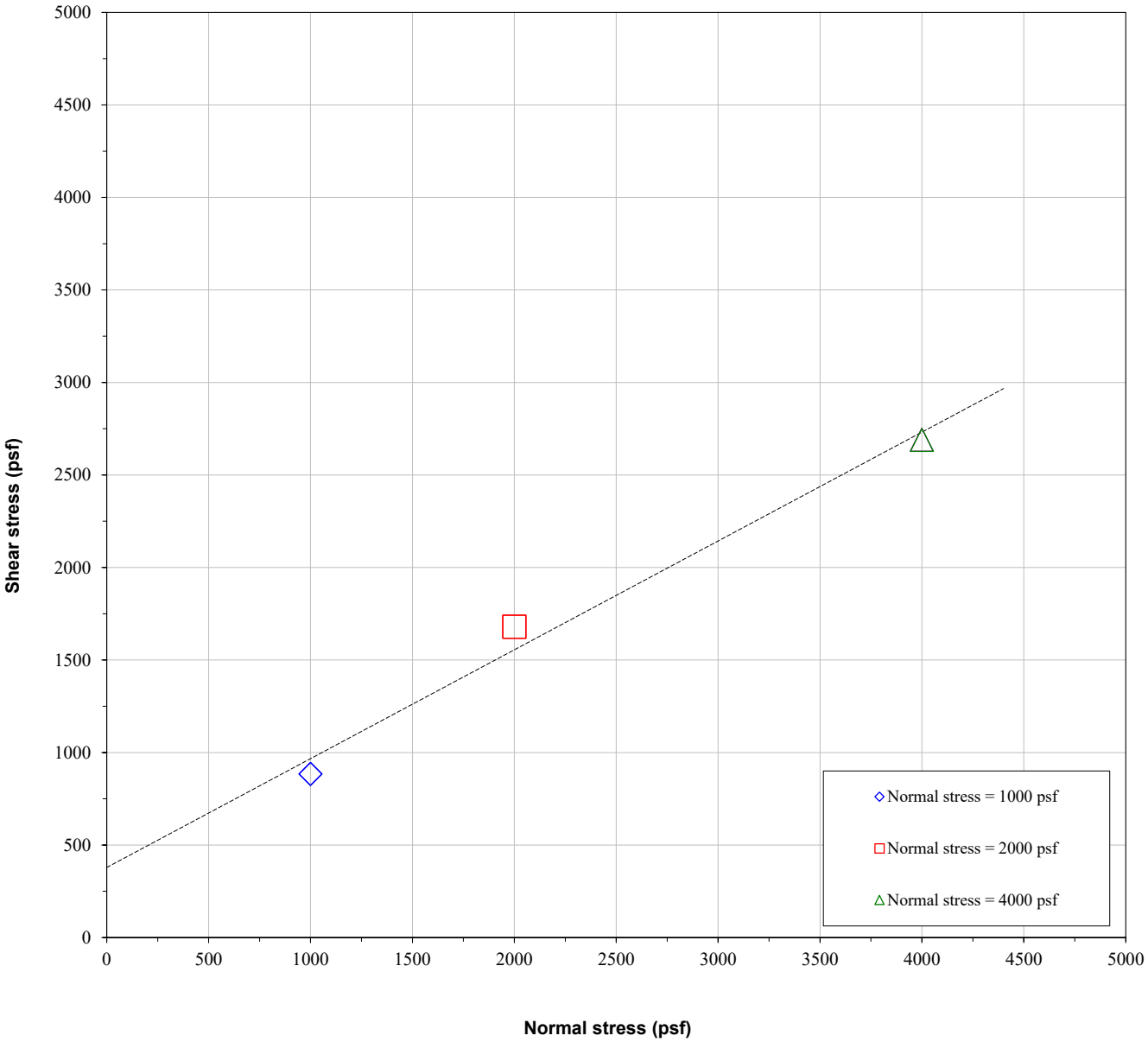
After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 9-10 ft

f (deg)	30
c (psf)	379



Direct Shear Test for Soils Under Drained Conditions*

After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 9-10 ft

Normal stress = 1000 psf			Normal stress = 2000 psf			Normal stress = 4000 psf		
Lateral Deflection (in)	Shear Stress (psf)	Axial Deflection (in)	Lateral Deflection (in)	Shear Stress (psf)	Axial Deflection (in)	Lateral Deflection (in)	Shear Stress (psf)	Axial Deflection (in)
0.000	104	0.000	0.000	92	0.000	0.000	0	0.000
0.006	243	0.003	0.006	258	0.002	0.006	259	0.004
0.011	347	0.005	0.011	415	0.003	0.011	579	0.006
0.017	415	0.006	0.017	530	0.004	0.017	813	0.010
0.023	476	0.007	0.023	648	0.004	0.023	996	0.012
0.028	524	0.008	0.028	750	0.005	0.028	1154	0.015
0.034	560	0.009	0.034	834	0.006	0.034	1294	0.017
0.040	582	0.009	0.040	887	0.006	0.040	1418	0.019
0.046	599	0.010	0.046	897	0.005	0.046	1533	0.019
0.051	618	0.012	0.051	995	0.005	0.051	1632	0.021
0.057	634	0.012	0.057	1062	0.005	0.057	1731	0.023
0.063	649	0.013	0.063	1121	0.006	0.063	1821	0.024
0.068	668	0.014	0.068	1168	0.007	0.068	1907	0.025
0.074	682	0.015	0.074	1208	0.007	0.074	1991	0.026
0.080	693	0.015	0.080	1244	0.008	0.080	2062	0.027
0.086	706	0.015	0.086	1276	0.008	0.086	2124	0.028
0.091	718	0.016	0.091	1303	0.009	0.091	2181	0.029
0.097	732	0.016	0.097	1329	0.009	0.097	2247	0.030
0.103	741	0.017	0.103	1354	0.010	0.103	2304	0.030
0.108	748	0.018	0.108	1373	0.010	0.108	2351	0.031
0.114	756	0.018	0.114	1389	0.011	0.114	2400	0.032
0.120	766	0.018	0.120	1412	0.012	0.120	2440	0.032
0.125	779	0.018	0.125	1426	0.012	0.125	2478	0.033
0.131	787	0.019	0.131	1442	0.013	0.131	2497	0.033
0.137	793	0.019	0.137	1455	0.013	0.137	2527	0.034
0.143	803	0.019	0.143	1465	0.013	0.143	2541	0.035
0.148	810	0.020	0.148	1480	0.013	0.148	2552	0.035
0.154	815	0.020	0.154	1496	0.014	0.154	2568	0.036
0.160	821	0.021	0.160	1503	0.014	0.160	2575	0.036
0.165	828	0.021	0.165	1509	0.014	0.165	2588	0.036
0.171	832	0.022	0.171	1523	0.015	0.171	2598	0.037
0.177	836	0.022	0.177	1540	0.016	0.177	2616	0.037
0.182	841	0.022	0.182	1548	0.016	0.182	2624	0.037
0.188	847	0.023	0.188	1565	0.016	0.188	2631	0.037
0.194	850	0.023	0.194	1579	0.016	0.194	2639	0.038
0.200	853	0.023	0.200	1592	0.017	0.200	2642	0.038
0.205	858	0.023	0.205	1596	0.017	0.205	2649	0.038
0.211	860	0.023	0.211	1611	0.017	0.211	2652	0.039
0.217	866	0.023	0.217	1621	0.017	0.217	2662	0.039
0.222	870	0.024	0.222	1632	0.017	0.222	2667	0.039
0.228	870	0.024	0.228	1640	0.017	0.228	2668	0.039
0.234	877	0.024	0.234	1647	0.017	0.234	2678	0.040
0.239	880	0.024	0.239	1658	0.018	0.240	2682	0.040
0.245	884	0.024	0.245	1670	0.018	0.245	2689	0.040
0.250	883	0.025	0.250	1683	0.018	0.250	2688	0.040

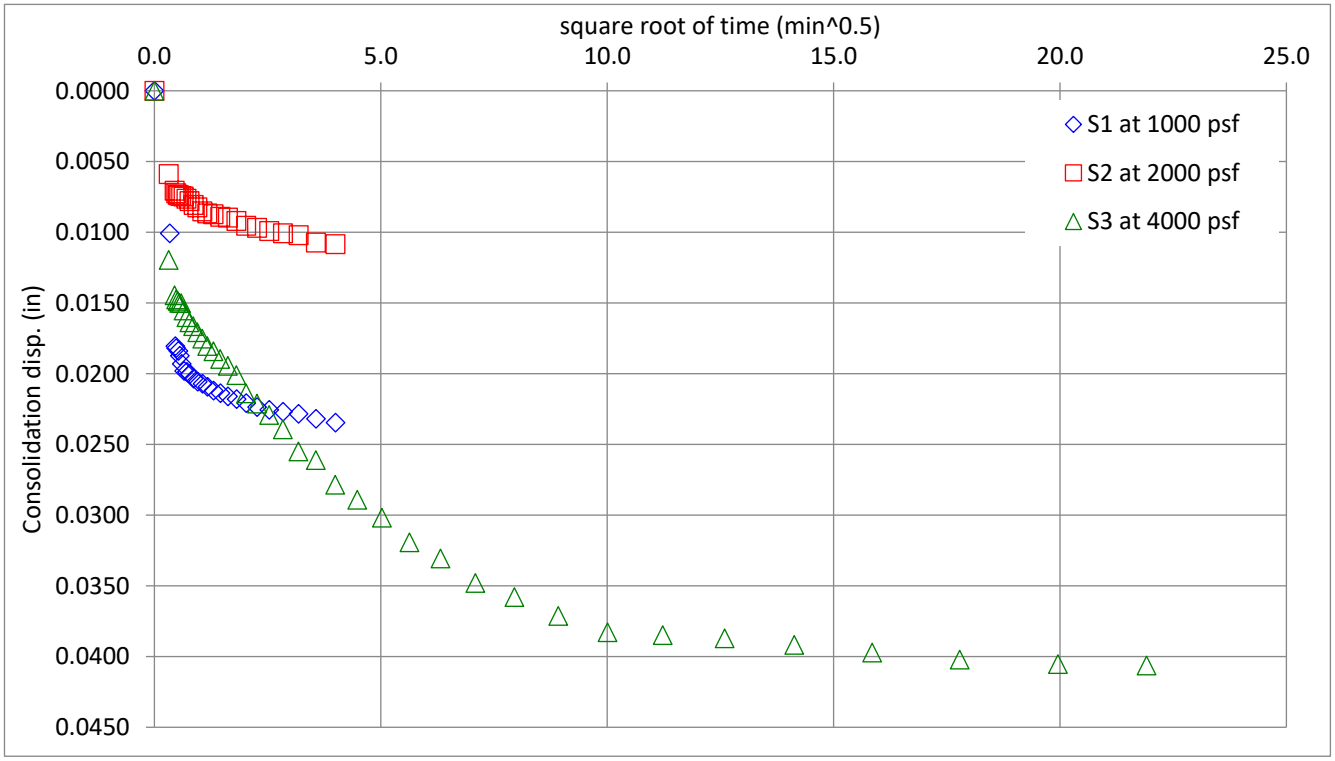
Direct Shear Test for Soils Under Drained Conditions*

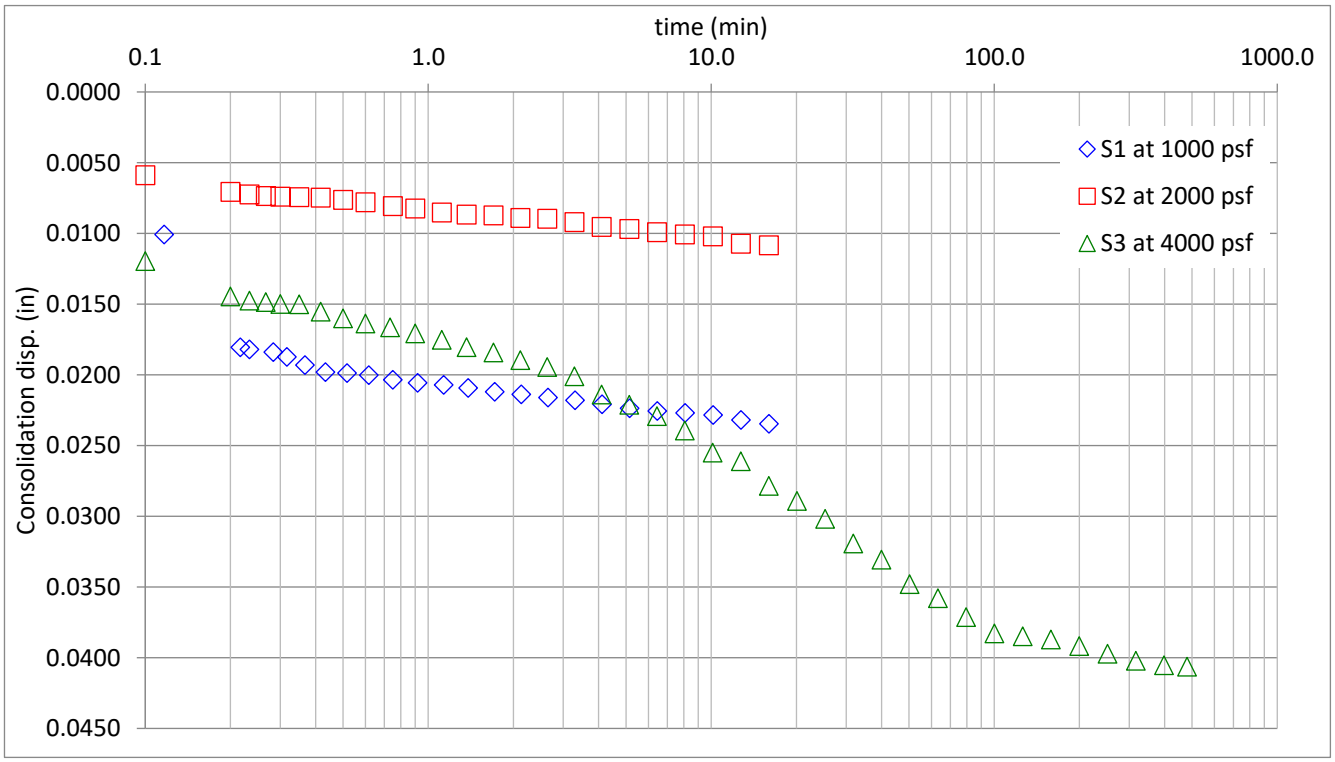
After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** JG-07

No: 23072 (23-1725) **Depth:** 9-10 ft





Direct Shear Test for Soils Under Drained Conditions*

After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** TP-02

No: 23072 (23-1725) **Depth:** 6-7 ft

Location: - Laboratory sample description: lt bn - bn silt

Date: 15-Nov-23 USCS classification: not requested

Tested by: AT Comments:

Reduced by: AT

Checked by: MGS X:\PROJECTS\23-1725 Bear Development\Reviewed\[2023-11-10_Lot57_TP-02_DS.xlsm]Sum

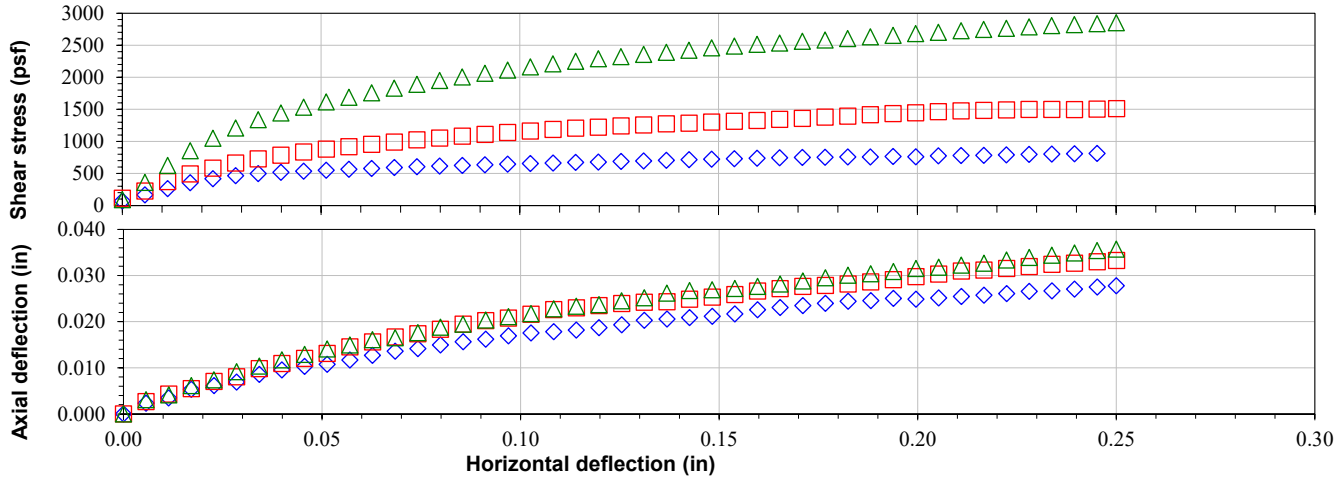
Sample type: Undisturbed-trimmed from shelby tul Gravel (%) 0.0 LL (%): NP

Testing device: GeoJac-DS Sand (%) 6.5 PL (%): NP

Fines (%) 93.5 Note: NP = Non-Plastic

	Test Number	Sample 1		Sample 2		Sample 3	
		Initial	Final	Initial	Final	Initial	Final
Unit weight data	Height, H (in)	1.000	0.975	1.000	0.965	1.000	0.954
	Height, H (cm)	2.540	2.477	2.540	2.452	2.540	2.422
	Dia., D (in)	2.500	2.500	2.500	2.500	2.500	2.500
	Dia., D (cm)	6.350	6.350	6.350	6.350	6.350	6.350
	Wt. rings + wet soil (g)	2052.51	2072.93	2040.55	2068.15	2066.16	2077.33
	Wt. rings (g)	1914.98	1914.98	1897.83	1897.83	1918.67	1918.67
Moisture	Wet soil + tare (g)	577.49	273.08	577.49	338.97	577.49	346.43
	Dry soil + tare (g)	508.79	240.64	508.79	308.78	508.79	316.58
	Tare (g)	116.54	126.81	116.54	193.75	116.54	195.96
	Moisture cont., w (%)	17.5	28.5	17.5	26.2	17.5	24.7
Phase Relationships	Gs, assumed	2.65	2.65	2.65	2.65	2.65	2.65
	Mass total (g)	137.5	158.0	142.7	170.3	147.5	158.7
	Mass of solids (g)	117.0	117.0	121.4	121.4	125.5	125.5
	Volume (cm^3)	80.4	78.4	80.4	77.7	80.4	76.7
	Vol. of water (cm^3)	20.5	40.9	21.3	48.9	22.0	33.2
	Vol. of solids (cm^3)	44.2	44.2	45.8	45.8	47.4	47.4
	Vol. of voids (cm^3)	36.3	34.3	34.6	31.8	33.1	29.3
	Vol. of air (cm^3)	15.8	-6.6	13.3	-17.0	11.1	-3.8
	Area, A (cm^2)	31.7	31.7	31.7	31.7	31.7	31.7
	Ht. solids, Hs (cm)	1.395	1.395	1.447	1.447	1.496	1.496
	Void ratio, e	0.821	0.776	0.755	0.694	0.698	0.620
	Porosity, n	0.451	0.437	0.430	0.410	0.411	0.383
	Vol.moisture, T	0.255	0.522	0.264	0.629	0.273	0.432
	Saturation, S (%)	57	119	61	154	66	113
	Dry density (gm/cm^3)	1.455	1.492	1.510	1.564	1.560	1.636
	Wet unit wt., gm (pcf)	106.7	119.7	110.8	123.3	114.5	127.4
	Dry unit wt., gd (pcf)	90.8	93.1	94.3	97.6	97.4	102.1

Normal stress,Sn (psf)	1000	2000	4000
Peak shear stress,Tp (psf)	814	1510	2850
Deflection at Peak Stress (in)	0.250	0.250	0.250
Shear rate (in./min)	0.001	0.001	0.001
Consolidation time (min)	25.3	20.1	10.1



Direct Shear Test for Soils Under Drained Conditions*

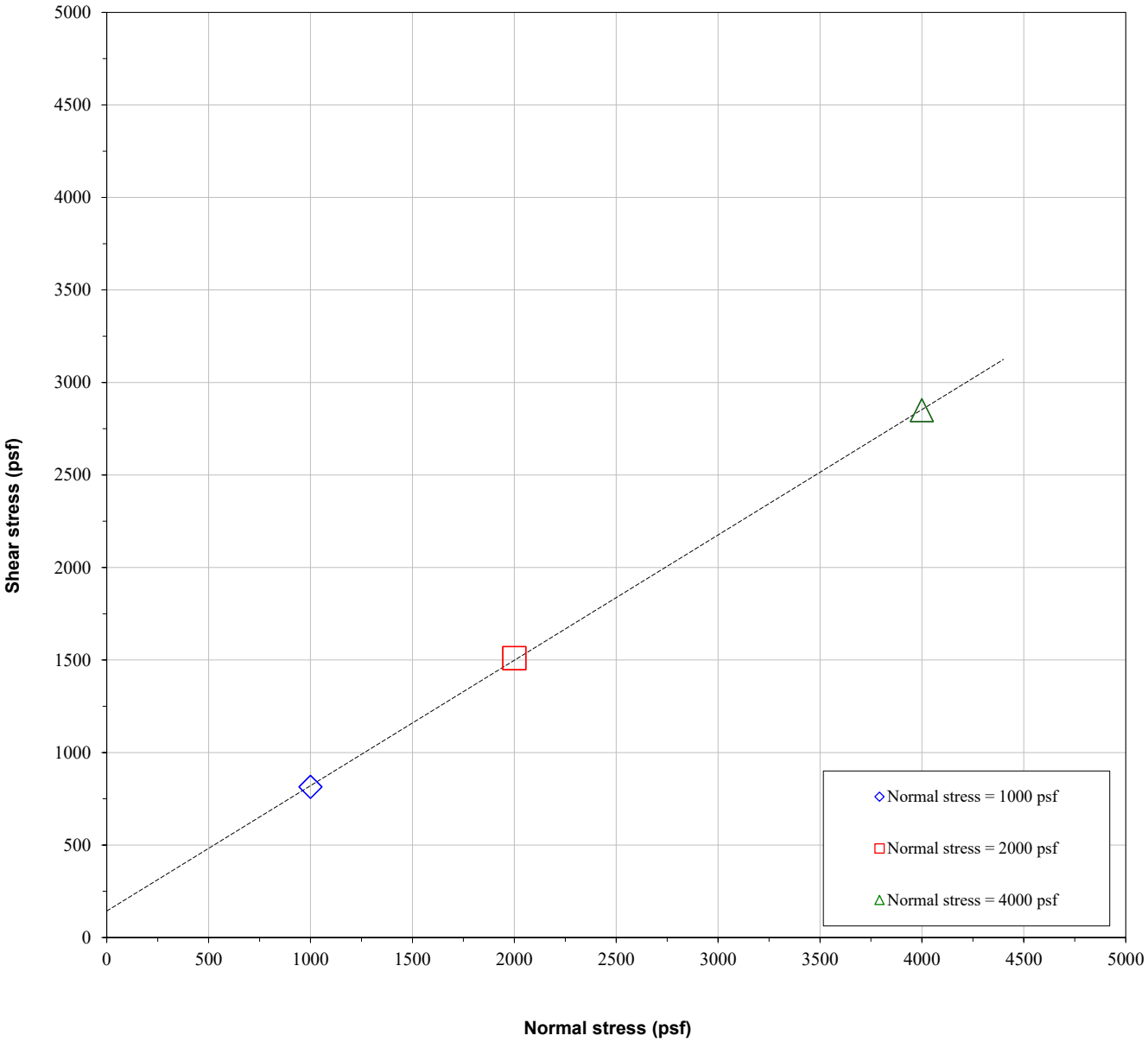
After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** TP-02

No: 23072 (23-1725) **Depth:** 6-7 ft

f (deg)	34
c (psf)	144



Direct Shear Test for Soils Under Drained Conditions*

After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** TP-02

No: 23072 (23-1725) **Depth:** 6-7 ft

Normal stress = 1000 psf			Normal stress = 2000 psf			Normal stress = 4000 psf		
Lateral Deflection (in)	Shear Stress (psf)	Axial Deflection (in)	Lateral Deflection (in)	Shear Stress (psf)	Axial Deflection (in)	Lateral Deflection (in)	Shear Stress (psf)	Axial Deflection (in)
0.000	71	0.000	0.000	114	0.000	0.000	91	0.000
0.006	166	0.002	0.006	226	0.003	0.006	361	0.003
0.011	263	0.003	0.011	373	0.004	0.011	625	0.004
0.017	354	0.005	0.017	494	0.005	0.017	855	0.006
0.023	418	0.006	0.023	583	0.007	0.023	1049	0.007
0.028	465	0.007	0.028	663	0.008	0.028	1209	0.009
0.034	497	0.009	0.034	727	0.010	0.034	1340	0.010
0.040	518	0.010	0.040	786	0.011	0.040	1445	0.012
0.046	536	0.010	0.046	835	0.012	0.046	1533	0.013
0.051	551	0.011	0.051	879	0.013	0.051	1617	0.014
0.057	564	0.012	0.057	918	0.015	0.057	1687	0.015
0.063	578	0.013	0.063	954	0.016	0.063	1757	0.016
0.068	592	0.014	0.068	990	0.017	0.068	1829	0.017
0.074	605	0.014	0.074	1023	0.017	0.074	1890	0.018
0.080	615	0.015	0.080	1052	0.018	0.080	1950	0.019
0.086	626	0.016	0.086	1083	0.019	0.086	2006	0.019
0.091	636	0.016	0.091	1110	0.020	0.091	2063	0.020
0.097	646	0.017	0.097	1138	0.021	0.097	2113	0.021
0.103	656	0.018	0.103	1162	0.022	0.103	2162	0.022
0.108	664	0.018	0.108	1188	0.023	0.108	2210	0.023
0.114	673	0.018	0.114	1206	0.023	0.114	2251	0.023
0.120	679	0.019	0.120	1222	0.023	0.120	2291	0.024
0.125	686	0.019	0.125	1242	0.024	0.125	2323	0.025
0.131	696	0.020	0.131	1258	0.024	0.131	2358	0.025
0.137	705	0.021	0.137	1274	0.024	0.137	2389	0.026
0.143	714	0.021	0.143	1284	0.025	0.143	2422	0.027
0.148	722	0.021	0.148	1301	0.025	0.148	2458	0.027
0.154	729	0.022	0.154	1314	0.026	0.154	2486	0.027
0.160	736	0.023	0.160	1326	0.027	0.160	2514	0.028
0.165	744	0.023	0.165	1343	0.027	0.165	2535	0.028
0.171	750	0.023	0.171	1359	0.028	0.171	2561	0.029
0.177	751	0.024	0.177	1378	0.028	0.177	2581	0.030
0.182	757	0.024	0.182	1394	0.028	0.182	2605	0.030
0.188	758	0.025	0.188	1415	0.029	0.188	2630	0.030
0.194	766	0.025	0.194	1432	0.029	0.194	2653	0.031
0.200	760	0.025	0.200	1447	0.030	0.200	2681	0.032
0.205	774	0.025	0.205	1463	0.030	0.205	2700	0.032
0.211	781	0.025	0.211	1476	0.031	0.211	2727	0.032
0.217	783	0.026	0.217	1484	0.031	0.217	2746	0.033
0.222	790	0.026	0.222	1492	0.032	0.222	2763	0.033
0.228	797	0.027	0.228	1498	0.032	0.228	2786	0.034
0.234	802	0.027	0.234	1499	0.032	0.234	2805	0.034
0.240	807	0.027	0.240	1495	0.033	0.239	2820	0.035
0.245	813	0.027	0.245	1504	0.033	0.245	2836	0.035
0.250	814	0.028	0.250	1512	0.033	0.250	2851	0.036

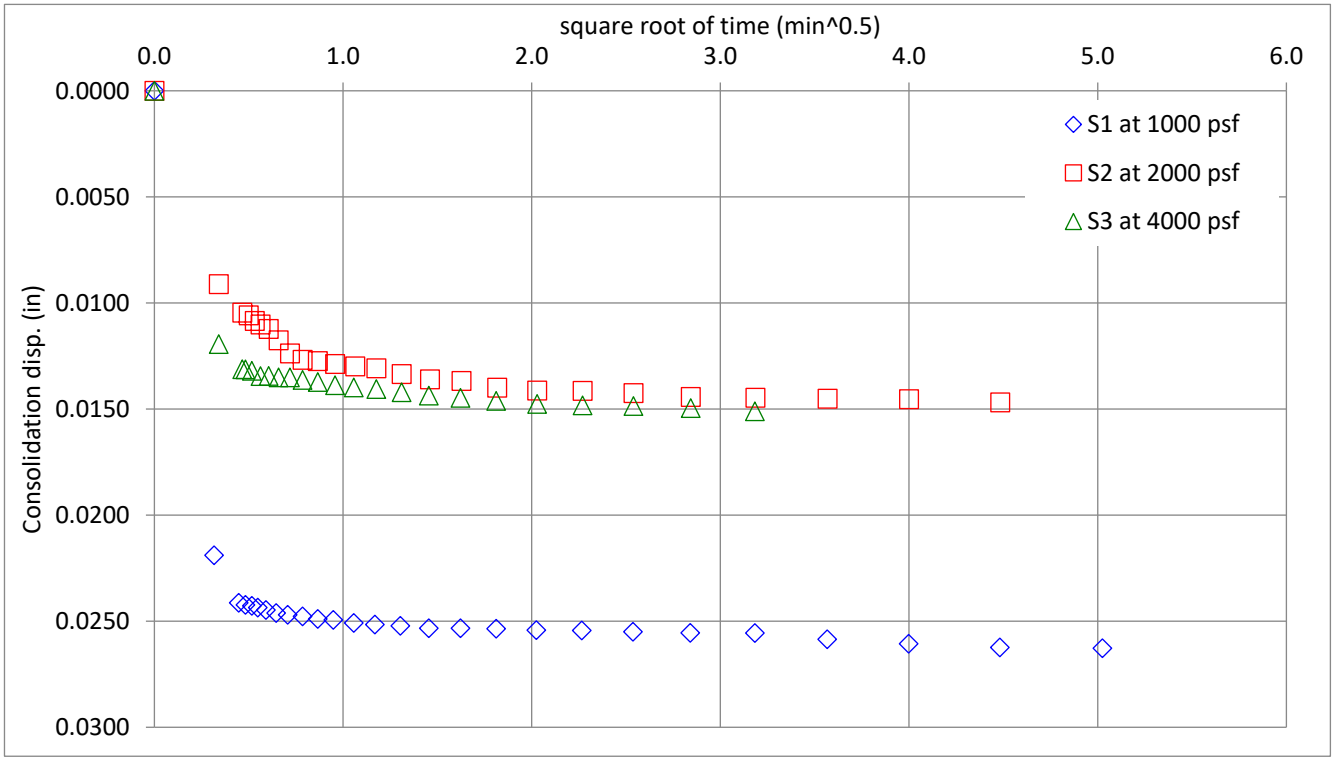
Direct Shear Test for Soils Under Drained Conditions*

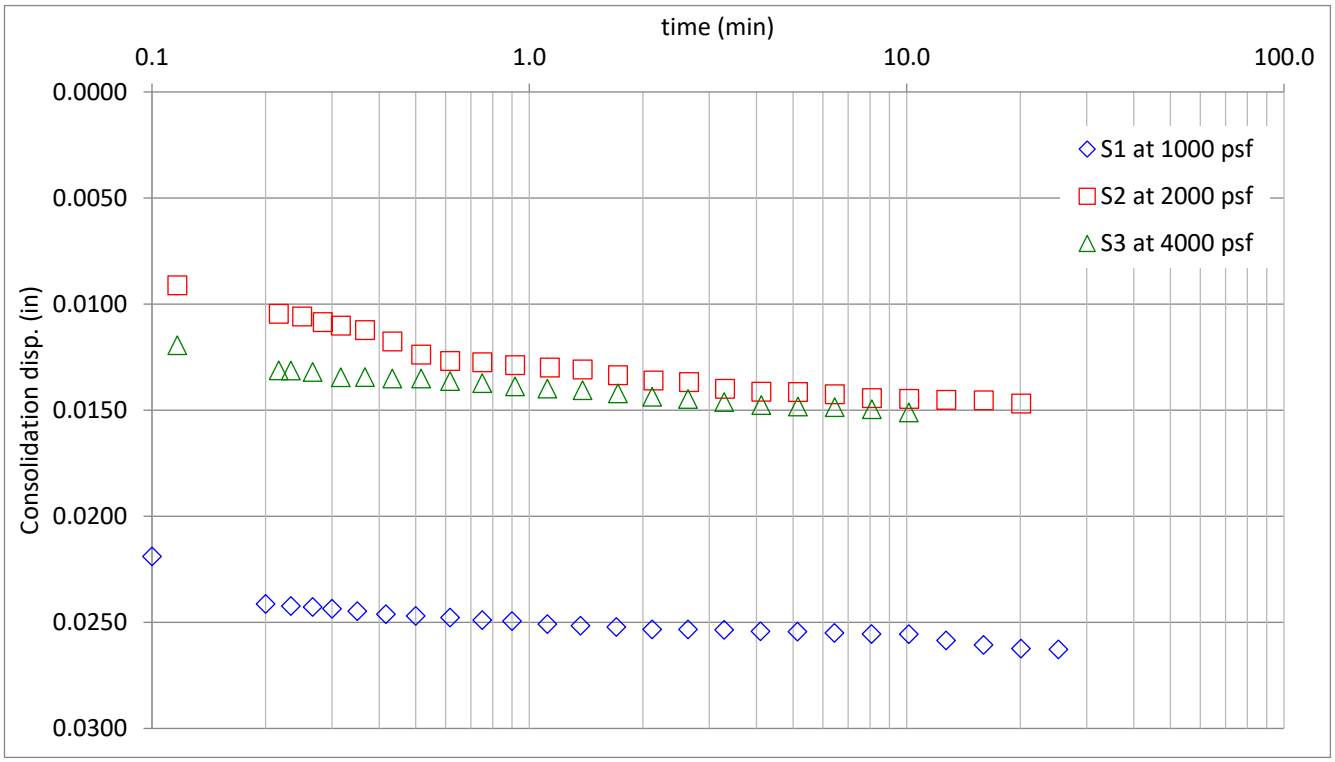
After ASTM D3080

GERHART COLE

Project: Bear Development Snow King **TH/TP/Sample:** TP-02

No: 23072 (23-1725) **Depth:** 6-7 ft





Direct Shear of Soils Under Consolidated Drained Conditions, ASTM D3080

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson # 21-222-02
Jackson, Wyoming

Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

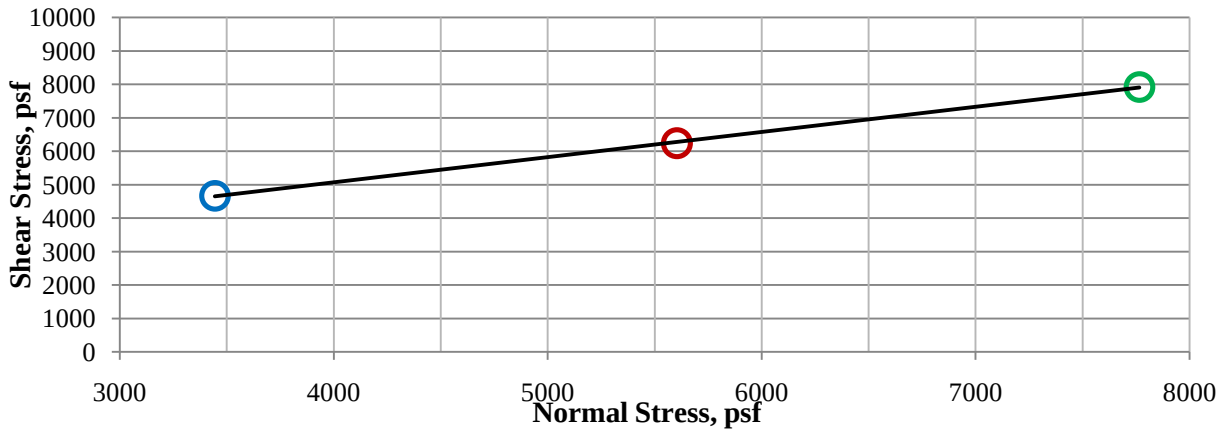
Sample Data:

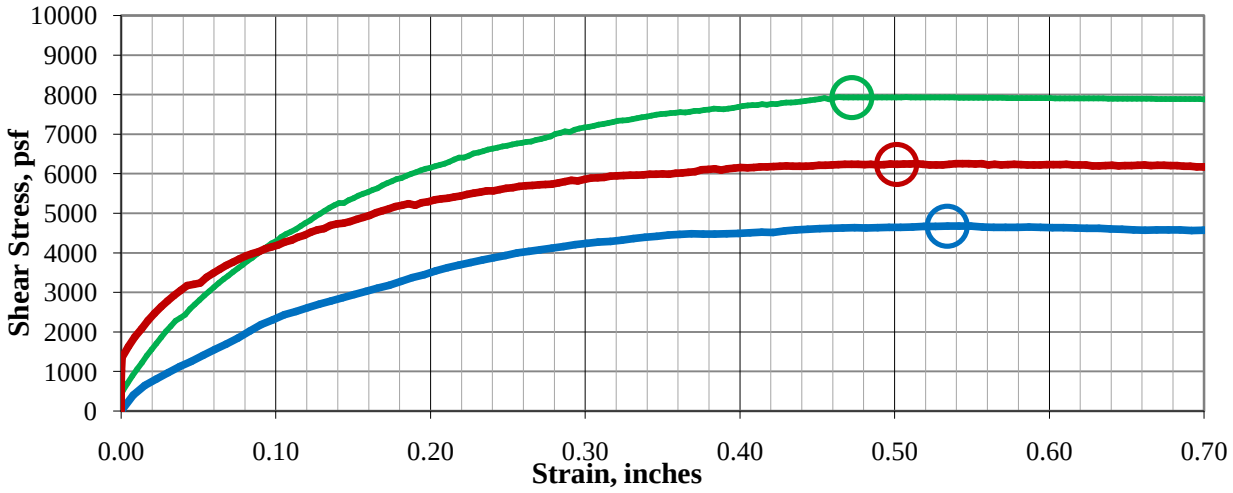
Boring: BH6-11 **Depth:** 52.5'-53' **Density:** 137.7 pcf moist

Description: Sandy Lean Clay, CL

Normal Stress, psf	Initial Moisture,%	Final Moisture,%	Consol + Collapse,%	Final Wet Density, pcf	Final Dry Density, pcf	Max Shear Stress, psf	Failure Strain,%
3444	14.4	16.2	2.2	143.1	123.1	**4673**	**22.1**
5604	14.4	15.6	3.0	143.5	124.1	**6234**	**20.7**
7764	14.4	14.7	3.8	143.6	125.2	**7924**	**19.5**

Peak Angle, ϕ° **37.0** Peak Cohesion, C, psf **2059** Strain rate, %/hour **4.1**





Remarks: Friction angle and cohesion in practice are sensitive to several other material properties, and conditions, in the field and lab. No individual lab property of a material can substitute for overall best practices in geotechnical design, construction, and field testing by qualified professionals.

2511 Holman Avenue
P. O. Box 80190
Billings, Montana 59108-0190
p: 406.652.3930; f: 406.652.3944
www.skgeotechnical.com

Unconfined Compressive Strength of Cohesive Soil

ASTM D 2166

Date: July 26, 2021

Project: **08-2506L Laboratory Testing**
Lot 58 Grand View Lodges
Nelson #21-222-02
Jackson, Wyoming

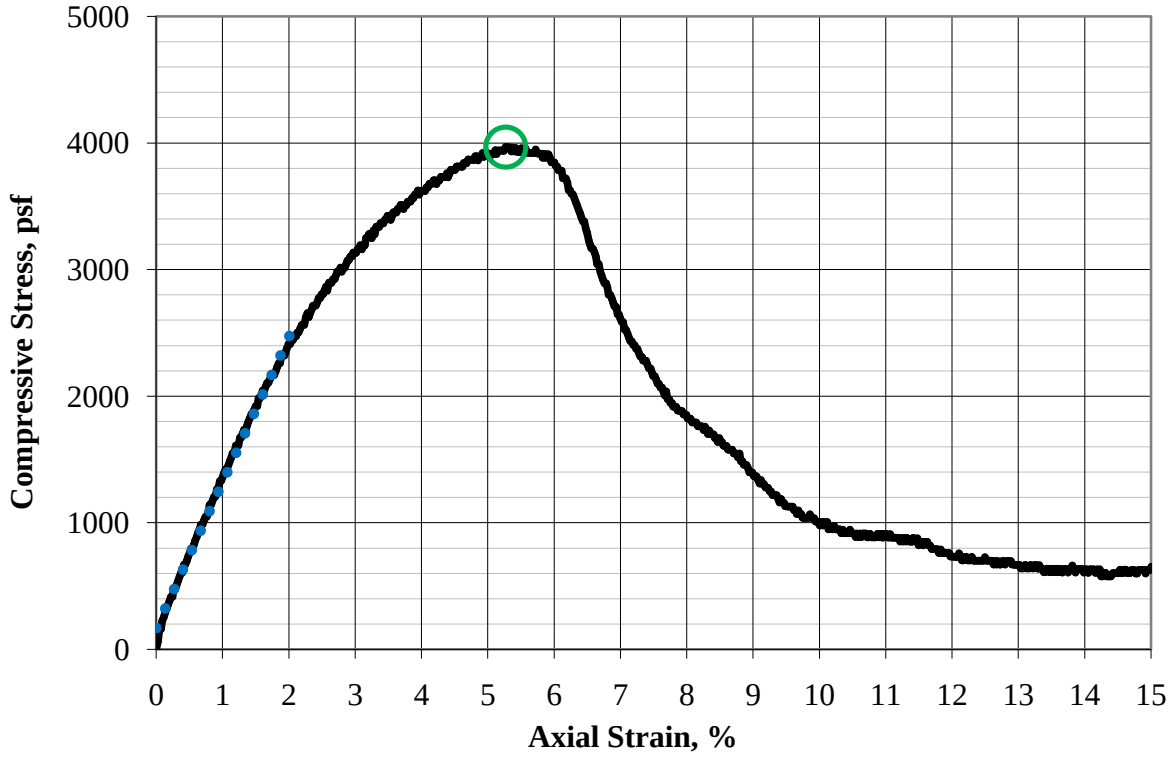
Client: Mr. Phil Gyr, PE
Nelson Engineering
pgyr@nelsonengineering.net

Sample Data:

Boring: BH6-4B
Depth: 22.5' - 23'
Description: Lean Clay, CL

Specimen Properties:	
Average Diameter, in.	2.395
Average Height, in.	5.186
Height/Diameter (L/D)	2.17
Moisture, %	18.6
Wet density, pcf	128.5
Dry density, pcf	108.3

Undrained Unconfined Strength Properties:	
Compressive strength, psf	3968
Shear strength, psf	1984
Axial elastic modulus, psi	798
Failure strain, %	5.3
Strain rate, 0.5 - 2% per minute	1.2
Temperature, °F	72.0



NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH5 @ 23'-28' Depth (ft): 23'-28'

Unified Soils Classification
SC (Clayey Sand)

Gravel	7%
Sand	55%
Fines	38%

Liquid Limit:	29
Plastic Limit:	4
Plasticity Index:	25

In-Situ Moisture Content	N/A

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.1	110.1	0.0	0%	100%
1"	25	110.1	110.1	0.0	0%	100%
3/4"	18.75	110.1	110.1	0.0	0%	100%
#4	4.75	110.1	147.1	37.0	7%	93%
#10	2.00	110.1	134.6	24.5	11%	89%
#40	0.425	110.1	145.4	35.3	18%	82%
#200	0.075	110.1	343.2	233.1	62%	38%
Pan	0	110.1	316.3	206.2	100%	0%
		Total Weight of Sample (g)		536.1		

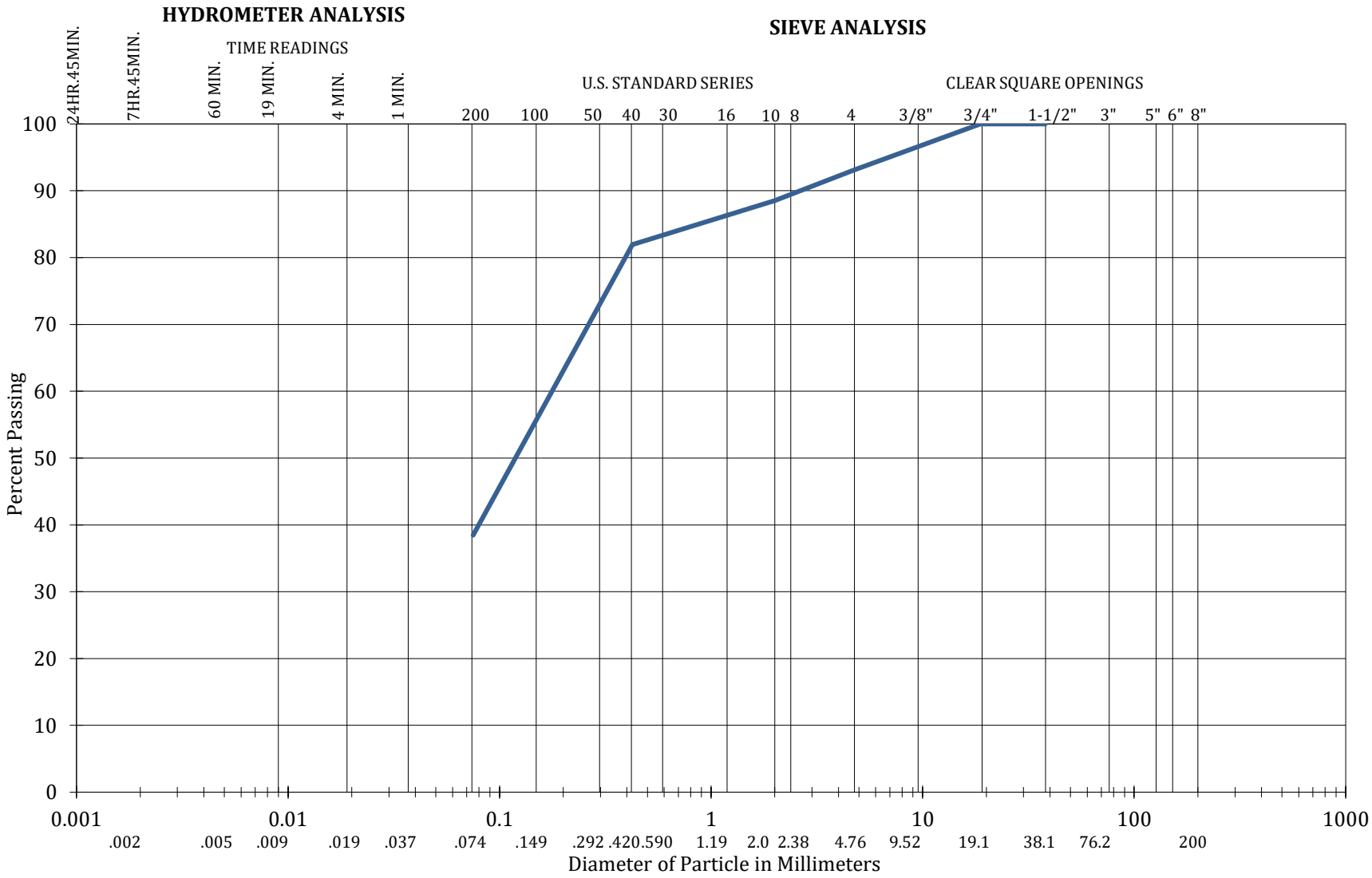
Moisture Content	
Wet Wt + Tare (g)	-
Dry Wt. + Tare (g)	-
Wt of Water (g)	-
Tare Wt. (g)	-
Dry Wt. (g)	-
Moisture Content	-
Wash	
Wet Wt. + Tare (g)	
Pre Wash Dry (g)	536.1
Post Wash Dry (g)	329.9
Tare Wt. (g)	109.9
Wt.Of Minus #200 =	206.2

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Tan Clayey Sand with Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	1/8/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH5 @ 23'-28'

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH5 @ 37'-41' Depth (ft): 37'-41'

Unified Soils Classification
SC (Clayey Sand)

Gravel	7%
Sand	68%
Fines	25%

Liquid Limit:	28
Plastic Limit:	12
Plasticity Index:	16

In-Situ Moisture Content	N/A

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	110.1	110.1	0.0	0%	100%
1"	25	110.1	110.1	0.0	0%	100%
3/4"	18.75	110.1	110.1	0.0	0%	100%
#4	4.75	110.1	163.8	53.7	7%	93%
#10	2.00	110.1	139.7	29.6	11%	89%
#40	0.425	110.1	196.8	86.7	23%	77%
#200	0.075	110.1	502.4	392.3	75%	25%
Pan	0	110.1	298.2	188.1	100%	0%
		Total Weight of Sample (g)		750.4		

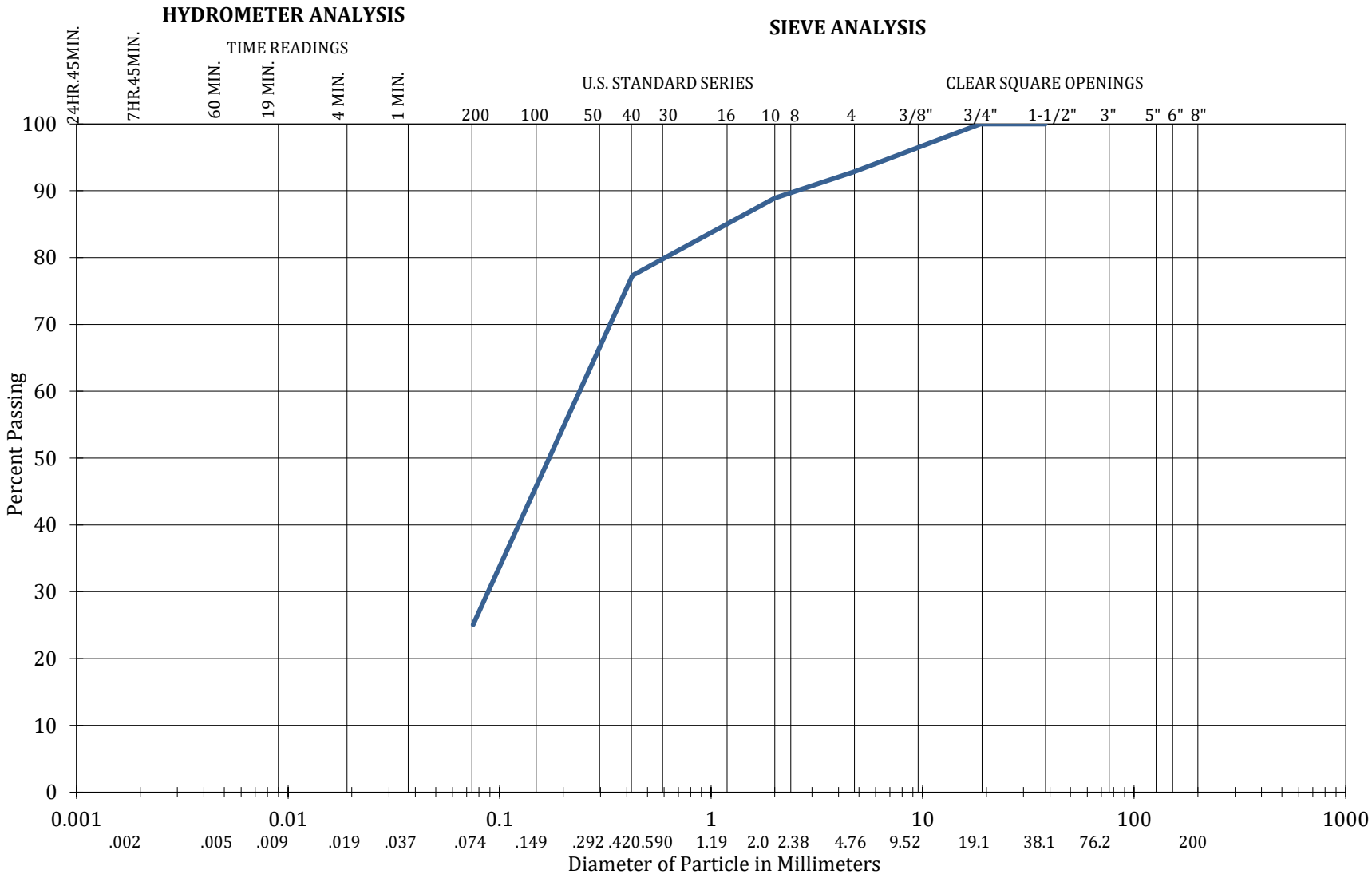
Moisture Content	
Wet Wt + Tare (g)	-
Dry Wt. + Tare (g)	-
Wt of Water (g)	-
Tare Wt. (g)	-
Dry Wt. (g)	-
Moisture Content	-
Wash	
Wet Wt. + Tare (g)	
Pre Wash Dry (g)	750.4
Post Wash Dry (g)	562.3
Tare Wt. (g)	114.3
Wt.Of Minus #200 =	188.1

Project:	Lot 58 Grand View Lodges
Job Number	02-130-12
Visual ID:	Gray Clayey Sand with Gravel

Sampled By:	PG
Date:	
Tested By:	AP
Date:	1/8/2005

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH5 @ 37'-41'

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH6-4B Depth (ft): 22'-23'

Unified Soils Classification
Lean Clay, CL

Gravel	**0%**
Sand	**12%**
Fines	**87%**

Liquid Limit:	**33**
Plastic Limit:	**15**
Plasticity Index:	**18**

In-Situ Moisture Content	**17.5%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	292.2	292.2	0.0	0%	100%
1"	25	292.2	292.2	0.0	0%	100%
3/4"	18.75	292.2	292.2	0.0	0%	100%
3/8"	9.5	292.2	292.2	0.0	0%	100%
#4	4.75	292.2	293.3	1.0	0%	100%
#10	2.00	292.2	293.3	1.1	1%	99%
#40	0.425	292.2	304.0	11.8	5%	95%
#100	0.15	292.2	301.3	9.1	9%	91%
#200	0.075	292.2	303.4	11.2	13%	87%
Pan	0	292.2	527.4	235.2	100%	0%
		Total Weight of Sample (g)		**269.3**		

Moisture Content	
Wet Wt + Tare (g)	940.7
Dry Wt. + Tare (g)	825.9
Wt of Water (g)	114.8
Tare Wt. (g)	170.9
Dry Wt. (g)	654.9
Moisture Content	17.5%
Wash	
Wet Wt. + Tare (g)	940.7
Pre Wash Dry (g)	269.3
Post Wash Dry (g)	34.2
Tare Wt. (g)	292.2
Wt.Of Minus #200 =	235.2

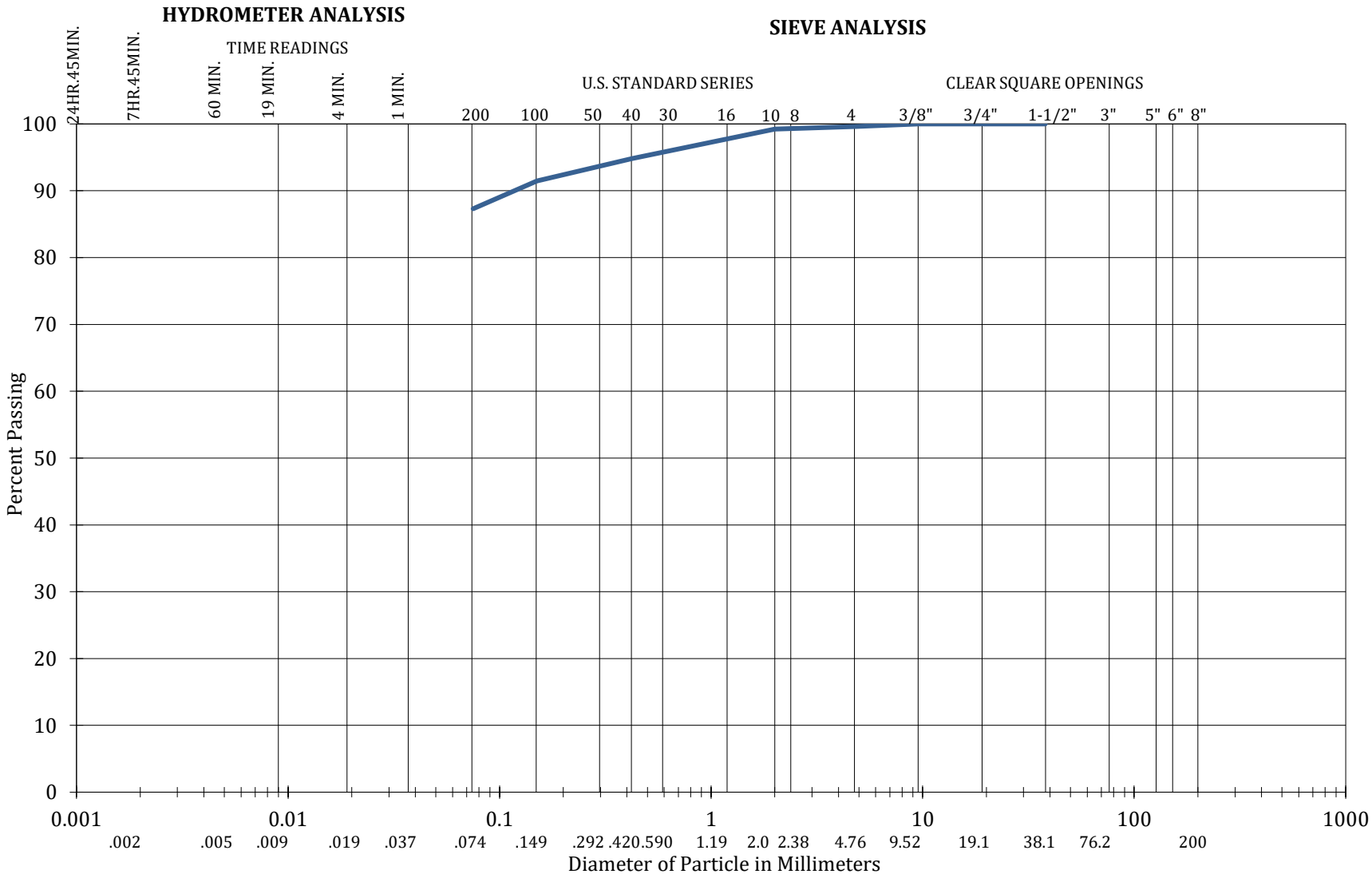
Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Olive Green Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/2/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION SIEVE CHART

WWW.NELSONENGINEERING.NET



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH6-4B

Lot 58 Grand View Lodges

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY

USCS CLASSIFICATION

WWW.NELSONENGINEERING.NET

Sample ID: BH6-11 Depth (ft): 52'-53'

Unified Soils Classification
Sandy Lean Clay, CL

Gravel	**9%**
Sand	**25%**
Fines	**66%**

Liquid Limit:	**25**
Plastic Limit:	**11**
Plasticity Index:	**14**

In-Situ Moisture Content	**16.5%**

Standard Sieve No.	Particle Size (mm)	Tare Weight (g)	Sample + Tare (g)	Sample Weight (g)	Cumulative % Retained	Percent Passing
1.5"	38	171.0	171.0	0.0	0%	100%
1"	25	171.0	171.0	0.0	0%	100%
3/4"	18.75	171.0	171.0	0.0	0%	100%
3/8"	9.5	171.0	205.5	34.5	5%	95%
#4	4.75	171.0	206.3	35.3	9%	91%
#10	2.00	171.0	231.4	60.4	17%	83%
#40	0.425	171.0	226.7	55.7	25%	75%
#100	0.15	171.0	200.2	29.2	29%	71%
#200	0.075	171.0	213.6	42.7	34%	66%
Pan	0	171.0	661.8	490.9	100%	0%
		Total Weight of Sample (g)		**748.7**		

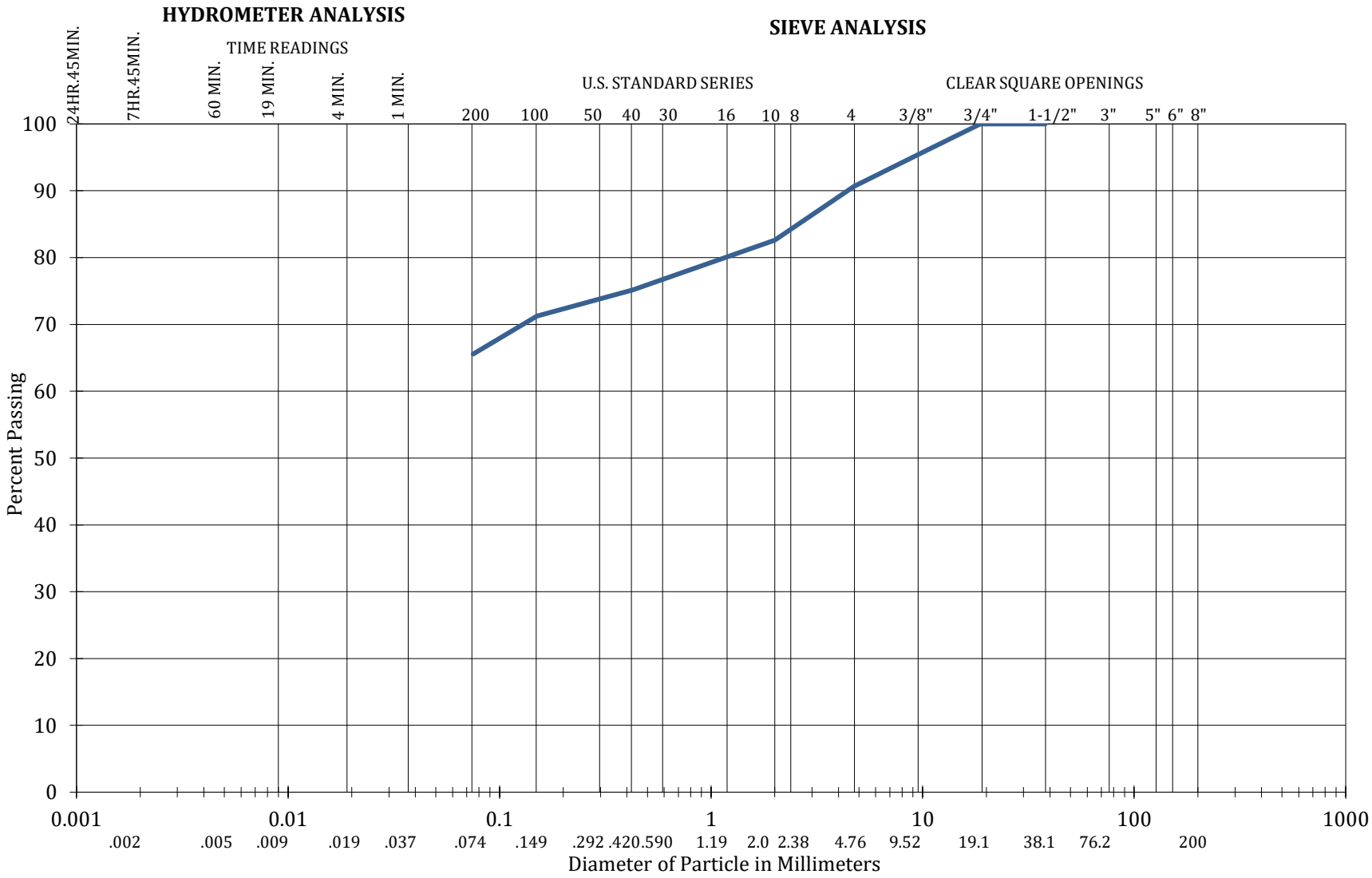
Moisture Content	
Wet Wt + Tare (g)	851.2
Dry Wt. + Tare (g)	754.8
Wt of Water (g)	96.4
Tare Wt. (g)	170.8
Dry Wt. (g)	584.0
Moisture Content	16.5%
Wash	
Wet Wt. + Tare (g)	851.2
Pre Wash Dry (g)	748.7
Post Wash Dry (g)	257.8
Tare Wt. (g)	170.4
Wt.Of Minus #200 =	490.9

Project:	Lot 58 Grand View Lodges
Job Number	21-222-02
Visual ID:	Brown Sandy Lean Clay

Sampled By:	AP
Date:	6/24/2021
Tested By:	AE
Date:	7/7/2021

NELSON ENGINEERING since 1964
Professional Engineers & Land Surveyors
JACKSON, WY • BUFFALO, WY
WWW.NELSONENGINEERING.NET

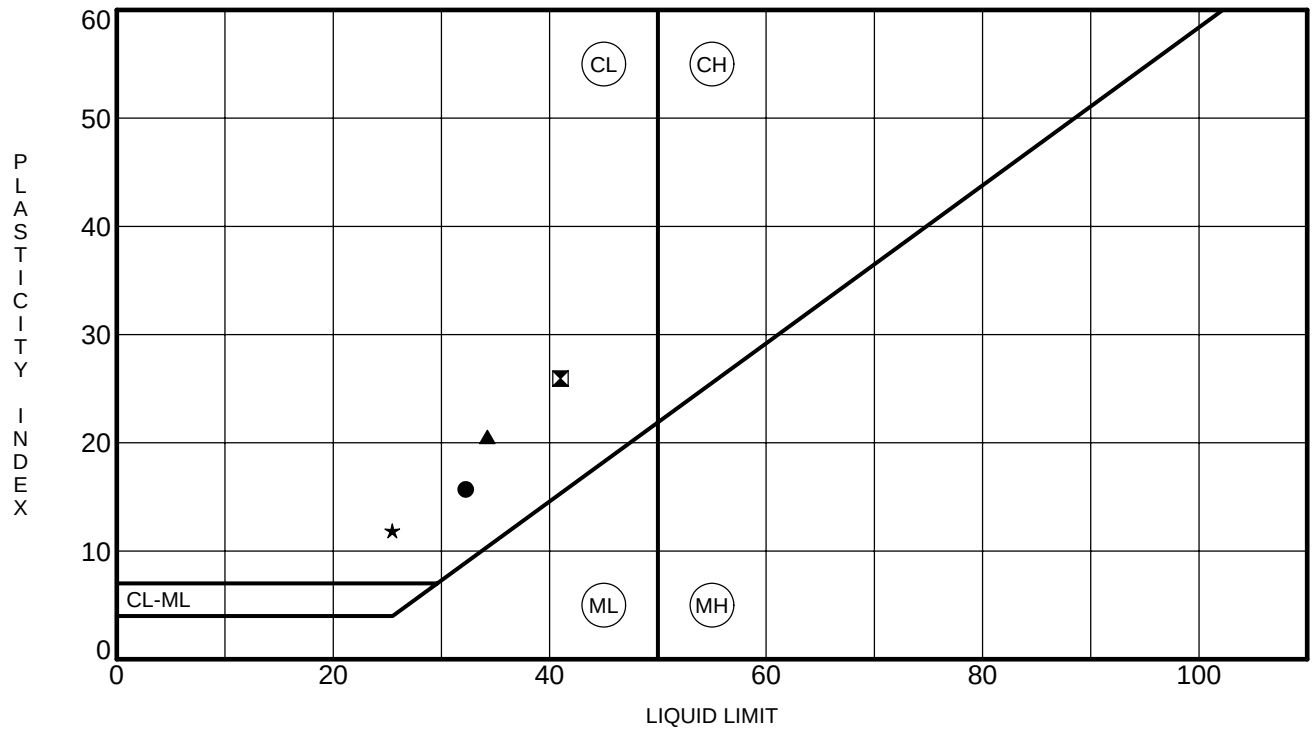
USCS CLASSIFICATION SIEVE CHART



CLAY (plastic) TO SILT (non-plastic)	SAND			GRAVEL		COBBLES
	FINE	MEDIUM	COARSE	FINE	COARSE	

BH6-11

Lot 58 Grand View Lodges



	Specimen Identification		LL	PL	PI	Fines	Classification
●	**TP-1**	**9.0**	**32**	**17**	**15**		
⊠	**TP-1**	**10.0**	**41**	**15**	**26**		
▲	**TP-1**	**25.0**	**34**	**14**	**20**		
★	**TP-1**	**27.5**	**25**	**14**	**11**		

Womack & Associates, Inc.
P.O. Box 12650
Jackson, WY 83002
Telephone: (307)733-7209
Fax:

ATTERBERG LIMITS' RESULTS

Project: TOJ - Snow King Water Tank

Location: Jackson, Wyoming

Number:

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX D

Soil-Engineering Parameters

Engineering parameters for site soils were evaluated based on a variety of methods, including:

- direct laboratory testing (shear strength and consolidation),
- correlations with index tests,
- empirical relationships between SPT N-values and shear strength, and
- visual classification and empirical estimates.

Due to the chaotic and random nature of the soils (i.e., mixture of fine-grained and coarse-grained soils), collecting relatively undisturbed Shelby tube samples of the landslide debris during the drilling effort to perform shear tests and consolidation tests on was difficult. Therefore, very limited soil parameters for soil unit weight, consolidation values, and shear strength values were directly determined from their respective tests. Most of the samples that underwent lab testing were disturbed samples collected during SPT sampling, sonic drilling and test pit excavation, of which their results were used to estimate the soil parameters based on correlations. We submitted three relatively undisturbed Shelby tube samples to undergo consolidation and shear strength testing for the loess encountered at the site.

Since the landslide deposits are understood to cover a greater area than just Lot 57, we also included applicable soil parameters from our site exploration on the nearby Lots 53 And 58, soil parameters from Nelson Engineering for Lots 53 and 58, and soil parameters for a nearby project provided by Womack & Associates, Inc.

A discussion regarding the selection of soils parameters is found below.

Soil Unit Weight

Three consolidation tests were performed which produced dry unit weights, while two shear tests were performed which produced dry unit weights. These direct unit weight measurements, SPT blow counts, and observations made in the open test pits were used to estimate the in-situ unit weight of the soils. Estimated unit weights are presented below in Table D-1.

Table D-1: Estimated Soil Unit Weight Values

Soil Layer	Average Unit Weight (Pounds per cubic foot)
CL and ML – Lean Clay (Loess)	115
GC-GM,GC and SC– Clayey Gravel, Silty Clayey Gravel, Clayey Sand (Landslide Debris)	125

Consolidation Parameters

Coefficients of consolidation, C_c, were calculated based on the direct consolidated test results, as well as correlation methods recommended by Skempton (1944), Nagaraj and Murthy (1985), Wroth and Wood (1978), and Kulhawy and Mayne (1990). These calculation methods use index properties such as the Liquid Limit and the Plasticity Index to estimate the coefficients of consolidation. The results presented below are the average of all C_c, values calculated from the direct results and correlation calculations.

Table D-2: Estimated Coefficients of Consolidation

Soil Layer	Coefficient of Consolidation
CL - Loess	0.22
ML-Loess	0.17
GC – Landslide Debris	0.13
GM – Landslide Debris	-
SC – Landslide Debris	0.22

Strength Parameters

Internal Friction Angle (phi)

Strength parameters used in the slope stability model were selected by examining direct shear results, calculations based on SPT blow count values, as recommended by Hatanaka and Uchida (1996) and Schmertmann (1975), and calculated based on index properties as recommended by Duncan (1989). Minimum, maximum, and average internal friction angles (phi) are summarized in the table below.

Table D-3: Estimated Internal Friction Values (Degrees)

	Minimum	Maximum	Average	Standard Deviation	Selected phi
CL – Loess	19	59.8	40.4	9.6	35
ML – Loess	34	34	34	0	35
GC – Landslide Debris	20.9	60.4	47.9	6.3	40
GC-GM – Landslide Debris	26	59	44.3	9.4	40
SC – Landslide Debris	16	35	27.2	6.4	25

As summarized in the table above, the minimum and maximum calculated internal friction angles for a single soil layer sometimes varied by over 20-degrees. Therefore, internal friction angles were selected by reviewing all calculated values, as well as reviewing suggested values in Chapter 9 of the Pit Slope Manual (1982).

Soils that have undergone movement are assumed to be in a residual strength state; i.e., weaker than the strength of the soils prior to the movement. Though the published geologic maps and our observations in the field classified the origin of the soils as landslide debris, no direct shear zones were observed and no signs of previous shearing (i.e., slickensides) were observed. Additionally, loess, typically formed from windblown glacial silt, was observed overlying the landslide deposit, therefore it is assumed the landslide occurred prior to or during the Pinedale Glaciation approximately 10 to 30 thousand years ago. If the soils observed in the boreholes and test pits were once in a residual state following failure, it is assumed since their mobilization in the failure event, they have been naturally consolidating and therefore regaining strength. Therefore, residual shear strengths were not used for the slope stability model and peak shear strengths were used.

Cohesion

Cohesion was added to the material models in the slope stability model to avoid selecting slip surfaces representing the “infinite slope” solution. Cohesion values used in the slope stability models can be found in Appendix F.

Compression Index (C_c) Calculation Spreadsheet

Project	BH	Depth	LL	PL	PI	Consol Results	Compression Index (Cc)				Average	Median	Std Dev	Classification
Bear Development - Snow King Loop Lot 57	JG-05	8.5'-11'	39	14	25		0.26	0.24	0.34	0.34	0.30	0.30	0.05	CL
Bear Development - Snow King Loop Lot 57	JG-05	22'-25'	26	15	11		0.14	0.16	0.15	0.15	0.15	0.15	0.01	GC
Bear Development - Snow King Loop Lot 57	JG-05	35'-37'	NP	NP	NP		-	-	-	-	-	-	-	GM
Bear Development - Snow King Loop Lot 57	JG-06	3.5'-5'	38	19	19		0.25	0.24	0.26	0.26	0.25	0.25	0.01	CL
Bear Development - Snow King Loop Lot 57	JG-06	12.5'-14'	32	13	19		0.20	0.20	0.26	0.26	0.23	0.23	0.03	CL
Bear Development - Snow King Loop Lot 57	JG-06	20'-22'	18	14	4		0.07	0.11	0.05	0.05	0.07	0.06	0.03	GC
Bear Development - Snow King Loop Lot 57	JG-06	32.5'-35'	28	15	13		0.16	0.18	0.18	0.18	0.17	0.18	0.01	CL
Bear Development - Snow King Loop Lot 57	JG-07	5'-6'	31	20	11	0.17	0.19	0.19	0.15	0.15	0.17	0.17	0.03	CL
Bear Development - Snow King Loop Lot 57	JG-07	9'-10'	33	18	15	0.28	0.21	0.21	0.20	0.20	0.20	0.20	0.00	CL
Bear Development - Snow King Loop Lot 57	JG-07	17.5'-18'	29	15	14		0.17	0.18	0.19	0.19	0.18	0.19	0.01	CL
Bear Development - Snow King Loop Lot 57	JG-08	10'-12'	NP	NP	NP		-	-	-	-	-	-	-	GM
Bear Development - Snow King Loop Lot 57	JG-08	12.5'-14'	32	15	17		0.20	0.20	0.23	0.23	0.21	0.22	0.02	CL
Bear Development - Snow King Loop Lot 57	JG-09	7.5'-9'	17	16	1		0.06	0.11	0.01	0.01	0.05	0.04	0.04	GC
Bear Development - Snow King Loop Lot 57	JG-09	15'-17'	NP	NP	NP		-	-	-	-	-	-	-	GM
Bear Development - Snow King Loop Lot 57	TP-02	6'-7'	NP	NP	NP	0.17	-	-	-	-	-	-	-	ML
Bear Development - Snow King Loop Lots 53 and 58	JG-01	18-19	31	16	15		0.19	0.19	0.20	0.20	0.20	0.20	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	27-29	28	16	12		0.16	0.18	0.16	0.16	0.17	0.16	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	54.5-57	33	15	18		0.21	0.21	0.24	0.24	0.23	0.23	0.02	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	67-69	26	16	10		0.14	0.16	0.14	0.14	0.14	0.14	0.01	CL
Bear Development - Snow King Loop Lots 53 and 58	JG-01	72.5-75	38	17	21		0.25	0.24	0.28	0.28	0.26	0.27	0.02	CL
Nelson 53&58	BH5	23'-28'	29	4	25		0.17	0.18	0.34	0.34	0.26	0.26	0.09	SC
Nelson 53&58	BH5	37'-41'	28	12	16		0.16	0.18	0.22	0.22	0.19	0.20	0.03	SC
Nelson 53&58	BH6	22'-23'	33	15	18		0.21	0.21	0.24	0.24	0.23	0.23	0.02	CL
Nelson 53&58	BH6	52'-53'	25	11	14		0.14	0.16	0.19	0.19	0.17	0.17	0.03	CL
Womack Water Tank	TP-1	9	32	17	15		0.20	0.20	0.20	0.20	0.20	0.20	0.00	CL
Womack Water Tank	TP-1	10	41	15	26		0.28	0.26	0.35	0.35	0.31	0.32	0.05	CL
Womack Water Tank	TP-1	25	34	14	20		0.22	0.21	0.27	0.27	0.24	0.24	0.03	CL
Womack Water Tank	TP-1	27.5	25	14	11		0.14	0.16	0.15	0.15	0.15	0.15	0.01	CL

Phi Calculation Spreadsheet

Shear Strength Correlation Summary - Peak Friction Angle

					Hatanaka and Uchida (1996)	Schmertmann (1975)					Duncan, 1989			
Project	BH	Sample	Depth (ft)	(N1)60	Peak Phi (N160)	Peak Phi (N160)	Phi (Direct Shear)	LL	PI	Overburden	Peak Phi	lassificatio	Unit Weight (pcf)	Cohesion
Bear Dev - 57	JG-05	D4	8.5	22	41	47		39	25	2371	19	CL	120	0
Bear Dev - 57	JG-05	D12	22	-	-	-		26	11	-	26	GC-GM		0
Bear Dev - 57	JG-05	D14	28.5	76	59	58		-	-	4871		GC-GM	125	0
Bear Dev - 57	JG-05	D19	36.5	19	40	42		-	-	5871		GC-GM	125	0
Bear Dev - 57	JG-06	D2	3.5	-				38	19	-	22	CL		0
Bear Dev - 57	JG-06	D3	6.5	31	45	52		-	-	2421		CL	115	0
Bear Dev - 57	JG-06	D6	11.5	12	36	39		-	-	2996		CL	115	0
Bear Dev - 57	JG-06	D8	12.5	-				32	19	-	22	CL		0
Bear Dev - 57	JG-06	D9	16.5	26	43	48		-	-	3571		CL	115	0
Bear Dev - 57	JG-06	D12	20	-				18	4	-	31	GC		0
Bear Dev - 57	JG-06	D13	21.5	26	43	47		-	-	4171		GC	120	0
Bear Dev - 57	JG-06	D15	26.5	66	56	57		-	-	4796		GC	125	0
Bear Dev - 57	JG-06	D18	31.5	54	53	55		-	-	5421		GC	125	0
Bear Dev - 57	JG-06	D19	32.5	-				28	13	-	24			0
Bear Dev - 57	JG-06	D21	36.5	18	39	41		-	-	6021		CL	120	0
Bear Dev - 57	JG-07	D-1	2.5	2	26	21		-	-	2446		GC	110	0
Bear Dev - 57	JG-07	D-2	5	5	30	30		31	11	2721	26	CL	110	0
Bear Dev - 57	JG-07	D-3	7.5	3	28	25		-	-	2996		CL	110	0
Bear Dev - 57	JG-07	D-4	10	32	45	51	30	33	15	3296	23	CL	120	379
Bear Dev - 57	JG-07	D-5	12.5	36	47	52		-	-	3596		CL	120	0
Bear Dev - 57	JG-07	D-6	15	23	41	46		-	-	3896		CL	120	0
Bear Dev - 57	JG-07	D-7	17.5	82	60	59		29	14	4140	23	GC	125	0
Bear Dev - 57	JG-07	D-8	19.5	31	45	49		-	-	4459		GC	125	0
Bear Dev - 57	JG-08	D-1	2.5	15	37	42		-	-	2589		CL	110	0
Bear Dev - 57	JG-08	D-2	5	25	42	48		-	-	2876		GC-GM	115	0
Bear Dev - 57	JG-08	D-3	7.5	23	41	46		-	-	3164		GC-GM	115	0
Bear Dev - 57	JG-08	D-4	10	31	45	50		-	-	3451		GC-GM	115	0
Bear Dev - 57	JG-08	D-5	12.5	21	41	45		32	17	3739	22	CL	115	0
Bear Dev - 57	JG-08	D-6	15	23	42	46		-	-	4026		CL	115	0
Bear Dev - 57	JG-08	D-7	17.5	23	42	46		-	-	4314		CL	115	0
Bear Dev - 57	JG-08	D-8	19	79	60	59		-	-	4423		CL	125	0
Bear Dev - 57	JG-09	D-1	2.5	9	34	36		-	-	2677		GC	110	0
Bear Dev - 57	JG-09	D-2	5	21	41	46		-	-	2964		GC	115	0
Bear Dev - 57	JG-09	D-3	7.5	24	42	47		17	1	3252	35	GC	115	0
Bear Dev - 57	JG-09	D-4	10	28	44	49		-	-	3539		GC	115	0
Bear Dev - 57	JG-09	D-5	12.5	31	45	50		-	-	3827		GC	115	0
Bear Dev - 57	JG-09	D-6	15	34	46	51		-	-	4139		GC	125	0
Bear Dev - 57	JG-09	D-7	17.5	50	52	55		-	-	4443		GC	125	0
Bear Dev - 57	JG-09	D-8	19	78	60	59		-	-	4558		GC	125	0
Bear Dev - 57	TP-02			-	-	-	34	-	-	-		ML	115	144
Bear Dev - 538.58	JG-01	D-8	18	--	--	--		31	15		34	CL	115	0
Bear Dev - 538.58	JG-01	D-12	27	38	47	53		28	12		35	CL	115	0
Bear Dev - 538.58	JG-01	D-17	37	94	63	60				4300		GC	120	0
Bear Dev - 538.58	JG-01	D-26	47	84	61	59						GC	120	0
Bear Dev - 538.58	JG-01	D-27	54.5	--	-	-		33	18		32	CL	115	0
Bear Dev - 538.58	JG-01	D-31	67	56	53	54						CL	115	0
Bear Dev - 538.58	JG-01	D-32	67	--	-	-		26	10		36	CL	115	0
Bear Dev - 538.58	JG-01	D-36	72.5	--	-	-		38	21		31	CL	115	0
Bear Dev - 538.58	JG-01	D-39	80	35	47	48						GC	120	0
Nelson 538.58	BH5	-	23	-	-	-		29	25		35	SC	115	0
Nelson 538.58	BH5	-	37	-	-	-		28	16		30	SC	115	0
Nelson 538.58	BH6	4	22	15	32	-		33	18		32	CL	108.3	0
Nelson 538.58	BH6	11	52	-	-	-	37	25	14		30	CL	115	0
Nelson 538.58	BH4	1	9	79	60	-						GC	120	0
Nelson 538.58	BH4	2	14	50	52	-						GC	125	0
Nelson 538.58	BH4	3	38	92	62	-						ML	110	0
Womack Water Tank	TP-1	-	9		-	-		32	15		34	CL	110	0
Womack Water Tank	TP-1	-	10		-	-		41	26		30	CL	110	0
Womack Water Tank	TP-1	-	25		-	-		34	20		31	CL	110	0
Womack Water Tank	TP-1	-	27.5		-	-		25	11		36	CL	110	0

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX E

Calculations

Settlement Methodology

The settlement calculations assume the soil layer of concern comprises 100% compressible soil by volume. Though, some soils at the site only partially comprise the fine-grained soils by mass, as described in the borehole logs. Based on lab testing and visual classification, the clayey gravels and silty gravels contain a maximum of 40% fines by mass. To convert the assumed mass to volume, we have used a scaling factor of 1.25, resulting in an assumed percent fines by volume of 50%.

Because the settlement is anticipated to only occur in the potentially compressible, fine-grained soils, the total settlement calculation was reduced by 50%.

Lateral Pressures Methodology

Seismic coefficients were calculated based on recommendation from NCHRP Report 611 "Seismic Analysis and Desing of Retaining Walls, Buried Structures, Slopes and Embankments" and FHWA NHI Course No 130094 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, as described below and illustrated in the equations. For our calculation of the seismic coefficient (k_s), we used an average wall height of 15' to account for the estimated foundation wall height of the building, and since the foundation wall is considered a ductile system with negligible allowable displacement, we used a ductility factor (r) value of 0.5 (FHWA, 2011). In summary, the seismic coefficient (k_s) is determined by applying a scaling factor (α) to the modified peak ground acceleration (PGAm) and a selected ductility factor based on the project requirements.

As the design progresses, close coordination with the structural engineer is recommended to ensure the assumptions above correspond with the design of the structure. If assumption above do not match the design requirements, additional analyses will be required.

Project: Bear Development
Project Number: 23072
Engineer: HC
Soil Sample: Average Cc value CL
Scenario: Direclty on poor soil

Settlement analysis of in-situ soil (only analyzing a maximum of 2B worth of soil below footing)

Key:

Manual Input
Calculation

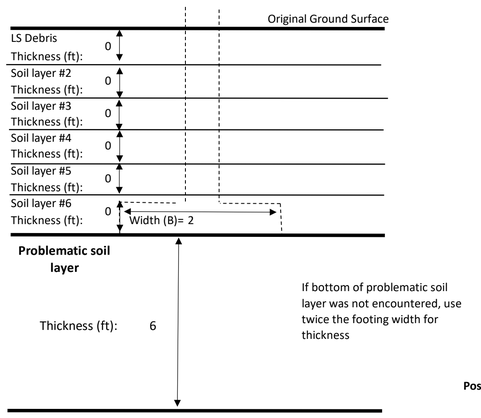
Step 1:

In-Situ Soil Properties of Problematic Soil			
	Soil Description: Lean Clay Loess		
	Source of Soil Properties: GCI Lab Data		
	Dry unit Weight:	79.4	pcf
	Moisture Content:	17.9%	
	Moist unit weight:	93.6	pcf
(Avergae 0.4 to 0.7)	Initial Void Ratio (e_0):	1.129	Vv/Vs
(Average 0.2 to 0.5)	Coefficient of Consol. (C_c):	0.17	

Step 2:

Original Overburden Pressure on Soil Element Identified in Step #1			
Soil Layer #1	Unit Weight		**PCF**
LS Debris	Thickness		**Ft.**
Soil Layer #2	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #3	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #4	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #5	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #6	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Problematic Soil Layer	Unit Weight	93.6	**PCF**
Below Footing	Thickess (H_0)	6	**Ft.**
Total Original Overburdern Pressure on Soil Element:		281	**PSF**

Pre-construction status. Footing is superimposed.



If bottom of problematic soil layer was not encountered, use twice the footing width for thickness

Step 3:

Foundation Characteristics		
Footing load:	3,000	psf
Estimated Footing Width (B):	2	ft
Footing Depth (D_f):	3	ft
Applied footing load applied to soil element (assuming 2V:1H)	1200	PSF

Step 4:

Backfill Soil Properties		
Dry Unit Weight:	120	pcf
Moisture Content:	12.0%	
Moist Unit Weight:	134.4	pcf
Backfill Depth:	3	ft

Step 5:

Settlement Calculation at Soil Element Identified in Step #2		
Thickness of Problematic Soil Layer (H_0):	6	ft
Depth to soil element below **OG**:	3	ft
Depth to soil element below footing:	3	ft
Original Overburden (σv_0):	280.8	psf
Applied foundation load at soil element :	1200.0	psf
Post Construction pressure at soil element (σv_f):	1884.0	
Change in presure at soils element:	1603	psf
$(\sigma v_f)/(\sigma v_0)$	6.709	
$Log[(\sigma v_f)/(\sigma v_0)]$	0.827	
$1+e_0$	2.129	
$H_0/(1+e_0)$	2.818	
Inches per foot:	12	
Settlement:	4.75	inches

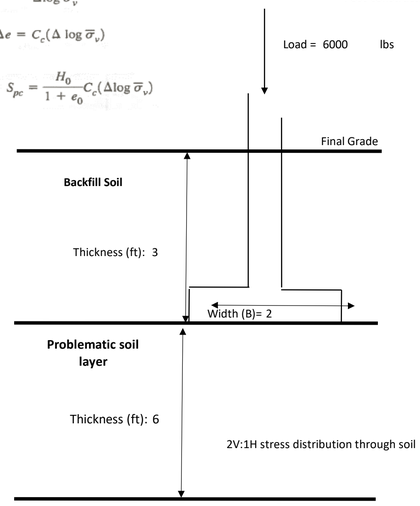
Settlement: $\text{Settlement} = S_{pc} = H_0\left(\frac{\Delta e}{1 + e_0}\right)$

Compression Index: $C_c = \frac{\Delta e}{\Delta \log \overline{\sigma}_v}$

Rearranging gives: $\Delta e = C_c(\Delta \log \overline{\sigma}_v)$

Subistituting in gives: $S_{pc} = \frac{H_0}{1 + e_0} C_c(\Delta \log \overline{\sigma}_v)$

Post-construction status



This formula is only valid for footings PLACED DIRECTLY ON PROBLEMATIC SOIL LAYER

$$S_{pc} = \frac{H_0}{1 + e_0} C_c(\log \overline{\sigma}_{v_f} - \log \overline{\sigma}_{v_e}) = \frac{H_0}{1 + e_0}(C_c)\log\left(\overline{\sigma}_{v_f}/\overline{\sigma}_{v_0}\right)$$

Project: Bear Development
Project Number: 23072
Engineer: HC
Soil Sample: Average Cc value for GC
Scenario: Directly on poor soil

Settlement analysis of in-situ soil (only analyzing a maximum of 2B worth of soil below footing)

Key:

Manual Input
Calculation

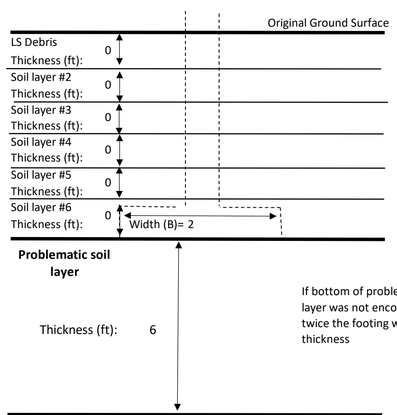
Step 1:

In-Situ Soil Properties of Problematic Soil			
	Soil Description: Clayey Silty Gravel		
	Source of Soil Properties: GCI Lab data		
	Dry unit Weight:	125	pcf
	Moisture Content:	7.0%	
	Moist unit weight:	133.8	pcf
(Avergae 0.4 to 0.7)	Initial Void Ratio (e_0):	0.427	Vv/Vs
(Average 0.2 to 0.5)	Coefficient of Consol. (C_c):	0.13	

Step 2:

Original Overburden Pressure on Soil Element Identified in Step #1			
Soil Layer #1	Unit Weight		**PCF**
LS Debris	Thickness		**Ft.**
Soil Layer #2	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #3	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #4	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #5	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Soil Layer #6	Unit Weight		**PCF**
(Descriptor)	Thickness		**Ft.**
Problematic Soil Layer	Unit Weight	125	**PCF**
Below Footing	Thickess (H_0)	6	**Ft.**
Total Original Overburdern Pressure on Soil Element:		375	**PSF**

Pre-construction status. Footing is superimposed.



If bottom of problematic soil layer was not encountered, use twice the footing width for thickness

Step 3:

Foundation Characteristics		
Footing load:	3,000	psf
Estimated Footing Width (B):	2	ft
Footing Depth (D_f):	3	ft
Applied footing load applied to soil element (assuming 2V:1H)	1200	PSF

Step 4:

Backfill Soil Properties		
Dry Unit Weight:	120	pcf
Moisture Content:	12.0%	
Moist Unit Weight:	134.4	pcf
Backfill Depth:	3	ft

Step 5:

Settlement Calculation at Soil Element Identified in Step #2		
Thickness of Problematic Soil Layer (H_0):	6	ft
Depth to soil element below **OG**:	3	ft
Depth to soil element below footing:	3	ft
Original Overburden (σv_0):	375.0	psf
Applied foundation load at soil element :	1200.0	psf
Post Construction pressure at soil element (σv_f):	1978.2	
Change in presure at soils element:	1603	psf
$(\sigma v_f)/(\sigma v_0)$	5.275	
$Log[(\sigma v_f)/(\sigma v_0)]$	0.722	
$1+e_0$	1.427	
$H_0/(1+e_0)$	4.205	
Inches per foot:	12	
Settlement:	4.74	inches

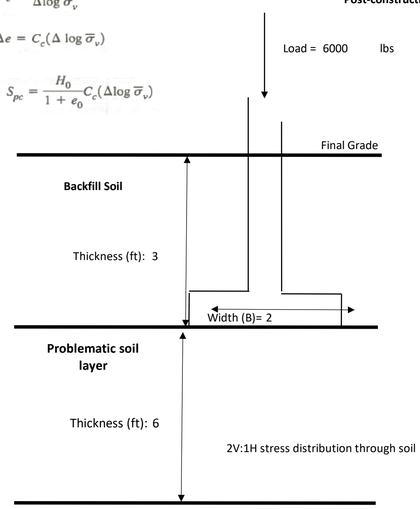
Settlement: $\text{Settlement} = S_{pc} = H_0\left(\frac{\Delta e}{1+e_0}\right)$

Compression Index: $C_c = \frac{\Delta e}{\Delta \log \overline{\sigma}_v}$

Rearranging gives: $\Delta e = C_c(\Delta \log \overline{\sigma}_v)$

Subistituting in gives: $S_{pc} = \frac{H_0}{1+e_0} C_c(\Delta \log \overline{\sigma}_v)$

Post-construction status



This formula is only valid for footings PLACED DIRECTLY ON PROBLEMATIC SOIL LAYER

$$S_{pc} = \frac{H_0}{1+e_0} C_c(\log \overline{\sigma}_{v_f} - \log \overline{\sigma}_{v_o}) = \frac{H_0}{1+e_0}(C_c)\log(\overline{\sigma}_{v_f}/\overline{\sigma}_{v_o})$$

Note: Maximum % fines by mass 40%. Scaling factor of 1.25 used to assume volume of fines, resulting in 50%.

JORGENSEN
It's About People, Trust and Know How

Project Bear Dev. Project No. 23072

Calculated By _____ Date _____

Sheet K_S Determination for Lateral Pressures

Known:

$F_v = 1.5$

$S_1 = 0.336$

$K_{max} = 0.545$

$H = 15'$ Basement Walls

$PGA = 0.454$

$F_a = 1.2$

- $\beta = F_v S_1 / K_{max}$

$\beta = 1.5(0.336) / 0.545$

$\boxed{\beta = 0.92}$

- $\alpha = 1 + 0.01(H)[(0.5\beta) - 1]$

$\alpha = 1 + 0.01(15)[(0.5)(0.92) - 1]$

$\boxed{\alpha = 0.919}$

- $K_{AV} = \alpha K_{max}$

$K_{AV} = 0.919(0.545)$

$\boxed{K_{AV} = 0.501}$

$K_S = r K_{AV}$

Assumed $r = 0.5$ for Ductile System with Negligible Allowable Displacements

$K_S = 0.5(0.501)$

$\boxed{K_S = 0.25}$

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

APPENDIX F

Slope-Stability Analysis

Slope-Stability Analysis

Methodology

1. **Analyses:** Slope stability analyses were performed using the SLOPE/W stability module of GeoStudio 2023.1.2 version 23.1.2.11, produced by Bentley Systems. The Morgenstern-Price limit equilibrium method, which takes into consideration moment and force equilibrium, was used to analyze slope stability.

   Based on the existing and proposed geometry of the project and the mapped geology, we determined the project area may be subject to potential failure. Therefore, we evaluated the cross-section for existing conditions, proposed conditions, and seismic proposed conditions scenarios.

2. **Geometry:** One cross section for the project was analyzed: Cross section C-C' (Figure 5). Cross section location is shown in Figure 2. Based on Cross section C-C', we included geometry for the existing conditions at the site, proposed conditions, and proposed conditions including seismic forces. The proposed conditions models also include estimated foundation loads for each housing unit based on preliminary plans provided to Jorgensen. We based the external existing geometry on topographic data collected by Jorgensen Associates, Inc. and supplemental topographic data provided by Teton County, 2015, proposed finished grade elevations were taken for the preliminary design documents provided by Hoyt Architects, and we based the internal geometry (material boundaries within the slope) on the results of the subsurface exploration (i.e., borehole and test pit logs), statistical correlations based on published literature, geologic conditions, and our experience with similar soils in the area.

   Subsurface conditions at the site were dominated by chaotically deposited landslide debris consisting of fine-grained Lean Clay (CL) and coarse-grained Clayey and Silty Gravels and (GC-GM) and Clayey Sands (SC). Often, soil layers identified in the SPT samples didn't correspond to similar soil layers at similar depths in the other boreholes indicating the soil layers were not continuous. To create a subsurface soil model with continuous soil layers, the discrete soil samples were interpolated and often combined between boreholes. Where discrete soil samples of different soil types were combined, an average phi value and unit weight of the combined samples was applied to the entire soil layer.

3. **Materials:** We estimated the shear strength parameters used in the analyses based on correlation to index tests and direct shear testing, as well as direct shear testing from the previous Geotechnical Investigation Report from July 2021, provided by Nelson Engineering. See the discussion in Appendix D regarding development of the soil-engineering parameters applied to the soil layers. Final parameters used in the stability analysis are summarized below in Table F-1.

   Where two separate soil classifications were combined to one layer (i.e., GC and CL), a unit weight and phi angle were selected using a "weighted average" approach; the boreholes shown on figure 5 were reviewed and depending on the soil shown in each borehole, a weighted average value was estimated.

   We used a Mohr-Coulomb strength model to define the soil parameters. Two parameters are used to describe this strength model: cohesion (c) and friction angle (φ). Cohesion is the soil's shear strength at zero overburden stress, and the friction angle expresses the relationship between overburden stress and shear stress. Mathematically, the shear strength is defined by the equation: $\tau = c + \sigma_n \tan(\varphi)$, where τ is the shear strength and σ_n represents the overburden stress. We used effective stress parameters as the overall soils are anticipated to drain well.

Table F-1: Soil Parameters Used for Slope Stability Analysis C-C'

Layer Name	Unit Weight (pcf)	Cohesion (c',psf)	Friction Angle (φ', degrees)
Construction Fill	125	50[1]	38
Landslide Debris GC/GM/SC	120	50	40
Loess – CL/ML	113	50[1]	36

1. Cohesion added where infinite slope stability failures occurred

4. **Phreatic Surface:** Groundwater was not encountered during the subsurface exploration for Lot 57. Groundwater conditions depicted in the models are based on groundwater observations at the nearby Lots 53 and 58 at an approximate depth of 30-feet below the ground surface. It is important to note, the subsurface exploration occurred during a time of year when peak groundwater conditions are assumed to have already occurred, implying potential peak groundwater conditions are *not* shown in the model and are unknown.

5. **Seismicity:** The post-construction scenario was evaluated in a seismic condition. Based on the ReMi and MASW results provided by Atlas Geophysics and direct shear testing data in the previous Nelson Engineering Site Investigation Report, the site is categorized as Site Class C – Very Dense Soil and Soft Rock. Seismicity was incorporated into the model using a pseudo-static limit equilibrium analysis approach where inertial forces from seismic accelerations were applied statically to the model. Seismic loads have been applied to the critical slip surface determined by static analysis for the post construction scenario, as it is assumed to be the most stressed region within the slope (Abramson et al., 2002). A seismic coefficient (k_s) of 0.25 was applied to Cross section C-C'.

Seismic coefficients were calculated based on recommendation from NCHRP Report 611 "Seismic Analysis and Desing of Retaining Walls, Buried Structures, Slopes and Embankments" and FHWA NHI Course No 130094 LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, as described below and illustrated in the equations. In summary, the seismic coefficient (k_s) is determined by applying a scaling factor (α) to the modified peak ground acceleration (PGAm) and a selected ductility factor based on the project requirements. Additionally, a seismic FS of 1.1 was used because it is assumed the system's allowable total permanent seismic deformation is negligible.

$$\beta = F_v \cdot S_1 / PGA_m$$

$$\alpha = 1 + 0.01H[(0.5\beta) - 1]$$

$$k_s = r^* \, PGA_m * \alpha$$

Where:

- $\beta = 0.92$
- $F_v = 1.5$
- $S_1 = 0.336$
- PGA_m (k_{max}) = 0.545
- α is equal to 0.838 for the C-C' seismic model.
- *H* is equal to the height of the critical slip surface; we used a conservative value of 15' for the C-C' seismic model

- r = 0.5. A value of 0.5 is used in calculating k_s when dealing with ductile systems (i.e., soils with no rigid structures) with allowable permanent seismic deformation of up to 2-inches (i.e. negligible displacement).
- Corresponding minimum factor of safety is 1.1

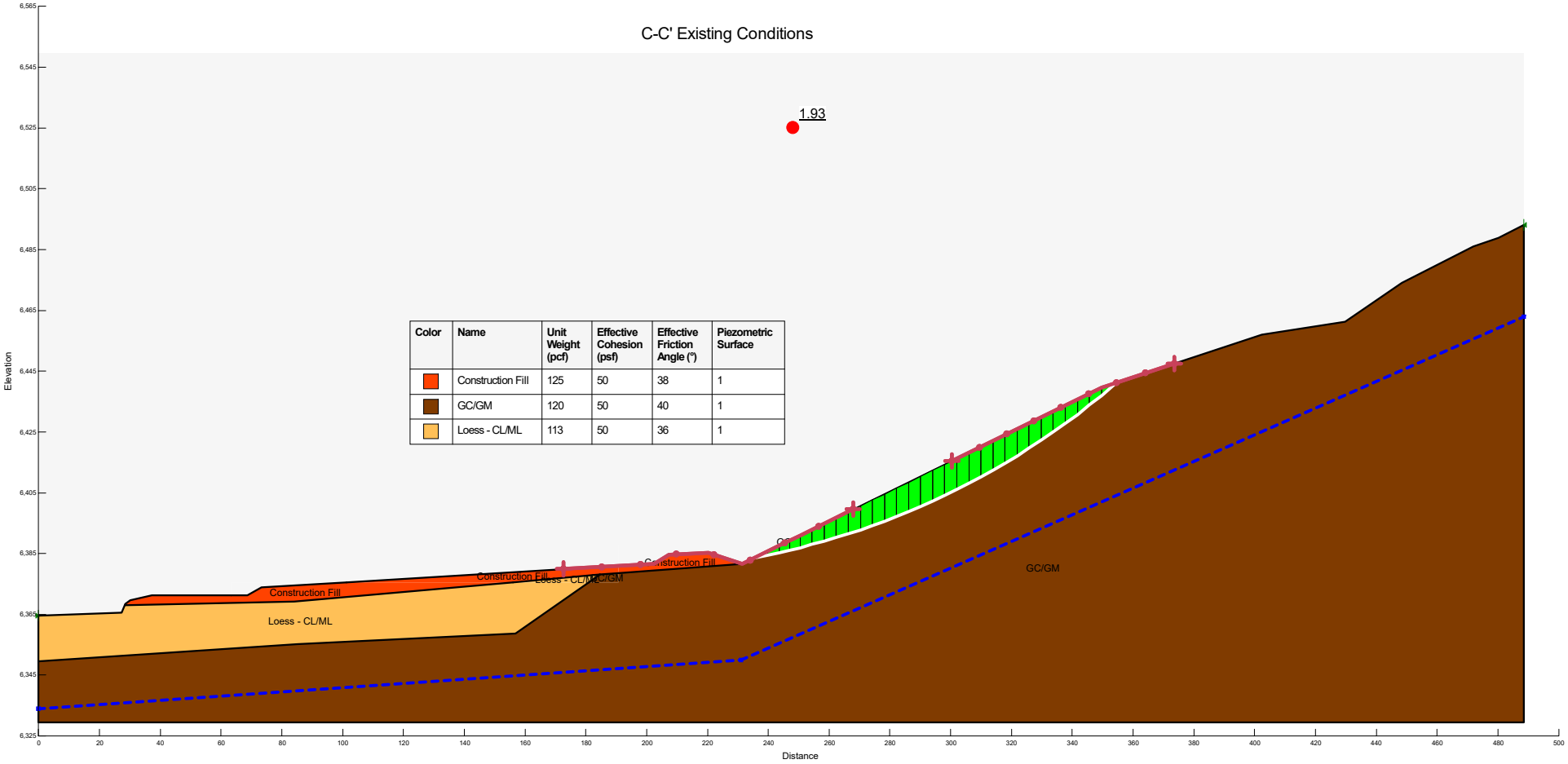
We calculated a ks value of 0.25, which we applied to our C-C' seismic model.

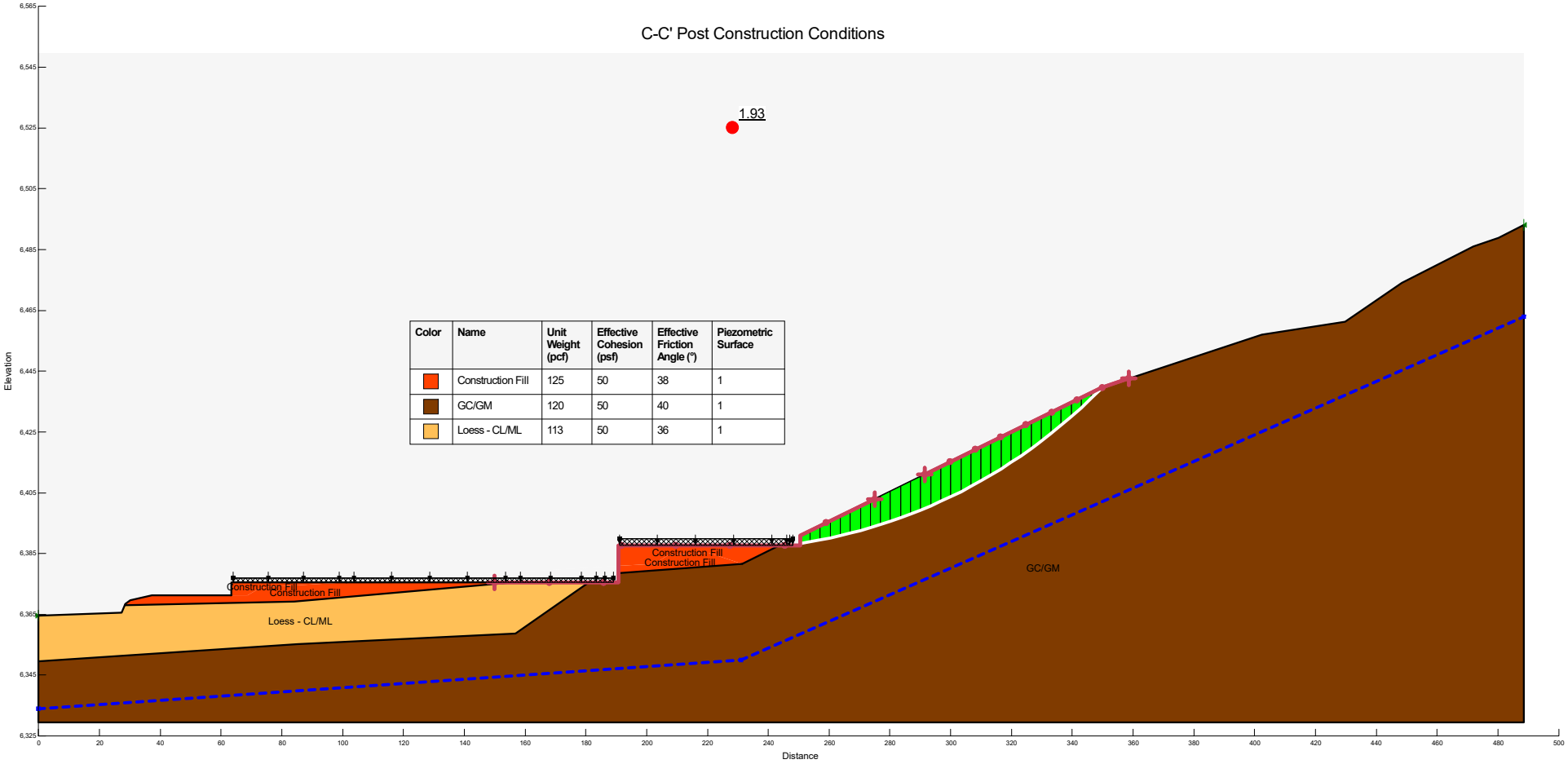
As the design progresses, close coordination with the structural engineer is recommended to ensure the assumptions above correspond with the design of the structure. If assumption above do not match the design requirements, additional analyses will be required.

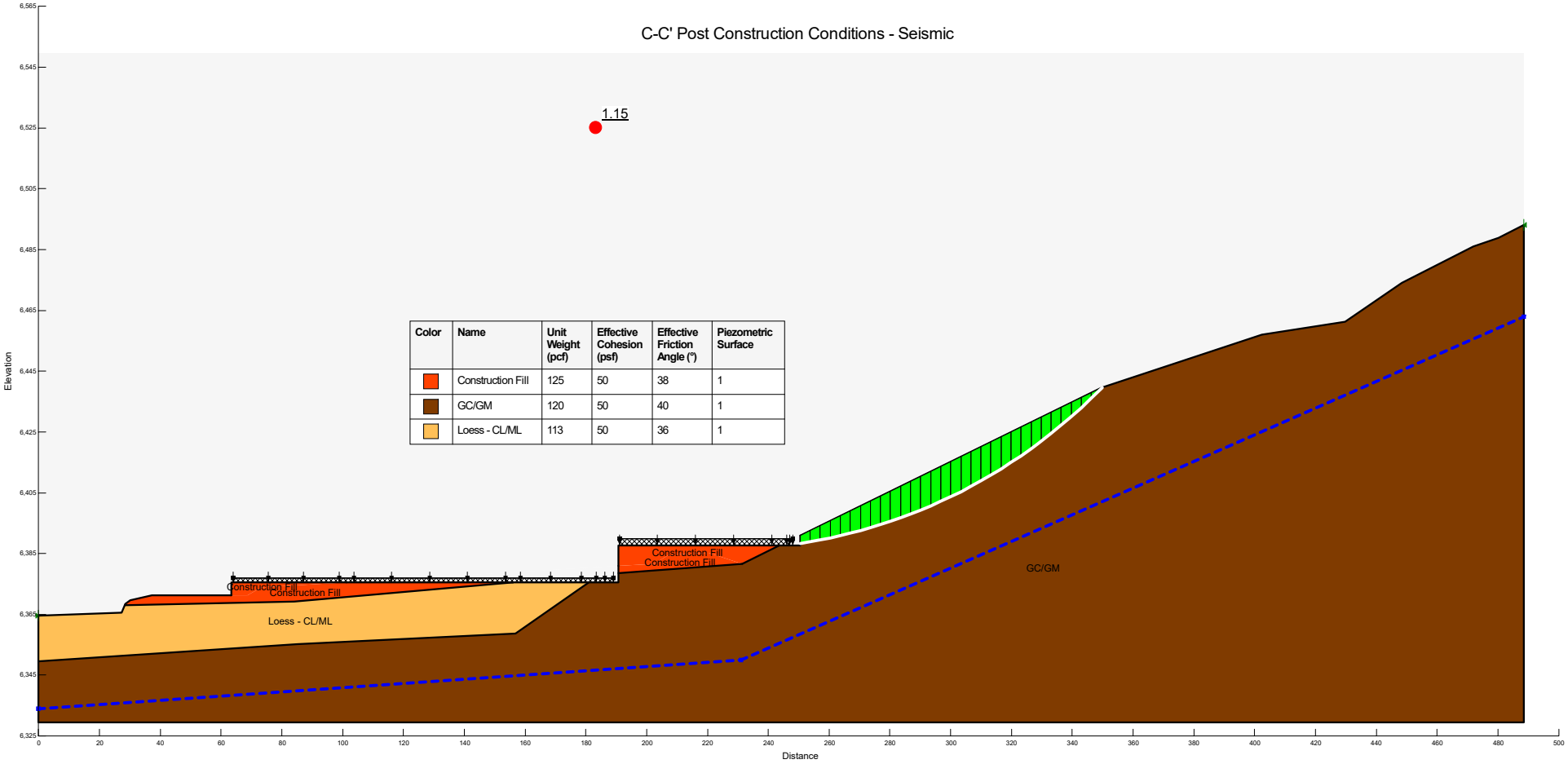
Surcharge Loads: Typical foundation loads were incorporated into the model, based on data in Section 1806 of the IBC, 2021. We use a distribution surcharge load of 2,000 psf to account for the weight of any structures within the model.

Results

We summarize factor of safety (FS) results for each cross section and analysis in Section 4.1 of the Report. The figures that follow are the output from each analysis. The critical slip surface and factor of safety are shown. Output files, reports, convergence data, or other data from Geostudio may be made available upon request.


C-C' Existing Conditions
1.93
Color
Name
Unit Weight (pcf)
Effective Cohesion (psf)
Effective Friction Angle (°)
Piezometric Surface
Construction Fill
125
50
38
1
GC/GM
120
50
40
1
Loess - CL/ML
113
50
36
1
Construction Fill
Loess - CL/ML
GC/GM
Elevation
Distance

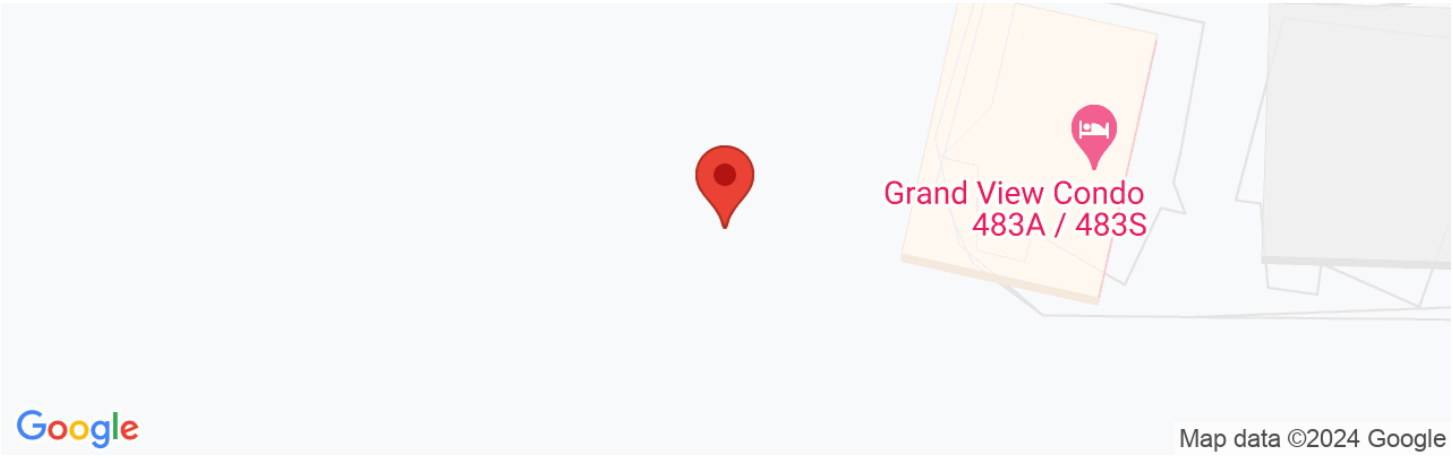

C-C' Post Construction Conditions
1.93
Color
Name
Unit Weight (pcf)
Effective Cohesion (psf)
Effective Friction Angle (°)
Piezometric Surface
Construction Fill
125
50
38
1
GC/GM
120
50
40
1
Loess - CL/ML
113
50
36
1
Construction Fill
Construction Fill
Construction Fill
Construction Fill
Loess - CL/ML
GC/GM
Elevation
Distance
6,565
6,545
6,525
6,505
6,485
6,465
6,445
6,425
6,405
6,385
6,365
6,345
6,325
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500


C-C' Post Construction Conditions - Seismic
1.15
Color
Name
Unit Weight (pcf)
Effective Cohesion (psf)
Effective Friction Angle (°)
Piezometric Surface
Construction Fill
125
50
38
1
GC/GM
120
50
40
1
Loess - CL/ML
113
50
36
1
Construction Fill
Construction Fill
Construction Fill
Construction Fill
Loess - CL/ML
GC/GM
Elevation
Distance
6,565
6,545
6,525
6,505
6,485
6,465
6,445
6,425
6,405
6,385
6,365
6,345
6,325
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500

USGS web services were down for some period of time and as a result this tool wasn't operational, resulting in *timeout* error.
USGS web services are now operational so this tool should work as expected.

OSHPD

Latitude, Longitude: 43.47198215, -110.75457259



Date	05/01/2024, 14:07:21
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.025	MCE_R ground motion. (for 0.2 second period)
S_1	0.337	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.23	Site-modified spectral acceleration value
S_{M1}	0.506	Site-modified spectral acceleration value
S_{DS}	0.82	Numeric seismic design value at 0.2 second SA
S_{D1}	0.337	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	D	Seismic design category
F_a	1.2	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.454	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.545	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.025	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.146	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.901	Factored deterministic acceleration value. (0.2 second)
S1RT	0.337	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.375	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.725	Factored deterministic acceleration value. (1.0 second)
PGAd	0.662	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.454	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.895	Mapped value of the risk coefficient at short periods

Type	Value	Description
C_{R1}	0.9	Mapped value of the risk coefficient at a period of 1 s
C_V	1.105	Vertical coefficient

DISCLAIMER

While the information presented on this website is believed to be correct, SEAOC /OSHPD and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in this web application should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. SEAOC / OSHPD do not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the seismic data provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the search results of this website.

JORGENSEN
It's About People, Trust and Know How

Project Bear Dev. - Lot 57 Project No. 23072
Calculated By JBJ Date 1/23/2024
Sheet 1/2

k_s Determination

U.S. Seismic Design maps - Structural Engineers Association of California Design Code Reference Document - ASCE 7-16

Risk Category II
Site class C - Very Dense Soil + Soft Rock

FHWA (2011)

$$k_{max} = f_{pga} \cdot PGA \quad (6\text{-}1)$$

$PGA = 0.454$
$F_{PGA} = 1.2$

$$k_{max} \text{ or } PGA_m = 1.2(0.454) = \underline{0.545}$$

$$k_{av} \text{ or MHA (maximum Average Horizontal Acceleration)} = \alpha \cdot k_{max} \quad (6\text{-}2)$$

where: $\alpha = 1 + 0.01(H)[(0.5\beta)-1]$ (6-3)

where: $\beta = f_v \cdot S_1 / k_{max}$ (6-4)

where: $f_v = 1.5$
$S_1 = 0.336$
$k_{max} = 0.545$

$\beta = (1.5)(0.336) / 0.545$

$\boxed{\beta = 0.92}$

JORGENSEN
It's About People, Trust and Know How

Project Bear Dev. Lot 57 Project No. 23072
Calculated By JBJ Date 1/23/2024
Sheet 2/2

α Determination:

$\beta = 0.92$
$H = 15'$

$\alpha = 1 + 0.01(15)[0.5(0.92) - 1]$ (6-3)

$\boxed{\alpha = 0.919}$

k_{av} Determination:

$\alpha = 0.919$
$k_{max} = 0.545$

$k_{av} = 0.919(0.545)$

$\boxed{k_{av} = 0.501}$

k_s Determination:

$k_{av} = 0.501$ (6-5)

$r = 0.5$ (assuming allowable permanent Seismic Deformation is negligible).

$k_s = 0.5(0.501)$

$\boxed{k_s = 0.25}$

Minimum factor of Safety of 1.1 using r of 0.5 assuming negligible allowable permanent Seismic Deformation

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

July 24, 2024

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosha, WI 53142

RE: GEOTECHNICAL-ENGINEERING REPORT: ADDENDUM No. 1 ADDITIONAL SLOPE STABILITY ANALYSIS, SNOW KING LOOP LOT 57, TETON COUNTY, WYOMING
PROJECT NUMBER: 23072

Dear Mr. Orthmann

We are pleased to present this addendum to the Geotechnical-Engineering Report (Report) for the proposed development at Lot 57 on Snow King Loop in Teton County, Wyoming. The original Report for Lot 57 was prepared and issued by this office on January 25, 2024. Per Section 2.0 of the Report, the project was in the early stages of design with our understanding that architectural plans could be subject to change, and additional slope stability analysis would be performed as the design progressed.

The purpose of this addendum is to provide additional slope stability analyses based on updated finished floor elevations for the proposed structures based on plan provided by Northworks dated May 23, 2024. The original Geotechnical-Engineering Report and this addendum should not be treated as stand-alone documents but rather be saved and transmitted to all members of the project team together. The additional slope stability analysis presented in this Addendum supersedes the original slope stability analyses presented in the original Report.

Project Background
At your request, Jorgensen Geotechnical (JG) drilled five (5) boreholes and excavated three (3) exploratory test pits for Lot 57 as part of the original geotechnical subsurface exploration. The purpose of the exploration was to bracket the proposed building locations. We identified two primary soil types at the proposed building locations: landslide debris and loess. The landslide deposits we encountered consist clayey gravels, lean clays, sandy gravels and exhibited chaotic deposition. Borehole data from Nelson engineering and MASW plots from Atlas Geophysics were incorporated into our subsurface characterization.

The original Report for Lot 57 recommended engineered aggregate piers (EAPs) or reinforced fills as soil improvement methods to reduce the risk of future potential settlement. It is our understanding that the design team elected to use EAPs for the proposed structures.

Slope Stability Analysis
The slope stability analyses were performed using SLOPE/W module of Geostudio. We analyzed one set of geometry for global slope stability taken from cross sections C-C'. All soil parameters used in this updated slope stability analyses remained consistent with the original Report; the only alteration to this updated slope stability model is the new finished floor elevations (i.e., external geometry). Refer to Appendix F of the original Geotechnical Engineering Report for general methodology of the slope

stability analyses including internal and external geometry, materials, phreatic surfaces, seismicity, and surcharges of each model. Table 1 presents the updated finish floor elevation for each structure based on the Northworks plans.

Table 1: Adjusted Finish Floor Elevations

Location	Finish Floor Elevation, ft
Lot 57 (South)	6402
Lot 57 (North)	6371

Results of the updated stability analyses are summarized in Table 2. The attached models show the output of the stability model for Cross-Section C-C'. Preconstruction slope stability results are not presented, as those are unchanged from the original Geotechnical Engineering Report.

Table 2: Lot 57 Slope Stability Analysis Results

Cross section	Analysis	FS
C-C'	Post-construction	1.96
	Post-Construction Seismic	1.16

Results

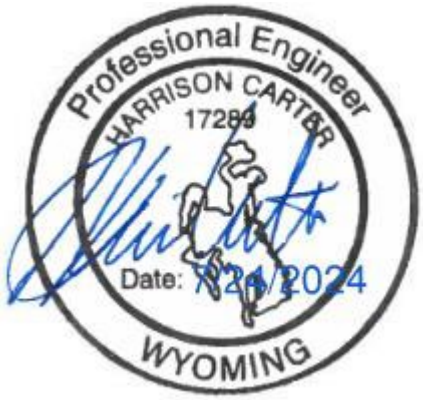
Factors of Safety (FS) with the updated finish floor elevations were 1.96 in static conditions, above the 1.5 threshold for residential construction. Post-construction seismic conditions indicate factors of safety of 1.16, above the 1.1 FS threshold for maximum allowable permanent seismic deformations of 2 inches (FHWA 2011).

Limitations
This report has been prepared based on a limited amount of data. Actual site conditions may vary. These services have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in this area under similar conditions. No other warranty is made or implied.

If you have any questions about this letter, or if we may provide other services to you, please contact us.

Respectfully submitted,

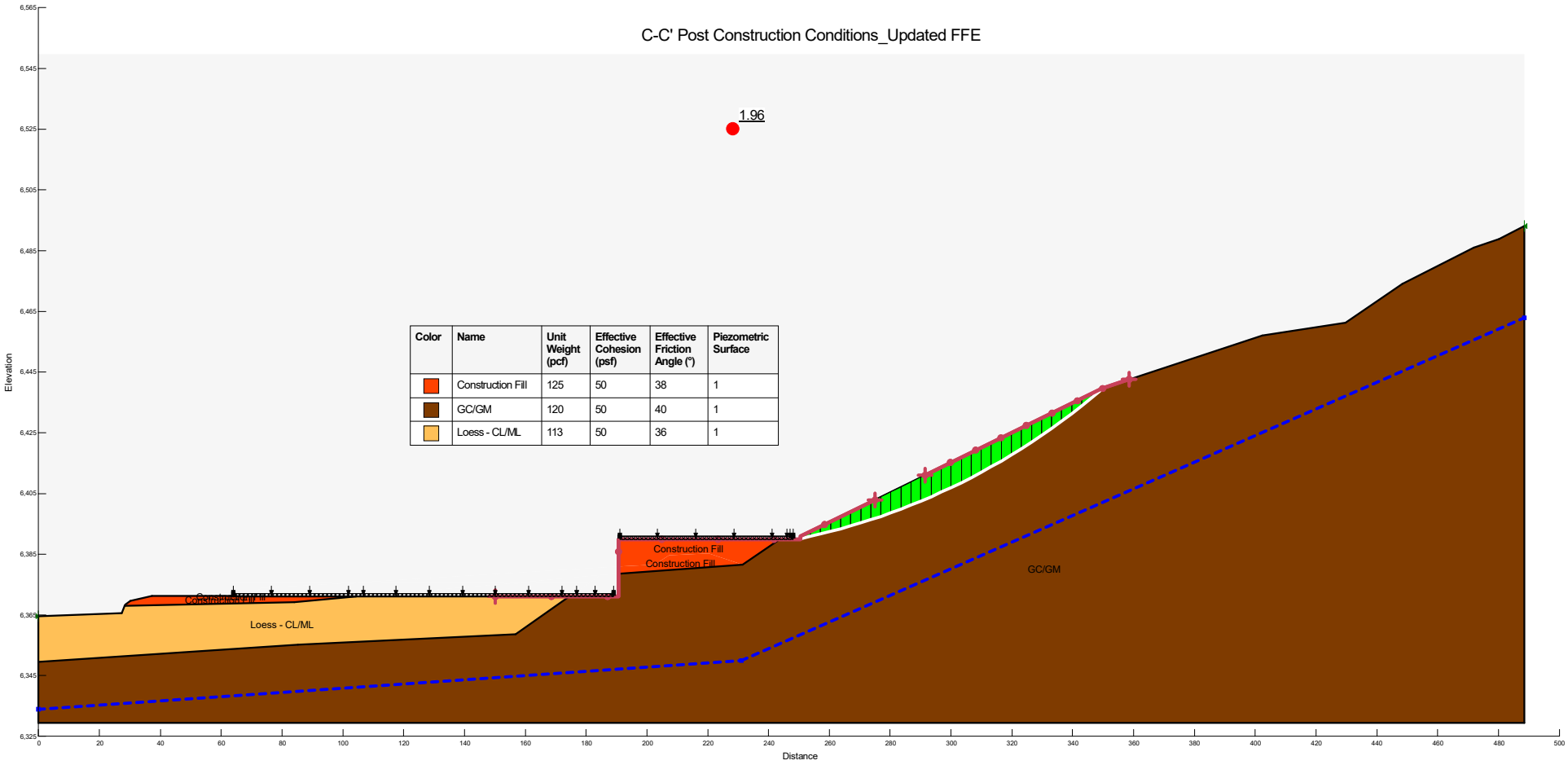
JORGENSEN GEOTECHNICAL

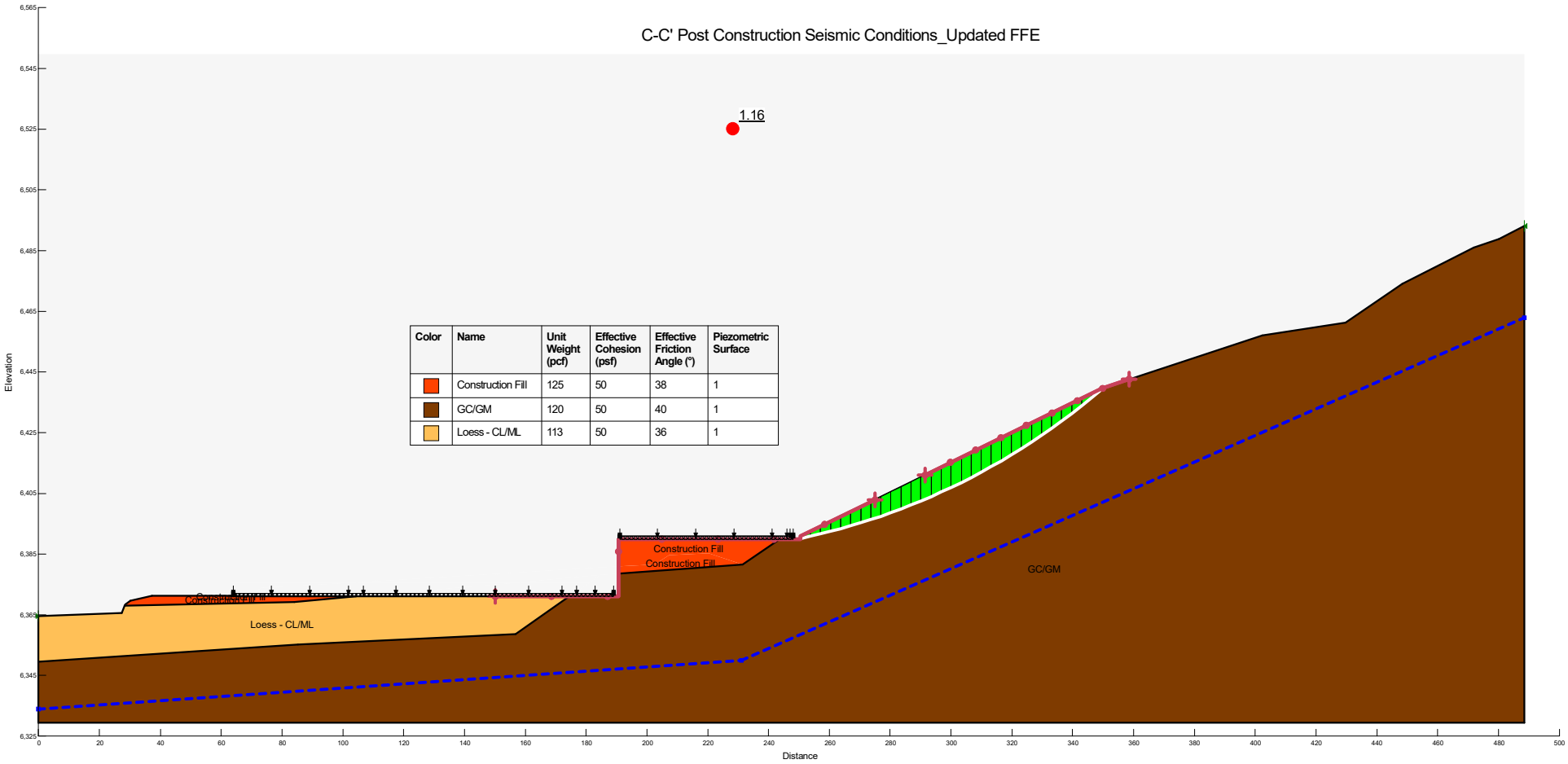


Nick Annala, E.I.
Geotechnical Design Engineer Technician

Harrison Carter, P.E.
Geotechnical Engineering Manager

Attached:
Slope Stability Models


C-C' Post Construction Conditions_Updated FFE
1.96
Color
Name
Unit Weight (pcf)
Effective Cohesion (psf)
Effective Friction Angle (°)
Piezometric Surface
Construction Fill
125
50
38
1
GC/GM
120
50
40
1
Loess - CL/ML
113
50
36
1
Construction Fill
Construction Fill
GC/GM
Loess - CL/ML
Elevation
Distance
6,565
6,545
6,525
6,505
6,485
6,465
6,445
6,425
6,405
6,385
6,365
6,345
6,325
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500


C-C' Post Construction Seismic Conditions_Updated FFE
1.16
Color
Name
Unit Weight (pcf)
Effective Cohesion (psf)
Effective Friction Angle (°)
Piezometric Surface
Construction Fill
125
50
38
1
GC/GM
120
50
40
1
Loess - CL/ML
113
50
36
1
Construction Fill
Construction Fill
Loess - CL/ML
GC/GM
Elevation
Distance
6,565
6,545
6,525
6,505
6,485
6,465
6,445
6,425
6,405
6,385
6,365
6,345
6,325
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500

JORGENSEN
GEOTECHNICAL, LLC

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

July 24, 2024

Nick Orthmann
Bear Development, LLC
4011 80th Street
Kenosha, WI 53142

RE: GEOTECHNICAL-ENGINEERING REPORT: ADDENDUM No. 1 ADDITIONAL SLOPE STABILITY ANALYSIS, SNOW KING LOOP LOTS 53, AND 58, TETON COUNTY, WYOMING
PROJECT NUMBER: 23072

Dear Mr. Orthmann

We are pleased to present this addendum to the Geotechnical-Engineering Report (Report) for the proposed development at Lots 53 and 58 on Snow King Loop in Teton County, Wyoming. The original Report for Lots 53 and 58 was prepared and issued by this office on December 28, 2023. Per Section 2.0 of the Report, the project was in the early stages of design with our understanding that architectural plans could be subject to change, and additional slope stability analysis would be performed as the design progressed.

The purpose of this addendum is to provide additional slope stability analyses based on updated finished floor elevations for the proposed structures based on plans provided by Northworks with the issue date of May 23, 2024. The original Geotechnical-Engineering Report and this addendum should not be treated as stand-alone documents but rather be saved and transmitted to all members of the project team together. The additional slope stability analysis presented in this Addendum supersedes the original slope stability analyses presented in the original Report.

Project Background
At your request, Jorgensen Geotechnical (JG) drilled seven (7) boreholes and excavated four (4) exploratory test pits for Lots 53 and 58 as part of the original geotechnical subsurface exploration. The purpose of the exploration was to bracket the proposed building locations. We identified three primary soil types at the proposed building locations: landslide debris, loess, and weathered bedrock. The landslide deposits we encountered consist of clayey gravels, lean clays, sandy gravels and exhibited chaotic deposition. Borehole data from Nelson engineering and MASW plots from Atlas Geophysics were incorporated into our subsurface characterization.

The original Report for Lots 53 and 58 recommended engineered aggregate piers (EAPs) or reinforced fills as soil improvement methods to reduce the risk of future potential settlement. It is our understanding that the design team elected to use EAPs for the proposed structures.

Slope Stability Analysis
The slope stability analyses were performed using SLOPE/W module of Geostudio. We analyzed two sets of geometry for global slope stability taken from cross sections B-B' and C-C'. All soil parameters used in this update slope stability analyses remained consistent with the original report; the only alteration to this updated slope stability model is the new finished floor elevations (i.e., external geometry). Refer to

Appendix F of the original Geotechnical Engineering Report for general methodology of the slope stability analyses including internal and external geometry, materials, phreatic surfaces, seismicity, and surcharges of each model. Table 1 presents the updated finish floor elevation for each structure based on the Northworks plans.

Table 1: Adjusted Finish Floor Elevations

Location	Finish Floor Elevation, ft
Lot 58	6419
Lot 53	6402

Results of the stability analyses are summarized in Table 2. The attached models show the output of the stability model for Cross-Section B-B' and C-C'. Preconstruction slope stability results are not presented, as those are unchanged from the original Geotechnical Engineering Report.

Table 2: Lot 53 and 58 Slope Stability Analysis Results

Cross section	Analysis	FS
B-B'	Post-construction	1.55
	Post-Construction Seismic	1.12
C-C'	Post-construction	2.66
	Post-Construction Seismic	1.80

Results

Factors of Safety (FS) with the updated finish floor elevations range from 1.55 to 2.66 in static conditions indicating FS's above the 1.5 threshold for residential construction. Post-construction seismic conditions indicate factors of safety from 1.12 to 1.80, all of which are above the 1.1 FS threshold for maximum allowable permanent seismic deformations of 2 inches (FHWA 2011).

Limitations

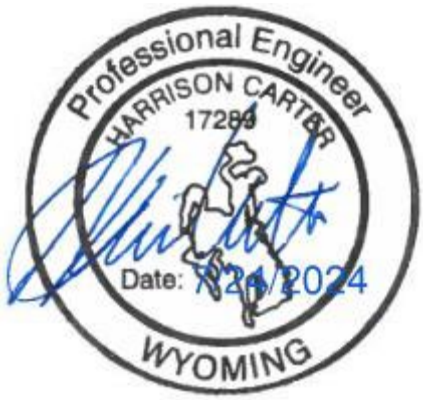
This report has been prepared based on a limited amount of data. Actual site conditions may vary. These services have been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in this area under similar conditions. No other warranty is made or implied.

If you have any questions about this letter, or if we may provide other services to you, please contact us.

Respectfully submitted,

JORGENSEN GEOTECHNICAL



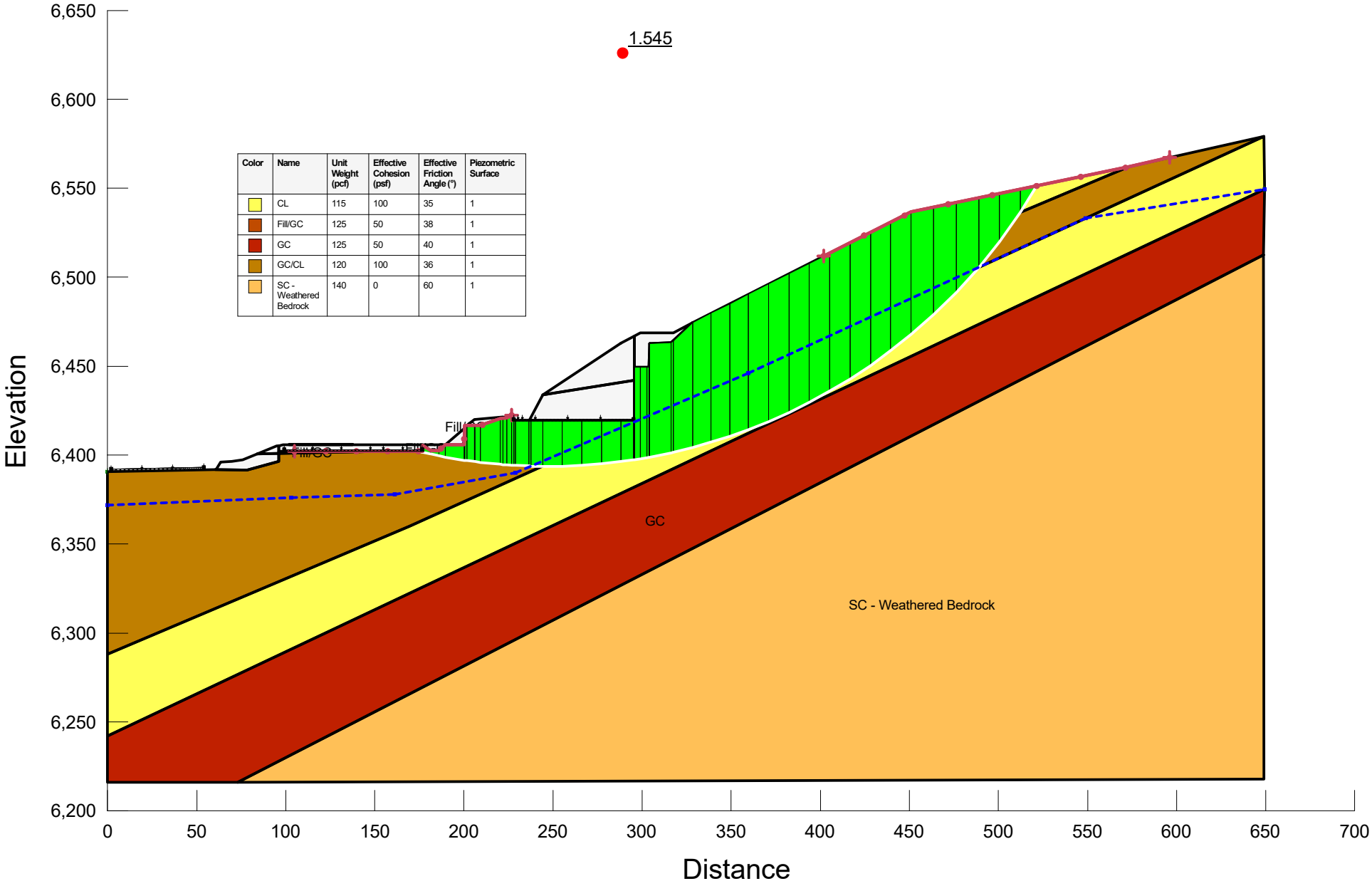


Nick Annala, E.I.
Geotechnical Design Engineer Technician

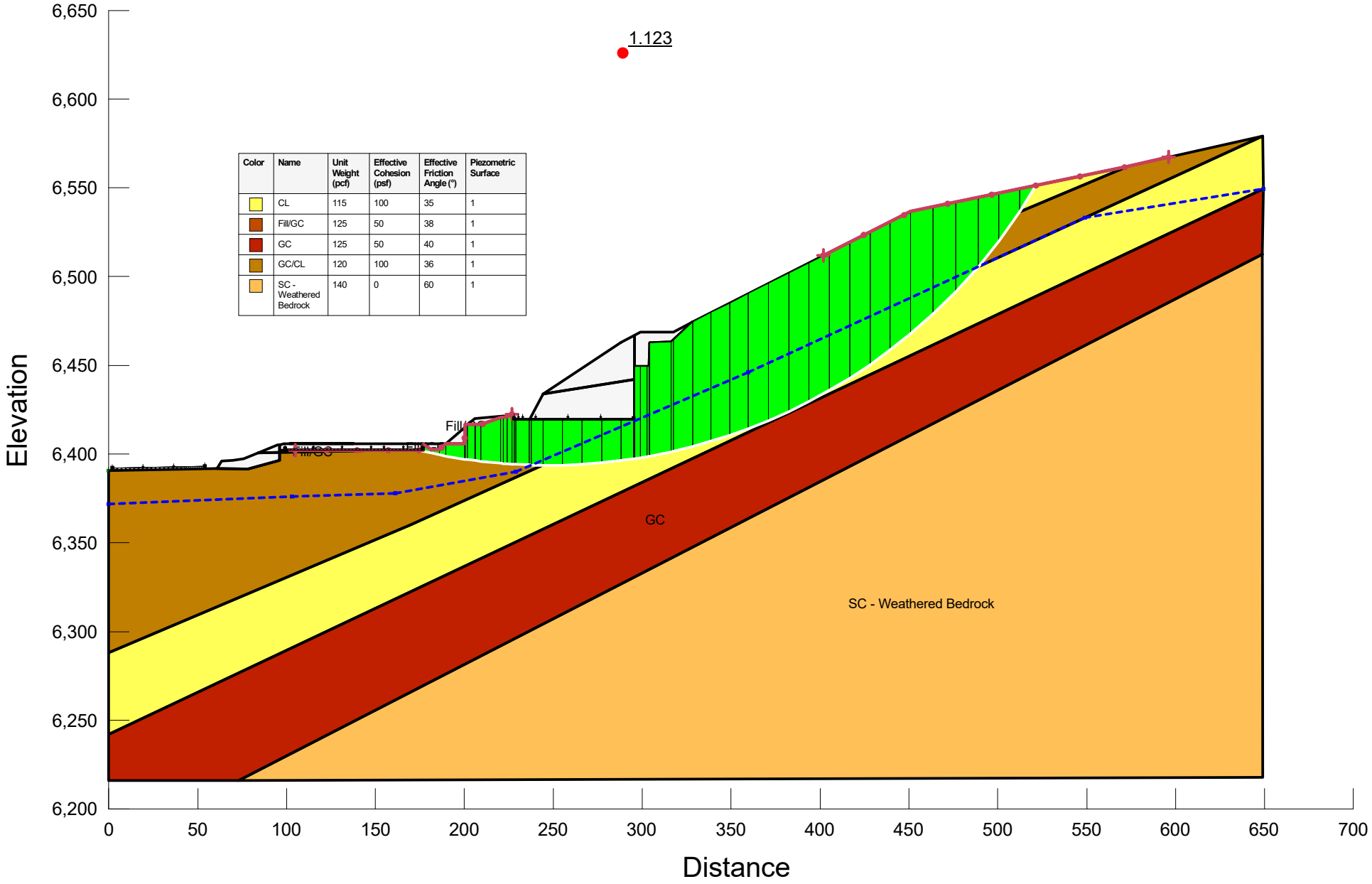
Harrison Carter, P.E.
Geotechnical Engineering Manager

Attached:
Updated Slope Stability Models

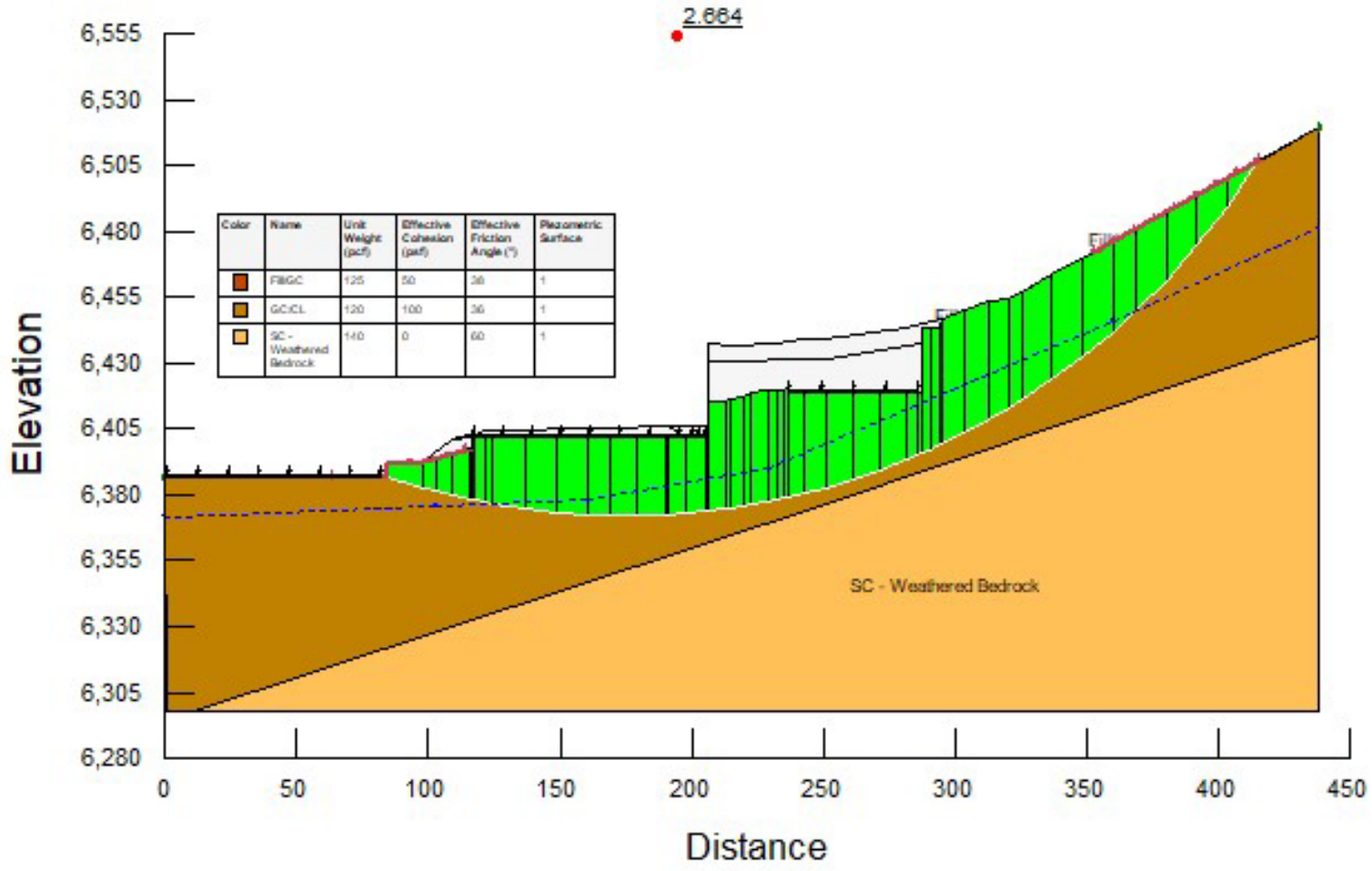
Lot 53 and 58 B-B' Proposed Conditions_Updated FFE



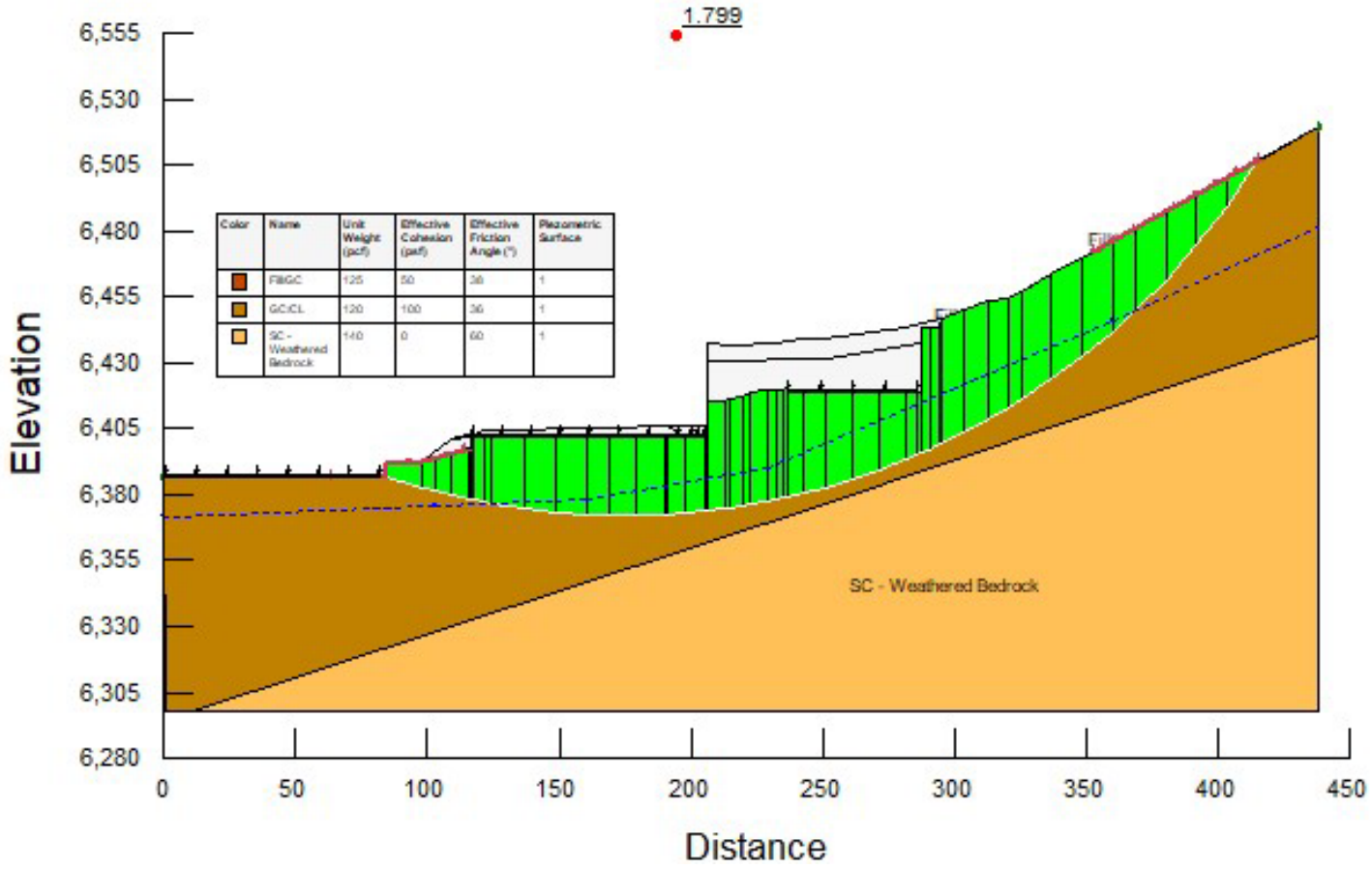
Lot 53 and 58 B-B' Proposed Seismic Conditions_Updated FFE



Lot 53 and 58 C-C' Proposed Conditions_Updated FFE



Lot 53 and 58 C-C' Proposed Seismic Conditions_Updated FFE



JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 2 YEAR

Design Storm Frequency = 2 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	18,937	0.43	0.2	1	0.2	0.2	0.09
Gravel Road	633	0.01	0.85	1	0.85	0.85	0.01
Asphalt and Concrete	495	0.01	0.95	1	0.95	0.95	0.01
Lawn, Heavy, Steep, 7%+	14,347	0.33	0.3	1	0.3	0.3	0.10
		0.00	0	1	0	0	0.00
Totals	**34412.4**	**0.79**					**0.21**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.26$

$C_{wd} \times C_f = 0.26$

$C_{wd} \times C_f \times \Sigma A_j = 0.21$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	1.07	67.62	0.22
10	0.89	112.49	0.19
15	0.73	138.39	0.15
20	0.64	161.78	0.13
30	0.5	189.58	0.10
40	0.4	202.22	0.08
50	0.34	214.86	0.07
60	0.3	227.50	0.06
70	0.29	256.57	0.06
80	0.26	262.89	0.05
90	0.24	273.00	0.05
100	0.23	290.69	0.05

Peak Flow Rate = 0.22 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 2 YEAR

Design Storm Frequency = 2 years

Discharge Rate, d = 0.22 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	0	0.00	0.08	1	0.08	0.08	0.00
Roofs	28,452	0.65	0.95	1	0.95	0.95	0.62
Asphalt and Concrete	4,308	0.10	0.95	1	0.95	0.95	0.09
Lawn, Heavy, Steep, 7%+	1,652	0.04	0.3	1	0.3	0.3	0.01
		0.00	0	1	0	0	0.00
Totals	**34412**	**0.79**					**0.73**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.92$

$C_{wd} \times C_f = 0.92$

$C_{wd} \times C_f \times \Sigma A_j = 0.73$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	1.07	234.94	67.06	167.88	0.78
10	0.89	390.83	134.12	256.71	0.65
15	0.73	480.85	201.18	279.68	0.53
20	0.64	562.09	268.23	293.86	0.46
30	0.5	658.70	402.35	256.35	0.36
40	0.4	702.62	536.47	166.15	0.29
50	0.34	746.53	670.59	75.94	0.25
60	0.3	790.44	804.70	-14.26	0.22
70	0.29	891.44	938.82	-47.38	0.21
80	0.26	913.40	1,072.94	-159.54	0.19
90	0.24	948.53	1,207.06	-258.52	0.17
100	0.23	1,010.01	1,341.17	-331.16	0.17

Water Quantity Storage Required = 294 ft^3

= 2,198 gallons

Peak Flow Rate = 0.78 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 10 YEAR

Design Storm Frequency = 10 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	18,937	0.43	0.2	1	0.2	0.2	0.09
Gravel Road	633	0.01	0.85	1	0.85	0.85	0.01
Asphalt and Concrete	495	0.01	0.95	1	0.95	0.95	0.01
Lawn, Heavy, Steep, 7%+	14,347	0.33	0.3	1	0.3	0.3	0.10
		0.00	0	1	0	0	0.00
Totals	**34412.4**	**0.79**					**0.21**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.26$

$C_{wd} \times C_f = 0.26$

$C_{wd} \times C_f \times \Sigma A_j = 0.21$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	1.8	113.75	0.38
10	1.42	179.47	0.30
15	1.19	225.60	0.25
20	1.05	265.41	0.22
30	0.83	314.71	0.17
40	0.68	343.77	0.14
50	0.57	360.21	0.12
60	0.51	386.75	0.11
70	0.47	415.82	0.10
80	0.44	444.88	0.09
90	0.4	455.00	0.08
100	0.37	467.63	0.08

Peak Flow Rate = 0.38 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 10 YEAR

Design Storm Frequency = 10 years

Discharge Rate, d = 0.38 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	0	0.00	0.08	1	0.08	0.08	0.00
Roofs	28,452	0.65	0.95	1	0.95	0.95	0.62
Gravel Road	4,308	0.10	0.85	1	0.85	0.85	0.08
Lawn, Heavy, Steep, 7%+	1,652	0.04	0.3	1	0.3	0.3	0.01
		0.00	0	1	0	0	0.00
Totals	**34412.4**	**0.79**					**0.72**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.91$

$C_{wd} \times C_f = 0.91$

$C_{wd} \times C_f \times \Sigma A_j = 0.72$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	1.8	389.84	112.81	277.03	1.29
10	1.42	615.08	225.62	389.46	1.02
15	1.19	773.18	338.43	434.75	0.85
20	1.05	909.62	451.24	458.38	0.75
30	0.83	1,078.55	676.85	401.69	0.59
40	0.68	1,178.17	902.47	275.70	0.49
50	0.57	1,234.48	1,128.09	106.39	0.41
60	0.51	1,325.44	1,353.71	-28.26	0.37
70	0.47	1,425.07	1,579.32	-154.26	0.34
80	0.44	1,524.69	1,804.94	-280.25	0.32
90	0.4	1,559.35	2,030.56	-471.21	0.29
100	0.37	1,602.66	2,256.18	-653.52	0.26

Water Quantity Storage Required = 458 ft^3

= 3,429 gallons

Peak Flow Rate = 1.29 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 100 YEAR

Design Storm Frequency = 100 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	18,937	0.43	0.2	1.25	0.25	0.25	0.11
Gravel Road	633	0.01	0.85	1.25	1.0625	1	0.01
Asphalt and Concrete	495	0.01	0.95	1.25	1.1875	1	0.01
Lawn, Heavy, Steep, 7%+	14,347	0.33	0.3	1.25	0.375	0.375	0.12
		0.00	0	1.25	0	0	0.00
Totals	**34412.4**	**0.79**					**0.26**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.26$

$C_{wd} \times C_f = 0.33$

$C_{wd} \times C_f \times \Sigma A_j = 0.26$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	3	236.98	0.78
10	2.33	368.10	0.61
15	1.9	450.26	0.50
20	1.65	521.35	0.43
30	1.3	616.14	0.34
40	1.08	682.49	0.28
50	0.95	750.43	0.25
60	0.82	777.28	0.21
70	0.74	818.36	0.19
80	0.65	821.52	0.17
90	0.61	867.34	0.16
100	0.56	884.71	0.15

Peak Flow Rate = 0.78 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 100 YEAR

Design Storm Frequency = 100 years

Discharge Rate, d = 0.78 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	0	0.00	0.08	1.25	0.1	0.1	0.00
Roofs	28,452	0.65	0.95	1.25	1.1875	1	0.65
Asphalt and Concrete	4,308	0.10	0.95	1.25	1.1875	1	0.10
Lawn, Heavy, Steep, 7%+	1,652	0.04	0.3	1.25	0.375	0.375	0.01
		0.00	0	1.25	0	0	0.00
Totals	**34412.4**	**0.79**					**0.79**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.92$

$C_{wd} \times C_f = 1.00$

$C_{wd} \times C_f \times \Sigma A_j = 0.79$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	3	716.93	235.02	481.91	2.37
10	2.33	1,113.62	470.04	643.59	1.84
15	1.9	1,362.16	705.06	657.10	1.50
20	1.65	1,577.24	940.07	637.16	1.30
30	1.3	1,864.01	1,410.11	453.89	1.03
40	1.08	2,064.74	1,880.15	184.60	0.85
50	0.95	2,270.26	2,350.19	-79.92	0.75
60	0.82	2,351.51	2,820.22	-468.71	0.65
70	0.74	2,475.78	3,290.26	-814.48	0.58
80	0.65	2,485.34	3,760.30	-1,274.96	0.51
90	0.61	2,623.95	4,230.33	-1,606.39	0.48
100	0.56	2,676.52	4,700.37	-2,023.85	0.44

Water Quantity Storage Required = 657 ft^3
= 4,915 gallons

Peak Flow Rate = 2.37 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 57

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 2 YEAR

Design Storm Frequency = 2 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	19,003	0.44	0.2	1	0.2	0.2	0.09
Gravel Road	1,561	0.04	0.85	1	0.85	0.85	0.03
Asphalt and Concrete	2,461	0.06	0.95	1	0.95	0.95	0.05
Lawn, Heavy, Steep, 7%+	13,130	0.30	0.3	1	0.3	0.3	0.09
		0.00	0	1	0	0	0.00
Totals	**36154.8**	**0.83**					**0.26**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.32$

$C_{wd} \times C_f = 0.32$

$C_{wd} \times C_f \times \Sigma A_j = 0.26$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	1.07	84.74	0.28
10	0.89	140.97	0.23
15	0.73	173.44	0.19
20	0.64	202.74	0.17
30	0.5	237.59	0.13
40	0.4	253.43	0.10
50	0.34	269.27	0.09
60	0.3	285.11	0.08
70	0.29	321.54	0.08
80	0.26	329.46	0.07
90	0.24	342.13	0.06
100	0.23	364.31	0.06

Peak Flow Rate = 0.28 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 57

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 2 YEAR

Design Storm Frequency = 2 years

Discharge Rate, d = 0.28 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	1,011	0.02	0.08	1	0.08	0.08	0.00
Roofs	19,594	0.45	0.95	1	0.95	0.95	0.43
Asphalt and Concrete	11,235	0.26	0.95	1	0.95	0.95	0.25
Lawn, Heavy, Steep, 7%+	4,315	0.10	0.3	1	0.3	0.3	0.03
		0.00	0	1	0	0	0.00
Totals	**36155**	**0.83**					**0.70**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.85$

$C_{wd} \times C_f = 0.85$

$C_{wd} \times C_f \times \Sigma A_j = 0.70$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	1.07	227.84	84.04	143.80	0.75
10	0.89	379.03	168.08	210.94	0.63
15	0.73	466.33	252.12	214.21	0.51
20	0.64	545.12	336.16	208.95	0.45
30	0.5	638.81	504.24	134.56	0.35
40	0.4	681.39	672.32	9.07	0.28
50	0.34	723.98	840.40	-116.42	0.24
60	0.3	766.57	1,008.48	-241.92	0.21
70	0.29	864.52	1,176.57	-312.05	0.20
80	0.26	885.81	1,344.65	-458.83	0.18
90	0.24	919.88	1,512.73	-592.84	0.17
100	0.23	979.50	1,680.81	-701.30	0.16

Water Quantity Storage Required = 214 ft^3

= 1,602 gallons

Peak Flow Rate = 0.75 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 57

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 10 YEAR

Design Storm Frequency = 10 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	19,003	0.44	0.2	1	0.2	0.2	0.09
Gravel Road	1,561	0.04	0.85	1	0.85	0.85	0.03
Asphalt and Concrete	2,461	0.06	0.95	1	0.95	0.95	0.05
Lawn, Heavy, Steep, 7%+	13,130	0.30	0.3	1	0.3	0.3	0.09
		0.00	0	1	0	0	0.00
Totals	**36154.8**	**0.83**					**0.26**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.32$

$C_{wd} \times C_f = 0.32$

$C_{wd} \times C_f \times \Sigma A_j = 0.26$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	1.8	142.55	0.47
10	1.42	224.92	0.37
15	1.19	282.73	0.31
20	1.05	332.63	0.27
30	0.83	394.40	0.22
40	0.68	430.83	0.18
50	0.57	451.42	0.15
60	0.51	484.69	0.13
70	0.47	521.12	0.12
80	0.44	557.55	0.12
90	0.4	570.22	0.10
100	0.37	586.06	0.10

Peak Flow Rate = 0.47 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 57

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 10 YEAR

Design Storm Frequency = 10 years

Discharge Rate, d = 0.47 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	1,011	0.02	0.08	1	0.08	0.08	0.00
Roofs	19,594	0.45	0.95	1	0.95	0.95	0.43
Gravel Road	11,235	0.26	0.85	1	0.85	0.85	0.22
Lawn, Heavy, Steep, 7%+	4,315	0.10	0.3	1	0.3	0.3	0.03
		0.00	0	1	0	0	0.00
Totals	**36154.8**	**0.83**					**0.68**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.82$

$C_{wd} \times C_f = 0.82$

$C_{wd} \times C_f \times \Sigma A_j = 0.68$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	1.8	369.24	141.38	227.86	1.22
10	1.42	582.58	282.75	299.83	0.96
15	1.19	732.33	424.13	308.20	0.81
20	1.05	861.56	565.51	296.06	0.71
30	0.83	1,021.57	848.26	173.31	0.56
40	0.68	1,115.93	1,131.01	-15.08	0.46
50	0.57	1,169.26	1,413.76	-244.50	0.39
60	0.51	1,255.42	1,696.52	-441.10	0.35
70	0.47	1,349.78	1,979.27	-629.49	0.32
80	0.44	1,444.14	2,262.02	-817.88	0.30
90	0.4	1,476.96	2,544.77	-1,067.81	0.27
100	0.37	1,517.99	2,827.53	-1,309.54	0.25

Water Quantity Storage Required = 308 ft^3
= 2,305 gallons

Peak Flow Rate = 1.22 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 57

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 100 YEAR

Design Storm Frequency = 100 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	19,003	0.44	0.2	1.25	0.25	0.25	0.11
Gravel Road	1,561	0.04	0.85	1.25	1.0625	1	0.04
Asphalt and Concrete	2,461	0.06	0.95	1.25	1.1875	1	0.06
Lawn, Heavy, Steep, 7%+	13,130	0.30	0.3	1.25	0.375	0.375	0.11
		0.00	0	1.25	0	0	0.00
Totals	**36154.8**	**0.83**					**0.33**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.32$

C_{wd} x C_f = 0.39

C_{wd} x C_f x ΣA_j = 0.33

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	3	296.99	0.98
10	2.33	461.32	0.76
15	1.9	564.28	0.62
20	1.65	653.37	0.54
30	1.3	772.17	0.43
40	1.08	855.33	0.35
50	0.95	940.46	0.31
60	0.82	974.12	0.27
70	0.74	1025.60	0.24
80	0.65	1029.56	0.21
90	0.61	1086.98	0.20
100	0.56	1108.76	0.18

Peak Flow Rate = 0.98 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 57

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 100 YEAR

Design Storm Frequency = 100 years

Discharge Rate, d = 0.98 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	1,011	0.02	0.08	1.25	0.1	0.1	0.00
Roofs	19,594	0.45	0.95	1.25	1.1875	1	0.45
Asphalt and Concrete	11,235	0.26	0.95	1.25	1.1875	1	0.26
Lawn, Heavy, Steep, 7%+	4,315	0.10	0.3	1.25	0.375	0.375	0.04
		0.00	0	1.25	0	0	0.00
Totals	**36154.8**	**0.83**					**0.83**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.85$

$C_{wd} \times C_f = 1.00$

$C_{wd} \times C_f \times \Sigma A_j = 0.83$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	3	753.23	294.53	458.69	2.49
10	2.33	1,170.01	589.07	580.94	1.93
15	1.9	1,431.13	883.60	547.53	1.58
20	1.65	1,657.10	1,178.14	478.96	1.37
30	1.3	1,958.39	1,767.20	191.18	1.08
40	1.08	2,169.29	2,356.27	-186.98	0.90
50	0.95	2,385.21	2,945.34	-560.13	0.79
60	0.82	2,470.58	3,534.41	-1,063.83	0.68
70	0.74	2,601.14	4,123.48	-1,522.34	0.61
80	0.65	2,611.18	4,712.55	-2,101.37	0.54
90	0.61	2,756.80	5,301.61	-2,544.81	0.51
100	0.56	2,812.04	5,890.68	-3,078.64	0.46

Water Quantity Storage Required = 581 ft^3

= 4,345 gallons

Peak Flow Rate = 2.49 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 2 YEAR

Design Storm Frequency = 2 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	0	0.00	0.2	1	0.2	0.2	0.00
Gravel Road	7,280	0.17	0.85	1	0.85	0.85	0.14
Asphalt and Concrete	0	0.00	0.95	1	0.95	0.95	0.00
Lawn, Heavy, Steep, 7%+	40,636	0.93	0.3	1	0.3	0.3	0.28
		0.00	0	1	0	0	0.00
Totals	**47916**	**1.10**					**0.42**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.38$

$C_{wd} \times C_f = 0.38$

$C_{wd} \times C_f \times \Sigma A_j = 0.42$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	1.07	136.56	0.45
10	0.89	227.18	0.38
15	0.73	279.51	0.31
20	0.64	326.73	0.27
30	0.5	382.89	0.21
40	0.4	408.42	0.17
50	0.34	433.94	0.14
60	0.3	459.47	0.13
70	0.29	518.18	0.12
80	0.26	530.94	0.11
90	0.24	551.36	0.10
100	0.23	587.10	0.10

Peak Flow Rate = 0.45 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 2 YEAR

Design Storm Frequency = 2 years

Discharge Rate, d = 0.45 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	0	0.00	0.08	1	0.08	0.08	0.00
Roofs	9,344	0.21	0.95	1	0.95	0.95	0.20
Asphalt and Concrete	12,857	0.30	0.95	1	0.95	0.95	0.28
Lawn, Heavy, Steep, 7%+	25,715	0.59	0.3	1	0.3	0.3	0.18
		0.00	0	1	0	0	0.00
Totals	**47916**	**1.10**					**0.66**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.60$

$C_{wd} \times C_f = 0.60$

$C_{wd} \times C_f \times \Sigma A_j = 0.66$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	1.07	214.04	135.44	78.60	0.71
10	0.89	356.07	270.87	85.20	0.59
15	0.73	438.08	406.31	31.77	0.48
20	0.64	512.10	541.74	-29.65	0.42
30	0.5	600.11	812.62	-212.50	0.33
40	0.4	640.12	1,083.49	-443.37	0.26
50	0.34	680.13	1,354.36	-674.23	0.22
60	0.3	720.14	1,625.23	-905.10	0.20
70	0.29	812.15	1,896.10	-1,083.95	0.19
80	0.26	832.16	2,166.98	-1,334.82	0.17
90	0.24	864.16	2,437.85	-1,573.69	0.16
100	0.23	920.17	2,708.72	-1,788.55	0.15

Water Quantity Storage Required = 85 ft^3

= 637 gallons

Peak Flow Rate = 0.71 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 10 YEAR

Design Storm Frequency = 10 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	0	0.00	0.2	1	0.2	0.2	0.00
Gravel Road	7,280	0.17	0.85	1	0.85	0.85	0.14
Asphalt and Concrete	0	0.00	0.95	1	0.95	0.95	0.00
Lawn, Heavy, Steep, 7%+	40,636	0.93	0.3	1	0.3	0.3	0.28
		0.00	0	1	0	0	0.00
Totals	**47916**	**1.10**					**0.42**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.38$

$C_{wd} \times C_f = 0.38$

$C_{wd} \times C_f \times \Sigma A_j = 0.42$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	1.8	229.74	0.76
10	1.42	362.47	0.60
15	1.19	455.64	0.50
20	1.05	536.05	0.44
30	0.83	635.60	0.35
40	0.68	694.31	0.29
50	0.57	727.49	0.24
60	0.51	781.10	0.22
70	0.47	839.81	0.20
80	0.44	898.52	0.19
90	0.4	918.94	0.17
100	0.37	944.47	0.16

Peak Flow Rate = 0.76 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 10 YEAR

Design Storm Frequency = 10 years

Discharge Rate, d = 0.76 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	0	0.00	0.08	1	0.08	0.08	0.00
Roofs	9,344	0.21	0.95	1	0.95	0.95	0.20
Gravel Road	12,857	0.30	0.85	1	0.85	0.85	0.25
Lawn, Heavy, Steep, 7%+	25,715	0.59	0.3	1	0.3	0.3	0.18
		0.00	0	1	0	0	0.00
Totals	**47916**	**1.10**					**0.63**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.57$

$C_{wd} \times C_f = 0.57$

$C_{wd} \times C_f \times \Sigma A_j = 0.63$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	1.8	344.00	227.84	116.16	1.14
10	1.42	542.75	455.67	87.08	0.90
15	1.19	682.26	683.51	-1.25	0.75
20	1.05	802.66	911.35	-108.69	0.66
30	0.83	951.72	1,367.02	-415.29	0.52
40	0.68	1,039.64	1,822.69	-783.06	0.43
50	0.57	1,089.32	2,278.36	-1,189.04	0.36
60	0.51	1,169.59	2,734.04	-1,564.45	0.32
70	0.47	1,257.50	3,189.71	-1,932.21	0.30
80	0.44	1,345.41	3,645.38	-2,299.97	0.28
90	0.4	1,375.99	4,101.05	-2,725.07	0.25
100	0.37	1,414.21	4,556.73	-3,142.52	0.23

Water Quantity Storage Required = 116 ft^3

= 869 gallons

Peak Flow Rate = 1.14 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
PRE-DEVELOPMENT - 100 YEAR

Design Storm Frequency = 100 years

Discharge Rate, d = 0.00 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Unimproved	0	0.00	0.2	1.25	0.25	0.25	0.00
Gravel Road	7,280	0.17	0.85	1.25	1.0625	1	0.17
Asphalt and Concrete	0	0.00	0.95	1.25	1.1875	1	0.00
Lawn, Heavy, Steep, 7%+	40,636	0.93	0.3	1.25	0.375	0.375	0.35
		0.00	0	1.25	0	0	0.00
Totals	**47916**	**1.10**					**0.53**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.38$

$C_{wd} \times C_f = 0.48$

$C_{wd} \times C_f \times \Sigma A_j = 0.53$

Time of Concentration = 5 minutes

	Water Quantity Calculations		
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Peak Flow (ft^3/sec)
5	3	478.61	1.58
10	2.33	743.45	1.23
15	1.9	909.37	1.00
20	1.65	1052.95	0.87
30	1.3	1244.40	0.69
40	1.08	1378.41	0.57
50	0.95	1515.61	0.50
60	0.82	1569.86	0.43
70	0.74	1652.82	0.39
80	0.65	1659.20	0.34
90	0.61	1751.73	0.32
100	0.56	1786.83	0.30

Peak Flow Rate = 1.58 cfs

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

SNOW KING - LOT 53

STORMWATER MANAGEMENT PLAN
RATIONAL METHOD RUNOFF CALCULATIONS
POST-DEVELOPMENT - 100 YEAR

Design Storm Frequency = 100 years

Discharge Rate, d = 1.58 cfs

Surface Type	Area A (ft^2)	Area (acres)	Runoff Coefficient C	Frequency Factor C_f	C x C_f	Calculation Value C'	C' x A (acres)
Lawn, Sandy, Flat, 2%	0	0.00	0.08	1.25	0.1	0.1	0.00
Roofs	9,344	0.21	0.95	1.25	1.1875	1	0.21
Asphalt and Concrete	12,857	0.30	0.95	1.25	1.1875	1	0.30
Lawn, Heavy, Steep, 7%+	25,715	0.59	0.3	1.25	0.375	0.375	0.22
		0.00	0	1.25	0	0	0.00
Totals	**47916**	**1.10**					**0.83**

Weighted Runoff Coefficient, $C_{wd} = \frac{\Sigma C_i A_j}{\Sigma A_j} = 0.60$

$C_{wd} \times C_f = 0.75$

$C_{wd} \times C_f \times \Sigma A_j = 0.83$

Time of Concentration = 5 minutes

	Water Quantity Calculations				
Rainfall Duration, t (min)	Rainfall Intensity, i (in/hr)	Runoff Volume (ft^3)	Discharge Volume (ft^3)	Site Detention (ft^3)	Peak Flow (ft^3/sec)
5	3	750.14	474.66	275.48	2.48
10	2.33	1,165.22	949.32	215.90	1.93
15	1.9	1,425.27	1,423.98	1.29	1.57
20	1.65	1,650.31	1,898.64	-248.32	1.36
30	1.3	1,950.37	2,847.95	-897.59	1.07
40	1.08	2,160.41	3,797.27	-1,636.86	0.89
50	0.95	2,375.45	4,746.59	-2,371.14	0.79
60	0.82	2,460.47	5,695.91	-3,235.44	0.68
70	0.74	2,590.49	6,645.23	-4,054.74	0.61
80	0.65	2,600.49	7,594.55	-4,994.05	0.54
90	0.61	2,745.52	8,543.86	-5,798.34	0.50
100	0.56	2,800.53	9,493.18	-6,692.65	0.46

Water Quantity Storage Required = 275 ft^3

= 2,061 gallons

Peak Flow Rate = 2.48 cfs

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

BY: SS
Date: 2024-06-28

Average Day Occupancy Rate [1]	50%
Max Day Factor [1], MDF	2.72
Peak Hour Factor [2], PHF	4

WATER DEMAND							
a				b	c=a*b	d=MDF*c	e=d/1440 * PHF
Unit Type			No. of Units	Average gpd/unit	Average TOTAL, gpd	Maximum TOTAL, gpd	PEAK HOUR, gpm
Lot 53							
Affordable	1	Bedroom	3	125	375	1020	2.8
Condo	2	Bedroom	17	125	4250	11560	32.1
Affordable	2	Bedroom	5	125	1250	3400	9.4
Condo	3	Bedroom	8	125	3000	8160	22.7
Affordable	3	Bedroom	1	125	375	1020	2.8
Condo	4	Bedroom	0	125	0	0	0.0
Subtotal Domestic Water Demand					9250	25160	69.9
Lot 58							
Condo	1	Bedroom	0	125	0	0	0.0
Condo	2	Bedroom	7	125	1750	4760	13.2
Condo	3	Bedroom	5	125	1875	5100	14.2
Condo	4	Bedroom	0	125	0	0	0.0
Subtotal Domestic Water Demand					3625	9860	27.4
Lot 57 North							
Condo	1	Bedroom	0	125	0	0	0.0
Condo	2	Bedroom	12	125	3000	8160	22.7
Condo	3	Bedroom	0	125	0	0	0.0
Condo	4	Bedroom	0	125	0	0	0.0
Subtotal Domestic Water Demand					3000	8160	22.7
Lot 57 South							
Condo	1	Bedroom	2	125	250	680	1.9
Condo	2	Bedroom	5	125	1250	3400	9.4
Condo	3	Bedroom	5	125	1875	5100	14.2
Condo	4	Bedroom	2	125	1000	2720	7.6
Subtotal Domestic Water Demand					4375	11900	33.1
Total Domestic Water Demand					20,250	55,080	153.0

FIRE SUPPRESSION						
Total Building Size	Building Type	Required Pressure [4]	Required Duration [4]	Total Fire Flow [4]	Sprinkler Reduction [5]	Adjusted Fire Flow [5]
(SF)	(IBC)	(psi)	(hours)	(gpm)	(%)	(gpm)
Lot 53						

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

78,992	IIB	20	4	6000	75%	1500
Lot 58						
35,103	IIB	20	4	4000	75%	1000
Lot 57 North						
30,941	IIB	20	3	3750	75%	1000
Lot 57 South						
37,490	IIB	20	4	4000	75%	1000

Note:

[1] Based on daily rates from the WYDEQ CH 12, Section 8

[2] Peak Hour Factor based on busiest hour occuring during the busiest quarter of the day.

[3] IFC - Appendix B, Table B105.1, Type II-B

[4] IFC - Appendix B, Section B105.2, 75% reduction for automatic sprinkler systems, minimum 1500 gpm

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

BY: SS
Date: 2024-07-20

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**
Lot 53					
Affordable 1 Bedroom	3	Lavatory Sink	1	1.5	5
		Shower	1	2.5	8
		Bath Tub	1	8	24
		Toilet	1	6	18
		Kitchen Sink	1	1.8	5
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	9
		Utility Sink	0	4	0
Condo 2 Bedroom	17	Lavatory Sink	3	1.5	77
		Shower	1	2.5	43
		Bath Tub	1	8	136
		Toilet	2	6	204
		Kitchen Sink	1	1.8	31
		Dishwasher	1	1.3	22
		Laundry (washer)	1	3	51
		Utility Sink	0	4	0
Additional Sinks		Lavatory Sink	12	1.5	18
Additional Toilets		Toilet	5	6	30
Affordable 2 Bedroom	5	Lavatory Sink	2	1.5	15
		Shower	1	2.5	13
		Bath Tub	1	8	40
		Toilet	2	6	60
		Kitchen Sink	1	1.8	9
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	15
		Utility Sink	0	4	0
Condo 3 Bedroom	8	Lavatory Sink	5	1.5	60
		Shower	3	2.5	60
		Bath Tub	1	8	64
		Toilet	3	6	144
		Kitchen Sink	1	1.8	14
		Dishwasher	1	1.3	10
		Laundry (washer)	1	3	24
		Utility Sink	0	4	0
Affordable 3 Bedroom	1	Lavatory Sink	1	1.5	2
		Bath Tub	1	8	8
		Shower	1	2.5	3

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**
		Toilet	1	6	6
		Kitchen Sink	1	1.8	2
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	3
		Utility Sink	0	4	0
Lot 58					
Condo 2 Bedroom	7	Lavatory Sink	3	1.5	32
		Shower	1	2.5	18
		Bath Tub	1	8	56
		Toilet	2	6	84
		Kitchen Sink	1	1.8	13
		Dishwasher	1	1.3	9
		Laundry (washer)	1	3	21
		Utility Sink	0	4	0
Condo 3 Bedroom	5	Lavatory Sink	5	1.5	38
		Shower	3	2.5	38
		Bath Tub	1	8	40
		Toilet	3	6	90
		Kitchen Sink	1	1.8	9
		Dishwasher	1	1.3	7
		Laundry (washer)	1	3	15
		Utility Sink	0	4	0
Lot 57					
Affordable 1 Bedroom	2	Lavatory Sink	1	1.5	3
		Shower	1	2.5	5
		Bath Tub	1	8	16
		Toilet	1	6	12
		Kitchen Sink	1	1.8	4
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	6
		Utility Sink	0	4	0
Condo 2 Bedroom	17	Lavatory Sink	3	1.5	77
		Shower	1	2.5	43
		Bath Tub	1	8	136
		Toilet	2	6	204
		Kitchen Sink	1	1.8	31
		Dishwasher	1	1.3	22
		Laundry (washer)	1	3	51
		Utility Sink	0	4	0
Additional Sinks		Lavatory Sink	3	1.5	5
Affordable 3 Bedroom	1	Lavatory Sink	2	1.5	3

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

WATER DEMAND - M22 FIXTURE CALCULATION					
Unit Type	**No. of Units**	**Fixture**	**Fixtures per Unit[2]**	**Fixture Value[1]**	**Fixture Value**
		Shower	2	2.5	5
		Bath Tub	1	8	8
		Toilet	2	6	12
		Kitchen Sink	1	1.8	2
		Dishwasher	0	1.3	0
		Laundry (washer)	1	3	3
		Utility Sink	0	4	0
Condo 3 Bedroom	4	Lavatory Sink	3	1.5	18
		Shower	2	2.5	20
		Bath Tub	1	8	32
		Toilet	2	6	48
		Kitchen Sink	1	1.8	7
		Dishwasher	1	1.3	5
		Laundry (washer)	1	3	12
		Utility Sink	0	4	0
Condo 4 Bedroom	2	Lavatory Sink	6	1.5	18
		Shower	3	2.5	15
		Bath Tub	1	8	16
		Toilet	3	6	36
		Kitchen Sink	1	1.8	4
		Dishwasher	1	1.3	3
		Laundry (washer)	1	3	6
		Utility Sink	0	4	0

TOTAL FIXTURE VALUE	2,583
Probable Water Flow Demand (AWWA M22 - Figure 4-3)	75
Design Pressure Adjustment Factor (AWWA M22 - 60 psi)	1.00
Adjusted Probable Demand (gpm)[3]	**75**

Note:

[1] Fixture Value based on AWWA M22

[2] Fixture count based 2024.07.02 program

[3] Domestic use only, no irrigation

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Attachment D: Water System Evaluation

The existing Snow King Resort Public Water System consists of a duplex booster pump located in the garage of Love Ridge Condominium Building 48, at 6,372 feet, a 1,160LF long, 8" diameter water supply line running uphill to a 110,000 gallon storage tank south/above at roughly 6,600 feet.

System Configuration

The following information was drawn from the Grand View Lodges – Phase B Wyoming DEQ Permit to Construct.

Static Headloss:

Water surface elevation in tank, full:

Tank Floor Elevation:	6583.0'
Depth to shutoff:	+ 13.0'
	6596.0'

	6596.0'
Booster Station Elevation:	- 6,372.0'
	224.0'

Friction Loss:

Fittings	Number of Fittings
8" Diameter Gate Valve	3
8" Diameter Tee; flow through	5
8" Diameter Tee; branch flow	1
8" Diameter 90° Bend	2
8" Diameter 45° Bend	6
8" Diameter 22.5° Bend	2
8" Diameter 11.25° Bend	2

Minor Head Loss; calculated for various flow scenarios

$$H_m = \frac{K*V^2}{2*g}$$

Flowrate	136 gpm	272 gpm	1,000 gpm	1,190.6 gpm
Minor Losses	0.05 ft-H_2O	0.19 ft-H_2O	2.59 ft-H_2O	3.67 ft-H_2O

Pipe

1,160 LF of 8" Diameter CL-350 Ductile Iron Pipe, Cement Lined

C coefficient	140.0
Inside Diameter	8.43"

Major Head Loss; calculated for various flow scenarios using Flowmaster

Flowrate	136 gpm	272 gpm	1,000 gpm	1,190.6 gpm
Major Losses	0.36' ft-H_2O	1.28 ft-H_2O	14.32 ft-H_2O	19.78 ft-H_2O

System Total Head Loss

Flowrate	136 gpm	272 gpm	1,000 gpm	1,190.6 gpm
Head	224.41' ft-H_2O	225.47 ft-H_2O	240.91 ft-H_2O	247.45 ft-H_2O

Water Available

Storage Tank

The tank provides 110,000 gallons of water storage

Pumped

Using 272 gpm flow scenario, for both pumps operating simultaneously

System Total Head: 45psi = 225.47 ft-H_2O

Pump Intake Head: - 103.83 ft-H_2O

121.64 ft-H_2O → 60.82 ft-H_2O per stage

National Pump M6HC Pump Curve used, 2-stage, 4.400 impeller configuration

Pump flowrate, Q = 155 gpm

System Demands

Existing Demands

Existing Love Ridge Condominiums Water Demand				
	Units No. of Units	Average TOTAL, gpd	Maximum TOTAL, gpd	Peak Hour gpm
Condos	20	10,944	27,072	37.6

Proposed Demands

Domestic Water Demand				
Lot	Units No. of Units	Average TOTAL, gpd	Maximum TOTAL, gpd	Peak Hour gpm
Lot 53	34	9,250	25,160	69.9
Lot 58	12	3,625	9,860	27.4
Lot 57	26	7,375	20,060	55.7
Total	**72**	**20,250**	**55,080**	**153.0**

Fire Flow

Combined fire sprinkler and hydrant flow: 1,000 gpm for 2 hours

System Capacity Analysis

Fire Flow Event: 2-hour duration

Water Supply

Storage Tank; at pump on level, assuming 5,000-gallon operating range between pump on and pump off level

105,000 gallons

Pumped; both booster pumps operating

Pump 1, starts at beginning of fire flow event

$$155\ gpm * 120\ minutes = 18{,}600\ gallons$$

Pump 2, starts when lag pump on level is reached in the tank. Assuming 5,000 gallons to lag pump on, this takes 4 minutes at fire flows

$$155\ gpm * 116\ minutes = 17{,}980\ gallons$$

Total volume of water available: $105{,}000 + 18{,}600 + 17{,}980 = \mathbf{141{,}580\ gallons}$

Water Demands

Existing Domestic Demands

Peak Hour: $37.6\ gpm * 60\ minutes = 2{,}256\ gallons$

Typical hour of maximum day: $27{,}072\ gpd \Big/ 24\ \frac{hours}{day} = 1{,}128\ gallons$

$$2{,}256 + 1{,}128 = 3{,}384\ gallons$$

Proposed Domestic Demands

Peak Hour: $153.0\ gpm * 60\ minutes = 9{,}198\ gallons$

Typical hour of maximum day: $55{,}080\ gpd \Big/ 24\ \frac{hours}{day} = 2{,}295\ gallons$

$$9{,}198 + 2{,}295 = 11{,}493\ gallons$$

Fire Flow, sprinklers and hydrants: $1{,}000\ gpm * 120\ minutes = 120{,}000\ gallons$

Total volume of water demanded: $3{,}384 + 11{,}493 + 120{,}000 = \mathbf{134{,}877\ gallons}$

Total volume of water available exceeds total volume of water demanded

JORGENSEN ASSOCIATES, PC
PO Box 9550
Jackson, WY 83002
307.733.5150

BY: SS
Date: 2024-07-09

Average Daily Flow	60%
Peak Hour Factor	4

SANITARY SEWER DEMAND						
Unit Type			No. of Units[2]	Max Flow per Bedroom, gpd[1]	Average TOTAL, gpd	Maximum TOTAL, gpd	PEAK HOUR, gpm
Lot 53							
Condo	1	Bedroom	3	150	270	450	1.3
Condo	2	Bedroom	20	150	3600	6000	16.7
Condo	3	Bedroom	11	150	2970	4950	13.8
Condo	4	Bedroom	0	150	0	0	0.0
SUBTOTAL SANITARY SEWER DEMAND					6840	11400	31.7
Lot 58							
Condo	1	Bedroom	0	150	0	0	0.0
Condo	2	Bedroom	6	150	1080	1800	5.0
Condo	3	Bedroom	6	150	1620	2700	7.5
Condo	4	Bedroom	0	150	0	0	0.0
SUBTOTAL SANITARY SEWER DEMAND					2700	4500	12.5
Lot 57 North							
Condo	1	Bedroom	0	150	0	0	0.0
Condo	2	Bedroom	12	150	2160	3600	10.0
Condo	3	Bedroom	0	150	0	0	0.0
Condo	4	Bedroom	0	150	0	0	0.0
SUBTOTAL SANITARY SEWER DEMAND					2160	3600	10.0
Lot 57 South							
Condo	1	Bedroom	2	150	180	300	0.8
Condo	2	Bedroom	5	150	900	1500	4.2
Condo	3	Bedroom	5	150	1350	2250	6.3
Condo	4	Bedroom	2	150	720	1200	3.3
SUBTOTAL SANITARY SEWER DEMAND					3150	5250	14.6
TOTAL SANITARY SEWER DEMAND					14,850	24,750	69

Notes:

[1] *Based on daily flow rates from the WYDEQ CH 11, Part B, Table 1*

[2] *Bedroom count shown based on Development Plan Review, 10.25.2019*

JORGENSEN

PO Box 9550 | 1315 HWY 89 S., Ste. 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

Attachment F: Snow King Resort Master Plan Water, Sewer, Traffic Analysis Assumptions

The Snow King Resort Master Plan evaluated impacts of development of the Master Plan area on the Town of Jackson infrastructure. Assumptions about the nature of future development were made to do these impact studies. For this Development Plan, we have broken out the assumed impacts that apply to Sub-area 3 based on the Example Development Table with the goal of ensuring the total impact of development in the sub-area is less than or equal to what was analyzed and approved in the Master Plan approval process.

The following assumed land uses for Sub-area 3, from the Example Development Table were used:
Condominium Units: 150
Hotel Rooms: 50

Traffic Impact

The traffic impacts allocated to Sub-area 3 in the Master Plan analysis are found by using the projected trip generation rates given in Table C-5 of the Master Plan.
Condo Units: 10.2 trips/unit/day
Hotel Rooms: 8.0 trips/room/day

This yields a traffic generation allocation, for sub-area 3 of:

Condominiums: $150\ units * 8.0\ \frac{trips/_{unit}}{day} = 1{,}200\ \frac{trips}{day}$

Hotel Rooms: $50\ rooms * 10.2\ \frac{trips/_{unit}}{day} = 510\ \frac{trips}{day}$

Total: $\mathbf{1710\ \frac{trips}{day}}$

Sanitary Sewer Generation

The sanitary sewer generation allocated to Sub-area 3 in the Master Plan analysis are found by using the projected maximum day sanitary sewer generation rates given in Section IX.C.4 of the Master Plan. The *Proposed Master Plan Flow Potential-2000* are:
Condominiums: 450 gpd/condominium
Hotel Units: 225 gpd/room

This yields a wastewater generation allocation, for sub-area 3 of:

Condominiums: $150\ units * 450\ \frac{gpd}{condominum} = 67{,}500\ gpd$

Hotel Units: $50\ rooms * 225\ \frac{gpd}{room} = 11{,}250\ gpd$

Total: $\boldsymbol{Maximum\ Day: 78{,}750\ gpd}$

$$\boldsymbol{Average\ Day = \frac{Maximum\ Day}{2} = 39{,}375\ gpd}$$

Water Demand

The water demand allocated to Sub-area 3 in the Master Plan analysis are found by using the projected domestic demand given in Section IX.B of the Master Plan. The Master Plan assumed that peak demand for domestic flow was double the maximum day wastewater generation rate. This yields:

Condominiums: 700 gpd/condominium
Hotel Units: 450 gpd/room

This yields a wastewater generation allocation, for sub-area 3 of:

Condominiums: $150\ units * 700 \frac{gpd}{condominum} = 105{,}000\ gpd$

Hotel Units: $50\ rooms * 450 \frac{gpd}{room} = 22{,}500\ gpd$

Total: $\boldsymbol{Maximum\ Day: 127{,}500\ gpd}$

Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

April 8, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Dept.
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

We understand that the Town is evaluating a modified proposal by Bear Development, LLC, to build a multi-unit condominium complex adjacent to the Grand View Condominiums in the Snow King Resort District.

We own unit 483, on the west-facing, top floor of Grand View Building 548. Lot 57 of the proposed development surrounds the west and south sides of Building 548.

We echo the concerns expressed by the Grand View Homeowners' Association, repeat the concerns we stated in our February 20, 2025 letter, and add points specific to the revised plans for Lot 57.

Lot 57's proposed structures are too large and too close to Grand View 548.

- The revised concept for Lot 57 is still not in compliance with the Snow King Master Plan's requirement that new buildings be compatible in bulk, scale and character with Grand View.
- The new plan maximizes sellable square footage on Lot 57 at the expense of the open, bright and understated current setting. Bear proposes two massive, modern structures that would dwarf the single structure previously approved by SKRMA and the Town by reference to footprint, height and proximity to Grand View.
- Prior to purchasing unit 483, we reviewed the approved plans for Lot 57 and took comfort in the expectation of scale-consistent development next door. (*See our February 20, 2025 submission for further reference.*)

- If the two-building concept is approved with the clearances proposed by Bear, the space between Grand View and the new structures will be a close, pedestrian unfriendly and potentially unsafe corridor.

    - Bear's own depictions underscore the lack of harmony with existing buildings and road clearances. For example, roof-to-roof clearance between Grand View 548 and the Love Ridge building downhill is nearly **53 feet**. This distance preserves space, privacy, light, sight lines, median space and clearance for Snow King Loop Road. (*Revised Plan "RP" p. 85.*)

    - Compared to existing structures separated by Snow King Loop Road, clearance between buildings would shrink by as much as 10 feet under Bear's revised plans. Bear envisions roof-to-roof clearance of just **43 feet** between Grand View 548 and the Lot 57 North building, and just **50 feet** between Grand View 548 and the South building, with Upper Snow King Loop Road passing in between. (*RP pp. 85.*) The combined effect will be a sense of increasing constriction as you turn uphill towards Lots 53 and 58. (*RP p. 72.*) The depictions submitted by Bear of this junction omit Grand View 548 to give an artificial sense of space and brightness in this space. (*RP pp. 73-74.*)

    - Separation between Grand View 548 and Lot 57 South could well be less than 50 feet, as the balconies of the new condos appear to extend beyond the building's roofline towards our patios, again impacting relative scale, privacy, light and sound. (*Compare RP pp. 75, 86.*)

    - Bear chose to eliminate sidewalks rather than compromise on square footage. (*RP p. 6.*) Two large buildings do not fit naturally with Lot 57's unusual shape or meet the Master Plan's requirement for harmony with Grand View. Bear celebrates the loss of sidewalks as win for plantings and visual screening, but it is more accurately a result of designing the largest possible structure to the limits of the property line in a constrained space. The Town should closely scrutinize whether the proximity of Lot 57's structures to Grand View is consistent with the Master Plan's mandates to "encourage pedestrian activity," "reduce mass to better align with neighboring structures," and ensure safe ingress and egress.

    - Despite roof line adjustments in the revised plan, Lot 57's South building will be at least **19 feet taller** than Grand View 548, a spatial misalignment that

will be made more obvious by the inadequate horizontal separation discussed above.

- Some of Bear's depictions of Lot 57 plans are incomplete and misleading.

  - Bear produced many renditions showing Lot 57's structures in relation to Grand View, yet not one shows the west-facing perspective down Upper Snow King Loop Road (i.e., between Grand View 548 and Lot 57 South). The Grand View HOA submitted its own rendering of this corridor to emphasize what Bear wants to downplay: the bottleneck and spatial (horizontal and vertical) mismatch that will result by allowing the proposed construction to the lot lines on the south arm of Lot 57 less than 50 feet away from Grand View neighbors' patios.

  - Even without an honest rendering of this tight east-west corridor, aerial images on pages 8, 14 and 62 of the Revised Plan show the horizontal scale disparity between Lot 57 South and Grand View – a disharmony that runs afoul of the Master Plan.

  - The image on page 73 of the Revised Plan is skewed to ignore Grand View, giving an artificial impression of space, light and access. The actual layout would be much tighter, at just 43-50 feet separation according to Bear's own renditions.

The Town should reject the proposed development on Lot 57 outright, or at a minimum disallow the outsized structure on Lot 57's South arm and require more horizontal clearance between Lot 57's North structure and Grand View 548.

Thank you for considering our position.

Respectfully,

Kyle Levine

Kyle B. Levine
for Blanche Neige LLC

Robert P. Warren
550 Snow King Loop, Apt 504
Jackson, Wy 83001

April 8, 2025

Mr. Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

As a resident of Jackson and an owner of a Grand View Condominium, I want to reiterate my vigorous opposition to the resubmitted application and plans of Bear Development, LLC, a Wisconsin developer (the "Applicant") for Snow King Condominiums, Lots 53, 57 and 58 (the "Plans"). The applicant's newly submitted plans are at sum an obvious transparent attempt to deliberately mislead the Planning and Town Council both by its "revisions" and proffered drawings.

To be specific, as an owner in Grand View Building 550, I again strenuously object to the bulk and scale of Lot 53's proposed building which will tower over my condominium. There is nothing in the Applicant's revised Plans which addresses the fact that as proposed the Lot 53 Building will meaningfully dwarf Grand View building 550. Its "new" Plans simply fail to reduce in any respect the size of the building on Lot 53 – obviously a misguided assessment that it could simply just muscle the Plans through municipal examination by indulging in the misguided presumption that it would not be serious scrutinized.

What brings the Applicant's greed and sleight of hand into clear focus is the way it yet again presents the visible depictions of its Plans. By grossly distorting the size of these buildings in its pictural renditions, the Applicant tacitly acknowledges that it does not want the town to recognize how outsized they are. There is no other reason to misrepresent the size and structure of the

proposed development other than to believe that no one will carefully probe their Plans.

Among other things, the applicant is in direct violation of the Snow King Master Plan in that the Applicant did not provide for any vegetation between their buildings and the sidewalks. To meet the Master Plan's requirement of having room for vegetation next to their building, the Applicant's apparent solution is to now simply eliminate the sidewalks. Pedestrians, therefore, walking up from the hotel or parking to visit one of the 72 condominiums, will need to walk in the road!

Moreover, by its size alone, the Lot 53 building will create a sunless valley between it and my unit. Without a doubt, the Lot 53 building violates the bulk, scale and character of Grand View's master plan upon which I relied when I first purchased my condominium.

Unfortunately, Applicant is an out of state developer with little regard for our community which is evidenced by its total lack of appreciation of how its Plans will impact Jackson and the surrounding Snow King condominium environment. It is abundantly clear from the size and scope of its Plans that the Applicant is merely concerned about how many apartment units, buildings, occupants and vehicles it can pack into Lots 53, 57 and 58.

It is extremely obvious as well that the Applicant's sole objective is simply to make as much money as possible -- to get the largest possible return on its investment -- with utterly no regard for the town of Jackson's surrounding communities, its natural beauty and the substantially increased strain it will place on our municipal services and infrastructure.

Also, the Plans place a huge increasing revenue burden on the citizens of Jackson with an inevitably expanding demand for municipal services like water, sewage, electrical service and traffic control. Also, it is certainly foreseeable that if this proposed project ever caught fire either internally or because of a forest fire, such an out-of-control conflagration would certainly engulf not only the surrounding condominiums, but also the houses and subdivisions below and others close to town – especially if driven by strong winds.

And, if anyone thinks that East and West Snow King Road and US 191 are parking lots between the hours of 3:30 pm and 6:00 pm, then this Plan with all its residents and vehicles, will make these roads at times simply impassable for Jackson residents -- especially those living on either side of these roadways which for many is their only way out.

The Grand View Condominium Association has submitted a letter objection to significant aspects of the Plans and has addressed the Applicant's failure to comply with the requirements of the Snow King Planned Resort District Master Plan. Plainly stated, the Plans are noncompliant with the overall Master Plan and are certainly not in the best interest of the Jackson community.

I again respectfully ask the Town of Jackson to reject the revised proposed Plans outright. We as residents should not aid and abet Applicant's outright greed and allow our town to be despoiled by outsiders who want to forever change the character of our community while lining their own pockets and then simply moving on without looking back! The Snow King Resort District Master Plan must be adhered to and respected.

Thank you for your consideration.

Submitted By,

Robert Warren

Robert P. Warren
550 Snow King Loop, Apt 504
Jackson, Wy 83001

February 19, 2025

Mr. Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

As a resident of Jackson and an owner of a Grand View Condominium, I stand in vigorous opposition to the application and plans of Bear Development, LLC, a Wisconsin developer (the "Applicant") for Snow King Condominiums, Lots 53, 57 and 58 (the "Plans").

To be specific, as an owner in Grand View Building 550, I strenuously object to the bulk and scale of Lot 53's proposed building which will tower over my condominium. As currently proposed, the Lot 53 Building will be more than twice the size of Building 550. Moreover, by its size alone, the Lot 53 building will create a sun less valley between it and my unit as well as seriously impinging upon my pedestrian walkway. Finally, the Lot 53 building violates the bulk, scale and character of Grand View's master plan upon which I relied when I first purchased my condominium.

Unfortunately, Applicant is an out of state developer with little regard for our community which is evidenced by its total lack of appreciation of how its Plans will impact Jackson and the surrounding Snow King condominium environment. It is abundantly clear from the size and scope of its Plans that

the Applicant is merely concerned about how many apartment units, buildings, occupants and vehicles it can pack into Lots 53, 57 and 58.

The Applicant's sole objective is simply to make as much money as possible -- to get the largest possible return on its investment -- with utterly no regard for the town of Jackson's surrounding communities, its natural beauty and the substantially increased strain it will place on our municipal services.

What brings the Applicant's greed and sleight of hand into clear focus is the way it presents the visible depictions of its Plans. By grossly distorting their size in its pictural renditions, the Applicant tacitly acknowledges that it does not want the town to recognize how outsized buildings are. There is no other reason to misrepresent the size and structure of the proposed development other than to believe that no one will carefully probe their Plans.

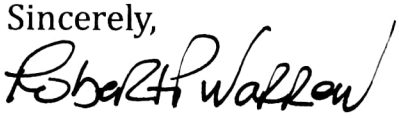
Also, the Plans place a huge increasing revenue burden on the citizens of Jackson with an inevitably expanding demand for municipal services like water, sewage, electrical service and traffic control. Also, it is certainly foreseeable that if this proposed project caught fire either internally or because of a forest fire, such an out-of-control fire would certainly engulf not only the surrounding condominiums, but also the houses and subdivisions below and others close to town – especially if driven by strong winds.

And, if anyone thinks that East and West Snow King Road and US 191 are parking lots between the hours of 3:30 pm and 6:00 pm, then this Plan with all its residents and vehicles, will make these roads at times simply impassable for Jackson residents -- especially those living on either side of these roadways which for many is their only way out.

The Grand View Condominium Association has submitted a letter objection to significant aspects of the Plans and has addressed the Applicant's failure to comply with the requirements of the Snow King Planned Resort District Master Plan. Plainly stated, the Plans are noncompliant with the overall Master Plan and are certainly not in the best interests of the Jackson community.

I respectfully ask the Town of Jackson reject the proposed Plans outright. We as residents should not aid and abet Applicant's outright greed and allow our town to be despoiled by outsiders who want to forever change the character of our community while lining their own pockets and then simply moving on without looking back! Thank you for your consideration.

Sincerely,



Robert P. Warren

From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: Palmers Email the Town Council
Date: Monday, May 26, 2025 6:06:50 AM

Email the Town Council

Email Content:	My wife and I put a substantial amount of our net worth at risk when we purchased Grand View Condo 494 in August of 2020. We decided on that condo because we did our due diligence and reviewed the plans for Lot 57 at Snow King Resort which would prevent unreasonable buildings to be built that were not in bulk, scale, and character with Grand View. This protected our investment and maybe just as importantly, the character of what one would expect in a resort in the historic town of Jackson which I have spent much time in for over 50 years. Now we are seeing that everything that is being requested to be approved for Lot 57 violates everything we read and saw in the Master Plan. When I saw the plan for Lot 57, I was horrified. I thought, “How in the world could this be approved when a reasonable person would not even entertain the thought of having a building that does not meet the specific requirements stated in the Master Plan?” This is a massive building, and in no way, shape or form complies with the Master Plan. I thought one of the reasons that we have a Master Plan was to prevent this very thing from happening. The plan says that any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View. That word “must” is very clear. Of course it requires someone’s judgement to approve or disapprove. To me, this judgement call is as clear as day. How can we say with a straight face that a building that is twice as high as the back of Grand View 548, has nearly four times the number of units, has a footprint that allows no setbacks from property line and extends three times in length versus Grand View buildings, is not in violation of the very plan which is supposed to protect this kind of thing from happening? Therefore, these plans for Lot 57 MUST be rejected so we continue to remain true to the Master Plan which was well thought out and done for a reason.
Your Name:	Chris & Mandy Palmer
Your Company Name:	*Field not completed.*
Your Phone Number:	703-928-3470
Your Email Address:	chris.mandy@cox.net

Your City:	Jackson
Your State:	WY
Your Zip Code:	83002

Email not displaying correctly? View it in your browser.

From: chris.mandy
To: Tyler Valentine
Subject: New Snow King Development
Date: Thursday, February 20, 2025 1:22:50 AM

Mr. Valentine,

As owner of 549 Snow King Loop, Unit 494, I fully support the issues our HOA board has raised regarding the proposed construction behind our units. This proposed construction on Lot 57 obviously violates the restrictions on page 77 to be compatible with Grand View in bulk, scale, and character. If this is allowed to go through, the result would be a towering monstrosity of buildings that diminish the whole look of the mountain and violate well thought out and purposeful restrictions. Please make the right decision on this proposed construction and do not allow it to go through.

Sincerely,
Chris Palmer

From: Deborah Wente
To: Tyler Valentine
Subject: Proposed Snow King development
Date: Thursday, February 20, 2025 8:45:30 AM
Attachments: SK Master Plan - Page 77 .jpg.msg
Lot 57 South-GV 548 .jpg.msg
Lot 57 North-GV 548 .jpg.msg

John and Deborah Wente
548 Snow King Loop Road
Unit 482
Jackson, WY 83001

February 20, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Department
Tvalentine@jacksonwy.gov

Dear Mr. Valentine,

We understand that the town is evaluating a proposal by Bear Development,LLC to build a multi unit condominium complex adjacent to the Grandview condominiums in the Snow King resort district.

We own Grandview unit 482 which is located on the east side of the building.

Please consider this letter as opposition to the Bear Development plans for lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant, negative impacts to Grandview and the surrounding areas and do not meet the master plans requirements

for bulk, scale, or character as explained more fully in the letter from Richard Lurie, President of the Grandview Condominium Association. We ask that these plans be denied until changes are made to bring the proposed development into compliance with the master plan.

In 2006 when we purchased our unit in building 548 of Snow King, we carefully reviewed all associated documentation. This included the Snow King master plan, please see attached. We understood that there would be eventual development near our unit consistent with what was presented in the master plan and approved by the Town of Jackson. As stated in the master plan, units will be developed to fit in with the bulk, scale, and character of the existing Grandview condominiums and Grandview Lodge.

We strenuously object to the current plan. These buildings are much bigger than the current units and are inconsistent with the Snow King master plan. We will completely lose visibility of Snow King Mountain. One of our favorite things is to sit on the back deck and look up at the mountain, there was never any expectation we would lose this privilege. Please reference the attached renderings to demonstrate how overshadowed our building would be with the lot 57 South building as proposed. Our beautiful view of the mountain would now be a view of a garage.

Again, we understand that these properties were planned for development. However, we had absolutely no expectation they would be so completely oversized compared to the current building.

If this development as proposed is allowed to proceed, the Snow King master plan becomes a useless document that no potential

buyer in the Resort District can rely upon.

We respectfully request that the town of Jackson reject the proposed plan.

John and Deborah Wente

Get Outlook for iOS

From: Dennis Law
To: Tyler Valentine
Subject: Bear Development"s Proposed development at Snow King Resort
Date: Thursday, February 20, 2025 11:47:47 AM

Hello Tyler,

My name is Dennis Law, I am writing this letter as an owner, with interest in a number of the condominiums in the Grand View Condominiums, through my father Creed Law's trust.

We strongly object to Bear Development's application for the development of lots 53 and 57 of the Snow King Resort. The proposed buildings are massive and out of place when compared to the existing condominiums in our neighborhood. The buildings and the large retaining wall associated with them will create significant negative impacts to Grand View and the surrounding areas. Furthermore, the proposed development does not appear to meet the Master Plan's requirements for the size, scale, character and design, as explained in more detail by Rich Laurie, President of the Grand View Condominium Association.

We ask that these plans and the associated development be denied until changes are made which will bring the proposed development into compliance with the Master Plan and the surrounding area.

Thank you very much for your consideration.

Sincerely,

Dennis C. Law

Donald O'Shei

548 Snow King Loop, Unit 484
Jackson, WY 83001
415-572-3699
doshei@hotmail.com

Apr 9, 2025

Tyler Valentine

Senior Planner
Town of Jackson Planning and Building Dept.

tvalentine@jacksonwy.gov

Dear Mr. Valentine,

Attached please find my letter of February 19, 2025 laying out a number of objections to the Bear Development, LLC plans for Snow King development. Unfortunately, the minimally revised current proposals not assuaged any of my objections in any meaningful way.

Looking at the revised artists renderings (which are designed, I believe, to minimize the perceived impact of the proposed structures in a manner not at all consistent with the true eventual actual impact) the vertical and horizontal mass of the structure proposed for Lot 57, the mountain modern style and the offsets are a total violation of the agreed Snow King Resort District Master Plan which states:

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums".

Any contention that this structure follows the master Plan is at best disingenuous and at worst intentionally deceitful. I can only reiterate that the objections I raised in my previous letter remain in full force. I repeat that:

Under no circumstances can these structures be approved or the Master Plan requirements will be rendered meaningless and the existing homeowner's interests will be disregarded and their property values damaged.

Nothing in the revised proposals ameliorates those objections and concerns.

Sincerely yours,



Donald O'Shei

Sincerely yours,



Donald O'Shei

Donald O'Shei

548 Snow King Loop, Unit 484
Jackson, WY 83001
415-572-3699
doshei@hotmail.com

February 19, 2025

Tyler Valentine

Senior Planner
Town of Jackson Planning and Building Dept.

tvalentine@jacksonwy.gov

Dear Mr. Valentine,

I have been following, with great interest the ongoing Bear Development, LLC, fiasco. To say I am deeply concerned is a drastic understatement. I have been the owner of Unit 484 in 548 Snow King Loop for over 15 years. Unit 484 is not a rental property and is my primary residence. During that entire period of 15 years Snow King has used the Lot 57 footprint as an equipment dumping ground and to store leaky diesel fuel tanks, creating an eyesore and negatively impacting our enjoyment, use and value of my property. Whenever I raised these issues, I was reassured that Lots 57 and 58 would be imminently redeveloped from this unsightly use, in accordance with the Snow King Resort District Master Plan and that these negative impacts would be mitigated in a manner "spatially and stylistically consistent with existing condominiums and the Grand View Lodge." We were, in fact, regularly pointed to the approved Master Plan's restrictions and illustrations of approved structures, which, were be relied on to protect our future interests

Imagine my consternation, when I discovered that Bear Development, LLC intended to build facilities that clearly diverge from the past approved renderings and footprints by a egregious amount, in violation of the Snow King Resort District Master Plan and that the improperly constituted Snow King Resort District Board had given its approval of said violation to the detriment of the existing home owners in a back door deal of some kind.

The proposed structure cannot be said to meet the Master Plan requirements in any way. The proposed Lot 57 building towers over the existing units. It's roof is approximately double the height of Unit 548. As seen in the artists rendering it is a four story building facing, across a minimal set back, a two story (from the rear aspect) structure. It is a mountain modern style design facing its western aesthetic "neighbors". It is a total mismatch of character. The non-existent setback places the main "party area" balconies directly across and much too close to the rear residential bedrooms of our unit in a manner guaranteed to raise conflict when ski vacation or summer short term renters decide to entertain themselves or guests. This doesn't even consider traffic impact. Clearly, the developers dealt with this concern for their potential unit owners by having much larger separation on the uphill side of the proposed structures.

I quote the final Snow King Master Plan:

"Specific Considerations Related to Sub-Area 3 (page 70)

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums"

It is clear to me, and I believe to any uninterested observer, that these proposed structures do not in any way or to any degree fit in with the bulk, scale and character of my property and that they grossly violate both the letter and the spirit of the Master Plan that was approved by the parties and relied on by the existing homeowners.

Under no circumstances can these structures be approved or the Master Plan requirements will be rendered meaningless and the existing homeowner's interests will be disregarded and their property values damaged.

Sincerely yours,



Donald O'Shei

Donald O'Shei

548 Snow King Loop, Unit 484
Jackson, WY 83001
415-572-3699
doshei@hotmail.com

February 19, 2025

Tyler Valentine

Senior Planner
Town of Jackson Planning and Building Dept.

tvalentine@jacksonwy.gov

Dear Mr. Valentine,

I have been following, with great interest the ongoing Bear Development, LLC, fiasco. To say I am deeply concerned is a drastic understatement. I have been the owner of Unit 484 in 548 Snow King Loop for over 15 years. Unit 484 is not a rental property and is my primary residence. During that entire period of 15 years Snow King has used the Lot 57 footprint as an equipment dumping ground and to store leaky diesel fuel tanks, creating an eyesore and negatively impacting our enjoyment, use and value of my property. Whenever I raised these issues, I was reassured that Lots 57 and 58 would be imminently redeveloped from this unsightly use, in accordance with the Snow King Resort District Master Plan and that these negative impacts would be mitigated in a manner "spatially and stylistically consistent with existing condominiums and the Grand View Lodge." We were, in fact, regularly pointed to the approved Master Plan's restrictions and illustrations of approved structures, which, were be relied on to protect our future interests

Imagine my consternation, when I discovered that Bear Development, LLC intended to build facilities that clearly diverge from the past approved renderings and footprints by a egregious amount, in violation of the Snow King Resort District Master Plan and that the improperly constituted Snow King Resort District Board had given its approval of said violation to the detriment of the existing home owners in a back door deal of some kind.

The proposed structure cannot be said to meet the Master Plan requirements in any way. The proposed Lot 57 building towers over the existing units. It's roof is approximately double the height of Unit 548. As seen in the artists rendering it is a four story building facing, across a minimal set back, a two story (from the rear aspect) structure. It is a mountain modern style design facing its western aesthetic "neighbors". It is a total mismatch of character. The non-existent setback places the main "party area" balconies directly across and much too close to the rear residential bedrooms of our unit in a manner guaranteed to raise conflict when ski vacation or summer short term renters decide to entertain themselves or guests. This doesn't even consider traffic impact. Clearly, the developers dealt with this concern for their potential unit owners by having much larger separation on the uphill side of the proposed structures.

I quote the final Snow King Master Plan:

"Specific Considerations Related to Sub-Area 3 (page 70)

The remaining developable lots within Sub-Area 3 consisting of Lots 53, 57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums"

It is clear to me, and I believe to any uninterested observer, that these proposed structures do not in any way or to any degree fit in with the bulk, scale and character of my property and that they grossly violate both the letter and the spirit of the Master Plan that was approved by the parties and relied on by the existing homeowners.

Under no circumstances can these structures be approved or the Master Plan requirements will be rendered meaningless and the existing homeowner's interests will be disregarded and their property values damaged.

Sincerely yours,



Donald O'Shei

Grand View Homeowners Association

Jackson, Wyoming

May 23, 2025

RE: Revised Bear Development Proposed Plans Lot 57

Town of Jackson - Town Council

The Grand View Condominium Association has reviewed the revised application and plans for Snow King Condominiums Lots 57 submitted by Bear Development, LLC, a Wisconsin developer (the "Applicant"). The Association respectfully submits that the Applicants revised plans continue to fail to comply with the requirements of the Snow King Planned Resort District Master Plan. We take strong opposition to the Planning Commission's approval of the revised Lot 57 plans and plan to present our objections during the Public Comment section of the Town Council Meeting on June 2nd.

The Association's primary objection is to the Lot 57 south building that continues to be incompatible in bulk, scale and character with Grand View Condominiums which is a specifically stated requirement of the Master Plan. See page 70 of Master Plan (page 74 in PDF)

Issue 1: Plans Continue to not Adhere to the Requirements of the Snow King Master Plan

The Master Plan provides a depiction of what was previously approved and could be anticipated and approved for Lot 57 – the "development predictability" that is a key component of the Master Plan. SKRMA always recommends prospective buyers in the Resort District to review the Master Plan to understand what has been approved to be built. The depictions and illustrations show a 25,393 square foot building approved by the Town of Jackson for Lot 57 building (Exhibit 1 below). A very reasonable building is depicted and compatible in bulk, scale and character with Grand View. Buyers of Grand View units therefore made their purchase decision based upon what they saw in the Master Plan.

Instead, the Applicant has decided to move 18,000 sq ft and added a second massive building – over 70% growth of what is approved in the Master Plan. The approval of this lot needs to be based upon as if it were purchased on a standalone basis and without the additional unapproved 18,000 sq ft. Lot 57 was never meant or illustrated to have two buildings on it.

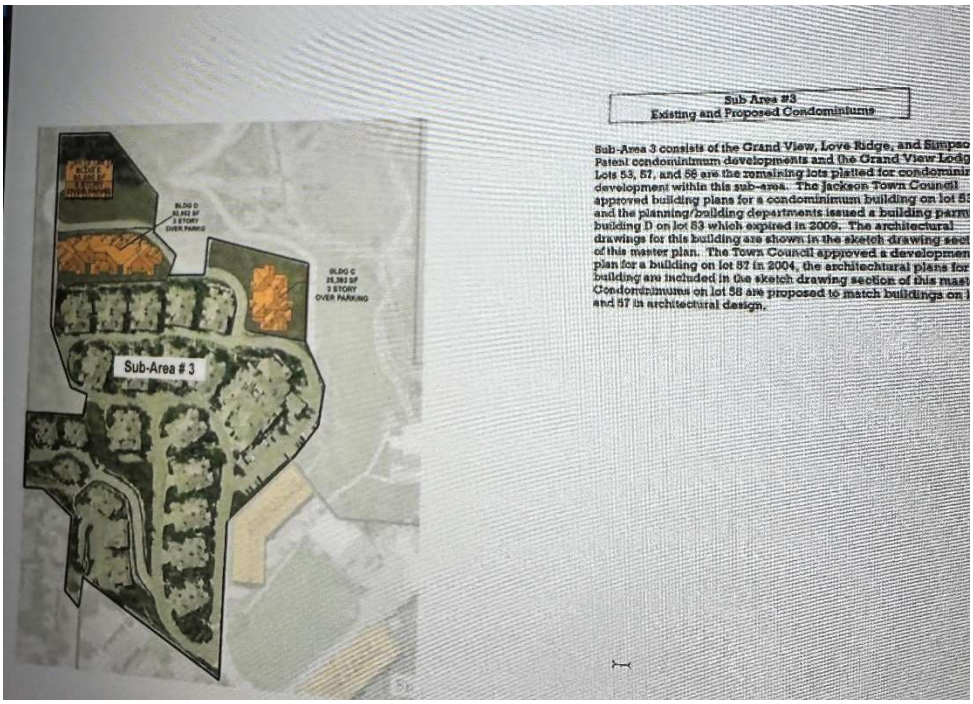


Exhibit 1 Snow King Master Plan illustration for Lot 57 – Single Building

I would also like to make the point that words placed in the Master Plan matter just as much as numbers. When the plan says any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View (Page 70 of the Master Plan), these words matter and it requires a clear judgement call. Fortunately, the call for the Town Council is very easy. The Applicants south building being twice as high as the back of Grand View 548, containing almost four times the number of units, foot print allows no setbacks from property line, no room for sidewalks and extends three times in length than Grand View buildings clearly violate these words.

If the revised Lot 57 plans are approved in their current form, a precedent will be set in the Snow King Resort District to allow for development of a size and character that is not consistent with the Master Plan Design Guidelines and was never contemplated in the Master Plan. Such an approval will create confusion and ambiguity moving forward, and will ultimately undermine the Master Plan itself.

Issue 2: Non-Responsive to Requested Reductions in Bulk and Scale

On the 16th of April, the Applicant's proposed plans for Lot 57 were rejected by the Planning Commission with the specific instructions as follows:

> *In addition, the applicant shall make design changes that further reduce the bulk and scale of the northeast corner of the south building. Suggested changes could include, but are not limited to, removing a section of building on the east side, shifting the building farther south, removing a partial story, shortening the roof overhang above the easternmost third-*

floor unit, reducing square footage, modifying the floor plans to create larger step-backs on upper units, and/or reducing unit counts.

The Applicant's response was woefully inadequate and essentially did almost nothing to address the issues identified:

- A removal of a bedroom of 517 square feet on the fourth floor of a portion of the northeast corner of the south building which represents a 2% reduction, in no way addresses the requirement to reduce the bulk and scale of the south building.

    - **How can a 2% reduction in the size of a building change the decision from it violates the <u>bulk, scale and character</u> requirement in the Master Plan to now it complies with the Master Plan? This is exactly the decision made by Town Planning. It defies logic.**

- The rendering (Page 7) finally provided by the Applicant in the revised package is so deceptive it is essentially dishonest. They created the rendering from a position a considerable distance from the south building to hide its massiveness. It is also an admission, in our opinion, by the Applicant that it <u>does violate the Master Plan</u> as they are trying to hide the actual bulk and scale of the south building with this deceptive rendering.

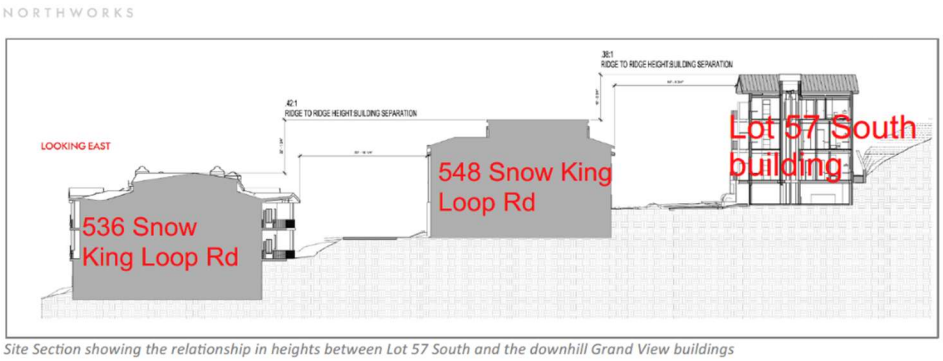
- The rendering produced by Grand View HOA (Exhibit 2) is still an accurate depiction of the bulk and scale of the south building, the total footprint of which has not changed. If you remove the upper left-hand corner single bedroom which is all the Applicant proposed to do in their latest revision, you would not be able to even see the change from the road below.

- The rendering below done to scale shows the south building continues to violated the Master Plan requirement to be compatible with Grand View in bulk, scale and character. Just look at the rendering below. That is Grand View 548 on the right and the extremely large Bear Dev south building on the left. It is 4 stories vs. 2 stories, almost twice as high, totally different scale (15 units vs. 4 units) and a totally different character of building vs. Grand View and the entire residential area of the resort district!



Exhibit 2 Bear Dev south building on left. Grand View 548 on right

Applicant continues to claim the south building is compatible with Grand View in bulk and scale. See Exhibit 3 below produced by the Applicant and which we will show is totally inaccurate. The actual spacing between the Applicant's south building and 548 is shown in Exhibit 2 above which was done from actual drawings. The actual spacing between Grand View 548 and Love Ridge 536 is shown in an actual picture in Exhibit 4 below. Again, the Applicant's depiction of compatibility is deceptive and totally inaccurate.



Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings

Exhibit 3 Applicant's Claim spacing and heights are the same.



Exhibit 4 – Actual view between Love Ridge on left and Grand View on right

Issue 3: Non-Responsive to Pedestrian and Vehicle Issues

We continue to point out the Applicant's unwillingness to address the pedestrian and vehicle issues. The Master Plan specifies that the height of buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. (p. 57, 59)

- A total Canyon effect will result between the south and north buildings. At the closest point, it is estimated that the buildings 55' and 35' respectively with less than 10' between them and at the sidewalk level around 6' between them. The same Canyon effect will be present between the south building and Grand View 548. This is totally pedestrian unfriendly which clearly violates a requirement in the Master Plan

- The Applicant's initial plan was rejected as they had not met the Master Plan requirement to have vegetation next to their buildings. Rather than reduce the size of their buildings, they removed the sidewalks on Lot 57 to meet this requirement. See Exhibit 5 below. Does one actually think pedestrians will cross the road, walk up on the Grand View sidewalk for 50' and then cross back to Lot 57? This is totally unrealistic and actually silly. Foot traffic for 60 condominiums will be walking in the road to get to the Applicant's buildings. Totally unsafe and again a total violation of the required pedestrian accommodations in the Master Plan.

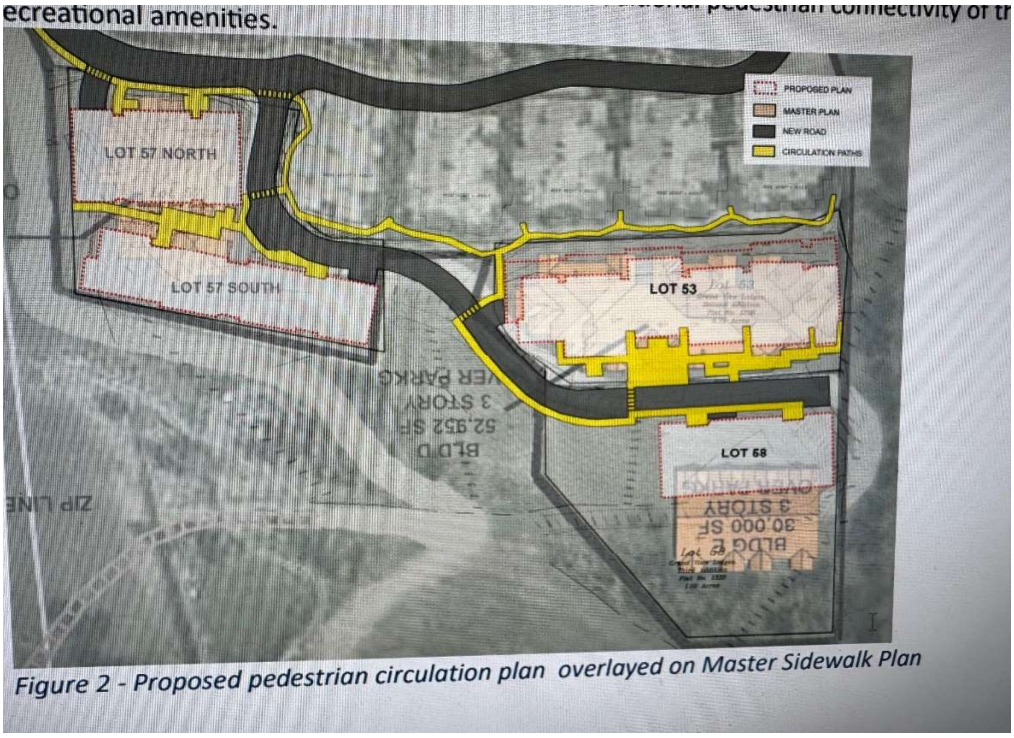


Figure 2 - Proposed pedestrian circulation plan overlayed on Master Sidewalk Plan

Exhibit 5

- The Applicant's movement of 18,000 sq ft and adding a second building is taking up so much of the .83-acre lot there is absolutely no allowance for visitor or service unit parking. Many of the planned units only have one parking space. Visitor and service unit parking will take place all along the road and at opportunistic spots at not only Bear Dev buildings but Grand View/Love Ridge buildings as well.

<u>Summary</u>

The owners in Grand View had relied upon the Master Plan to be followed when they made their purchase decision. It is absolutely unfair to these owners to allow Bear Dev. plans for an unanticipated south building on Lot 57 that towers over their buildings. The bulk, scale, and character of the south building is not compatible with existing development, will dwarf the pedestrian scale in Sub-Area, and is squarely at odds with the Master Plan goals of balance and predictability.

Exhibit 6 is provided to depict how compatible the Applicant's north building is to Grand View with the elimination of the south building. This is how the Master Plan had envisioned Lot 57.



Exhibit 6

With the requested rejection of the plans for Lot 57, the Applicant still has a very viable plan to move forward. They can immediately start with the plans approved for Lots 53 and 58 while they spend the additional time and energy needed to redesign Lot 57 to meet the requirement of the Snow King Master Plan.

Respectfully Submitted,

Rich

Richard Lurie
President
Grand View Condominium Association

Grand View Homeowners Association

Jackson, Wyoming

February 18, 2025

Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

The Grand View Condominium Association (the "Association") has reviewed the application and plans for Snow King Condominiums Lots 53, 57 and 58 (the "Plans") submitted by Bear Development, LLC, a Wisconsin developer (the "Applicant"). The Association respectfully submits that certain, significant aspects of the Plans fail to comply with the requirements of the Snow King Planned Resort District Master Plan (the "Snow King Master Plan" or the "Master Plan"). The Association's primary objection is to (i) the incompatible size, bulk and scale of the development proposed for Lots 57 and 53, and (ii) the retaining wall proposed for the south side of Lot 53, (all as described in more detail below.

The Association has been urged to consider that the newly submitted Plans are a significant improvement over plans previously submitted by Bear Development that the Town deemed grossly inadequate. However, this is not a relevant factor for the Town's evaluation. The Plans remain noncompliant with the Master Plan as further detailed below and we request the Town of Jackson reject the proposed Plans.

First, SKRMA's approval of the Applicant's plans was Invalid

- SKRMA sent out the Applicant plans for Lots 53, 58 and 57 to all SKRMA members on the 21st of May, 2024. At the SKRMA Board meeting of May 23rd (2 days later), the plans were approved. This allowed only eighteen (18) hours to review a 70-page design plan.
- This is the largest development project in the history of the Resort District, valued at over $200 million and we requested to see a professional independent review of the plans. Our request was ignored
- Grand View Condominium Association then reviewed the plans on their own and found the plans violate the Snow King Master plan as we have articulated in this letter. We conveyed this to SKRMA in writing and they did not respond.

- SKRMA took another vote and again approved the plans with 6 yes votes (3 from Snow King Mountain and 3 from the Snow King Hotel). One no vote was registered by the Residential Class representative.
- We would like to point out the SKRMA Bylaws are in violation of the Snow King Master Plan which calls for the allocation of Board seats based upon assessed valuation. Please see Section XI of the Master Plan. In direct conflict with this requirement, the SKRMA Board's Bylaws stipulate 3 seats to Snow King Mountain and 3 seats to Snow King Hotel and the Residential Class was given just 1 seat.
    - Currently the Residential Class assessed valuation is approximately $15 million.
    - The Snow King Hotel and Conference Center has an assessed valuation of $3.2 million.
    - Snow King Mountain assessed valuation is estimated at $2.9 million.
    - The total for both the Hotel and Mountain comes to $6.2 million and therefore the Residential Class has an assessed valuation of 2.5 times the valuation of the Hotel and Mountain combined.
    - According to the Master plan the Residential Class should have at least twice the number of board seats that are assigned to the Hotel and the Mountain.
- We therefore believe the approval by the SKRMA board is invalid.

Second, the Plans do not Adhere to the Requirements of the Snow King Master Plan.

Background: Properties within the Snow King Planned Resort District are governed by the Master Plan, and all development in these Sub-Areas must comply with the Master Plan's terms and conditions. Both Grand View Condominiums and Lots 53, 57 and 58 lie within Sub-Area 3. The sections of the Master Plan most applicable to the Bear Development project are as follows:

1. One of the main purposes of the Master Plan is to provide the community limits of development predictability. (p. 2)

2. The Master Plan includes Master Site Plans and maps to illustrate proposed development and the site characteristics for each Sub-Area. In these site plans, square footage for the buildings on each of Lots 53, 67, and 58 are planned as follows. (pp. 3, 15)
    - Lot 53 -- 52,952 sf
    - Lot 57 -- 25,393 sf
    - Lot 58 – 30,000 sf

3. A theme in the Master Plan is balance. Balance includes the scale and character of the development and how well it fits into the fabric of the community and the landscape. (p. 30)

4. The Design Guidelines established by the Master Plan require that projects adhere to all of the following:

- Site planning and architecture shall assemble a built environment that connects buildings, spaces and structures through common scale, design, and materials. (p. 57)
- There shall be a visual continuity among the resort structures and design elements…development shall be compatible with the surrounding built and natural environment in both scale and character. (p. 57)
- The height of buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. (p. 57, 59)
- The bulk and scale of individual buildings within the Resort shall achieve compatibility with other structures within the Planned Resort when resort development is completed (p. 58)
- **Specifically stated in the Master Plan, Lots 53, 57, and 58 shall be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge.** These buildings can be up to three stories in height with a basement and with massing, articulation, openings, and step backs used to reduce bulk and mass. Buildings on these lots may consist of one single building complex or multiple buildings in order to best create a design that fits well with the topography and neighboring condominiums… (p. 70) (emphasis added)
- The Master Plan includes Sketch Plans for Lots 53 and 57 which show buildings that were previously approved by the Town of Jackson as compliant with the Master Plan and represent what was intended/planned for these Lots.

We believe the Applicant is aware his plans do not comply with the Master Plans requirements to be compatible in bulk, scale and character with Grand View and we will provide two examples.

Issue 1. The Lot 53 Building Placement and Spacing does not Comply with the Master Plan

1. In evaluating the Plans for Lot 53, it is critical to note that the renderings as presented in the Bear Development application are inaccurate, insomuch as they fail to show the correct scale of the proposed development. Grand View had asked the Applicant for a rendering showing what the space between the proposed building on Lot 53 and Grand View buildings 550, 551 and 552 will look like. The Applicant provided the attached rendering "Lot 53-GV Rendering." On computing the scale of the rendering, the Grand View buildings are approximately the correct size, but the Applicant's building is actually **TWICE** as high as is depicted in the rendering. This is example 1 of the Applicant's awareness of non-compliance.

2. On page 98 of the Plans, the Applicant provided the only "to scale" drawing with the view of the sidewalk between the proposed building on Lot 53 and the Grand View buildings on the left. (Pages from P24-168, P24-174, P24-175 TransMemo.pdf, attached to this correspondence). From the drawing you can see space between the Lot 53 structure and the Grand View buildings is approximately 24'. In contrast, the space planned between the

proposed Lot 53 building and the Lot 58 building is approximately 75 feet. The minimal, restrictive space between Grand View as compared with the three-times greater space between the buildings on Lot 53 and 58 should not be allowed, as the openings and design do not fit well with the topography or the neighboring condominiums as specifically required under the Master Plan, and create a clear, detrimental impact to Grand View.

Issue 2. The Lot 53 "Retaining Wall" and construction will obstruct access to and from Grand View Condominiums and does not comply with the Master Plan.

1. To maximize the size of their buildings and increase their height, the building plan for Lot 53 has specified a 10' retaining wall on the border between Lots 53 and Grand View (see page 98 of the Plans). This brings the proposed total height of the building on Lot 53 to 64' feet (elevation 6,456 less 6,392), towering 40' over Grand View buildings 550, 551 and 552. The wall is proposed to be built almost touching the sidewalk that runs along the back of the Grand View buildings. A 10-foot-high wall touching the sidewalk where people walk is unacceptable. The wall creates safety issues, access issues, and will interfere with snow removal and ice mitigation, not to mention dwarfing the pedestrian scale emphasized in the Master Plan.

2. The Applicant has specified it plans to close the Grand View sidewalk, which has existed in its current location for close to 20 years, for the duration of the development, and over 90% is on Grand View's property. This closure violates the legal rights of Grand View Owners by cutting off access to the Condominiums along a route that has long been established. Applicant did not discuss placement of the retaining wall along the sidewalk nor obstruction of the sidewalk with the Grand View at any point.

Issue 3: The Plans for Lot 57 are not compatible with the requirements of the Master Plan because the massive buildings planned are approximately two times (2x) what was intended for Lot 57 and are not compatible in bulk, scale and character with the existing Grand View Condominiums or the rest of Sub-Area 3.

1. The proposed buildings on Lot 57 are 57 feet and 4 stories high and contain 27 units. As stated above, the Master Plan provides a depiction of what was previously approved and could be anticipated and approved for Lot 57 – the "development predictability" that is a key component of the Master Plan. SKRMA always recommends prospective buyers in the Resort District to review the Master Plan to understand what has been approved to be built. The depictions and maps show the planned and approved Lot 57 building to be 25,393 square feet (see attachment "Page 77 of Master Plan"). A very reasonable building is depicted and compatible in bulk, scale and character with Grand View. Instead, the Applicant is presenting two massive buildings containing 45,000 square feet – close to double what is included in the Master Plan. See attachment Lot 57 Bear Buildings. To

allow 45,000 sf of development on this Lot would render meaningless the maps and plans in the Master Plan and goal of development predictability.

2. Not only is this bulk, scale and character far beyond what would be considered predicable development under the Master Plan, but the size and massing do not fit with the adjacent Grand View Condominiums, as is required. The five Grand View buildings each contain 4 units, with maximum building heights of approximately 40 feet. Each Grand View Building is approximately 7,200 sf. On a per-acre basis, Lot 57's development is close to 50% more dense than Grand View's. The massive development proposed for Lot 57 is likewise not similar to, or compatible with, the rest of Sub-Area 3 which is comprised of all 3-story, smaller buildings. The new buildings will tower over the older buildings, creating a sharp contrast and a visible break in character.

3. The Lot 57 buildings will tower over the residential buildings to which they are adjacent and will overwhelm people walking beside the buildings and the pedestrian scale, which is specifically disallowed under the Master Plan. The massing, articulation, and step backs do nothing to reduce bulk and mass and fail to consider the pedestrian scale.

4. In light of its concerns about the above size, bulk and scale of the Lot 57 buildings, Grand View asked the Applicant for scaled drawings showing Grand View building 548 with the Applicant buildings on Lot 57. The Applicant refused to provide the requested drawings, (example 2 of Applicant's awareness of non-compliance) and Grand View therefore hired Y2 Consulting and Cratif, at its own expense, to produce renderings requested of Applicant.

    a. The rendering entitled "Lot 57 South-GV 548" is attached to this letter and supports the objections raised in this section. The Lot 57 South building towers 31' over Grand View 548 and is over <u>double the height of Grand View 548 from the ground level.</u> A theme in the Master Plan is balance. Balance includes the scale and character of the development and how well it fits into the fabric of the community and the landscape. This rendering clearly demonstrates the Applicant's total disregard of that requirement.

<u>Summary</u>

The Association understands that the Applicant has a right to build reasonable structures on their three lots. We only request that the buildings comply with the terms, conditions, and intent of the Master Plan. The buildings must be consistent with what was anticipated in the Master Plan (on which owners within the Snow King Resort Area relied) and be compatible with the existing residential construction within Sub Area 3. The bulk, scale, and character of the Lot 57 buildings and the retaining wall on Lot 53 as detailed above are not compatible with existing development, will dwarf the pedestrian scale in Sub-Area, and are squarely at odds with the Master Plan goals of balance and predictability.

We believe compatibility can be obtained by making two changes:

1. The retaining wall as currently specified to raise the property level between Lot 53 and Grand View should not be allowed. The building planned for Lot 53 must be moved south (away from Grand View property) to provide a minimum of 50' between Grand View buildings 550, 551 and 552 and Lot 53 building. This will also allow 50' spacing between the Lot 53 building and Lot 58 building. The current line of trees planted along the stone wall and property line between Grand View and Lot 53 must remain.

2. Only the Lot 57 North building, as proposed and previously approved by the Town of Jackson, may be built as illustrated on Page 77 of the Master Plan. See attached rendering entitled: Lot 57 North – GV 548. Elimination of Lot 57 South building restores balance, scale and character to Lot 57 with Grand View CA and was in clear violation of the Master Plan.

If the Plans are approved in their current form, a precedent is being set in the Snow King Resort District to allow for development of a size and character that is not consistent with the Master Plan Design Guidelines and was never contemplated in the Master Plan. Such an approval will create confusion and ambiguity moving forward, and will ultimately undermine the Master Plan itself.

Respectfully Submitted,

Rich

Richard Lurie
President
Grand View Condominium Association



SIDEWORKS

HDLA

LOT 53
RENDERING

L5.00



LEGEND

- (A) SIDEWALK
- (B) RETAINING WALL PLANTERS
- (C) ASPEN AND NATIVE SHRUB PLANTINGS
- (D) STAIRS

NTS

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwka.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

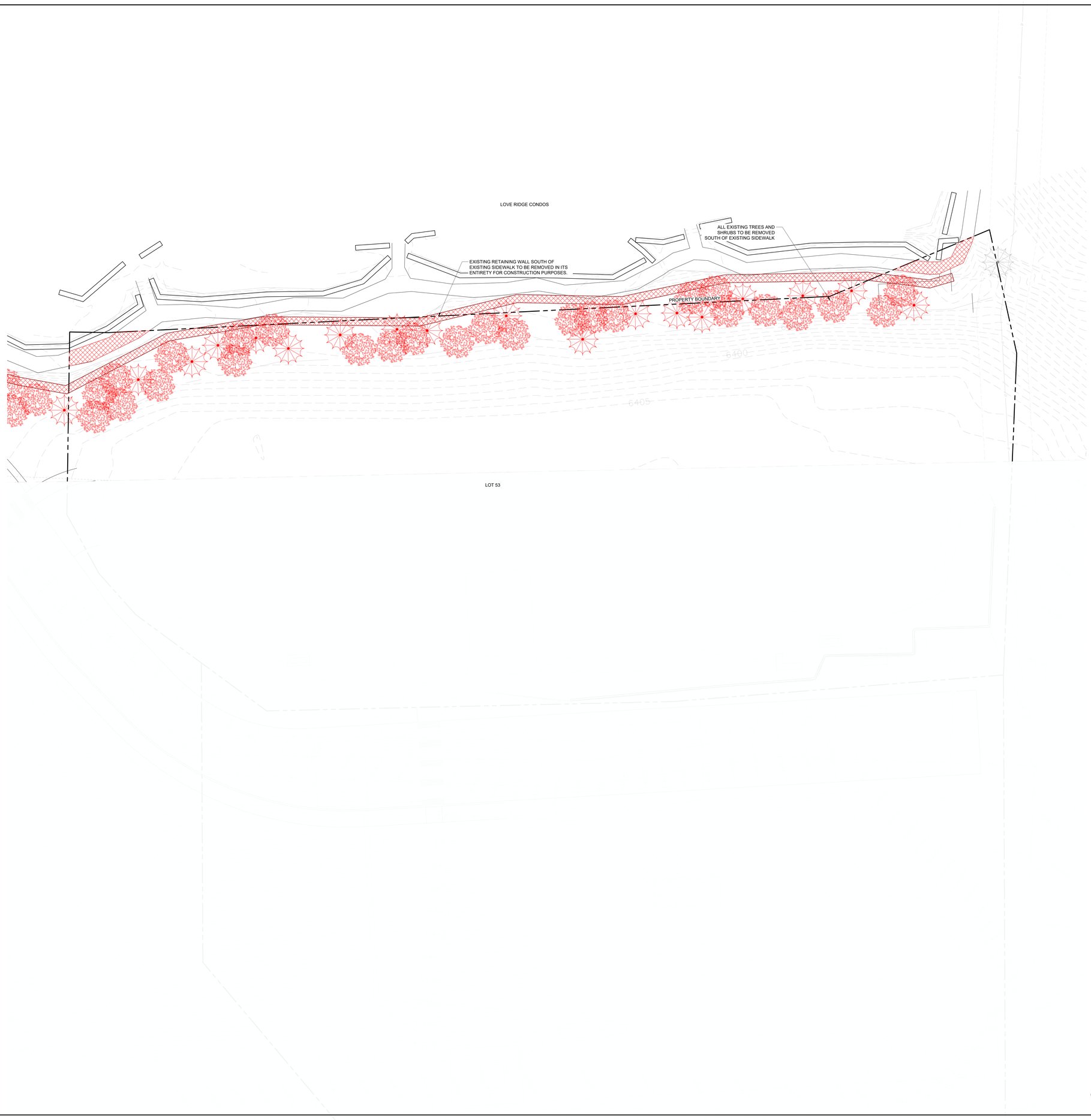
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53 RENDERED PLAN

Drawing Name

L1.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- PAVERS
- PAVERS WITH SNOWMELT
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- RAISED PLANTERS
- EXTERIOR SITE LIGHTING

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

653 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 53
DEMO PLAN

Drawing Name
L2.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- PAVERS
- PAVERS WITH SNOWMELT
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- RAISED PLANTERS
- EXTERIOR SITE LIGHTING

PLANT SCHEDULE- LOT 53

TREES:

NAME	SIZE	CONT.	QTY
Quaking Aspen/ Populous tremuloides	3" Cal.	B&B	26

SHRUBS:

Native Shrubs- species TBD		5-6' H	96

GROUND COVERS:

Native Meadow Sod		SOD	1,650 SF

NORTH

0 5 10 20
ORIGINAL SCALE: 1"=10'

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkg.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

653 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

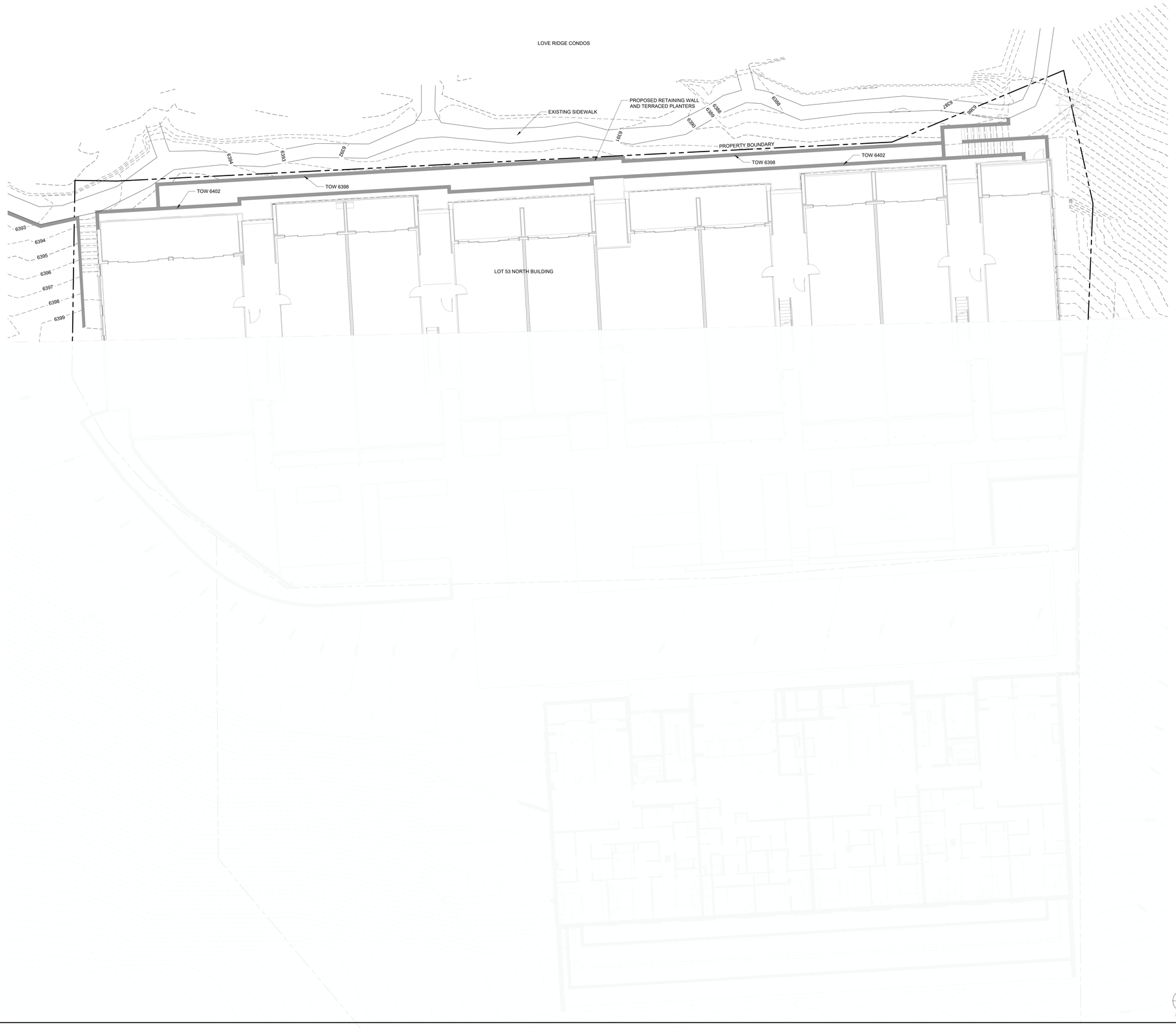
Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53
PLANTING PLAN

Drawing Name

L3.00



LEGEND

- PROPERTY BOUNDARY
- ROADWAY
- RETAINING WALL
- PAVERS
- PAVERS WITH SNOWMELT
- STEPS
- AUTO CONCRETE
- BIKE PARKING
- RAISED PLANTERS
- EXTERIOR SITE LIGHTING

NORTH

0 5 10 20

ORIGINAL SCALE: 1"=10'

NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwkz.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA

560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

653 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number

LOT 53
GRADING PLAN

Drawing Name

L4.00



NORTHWORKS

1512 N. Throop Street
T 312-440-9800 F 312-440-9851
Chicago, Illinois 60642
www.nwka.com

© 2024 Northworks Architects & Planners - All rights reserved. Any discrepancies shall be reported immediately to the Architect before proceeding. Only figured dimensions should be used. Contractors and fabricators to verify all dimensions on site prior to beginning Work.

HDLA
560 South
Glenwood
P.O. Box 1648
Jackson, WY 83001
307.739.1001

www.hdlajh.com

NO.	ISSUED DATE	ISSUED FOR
	10/02/2024	HOA PLANTING PLAN

Project
SNOW KING LOOP

553 UPPER SNOW KING LOOP ROAD
JACKSON, WY 83001

Project No.	
Drawn By	LN
Checked By	MK

Discipline & Drawing Number
LOT 53
RENDERING

Drawing Name
L5.00

NORTHWORKS

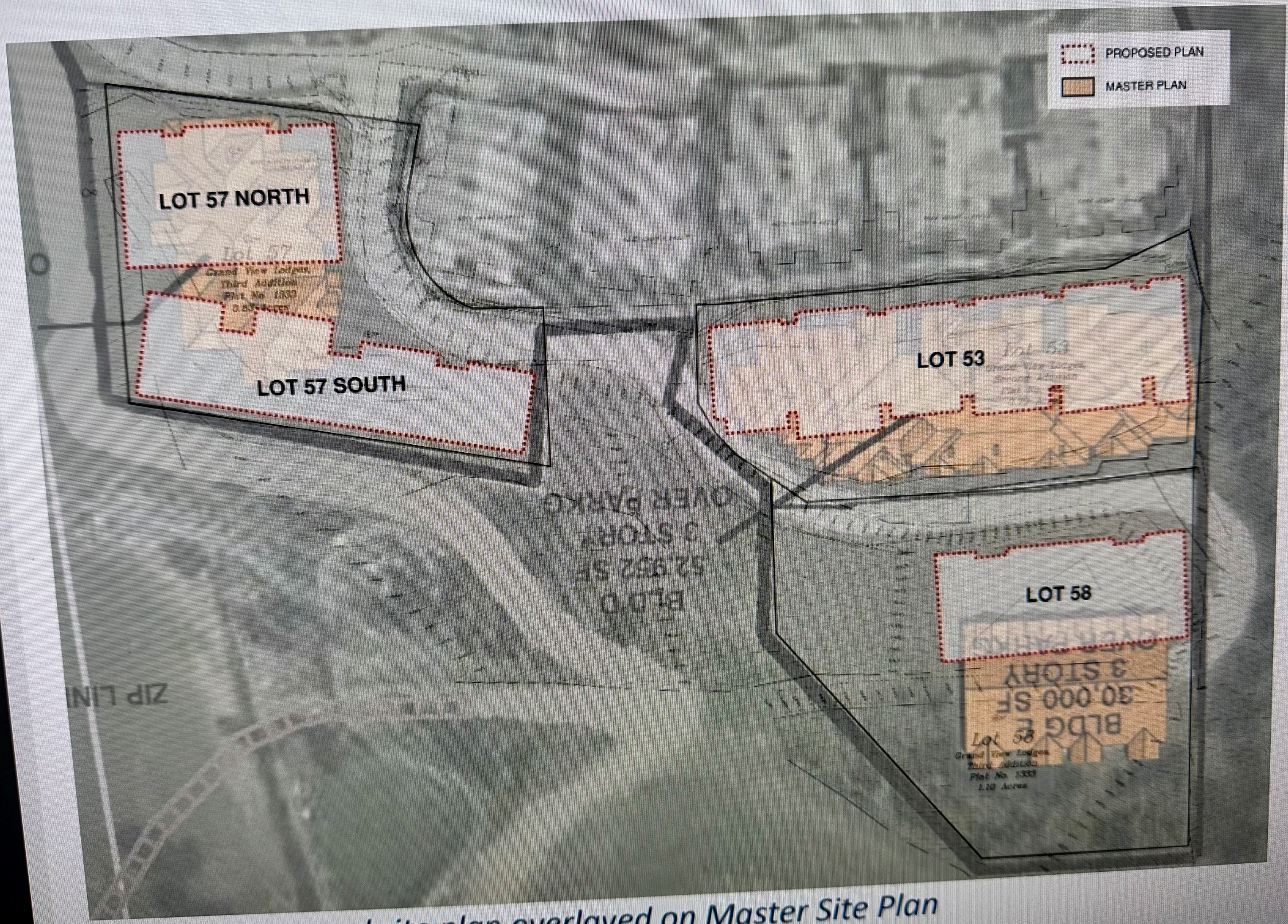
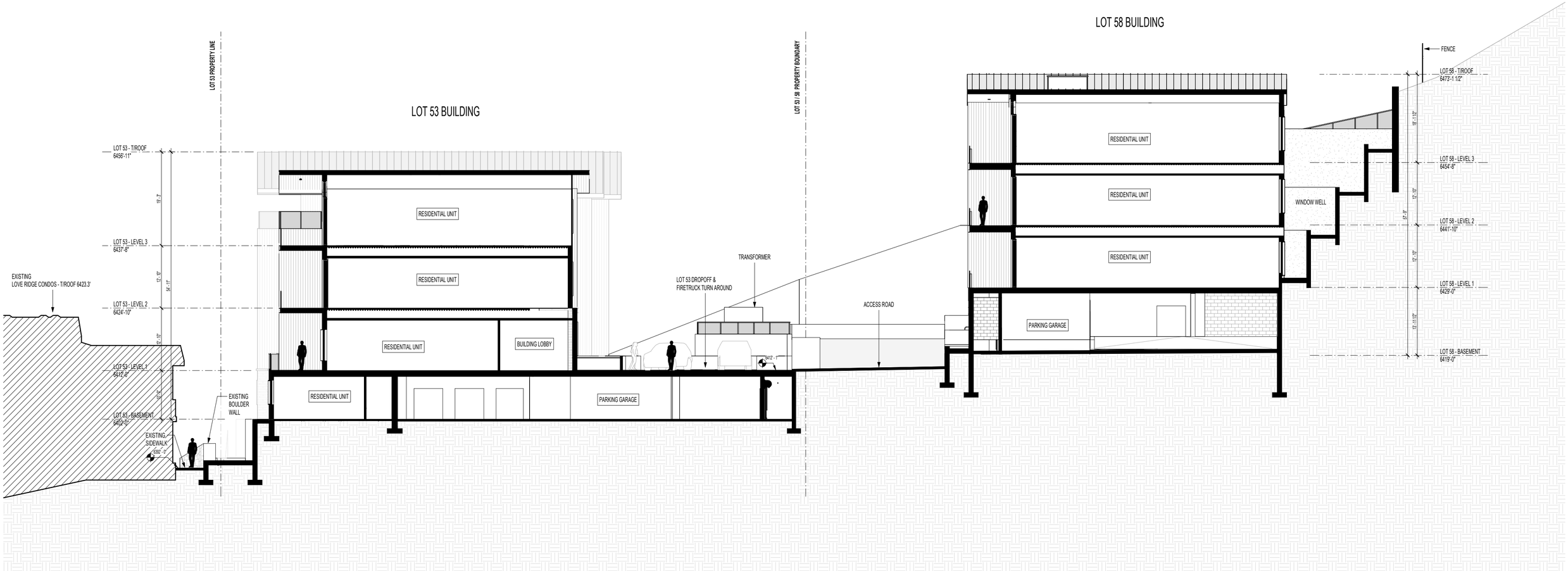


Figure 1 - Proposed site plan overlayed on Master Site Plan

Site Plan also includes a circulation plan that indicates where sidewalks should







SITE SECTION THROUGH LOT 53 & LOT 58, LOOKING EAST



Sub Area #3
Existing and Proposed Condominiums

Sub-Area 3 consists of the Grand View, Love Ridge, and Simpson Patent condominimum developments and the Grand View Lodge. Lots 53, 57, and 58 are the remaining lots platted for condominimum development within this sub-area. The Jackson Town Council approved building plans for a condominimum building on lot 53 and the planning/building departments issued a building parmit for building D on lot 53 which expired in 2009. The architectural drawings for this building are shown in the sketch drawing section of this master plan. The Town Council approved a development plan for a building on lot 57 in 2004, the architechtural plans for this building are included in the sketch drawing section of this master plan. Condominimums on lot 58 are proposed to match buildings on lots 53 and 57 in architectural design.

4 in. of snow Thu

From: harrydannenberg1@gmail.com
To: Tyler Valentine
Cc: Rich LURIE; Jenny Herman
Subject: Bear Development of Snow King Lots 53, 57 and 58
Date: Thursday, February 20, 2025 7:29:49 AM

I am a 10 year property owner and part time resident (summers) in the Love Ridge condominiums located in the Snow King Resort District. I am also a member of the Board of Directors of the Snow King Resort Master Association (SKRMA). I am the residential director of SKRMA representing the interests of the residential homeowners in the resort district.

I am writing to express my strong agreement with the Grand View Condominium Association and the Love Ridge Homes Condominium Association that the proposed development by Bear Development violates the Snow King Planned Resort Master Plan in that it does not fit in with the bulk, scale and character of the existing Grand View Condominiums and Grand View Lodge as required under the Master Plan. Specifically, the Lot 57 South Building , which is proposed to be approximately 60 feet high, will overwhelm the Grand View Condominiums and the entire resort area and this behemoth of a building will overwhelm pedestrians and pedestrian scale in the resort district.

I also agree with Grand View Condominium Association that the retaining wall between Grand View Condominiums and Lot 53 violates the Master Plan and should be moved south as set forth in the letter sent to you by the Grand View Condominium Association. There is no place in the Resort District for such an aggressive form of development with respect to other members of the Snow King Resort community.

I hope that the town takes the correct action and rejects the Bear Development proposal. I believe that the residential community in the Resort Districtto would support reasonable development of lots 53,57 and 58. I do not think there is support from the residential community for the Bear Development proposal.

Harry Dannenberg

Sent from my iPad

From: Jim Maxwell <jim@AGRILANDFARMING.COM>
Sent: Tuesday, February 18, 2025 12:21 PM
To: Tyler Valentine
Subject: Development Plans 553, 510, & 725 Upper Snow King Loop

Dear Mr. Valentine:

I have serious concerns about the proposed ten-foot-high wall immediately south of the buildings 551 and 552 Snow King Loop. I own a condominium in each of these two buildings. Starting in 2007 and continuing through 2015, I served as president of the Grandview Homeowner's Association which includes the twenty condominium units situated immediately to the north of the ten-foot-high wall proposed for construction at the northern most edge of the above referenced projects.

Manuel Lopez, former president of Snow King Resort and the group that formerly owned Lots 53 and 57, and I walked the sidewalk south of our buildings and agreed to the planting of trees south of our sidewalk. This agreement was in response to our **mutual** opinion that a buffer was needed between our existing buildings and whatever would be eventually built on Lot 53. This agreement and mutual expectation were eventually memorialized in the master development plan for the area. The owners of the twenty Grandview Condos would not have supported the master plan had this provision and understanding not been included in such plan. Ignoring the master plan at this point is inappropriate and unacceptable.

The owners of the twenty Grandview Condos have, for many years, had the expectation that our neighbors to the south and the Town of Jackson would continue to recognize the need for a landscaped buffer south of our south sidewalk. Allowing the project to move forward as currently configured would create a very unpleasant area south of our condos and ruin the environment on twenty back decks of these units. It would also violate the master plan on which we have relied.

From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: John and Irene Hammons Email the Town Council
Date: Friday, May 23, 2025 6:13:55 PM

Email the Town Council

Email Content:	As Owners of Grand View Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53,57 & 58. We strongly endorse the Grand View Homeowners Association correspondence and communications to you as detailed by HOA President Rich Lurie and the Grand View Board. The Bear Development Plan and corrective submissions as requested by the Planning Department are still in violation and do not in anyway comply effectively with the Snow King Master Plan.in Bulk, Size, or Character. We purchased the property with the premise that the development would be in accordance with the Snow King Master Plan. Even details of the future development plan were personally communicated to us by the Owner/Developer at the time of purchase negotiations and definitely had a bearing on our decision. Safety issues also concern us regarding accessibility for emergency and utility service vehicles and guest parking without a proper ingress/egress solution. Also, pedestrian accessibility to the Snow King Mountain amenities is a concern and will have an effect on the Grand View community The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with. Thank you for your consideration.
Your Name:	John & Irene Hammons
Your Company Name:	Windmill Canyon Ranch
Your Phone Number:	6614356459
Your Email Address:	linknspace@roadrunner.com
Your City:	Leona Valley
Your State:	California
Your Zip Code:	93551

Email not displaying correctly? View it in your browser.

From: Deborah Wente <dgwente@outlook.com>
Sent: Tuesday, April 8, 2025 10:36 AM
To: Tyler Valentine
Subject: Re: Proposed Snow King development
Attachments: Bear Building Comparisons.png; Grand View - Love Ridge Building Spacing.jpg; Lot 57 South-GV 548.jpg

John and Deborah Wente
548 Snow King Loop Road
Unit 482
Jackson, WY 83001

April 8, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Department
Tvalentine@jacksonwy.gov

Dear Mr. Valentine,

Please find an updated letter regarding the Bear Development proposal in the Snow King resort district. You will find that the primary issue concerning our unit at 548 Snow King Loop Road is unchanged.

We own Grandview unit 482 which is located on the east side of the building.

Please consider this letter as opposition to the Bear Development plans for lot 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our

neighborhood. The buildings create significant, negative impacts to Grandview and the surrounding areas and do not meet the master plans requirements for bulk, scale, or character as explained more fully in the letter from Richard Lurie, President of the Grandview Condominium Association. We ask that the plans for Lot 57 be denied until changes are made to bring the proposed development into compliance with the master plan.

The revised plans submitted by Bear Development have done nothing to address these issues. It is clear their revised plans refuse to reduce by any amount the size of their buildings on Lot 57. To meet the requirement to have room for vegetation next to their building, instead of reducing the size and footprint of their buildings to allow vegetation as required by the Snow King Master Plan, their solution is to eliminate the sidewalks. Pedestrians, therefore, walking up from the hotel or parking to the 72 condominiums have to walk in the road!

In 2006 when we purchased our unit in building 548 of Snow King, we carefully reviewed all associated documentation. This included the Snow King master plan, please see attached. We understood that there would be eventual development near our unit consistent with what was presented in the master plan and approved by the Town of Jackson. As stated in the master plan, units will be developed to fit in with the bulk, scale, and character of the existing Grandview condominiums and Grandview Lodge.

We strenuously object to the current plan. These buildings are much bigger than the current units and are inconsistent with the Snow King master plan. We will completely lose visibility

of Snow King Mountain. One of our favorite things is to sit on the back deck and look up at the mountain, there was never any expectation we would lose this privilege. Please reference the attached renderings to demonstrate how overshadowed our building would be with the lot 57 South building as proposed. Our beautiful view of the mountain would now be a view of a garage.

Again, we understand that these properties were planned for development. However, we had absolutely no expectation they would be so completely oversized compared to the current building.

If this development as proposed is allowed to proceed, the Snow King master plan becomes a useless document that no potential buyer in the Resort District can rely upon.

We respectfully request that the town of Jackson reject the proposed plan.

John and Deborah Wente

Get Outlook for iOS

From: Deborah Wente
To: Tyler Valentine
Subject: Re: Proposed Snow King development
Date: Thursday, February 20, 2025 9:26:01 AM
Attachments: Lot 57 North-GV 548_jpg.msg
Lot 57 South-GV 548_jpg.msg
SK Master Plan - Page 77_jpg.msg

April 7, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning & Building Department
tvalentine@jacksonwy.gov

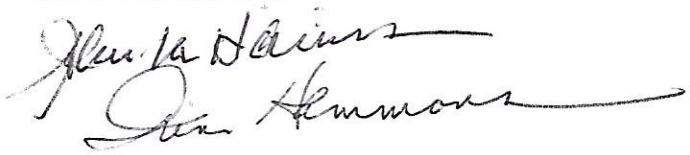
Dear Mr. Valentine:

As Owners of Grandview Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence to you as detailed by Rich Lurie. The Bear Development's resubmissions do not in anyway comply effectively with the Snow King Master Plan in bulk, scale or character.

The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with.

Thank you for your consideration.

John & Irene Hammons



From: John Petrakis
To: Tyler Valentine
Cc: Rich Lurie; dlangen@bojh.com; Nicolle Moyer
Subject: RE: Bear Development plans for Lots 53 and 57 of the Snow King Resort
Date: Thursday, April 3, 2025 8:51:30 AM

From: John Petrakis
To: Tyler Valentine
Cc: Rich Lurie; dlangen@bojh.com; Nicolle Moyer
Subject: Bear Development plans for Lots 53 and 57 of the Snow King Resort
Date: Thursday, February 20, 2025 10:36:00 AM

Dear Mr. Valentine – I am owners of Grand View Condominium No. 5140. Please consider this letter as opposition to the Bear Development plans for Lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant, negative impacts to Grand View and the surrounding areas and do not meet the Master Plan's requirements for bulk, scale or character, as explained more fully in the letter from Rich Lurie, President of the Grand View Condominium Association. We ask that these plans be denied until changes are made to bring the proposed development into compliance with the Master Plan.

I also strongly agree with all the details of Mr. Lurie letter dated February 17, 2025. But I think it's worth repeating one of Mr. Lurie points in his letter pointing out that the residential representation on the SKRMA board it significantly underrepresented. I further believe that the Town of Jackson should reject this proposal because of all the points in Mr. Lurie's letter but should also make the point that until the SKRMA board is correctly represented the Town of Normal will not approve any development plans in the SKRMA designated area.

Thanks for your consideration.

John Petrakis
309-208-0201

Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

February 20, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Dept.
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

We understand that the Town is evaluating a proposal by Bear Development, LLC, to build a multi-unit condominium complex adjacent to the Grand View Condominiums in the Snow King Resort District.

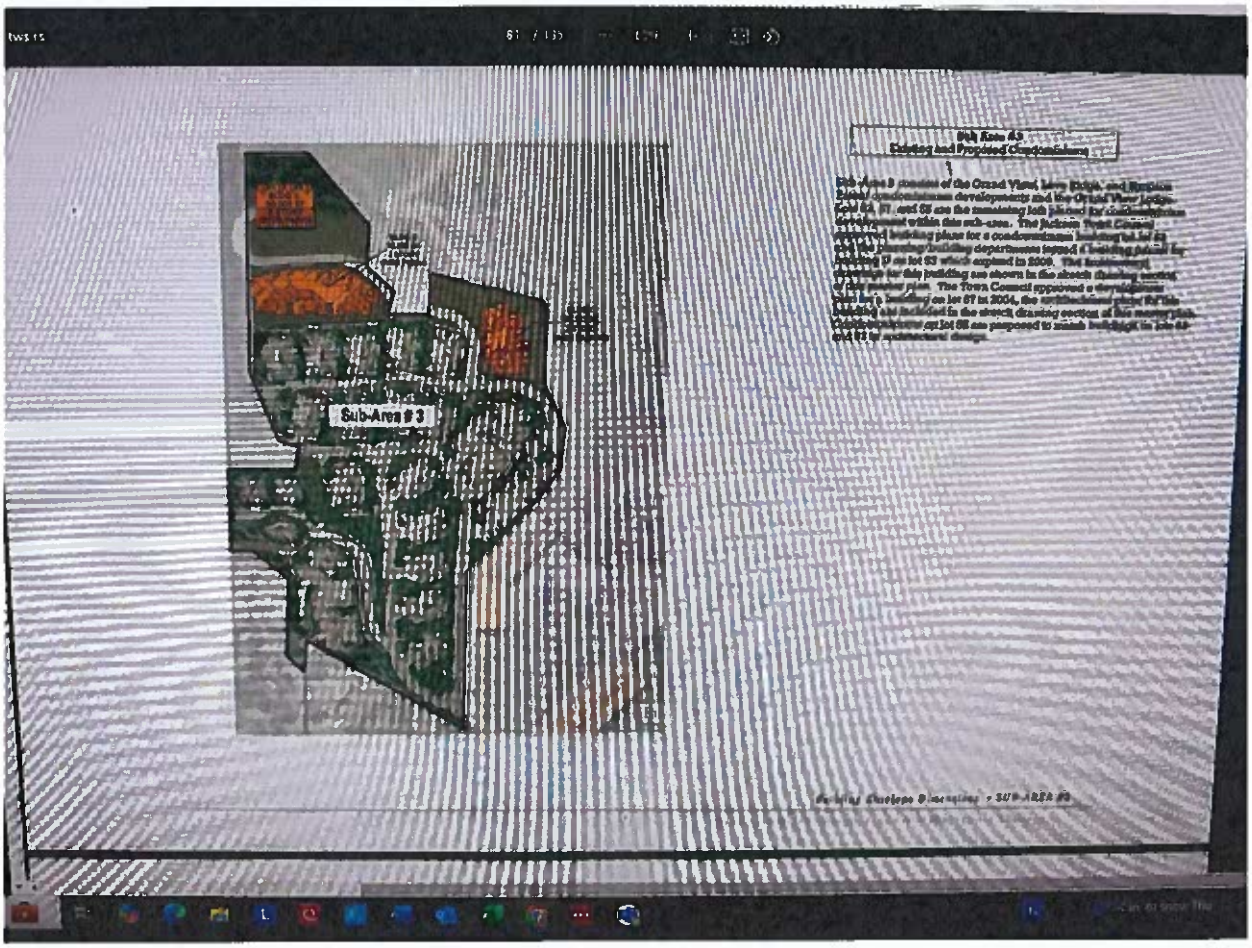
We own Grand View unit 483, which is situated on the west-facing top floor of Building 548 in the southwest corner of our community. Lot 57 of the proposed development encircles the west and south sides of Building 548.

We echo the concerns expressed by the Grand View Homeowners' Association in its February 17, 2025 letter, and want to share several additional concerns particular to Lot 57.

Master Plan terms and Town decisions set public expectations that future development on Lot 57 would be restrained.

We purchased unit 483 in November 2023. During our pre-purchase due diligence, we learned that new development might occur on Lot 57. Accordingly, we reviewed the Snow King Master Plan and minutes of HOA meetings at which SKRMA representatives discussed development prospects, as well as limitations under the Master Plan and Town regulations. As you know, these standards generally require that any new development must be spatially and stylistically consistent with the Grand View community.

We also reviewed the public docket pertaining to Lot 57 and saw renditions of the development concept approved by the Town in 2006 but never built (see image below). Although we were concerned about possible development next door, we were reassured that the Town and SKRMA would apply these standards as a check on developers seeking to change the landscape and density of our mountainside environment, or the neighborhood's appearance from Town.



We were dismayed to learn that SKRMA approved Bear Development's plan – seemingly without regard to the bulk and scale limitations – permitting nearly twice the square footage of that approved in 2006.

The Town should maintain the standards it affirmed in 2021 and 2023.

In our pre-purchase diligence, we found that Bear Development submitted a Zoning Compliance Verification (ZCV) application in May 2023, asking the Planning & Building Department to "clarify development rights and opportunities" on Lots 53, 57 and 58 in light of the Town's 2006 approvals and related determinations in 2021.

In a June 23, 2021 ZCV response (P21-112), the Town had affirmed that future development "must comply" with the requirements to maintain "bulk, scale and character consistency;" "to reduce bulk and mass;" and "to create a design that fits well with the topography and neighboring condominiums." The proposal for Lot 57 meets none of these standards.

The Lot 57 proposal must be rejected or reimagined consistent with the Master Plan and Town precedent.

Bear Development asks to shoehorn two new structures on Lot 57 – one behind Building 548 (and feet away from the Cowboy Coaster) and one beside it. The structures are undoubtedly a high-quality investment in the Snow King resort. However, as seen in the renditions below, the south building would fully occupy the narrow southeast arm of Lot 57 and loom over Building 548. This clear scale mismatch and seemingly inadequate envelope would defeat the requirements of the Master Plan, as reflected in the 2006 approved concept and reaffirmed by the Town's 2021 and 2023 ZCV opinions, and may also raise safety concerns that would be best addressed by other stakeholders.





The Master Plan and Town standards were established in the daylight for prospective buyers and developers to see and rely upon. The Town should maintain these standards and reject Bear Development's proposed 45,000 square feet addition to Lot 57, or at least its towering south structure.

Thank you for considering our position and for maintaining Jackson's and Snow King's unmatched character.

Respectfully,

Kyle B. Levine
for Blanche Neige LLC

Tyler Valentine April 9, 2025
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov
RE: Bear Development Proposed Plans for Snow King Condominiums Lots 53, 57, 58

Dear Mr. Valentine,

The Love Ridge Lodge Homes Condominium Association (the "Association") reviewed the updated application and plans received on March 25, 2025 for the Snow King Condominiums on Lots 53, 57 and 58 (the "Plans") summited by Bear Development, LLC (the "Applicant").

The Association submits the following:
Lot 53 and Lot 58 – Plans were improved over the prior submissions with the relocation of the building on lot 53 being at least an additional 20' south and the elimination of the retaining wall. However, since there is a tree line barrier we ask why would they plan to cut down mature trees that are currently planted on the applicant's side of the border? These trees and plants are established and thriving. They provide screening that will be advantageous for both Grand View Condominium residents and the residents of the new development. Removing these mature plantings and then subsequently replacing them with new, young plantings and boulders will cause residents to have clear views of each other with minimal privacy screening for many years.

Lot 57 – With regards to the scale of the building on Lot 57. We agree with Grand View Condominiums' findings that the plans remain noncompliant with the Master Plan as detailed in the attached drawings done by Northworks. We request the Town of Jackson reject the proposed Lot 57 South building.

While updating the plans to meet the requirements of the Snow King Master Plan to have vegetation between the buildings and the sidewalks it appears that sidewalks were eliminated to allow for vegetation. This is unacceptable since there are several months of winter where many pedestrians walk to areas within the resort district. While the roads are plowed routinely, they are not clear for pedestrians and will be a hazard for skiers accessing the mountain or the hotel for restaurants and amenities. Where there are sidewalks areas, there is no mention whether these sidewalks will have a snowmelt system to help keep them clear in winter months. Is that part of the plan?

Sewer and water infrastructure has not been a part of the plans that we've received. Who is responsible for this infrastructure? When the Grand View Condominiums were developed it was determined that an additional pump system was required to provide adequate water pressure for the units as well as fire protection. We have not seen any details of a study for the water system. In addition, we have not seen studies to show that the existing sewer and water lines are sufficient to handle the additional 72 condos. Who is responsible for making sure that the existing infrastructure is adequate for these additional buildings. This is a concern for both Grand View and Love Ridge CA's.

We appreciate the time that the Planning Commission is taking to review these plans and the concerns that perimeter neighbors are voicing.

Jenny Herman
President
Love Ridge Lodge Homes CA

Jenny Herman Cell
817.938.4009

From: Peter Wold
To: Tyler Valentine
Subject: Bear Development at Snow King
Date: Thursday, February 20, 2025 3:24:48 PM

Dear Mr. Valentine,
I own several Grandview Condominiums and Unit 5110 in the Loveridge Condos.
I seldom object to development in Wyoming, but I vehemently object to the Bear Development at Snow King on Lots 53 and 57.
Their plans contradict the Master Plan and simply need to be redone to comply with it. As the project is designed, it would devalue the Loveridge/Grandview area.
Thank you in advance for requiring compliance to the Master Plan.
Sincerely, Peter Wold

From: noreply@civicplus.com
Sent: Monday, April 28, 2025 7:00 AM
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department
Subject: Online Form Submittal: Email the Planning Commission

Email the Planning Commission

Email Content:

Dear Commissioners:

I am writing on behalf of the Grand View Homeowners' Association regarding Bear Development's plan for Snow King Lots 53, 58 and 57. While I appreciated having had the chance to comment by phone at the April 16 meeting, I expected to have the same opportunity as the developers to present slides that may have helped your deliberations. We were very disappointed but respect your reasons for not allowing Public Comments to not allow screen sharing. I would like to therefore supplement my comments with this letter and I will try to find a way to attach the slides I had hoped to share.

I appreciate the Planning staff's keen analysis and the Commission's work to balance the competing interests about the key question before you: whether the bulk, scale and character of the proposed development is consistent with its existing neighbors and complies with the Snow King Master Plan that specially requires that they must. We were pleased that the Commission heard staff's concerns about the character of the development, particularly the canyon effect between Grand View and Lot 57, and granted a continuance to May 21 for closer evaluation of revised plans.

At the meeting, several commissioners acknowledged the unique mass and scale of this project, and the unique challenges of the subjective approach the Commission is called upon to apply here. We maintain that Lot 57 plans are largely incompatible in bulk, scale and character with Grand View. I am sharing the slides I wanted to present at the meeting confident that they will vividly show the impacts of over-aggressive development and the canyon effect clearly identified by the Planning team and confirmed by several Commissioners at the meeting.

In addition to the factors that led to condition 5 on Lot 57's development, we noted several other concerns being voiced at the meeting. We expect that the developers' revised plans will address them fully before the Commission advances the project to Town Council:

· Chair Wilson's preference to see structural shifts to mitigate the canyon effect caused by the excessive verticality of both Lot 57 buildings and specifically Lot 57 South Building which was never anticipated or ever illustrated as a possibility in the Snow King Master Plan.

· Recognition that the current plans have inadequate parking spots for visitors, rideshare services, service providers, etc. – meaning that Snow King Loop Road and Grand View's and Love Ridge's parking areas will carry the burden of increased occupancy. The Commission and staff discussed the challenges of forcing people to park in "informal places," and the "more competitive" parking environment that will result with new short-term rental project proposed by Bear.

· Recognition that fluid pedestrian flow envisioned by the Master Plan will be sacrificed between Grand View and Lot 57 because the developers left inadequate room for sidewalks and landscaping, choosing instead to build to the limits of property lines.

· Concerns about overallocation and density with Bear's plans to shift 18,000 square feet of permitted development to Lot 57 from Lots 53 and 58, resulting in a much larger footprint than might be permitted if Lot 57 were being developed individually, and a substantially larger and scale-incompatible development than that envisioned in the Master Plan and relied upon by Grand View owners when they purchased their properties. While allocation across parcels may be allowed under the Master Plan, it cannot be a free pass to ignore overriding bulk, scale and character requirements.

· The Commission recognized the comments by the Grand View and Love Ridge HOA presidents and asked about the level of cooperation between developers and the HOAs to address neighbors' concerns. Mr. Mills stated that there had been "significant" efforts to build consensus with Grand View. That is not accurate. In fact, Bear refused to develop any

renderings showing their Lot 57 South Building with Grand View 548 which was specifically requested numerous times. We also found Bear had put into their plans the removal of a stone wall that majority resided and was owned by Grand View without ever informing and discussing it with us. After much strong resistance, they relented. To be clear, the HOAs are opposed to Bear's plan because it does not meet the Master Plan requirements and far exceeds the development any of our homeowners reasonably expected. We are not opposed to development as a categorical matter.

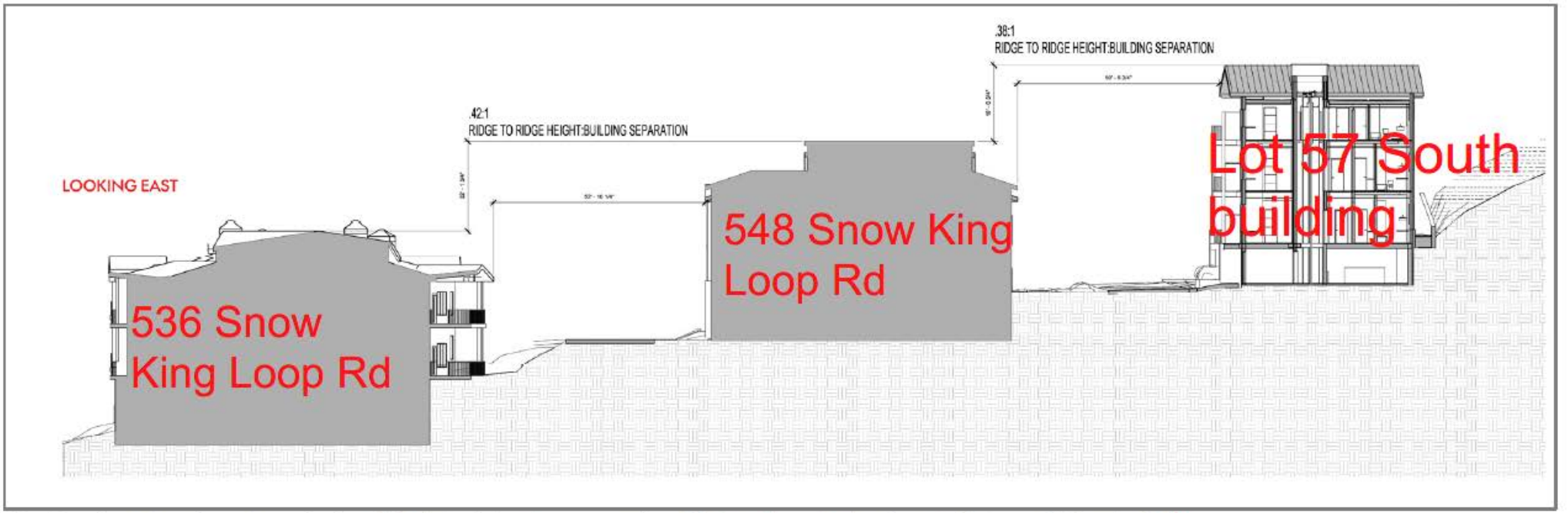
We appreciate your attention and further diligence at the May 21 meeting, understanding that Lot 57 plans cannot and should not advance to Town Council unless the Commission is satisfied that they comply with the Master Plan. In our opinion, the elimination of the never anticipated Sout Building and the redesign of the North Building is the optimum resolution. Plans for Lot 53 and 58 are independent filings and can proceed to Town Council even if Lot 57 plans are delayed for non-compliance with the conditions imposed at the April 16 meeting.

As there is no means to attach the four slides we wished to reference, I will send them to Tyler and have him forward them to the Commission.

Thanks again for the opportunity to share our views and concerns over this important project.

Your Name:	Richard Lurie
Your Company Name:	Grand View Home Owners Association
Your Phone Number:	203-249-0532
Your Email Address:	rlurie@optonline.net
Your City:	Jackson
Your State:	Wyoming
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.



Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings







From: rlurie@optonline.net
Sent: Saturday, March 29, 2025 6:41 AM
To: Tyler Valentine
Subject: RE: Re-Submittal for Lot 53, 57, 58

Hi Tyler the updated application was sent out to all of Grand View Owners. We are still reviewing and will have our response back to you prior to the 10th, however I can give you this feedback.

Lot 53 – we are OK with the changes and only will request the current line of trees remain. As they say they are planning to replace them, it is very curious why they have to remove them if the new building is now around 20 feet away from them.

Lot 57 – we found their response not serious. They are suggesting that by changing the roof lines and the deck walls that the Lot 57 South building will all of a sudden be compliant with the Snow King Master plan that requires it to be compatible with Grand View in bulk, scale and character. If it is not even close! Their page 9 depiction of the buildings is very deceitful. We asked Nick for further explanation and still waiting for his response.

We also found their solution laughable and insightful to their proposal to meet the requirement to have room for vegetation next to their building. Their solution is to eliminate the sidewalks. Therefore, pedestrians and visitors to 72 condominiums that are arriving by foot have to walk in the road! That was their solution and never considered that putting two extremely large buildings are just not compatible with Lot 57.

Rich

Richard Lurie
Grand View HOA
203-249-0532

From: Tyler Valentine <tvalentine@jacksonwy.gov>
Sent: Wednesday, March 26, 2025 10:26 AM
To: Rich LURIE <rlurie@optonline.net>
Subject: RE: Re-Submittal for Lot 53, 57, 58

Thank you Rich.

-Tyler V

From: Rich LURIE <rlurie@optonline.net>
Sent: Tuesday, March 25, 2025 8:43 PM
To: Tyler Valentine <tvalentine@jacksonwy.gov>
Subject: Re: Re-Submittal for Lot 53, 57, 58

Hi Tyler, thanks. I will send it to all Grand View owners. If there are other owners that should get it, please send it to them.

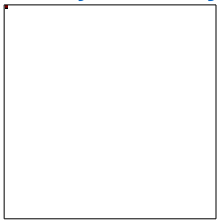
Thanks very much,

Rich

Richard Lurie
R.C. Lurie & Associates
341 Jelliff Mill Road
New Canaan, CT. 06840
203-966-2919
Cell 203-249-0532

> On Mar 26, 2025, at 2:56 AM, Tyler Valentine <tvalentine@jacksonwy.gov> wrote:
>
> I have not yet sent it to others. Are you going to do that or would you like me to?
>
> Comments are due by Thursday, April 10th.
>
> ---
>
> **From:** Rich LURIE <rlurie@optonline.net>
> **Sent:** Tuesday, March 25, 2025 4:50 PM
> **To:** Tyler Valentine <tvalentine@jacksonwy.gov>
> **Subject:** Re: Re-Submittal for Lot 53, 57, 58
>
> Hi Tyler, forgot to ask if the updated submission was sent to all those that submitted comments?
>
> Rich
>
> Richard Lurie
> R.C. Lurie & Associates
> 341 Jelliff Mill Road
> New Canaan, CT. 06840
> 203-966-2919
> Cell 203-249-0532
>
> > On Mar 26, 2025, at 12:55 AM, Tyler Valentine <tvalentine@jacksonwy.gov> wrote:
> >
> > Rich,
> >
> > Attached is the revised submittal for the Snow King Development Plans.

Tyler Valentine
Senior Planner, AICP
Town of Jackson
Phone (307) 733-0440 #1305
tvalentine@jacksonwy.gov
www.jacksonwy.gov



<Snow King Condos - Development Plan Submission - 2025-03-24_pdf>

<~WRD0005.jpg>

From: Susan Houchens
To: Tyler Valentine; Richard Lurie
Subject: Bear Plans for Lot 57
Date: Tuesday, May 27, 2025 5:11:50 PM

We are the owners of Grand View Condominium #522 in building 552. Please consider this letter as opposition to the Bear Development plans for Lot 57 of the Snow King Resort, This proposed building is massive in comparison to the existing buildings in our neighborhood.

When we purchased our Grand View Condominium, we reviewed and relied on Snow King Resort Master Plan to understand what could be built on Lot 57. What we are now being asked to approve for Lot 57 violates everything we read and saw in the Master Plan. This is totally unfair to all the Grand View owners, and these plans must be rejected.

Richard Houchens
Sussan Houchens

From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: Richard Lurie Email the Town Council
Date: Monday, May 26, 2025 1:51:14 PM

Email the Town Council

Email Content:

Dear Jackson Town Council,
I am the owner of unit 4910 in the Grand View 549 building and I would like to submit my personal strong opinion that the Lot 57 south building being proposed by Bear Dev NOT be approved as proposed.

When I purchased my unit, I reviewed the Master Plan and saw a reasonable size building of a little over 25,000 sq ft approved by the Town Council for Lot 57. I was therefore very comfortable in my purchase. No where in the Master Plan was it every illustrated another building could be built where Bear Dev is now proposing the south building. It is totally unreasonable to expect a potential owner to be able to dig through the Master Plan to realize multiple buildings could be built and if the owner of Lot 57 happened to own other lots in the Resort District, they could move additional square footage to this Lot 57 which is exactly what Bear did. One would have to hire an architect or professional planner to figure that out. That is totally unreasonable.

Why would Bear move an additional 18,000 sq ft to Lot 57? The only explanation is he found it cheaper to cram all that extra square footage on the relatively flat Lot 57 than where the plan originally allocated that square footage. He could care less the impact on the existing Grand View owners in the adjacent lot. There is no rational to accommodate this out of town developer at the expense of his neighbors.

Fortunately, the planners who put together the Snow King Master Plan foresaw what could be proposed and put in the Plan very meaningful words to prevent over development. They specifically stated on Page 70 that any buildings on Lot 57 had to be compatible in bulk, scale and character with Grand View condominiums. The words in the Master Plan are just as important as the numbers and these words are clearly being violated by Bear Dev. Their south building is twice as high as the south side of Grand View, contain 4 times the number of units per building and is three times longer than the width of a Grand View building. The building towers over my unit. In my due diligence, no way could I have foreseen what this out of state developer is proposing.

	In addition, the developer as used up so much of the Lot 57 space, he provided no sidewalks or visitor parking. Cramming that south building onto Lot 57 totally changes the entire character of the residential area of the Resort District and we ask the Town Council to reject the developers plans. Rich Richard Lurie Grand View 4910
Your Name:	Richard Lurie
Your Company Name:	Grand View Condominium Association
Your Phone Number:	203-249-0532
Your Email Address:	rlurie@optonline.net
Your City:	Jackson
Your State:	W
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

From: sagarling rdeinc.biz <sagarling@rdeinc.biz>
Sent: Thursday, March 27, 2025 10:22 AM
To: Tyler Valentine
Cc: ragarling rdeinc.biz
Subject: Town of Jackson Planning and Building Department-Bear Development

Importance: High

Tyler,

We are owners of Grand View Condominium, 551 Snow King Loop Road, Unit No. 5120. Please consider this letter as opposition to the Bear Development plans for Lots 53 and 57 of the Snow King Resort.

We received the Bear Development updated plans for Lots 53, 58 and 57.

It is curious that the updated plans show a reduced height, but the plans do not reflect the height change, that we can identify.

Three stories above an exposed garage equates to 4 stories, which violates the SKRMA Master Plan. The developer identifies the garages are 51% below grade, but is that truly the case? What is the acceptable point of measurement, three stories from grade or above grade (as defined by the developer)? What will the impact be for the downhill residences with the massive earth moving required to obtain subterrain garage structures? We have not located where the developer, or SKRMA, has addressed the current utilities infrastructure that are currently located in the development area. The 110k gallon water storage tank is connected to the private PWS that services the resort district with a 10” pipeline. The storage tank provides additional water and pressure to the Town of Jackson for emergency firefighting when the Town’s waterline pressure is reduced to 30 psi.

The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The three massive structures create significant, negative impacts to Grand View Condos and the surrounding HOA communities and do not meet the Master Plan’s requirements for bulk, scale, or character. The viewscape will be permanently afflicted with massive, towering structures which conflict with the current local mountain luxury cabin architectural design embodied by all the Snow King Resort district development.

Sheryl

Sheryl and Roger Garling
R and D Enterprises, Inc.
www.rdeinc.biz
PO Box 3321

Casper, WY 82602
Cell 307.277.3861
Land 307.237.4188
sagarling@rdeinc.biz
ragarling@rdeinc.biz

From:	sagarling rdeinc.biz
To:	Tyler Valentine
Cc:	ragarling rdeinc.biz
Subject:	Town of Jackson Planning and Building Department-Bear Development
Date:	Wednesday, February 19, 2025 1:28:51 PM

Mr. Valentine,

We are owners of Grand View Condominium, 551 Snow King Loop Road, Unit No. 5120. Please consider this letter as opposition to the Bear Development plans for Lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant, negative impacts to Grand View and the surrounding areas and do not meet the Master Plan's requirements for bulk, scale, or character, as explained more fully in the letter from Rich Lurie, President of the Grand View Condominium Association. We ask that these plans be denied until changes are made to bring the proposed development into compliance with the Snow King Resort Master Plan.

Respectfully submitted,
Sheryl
President
R and D Enterprises, Inc.

Sheryl and Roger Garling
R and D Enterprises, Inc.
www.rdeinc.biz
PO Box 3321
Casper, WY 82602
Cell 307.277.3861
Land 307.237.4188
sagarling@rdeinc.biz
ragarling@rdeinc.biz

From: Susan Houchens
To: Tyler Valentine; Richard Lurie
Subject: Bear Development
Date: Thursday, February 20, 2025 5:59:18 PM

We are the owners of Grand View Condominium No. 522 in building 552. Please consider this letter as opposition to the Bear Development plans for lots 53 and 57 of the Snow King Resort. The proposed buildings are massive in comparison to the existing condominiums in our neighborhood. The buildings and retaining wall create significant negative impacts to Grand View and the surrounding areas.

When we purchased our Grand View Condominium, we reviewed and relied upon the Snow King Resort Master Plan to understand what could be constructed adjacent to Grand View on Lots 53. 57, and 58. The size, height, and proximity of the proposed Bear Development construction to Grand View far exceeds anything that could have been anticipated under the Master Plan and should not be allowed.

Richard Houchens
Susan Houchens

From: Virginia Wade <gwademd@gmail.com>
Sent: Sunday, February 16, 2025 1:28 PM
To: Tyler Valentine
Subject: Snow King owner 552-521

Dear Tyler Valentine:
As a long-standing homeowner in the valley, I have always taken an interest in project development. Having recently sold a family home on the West Bank, owned from 1998 to April of 2024, I have witnessed many neighborhoods undergo transformation, with tremendous impact to the community. Massive homes,cold beds, they are of no benefit to the community's economy.
We sold our home to be in a Resort
Overlay. We like Snow King, it has the local flavor that has been lost at Teton Village, where parking lots are full and closed, ticket sales are limited, residents are displaced, and as a homeowner not in a resort overlay we were afforded less and less convenience.
When we are not in residence the condo at Snow King can be rented and that contributes to the health and wealth of our community.

In 1998, there was no Snake River Lodge and Spa, no Four Seasons, no Teton Club.
Granite Ridge was just being developed.
There was a time when 2 stories was the limit, and the Four Seasons became the largest building in Wyoming.
I am now the owner of Snow King Loop 552. The 10' retaining wall will do nothing to prevent a slide when a 52,000 sf building is excavated and built to the current proposal on a very steep grade. Drainage in the spring melt doesn't flow through concrete. There are other projects on the sloped terrain in town, they have to be studied. One that comes to mind is Pine Glades.
My row of condos is set apart from those on the lower slope by a road, not a wall.

Increasing the setbacks must be a part of the master plan. Scaling back the height should be considered. It's just too steep.

At the present time there are many projects on the drawing board. They take years to complete. Stop work orders, violations, makes me wonder who approved them in the first place.
The Snake River Bridge project has polarized the community. Tourists who visit Teton Village stay in Teton Village. Going to dinner in town can take upwards of an hour and a half, tee shirt shopping is now an all day commitment. It takes too long to get to the airport.
There is no parking.

Residents don't visit their friends on the other side of the river, skiers stop at Calico and drink booze until the road clears, and there are more massive projects being reviewed that will serve to create gridlock for years.
Talk of widening the Village Road is a nonstarter.
The power lines on the Village Road that snapped a few years ago, causing widespread outages in the valley lasting for days, knocked out the airport power, but the lines were not buried along with the natural gas and fiber optic lines on the Village Road, so where is the widening to occur? Teton Pines? Shooting Star?
What is needed now is serious consideration to every project that comes up for approval.
I read in JH News and Guide a proposal for a north bridge. Money went to build a bike bridge, a treacherous roundabout, a hanger for private planes on the drawing board. Why not a north bridge?

I believe that first and foremost there needs to a a master plan that addresses the congestion. It is a turn off.
Aspen has a moratorium on new builds.
It may be time.

Virginia Wade
Sent from my iPhone

From: Bills GMAIL <william.l.hartmann@gmail.com>
Sent: Wednesday, April 9, 2025 12:54 PM
To: Tyler Valentine
Cc: Debbie Hartmann
Subject: Bear Development Revised Proposed Plans for Snow King Condominium Lots 53, 57 & 58

Tyler Valentine
Senior Planner
Planning & Building Department
Town of Jackson, Wyoming

Dear Mr. Valentine:

We are writing this letter to you as an update to our letter dated February 19, 2025 regarding development plans for Snow King Condominium Lot 57. Lot 57 is directly across from our condominium unit at 548 Snow King Loop.

We have reviewed the modifications to the plans previously submitted by Bear Development.

We do not believe the plans, as modified, and for which Bear Development is now seeking approval, address our objections as previously spelled out in our letter of February 19, 2025.

We continue to object to the **Bulk, Scale and Character** of the Bear Development proposed buildings on Lot 57. We view the changes that Bear Development have proposed to the Buildings on Lot 57 as **minimal** and **not responsive** to the objections that we previously raised. Our objections are very specifically focused on the South Building which we contend is not compliant with the Snow King Master Plan.

We continue to urge you and the Town Council to reject this application and to seek meaningful and responsive modifications, specifically to the Lot 57 buildings, and with particular focus on the non-compliant South Building.

Regards,

William and Deborah Hartmann
548 Snow King Loop, Unit 4810
Sent from my iPad

From: noreply@civicplus.com
To: Town Council
Subject: Online Form Submittal: Hartmanns Email the Town Council
Date: Monday, May 26, 2025 8:23:02 AM

Email the Town Council

Email Content:	I am writing to object to the Bear Development Plans for Snow King Loop, Lot 57. We are the owners of 548 Snow King Loop Unit 481, which is directly impacted by plans on Lot 57. When we purchased our unit we relied upon the Snow King Master Plan which we assumed would be enforced and govern the future development of Lot 57. The revised plans, as submitted by Bear Development, do not comply with the Bulk, Scale and Character language which is contained in the Master Plan. We have objected to each of Bear Development's Lot 57 plans as submitted. This latest proposal from Bear Development is NOT RESPONSIVE TO THE CONCERNS RAISED PREVIOUSLY BY THE COMMISSION. The footprint of the buildings has not changed. The inclusion of the South Building is inconsistent with the Master Plan which included only one building on Lot 57. The Lot 57 development plans are too much building on too little property which is inconsistent with the Bulk, Scale and Character of the rest of Snow King Mountain. We encourage the Town Council to reject the plans for Lot 57 and require a more thoughtful and responsive plan from Bear Developoment.
Your Name:	William and Deborah Hartmann
Your Company Name:	*Field not completed.*
Your Phone Number:	216-470-2101
Your Email Address:	WILLIAM.L.HARTMANN@gmail.com
Your City:	Jackson
Your State:	WY
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

From:	William Hartmann
To:	Tyler Valentine
Cc:	Debbie
Subject:	Bear Development Proposed Plans for Snow King Condominium Lots 53, 57 & 58
Date:	Wednesday, February 19, 2025 6:19:48 PM
Attachments:	pg 77 Snow King Master Plan.pdf

Tyler Valentine

Senior Planner

Planning & Building Department

Town of Jackson, Wyoming

Dear Mr. Valentine:

We are writing to you regarding a request for approval for three Development Plans for Snow King condominiums which includes Lot 57.

Our unit is directly across from Lot 57 at 548 Snow King Loop.

We strongly oppose the development as proposed by Bear Development and are in full support of the objection filed by the Grand View Condominium Association.

By way of background, we purchased the unit in March 2023. At that time, we reviewed the Snow King Master Plan and were fully aware that at some point, Lot 57 would be developed.

We took comfort in two items contained in the Master Plan.

First, the statement contained in the Master Plan on page 70 that "The remaining developable lots with-in Sub Area 3 consisting of Lots 53, 57 and 58 located to the South of the existing Grand View development to fit in with the **bulk, scale and character** of the existing Grand View Condominiums.

Second, on Page 77 of the Master Plan shows a single, reasonable sized building that was part of the approved Master Plan. The Town Council previously approved a development plan for a building on this lot in 2004. This is directly across from our unit in Grand View 548. The proposed structures, for which approval is being sought, are a significant deviation from what is contained in the Master Plan.

The rendition included in the Grand View Condominium Association shows two buildings, versus one in the Master Plan (please see attached from page 77). It also shows the new buildings, especially the South Building towering over the 548 building. This does not, in our opinion, fit with the bulk, scale and character of Snow King Mountain.

We urge you and the Town Council to seek revisions to the plans for Lot 57, as submitted, to avoid destroying the character of the Grand View Condominiums and to adhere to the Master Plan.

Regards

William and Deborah Hartmann
548 Snow King Loop, Unit 4810

From: chris.mandy@cox.net
To: Tyler Valentine
Subject: Revised Bear Development Proposed Plans Lot 57
Date: Thursday, May 15, 2025 4:29:18 PM

Hello Tyler,

My wife and I put a substantial amount of our net worth at risk when we purchased Grand View Condo 494 in August of 2020. One reason we did this was that the Master Plan for the Snow King Resort had what we thought to be a very solid and well thought out plan that would prevent unreasonable buildings to be built that were not in bulk, scale, and character with Grand View. This protected our investment and maybe just as importantly, the character of what one would expect in a resort in the historic town of Jackson which I have been going to for over 50 years.

When I saw the plan for Lot 57, I was horrified. I thought, "How in the world could this be approved when a reasonable person would not even entertain the thought of having a building that does not meet the specific requirements stated in the Master Plan?" This is a massive building, and in no way, shape or form complies with the Master Plan. I thought one of the reasons that we have a Master Plan was to prevent this very thing from happening. The plan says that any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View. That word "**must**" is very clear. Of course it requires someone's judgement to approve or disapprove. To me, this judgement call is as clear as day. How can we say with a straight face that a building that is twice as high as the back of Grand View 548, has nearly four times the number of units, has a footprint that allows no setbacks from property line and extends three times in length versus Grand View buildings, is not in violation of the very plan which is supposed to protect this kind of thing from happening?

Furthermore, the applicant's response had an attitude of, "Let's see what we can get away with" and thus was very inadequate in addressing the requirement to reduce the bulk and scale of the south building. A 2% reduction???!!!! That is insulting to me as an owner that they would even

present this amendment. How can the applicant claim that the south building is compatible with Grand View in bulk and scale? Their depiction of compatibility is deceptive, inaccurate and has an air of arrogance.

In addition, the applicant has been unwilling to address the pedestrian and vehicle issues. I'm sure you're aware that the Master Plan says that the height of the buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. Well, I for one would be totally overwhelmed by this massive building, not to mention that pedestrians will have to be walking on the road, not in the way that the applicant suggests they will walk. That makes no sense whatsoever, it won't happen, and I think the applicant knows that.

Therefore, I respectfully recommend that the Town of Jackson reject the plans for Lot 57 so we continue to remain true to the Master Plan which was well thought out and done for a reason.

Sincerely,
Chris Palmer

May 15, 2025

To: Town of Jackson Planning Commission
From: K&K on Simpson, LLC
RE: Comment for 180 S. King St. Courthouse Development

To the Members of the Town of Jackson Planning Commission:

The members of K&K on Simpson, LLC ("K&K"), owner of 70/72 E. Simpson Ave., request the following be considered in the application for approval of sketch plan and all future permitting for development of the proposed Courthouse complex to be located at 180 S. King St., Jackson, WY.

Before discussing the details of the proposed Courthouse plan, I would like to point out that the basis for K&K's perspective is largely the result of having been located on East Simpson Ave. for over 43 years. The members of K&K are George and Lea Kuvinka. For 40 years we operated our law office at 70 E. Simpson. Since our retirement, the property has been a mixed-use rental property. We continue to have nearly daily contact with the property as we perform much of the maintenance on the property. From the top of Snow King, you might notice that our property includes the largest and greenest backyard in the area. We have chosen not to develop but, rather, to preserve and renovate. During the same period, there have been several long term major construction projects at the 180 S. King St. location which include the current jail, the Hansen Courthouse and the renovation of the current courthouse.

The comments in this letter are limited to practical matters which I raised at the neighborhood meeting this past winter. Nobody from the Town planning office or commission attended the meeting. We may have opinions regarding the size and necessity for such a large building. However, it appears that there is already a commitment to a single 80,000 square foot building.

1. Construction Noise and Hours. This project is in the fringe between a commercial area and a residential area. 70 E. Simpson is an office and 72 E. Simpson is a residential rental. Many other properties in the area are mixed use or residential. During the previous courthouse remodel, jackhammering was constant for hours each day over lengthy periods of time. Much more noise and disruption will likely occur considering the proposed structure is 80,000 square feet to be constructed over the three years. It would seem appropriate that strict time limits on the days and hours of construction

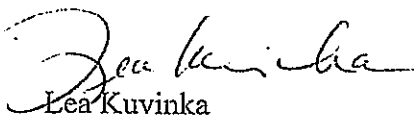
including a maximum number of hours per day during which the noisier activities can occur. For instance, noisier construction activities could be limited to a few hours per day. The contractor should be required to inform those who request notification of a schedule of expected noise and other disruptions on a regular basis before they occur so that businesses can plan their activities and residents know what to expect.

2. Staging. At the neighborhood meeting, there was brief mention of the proposed staging area being in the parking area across from the Hansen Courthouse. This 50'X150' lot seems inadequate for such a large project. My understanding is that some of the parking near the jail and general services building will remain in service further limiting on-site staging. The result of inadequate staging areas will likely be that construction materials will be stored in trailers on the local streets and other areas which interfere with the current use of the streets and sidewalks. A plan for adequate staging should be required which considers the current neighborhood use of these areas.

3. Parking. On any given day, the streets around the current courthouse are solidly parked. Even if the current courthouse offices are moved, the parking problem will not resolve as parking is being pushed into this area. Visitors as well as employees of the commercial area park where limits are more generous. Similar to the current construction area on Pearl Street, street parking will be further limited and pushed in every direction due to closed curb parking. No doubt, the Town staff as well as the neighborhood occupants will find the parking issue an incredible challenge when the construction gets going. One obvious strategy would be to require the contractor to prohibit workers from parking anywhere in the area by providing parking elsewhere with transportation to the construction site. The Town might also consider strategies to redirect visitor and downtown employee parking away from this area. I am sure there are other strategies as well. The point being that this issue needs to be addressed in detail with a specific traffic and parking plan for the area.

We realize there is no way to completely mitigate the effect of an 80,000 square foot building with a three year construction timeline, our request is that the Town do as much as possible to retain the character and quality of our neighborhood, from the design of the project to the disruption the construction process may cause.

Very truly yours,



Lea Kuvinka
On behalf of K&K on Simpson, LLC

Grand View Homeowners Association

Jackson, Wyoming

May 15, 2025

Tyler Valentine
Senior Planner, Town of Jackson Planning and Building Department
Via email to: tvalentine@jacksonwy.gov

RE: Revised Bear Development Proposed Plans Lot 57

Dear Tyler,

The Grand View Condominium Association (the "Association") has reviewed the revised application and plans for Snow King Condominiums Lots 57 submitted by Bear Development, LLC, a Wisconsin developer (the "Applicant"). The Association respectfully submits that the Applicants revised plans continue to fail to comply with the requirements of the Snow King Planned Resort District Master Plan ("Master Plan") and do not address the specific concerns raised by Planning and the Commission on April 16.

The Association's primary objection is to the Lot 57 south building that continues to be incompatible in bulk, scale and character with Grand View Condominiums which is a specifically stated requirement of the Master Plan.

Issue 1: Plans Continue to not Adhere to the Requirements of the Snow King Master Plan

The Master Plan provides a depiction of what was previously approved and could be anticipated and approved for Lot 57 – the "development predictability" that is a key component of the Master Plan. SKRMA always recommends prospective buyers in the Resort District to review the Master Plan to understand what has been approved to be built. The depictions and illustrations show a 25,393 square foot building approved by the Town of Jackson for Lot 57 building (see attachment Exhibit 1). A very reasonable building is depicted and compatible in bulk, scale and character with Grand View. Buyers of Grand View units therefore made their purchase decision based upon what they saw in the Master Plan. Instead, the Applicant has decided to move 18,000 sq ft and added a second massive building – over 70% growth of what is approved in the Master Plan. The approval of this lot needs to be based upon as if it were purchased on a stand alone basis and without the additional unapproved 18,000 sq ft.

We would like to make it clear that our objection to the proposed plans for Lot 57 is totally based upon it not meeting the specific requirements stated in the Master Plan and NOT anything to do with current owners against development or losing their views.

I would also like to make the point that words placed in the Master Plan matter just as much as numbers. When the plan says any buildings on Lot 57 must be compatible in bulk, scale and character with Grand View, this requires a clear judgement call. Fortunately, the call for the Planning Commission is very easy. The Applicants south building being twice as high as the back of Grand View 548, containing almost four times the number of units, foot print allows no setbacks from property line and extends three times in length than Grand View buildings clearly violate these words.

If the revised Lot 57 plans are approved in their current form, a precedent will be set in the Snow King Resort District to allow for development of a size and character that is not consistent with the Master Plan Design Guidelines and was never contemplated in the Master Plan. Such an approval will create confusion and ambiguity moving forward, and will ultimately undermine the Master Plan itself.

Issue 2: Non-Responsive to Requested Reductions in Bulk and Scale

On the 16th of April, the Applicant's proposed plans for Lot 57 were rejected with the specific instructions as follows:

> *In addition, the applicant shall make design changes that further reduce the bulk and scale of the northeast corner of the south building. Suggested changes could include, but are not limited to, removing a section of building on the east side, shifting the building farther south, removing a partial story, shortening the roof overhang above the easternmost third-floor unit, reducing square footage, modifying the floor plans to create larger step-backs on upper units, and/or reducing unit counts.*

The Applicant's response was woefully inadequate and essentially did almost nothing to address the issues identified:

- A removal of a bedroom of 517 square feet on the fourth floor of a portion of the northeast corner of the south building which represents a 2% reduction, in no way addresses the requirement to reduce the bulk and scale of the south building.
- The rendering (Page 7) finally provided by the Applicant in the revised package (which we had continually requested) is so deceptive and dishonest. It is also an admission by the Applicant that it does violate the Master Plan as they are trying to hide the actual bulk and scale of the south building.
- The rendering produced by Grand View HOA (Exhibit 2) is still an accurate depiction of the bulk and scale of the south building, the total footprint of which has not changed. If you remove the upper left-hand corner single bedroom which is all the Applicant is proposing, you would not be able to even see the change from the road below.

- The south building continues to violated the Master Plan requirement to be compatible with Grand View in bulk, scale and character as it clearly does not.

Applicant continues to claim the south building is compatible with Grand View in bulk and scale. See Exhibit 3 produced by the Applicant and which we will show is totally inaccurate. The actual spacing between the Applicant's south building and 548 is shown in Exhibit 2 which was done from actual drawings. The actual spacing between Grand View 548 and Love Ridge 536 is shown in an actual picture in Exhibit 4. Again, the Applicant's depiction of compatibility is deceptive and totally inaccurate.

Issue 3: Non-Responsive to Pedestrian and Vehicle Issues

We continue to point out the Applicant's unwillingness to address the pedestrian and vehicle issues. The Master Plan specifies that the height of buildings shall not overwhelm people walking beside the buildings and must not overwhelm pedestrian scale. (p. 57, 59)

- A total Canyon effect will result between the south and north buildings. At the closest point, it is estimated that the buildings 55' and 35' respectively with less than 10' between them and at the sidewalk level around 6' between them. The same Canyon effect will be present between the south building and Grand View 548. This is totally pedestrian unfriendly which clearly violates a requirement in the Master Plan
- The applicant removed sidewalks on Lot 57 to meet the vegetation requirements along their buildings. The applicant is therefore suggesting pedestrians will use the Grand View sidewalks across the road rather than reduce the building sizes on Lot 57. This is totally unrealistic and actually silly. Does one actually think pedestrians will cross the road, walk up on the Grand View sidewalk and then cross back to Lot 57? Pedestrians will be walking in the road to get to the Applicant's buildings by foot. Totally unsafe and again a total violation of the required pedestrian accommodations in the Master Plan.
- The Applicant's movement of 18,000 sq ft and adding a second building is taking up so much of the .83 acre lot there is absolutely no allowance for visitor or service unit parking. Many of the planned units only have one parking space. Visitor and service unit parking will take place all along the road and at opportunistic spots at not only Bear Dev buildings but Grand View/Love Ridge buildings as well.

Summary

The Applicant's proposed changes in response to the rejection of their original plans for Lot 57 continue to violate the Master Plan and continue to be inconsistent with what was anticipated in the Master Plan and on which owners within the Snow King Resort Area relied. The bulk, scale, and character of the south building is not compatible with existing development, will dwarf the pedestrian scale in Sub-Area, and is squarely at odds with the Master Plan goals of balance and

predictability. Exhibit 5 is provided to depict how compatible the Applicant's north building is to Grand View with the elimination of the south building.

With the requested rejection of the plans for Lot 57, the Applicant still has a very viable plan to move forward. They can immediately start with the plans approved for Lots 53 and 58 while they spend the additional time and energy needed to redesign Lot 57 to meet the requirement of the Snow King Master Plan.

Respectfully Submitted,

Rich

Richard Lurie
President
Grand View Condominium Association

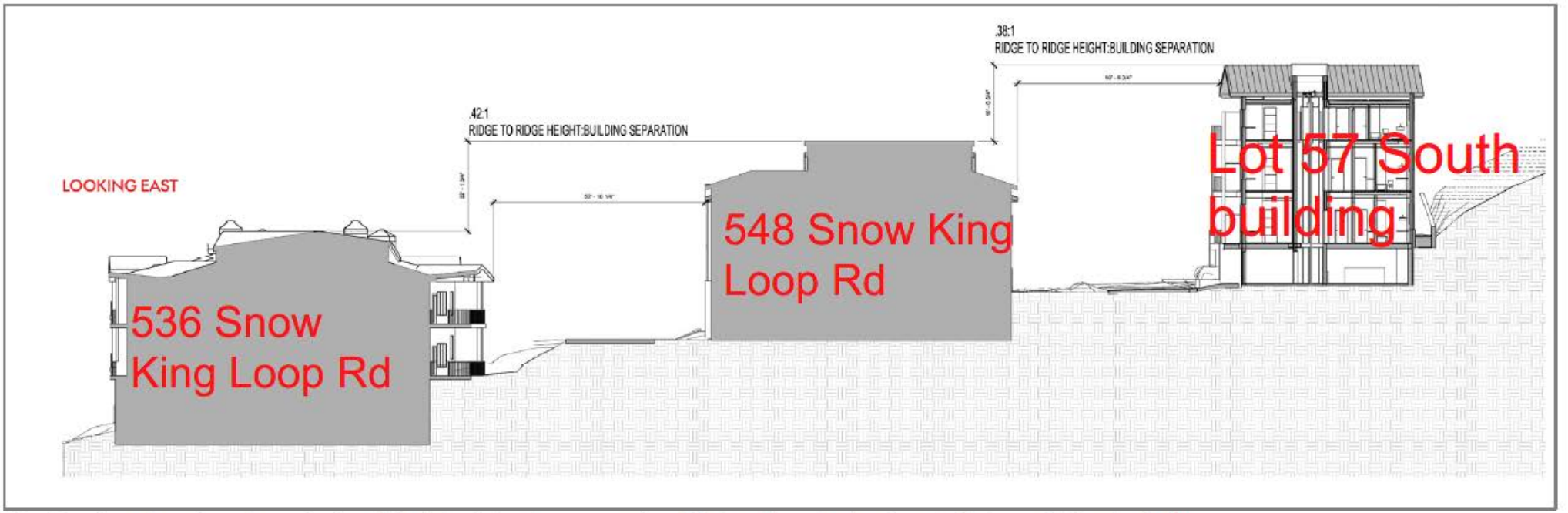


Sub Area #3
Existing and Proposed Condominiums

Sub-Area 3 consists of the Grand View, Love Ridge, and Simpson Patent condominimum developments and the Grand View Lodge. Lots 53, 57, and 58 are the remaining lots platted for condominimum development within this sub-area. The Jackson Town Council approved building plans for a condominimum building on lot 53 and the planning/building departments issued a building parmit for building D on lot 53 which expired in 2009. The architectural drawings for this building are shown in the sketch drawing section of this master plan. The Town Council approved a development plan for a building on lot 57 in 2004, the architechtural plans for this building are included in the sketch drawing section of this master plan. Condominimums on lot 58 are proposed to match buildings on lots 53 and 57 in architectural design.







Site Section showing the relationship in heights between Lot 57 South and the downhill Grand View buildings



From: Harry Dannenberg <harrydannenberg1@icloud.com>
Sent: Thursday, May 15, 2025 8:29 AM
To: Tyler Valentine
Subject: Revised Proposal for Lot 57

I am a 10 year property owner and part time resident (summers) in the Love Ridge Condominiums located in the Snow King Resort District. I am also a member of the Board of Directors of SKRMA. I am the residential director of SKRMA representing the interests of the residential owners in the resort district. As a member of the SKRMA Board I previously voted against approval of the plans by Bear Development with regard to lot 57.

I wrote you on February 20,2025 expressing my agreement with the views of Grand View Condominium Association and Love Ridge Homes Condominium Association that the proposed development by Bear Development violates the Snow King Resort Master Plan because Bear's plans were not compatible with the bulk,scale and character of the existing Grand View Condominiums and Grand View Lodge as required under the Master Plan. I have reviewed the revised submission and plans of Bear Development and I continue to oppose the plan for Lot 57 because it is incompatible in bulk, scale and character of the Grand View Condominiums and Grand View Lodge as required under the Master Plan.

I express my strong agreement with the excellent letters submitted by Rich Lurie, President of Grand View Condominium Association and Kyle Levine, an owner of a unit in Grand View.

I hope the town takes the correct action and rejects the revised proposal for the Lot 57 South Building. This behemoth of a building does not belong in the resort district. Any development of Lot 57 should be along the lines that are described in the Master Plan and approved by the Town Council in 2006. Two large buildings on Lot 57 are not allowed by the Master Plan.

Sincerely, Harry Dannenberg
Sent from my iPad

From: Jenny Herman
To: Tyler Valentine
Subject: Revised Proposal for SKRMA Lot 57
Date: Thursday, May 15, 2025 10:27:27 AM

Mr. Valentine and The Members of the Planning Commission:

My husband and I have owned a Love Ridge condo for 20 years. I am retired and spend a significant amount of time in Jackson throughout the year. Over the past 5 years I have served in some capacity on the HOA Board and for the past 3 years as the HOA board's President. All this to say I am very involved with day-to-day operations and ongoing resolutions that happen when you have 10 buildings with 40 condo units.

Parking: One of our ongoing issues is parking. Each condo is deeded 2 specific parking places in our garage. Each space is marked with the condo unit number. We also have a large sign on the entry doors that states unauthorized vehicles will be towed by Jackson police. None of these are tandem spaces. During busy seasons these spaces are always full. When you have dinner guests, service trucks etc, they have nowhere to park but the roadway. I bring this up because the parking included in the BEAR proposal is not sufficient. Our roadways are much wider and allow for a vehicle to be temporarily parked without impeding traffic. The BEAR proposals have no space for oversized vehicles. We have limited outdoor spaces that can be reserved for oversized vehicles, they have none! This is a huge concern and I have not seen evidence that this was addressed in the original plans or any of the revised plans.

Sidewalks: The revised plan did not address the lack of sidewalks along each building. Yet, they preprot that they are walking distance to town and do not give walkways to traverse on. In the winter, these walkways are needed for a safe way to get across the resort area. In both Love Ridge and Grandview Condos we have heated sidewalk systems and also utilize shovelling to make sure owners and guests have the sidewalks to get around the area. Due to the snow depth and ice build up the roadway is often not safe to walk on. Please mandate that BEAR Development address this issue!

I express a strong agreement with the detailed letters submitted by Rich Lurie, President of Grand View Condominium Association and Kyle Levine, an owner of a unit in Grand View. They provided the technical letters and the negative impact that allowing the current BEAR plan on Lot 57 will create.

It is my hope that the town will take the correct action and **reject the revised BEAR Dev plans for Lot 57**. Please refer back to the 2006 approved plans for Lot 57, those plans were in line with the SKRMA Master Plan.

I regret that I have a personal conflict and thus cannot participate in the Zoom meeting on May 21st. However, I do plan to attend the scheduled Town Council meeting on June 2nd to voice my concerns that have not been addressed with regards to traffic, walkways and parking.

Sincerely,
Jenny Herman
Love Ridge Unit 536

February 14, 2025

Tyler Valentine
Senior Planner, Town of Jackson

RE: Bear Development Proposed Plans for Lots 53, 57, 58
Items P24-168, P24-174 & P24-175

Mr. Valentine,
The Love Ridge Lodge Homes Condominium Association's Board reviewed Bear Development's plans for Lot 57, 53 and 58. After review of the documents and drawings we believe they do not comply with the Snow King Resort District Master Plan. A blatant violation to this Master Plan is shown in the excerpt below. Therefore, we request that the Town of Jackson reject the proposed Bear Development plan.

From page 70 of the Snow King Master Plan:

> The remaining developable lots within Sub-Area 3 consisting of Lots 53,57, and 58 located to the South of the existing Grand View Condominiums will be developed to fit in with the bulk, scale, and character of the existing Grand View Condominiums and Grand View Lodge.

Thank you for your time in carefully reviewing the Bear Development plan in connection to the Snow King Resort District Master Plan. We have 40 individual owners in our HOA and strive to work in the interest of our association for all our owners.

Respectfully,

Jenny A. Herman, President
Love Ridge Lodge Homes Condominium Association

From: Jenny Herman
To: Tyler Valentine
Subject: Revised Proposal for BEAR Development SKRMA Lot 57
Date: Thursday, May 15, 2025 5:11:37 PM

Mr. Valentine and The Planning Commission,

I submitted a letter on behalf of the Love Ridge Lodge Homes HOA on February 20, 2025. Our position has not changed. The proposed development by Bear Development violates the Snow King Resort Master Plan because Bear's plans were not compatible with the bulk,scale and character of the existing Grand View Condominiums and Grand View Lodge as required under the Master Plan.
We have reviewed the revised submission and plans of Bear Development and we continue to oppose the plan for Lot 57 because it is incompatible in bulk, scale and character of the Grand View Condominiums and Grand View Lodge as required under the Master Plan.

In packets that have been previously submitted we encourage all members of the committee to review the submissions by Rich Lurie, President of Grand View Condominium Association and Kyle Levine, an owner of a unit in Grand View.

I hope the town takes the correct action and rejects the revised proposal for the Lot 57 South Building. This behemoth of a building does not belong in the resort district. Any development of Lot 57 should be along the lines that are described in the Master Plan and approved by the Town Council in 2006 and again in 2021.

Sincerely,
Jenny Herman
President, Love Ridge Lodge Homes CA
Mobile: 817.938.4009

From: Jeremie Dufault
To: Tyler Valentine
Subject: Lot 57
Date: Sunday, May 25, 2025 7:24:28 PM

Dear Mr. Valentine, I am the owner of Unit 5030 at 550 Snow King Loop. I have reviewed the plans for Lot 57. The proposed building is not compatible in bulk, scale and character with Grand View Condominiums as required by the approved Master Plan. I reviewed the Master Plan prior to my purchase and determined that any developer of Lot 57 would be legally obligated to build consistent in bulk, scale, and character, and not be allowed to violate the terms of the Master Plan. I respectfully request that you reject the current proposal in support of the reliance and expectations owners like me had when we purchased our units. Thank you, Jeremie

From: noreply@civicplus.com
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department; georgiews4@gmail.com
Subject: Online Form Submittal: Email the Planning Commission
Date: Sunday, May 18, 2025 12:55:20 PM

Email the Planning Commission

Email Content:	As Owners of Grand View Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence and communications to you as detailed by our HOA President Richard Lurie and the Grand View Board. The Bear Development's Plan and corrective submissions as requested by the Planning Department are still in violation and do not in anyway comply effectively with the Snow King Master Plan in bulk, size or character. We purchased this property with the premised that the development would be in accordance with the Snow King Master Plan. Even details of the future development plan were personally communicated to us by the Owner/Developer at the time of purchase negotiations and definitely has a bearing on our decision. Safety issues also concern us regarding accessibility for emergency and utility service vehicles and guest parking without a proper ingress/egress solution. The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with. Thank you for your consideration.
Your Name:	John & Irene Hammons
Your Company Name:	Windmill Canyon Ranch
Your Phone Number:	6614356459
Your Email Address:	windmilljh@gmail.com
Your City:	Leona Valley
Your State:	California
Your Zip Code:	93551

Email not displaying correctly? View it in your browser.

From: Deborah Wente <dgwente@outlook.com>
Sent: Sunday, May 11, 2025 9:20 AM
To: Tyler Valentine
Subject: Re: Proposed Snow King development
Attachments: View 3 50% Tree Opacity.jpg; Screenshot 2025-05-11 at 10.17.20 AM.png

John and Deborah Wente
548 Snow King Loop Road
Unit 482
Jackson, WY 83001

May 11, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Department
Tvalentine@jacksonwy.gov

Dear Mr. Valentine,

Please find an updated letter regarding the Bear Development proposal in the Snow King resort district. You will find that the primary issue concerning our unit at 548 Snow King Loop Road remains unchanged.

We own Grandview unit 482 which is located on the east side of the building.

Please consider this letter as opposition to the Bear Development plans for lot 57 of the Snow King Resort. The proposed buildings remain massive in comparison to the existing condominiums in our neighborhood. The buildings create significant, negative

impacts to Grandview and the surrounding areas and do not meet the master plans requirements for bulk, scale, or character as explained more fully in the letter from Richard Lurie, President of the Grandview Condominium Association. We ask that the plans for Lot 57 be denied until changes are made to bring the proposed development into compliance with the master plan.

The newly revised plans submitted by Bear Development have done little to address these issues. It is clear their revised plans refuse to reduce by any but the most negligible amount the size of their buildings on Lot 57. To meet the requirement to have room for vegetation next to their building, instead of reducing the size and footprint of their buildings to allow vegetation as required by the Snow King Master Plan, their solution is to eliminate the sidewalks. Pedestrians, therefore, walking up from the hotel or parking to the 72 condominiums have to walk in the road. Additionally, there is no accommodation for parking which will also create a negative impact for our unit.

In 2006 when we purchased our unit in building 548 of Snow King, we carefully reviewed all associated documentation. This included the Snow King master plan. We understood that there would be eventual development near our unit consistent with what was presented in the master plan and approved by the Town of Jackson. As stated in the master plan, units will be developed to fit in with the bulk, scale, and character of the existing Grandview condominiums and Grandview Lodge.

We strenuously object to the current plan. These buildings are much bigger than the current units and are inconsistent with the Snow King master plan. We will completely lose visibility

of Snow King Mountain. One of our favorite things is to sit on the back deck and look up at the mountain, there was never any expectation we would lose this privilege. Please reference the attached renderings to demonstrate how overshadowed our building would be with the lot 57 South building as proposed. Our beautiful view of the mountain would now be a view of a garage. We would be surrounded by buildings that are much bigger and bulkier in scale than those currently in place.

Again, we understand that these properties were planned for development. However, we had absolutely no expectation they would be so completely oversized compared to the current building.

If this development as proposed is allowed to proceed, the Snow King master plan becomes a useless document that no potential buyer in the Resort District can rely upon.

We respectfully request that the town of Jackson reject the proposed plan.

John and Deborah Wente

Get Outlook for iOS

April 13, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning & Building Department
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

As Owners of Grandview Lodge #4930, we are still very opposed to the Bear Development Plan for Lots 53, 57 & 58. We strongly endorse the Grand View Homeowners Association correspondence and communications to you as detailed by Rich Lurie and the Grand View Board.. The Bear Development's resubmissions are still in violation and do not in anyway comply effectively with the Snow King Master Plan in bulk, scale or character.

We purchased the property with the premise that the development would be in accordance with the Snow King Master Plan. Even details of this future development plan was personally communicated to us by the Owner/Developer at the time of purchase negotiations and had a bearing on our decision.

Safety issues also concern us regarding accessibility for emergency and utility service vehicles and guest parking without a proper ingress/egress solution.

The overriding, radical, self-serving development plan just does not fit. The Snow King Master Plan has set the criteria and standard for the Grand View Community and should be honored and complied with.

Thank you for your consideration.

John & Irene Hammons



From: noreply@civicplus.com
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department; georgiews4@gmail.com
Subject: Online Form Submittal: Email the Planning Commission
Date: Monday, May 19, 2025 10:17:50 AM

Email the Planning Commission

Email Content:

Kyle Levine
Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

May 19, 2025

Planning Commission
Town of Jackson, WY
Via online portal

Dear Commissioners:

I'm writing as a property owner in Grand View building 548, which is adjacent to Lot 57 of Bear Development's pending project. I understand that revised plans will reviewed at your May 21 meeting. I respectfully urge you to reject the revised plans or to approve conditionally (as you were poised to do on April 16) so that Lot 57 plans show meaningful bulk and scale changes before Town Council review.

I attended the April 16 meeting by Zoom and appreciated the Commission's well informed and inquisitive approach, agreeing with Planning's recommendation to condition development on changes "geared at reducing the bulk and scale and improving the character" of the south building consistent with the Master Plan. I am surprised and concerned at the apparent lack of effort by Bear to respond to the Commission's clearly stated concerns about bulk, scale and character compatibility. I am also concerned about what appear to be the unmitigated violation of the Master Plan mandates "not overwhelm the pedestrian scale" and "require the structures to step back away from the street or plaza."

The revised plans include the minimal changes to address Condition 5 of your April 16 Resolution, but do not solve the fundamental design flaws under the Master Plan that fueled the

April 16 deliberations and Resolution. The Commission has the authority and responsibility to current property owners to reject the plans or to condition approval on meaningful changes.

1. Canyon Effect / Excessive Verticality and Density

Planning voiced “character-related concerns over the northeast portion of the south building because it is located close to the road and creates a canyon effect, which is more urban and not in character with surrounding developments that include adequate landscaping and space between the road and the buildings.”

Several Commissioners remarked on the large scale of Bear’s two-building, 43,000 sq. ft. plan and the discrepancy with the 28,000 sq. ft. concept shown in the Master Plan and approved by the Town Council in 2006. Bear’s superficial, minimal changes did nothing to fix the real problem you and our neighbors see here – the planned development is too big, to high and too close to Grand View 548

The canyon effect – a result of the verticality noted by Chair Wilson and inadequate spacing or setbacks – remains a serious defect that has not been seriously addressed by Bear. The footprint of Lot 57’s buildings is exactly the same as presented on April 16. Roofline pullbacks four stories above do nothing to mitigate the closeness that will be felt at street level.

I recognize that the Commission needs to reconcile the Master Plan’s desire for design flexibility with the obligation to preserve bulk, scale and character consistency. But what’s technically allowed isn’t necessarily character-consistent. Planning’s April 16 report explains the canyon effect as an instance of this tension. “The cause of this canyon effect is because 1) the south building is proposed in a location that the Master Plan did not anticipate, but otherwise allows, and 2) the applicant is proposing more overall floor area and basement square footage on Lot 57 than shown on the conceptual site plan even though they are compliant with overall square footage, APOs, parking, FARs LSR, etc.” (emphasis added.)

As you discussed, the dense layout proposed by Bear is an unfortunate function of Bear’s ability to mix-and-match allowable square feet among its three parcels and thus exceed the Master Plan concept by 15,000+ sq. ft. while building to the very edge of the northeast property line. The Commission cannot endorse a plan of this density, even if cross-allocation itself is allowed under the Master Plan, because it does not fit with the neighborhood bulk, scale or character. Would this massive development be permitted if Lot 57 were an independent project without the benefit of bonus footprint allocation?

The canyon effect is a function of vertical and horizontal volume. Condition 5 offered solutions for both factors, but Bear did too little to fix the entire problem. Bear removed just 2% of the overall square footage from a portion of the top floor, helping slightly with vertical bulk and scale, but did nothing to change horizontal density driven by the structural footprint. If you don't have time to visit the site to see for yourself how little room there is for the proposed development (especially on the south arm, where the Master Plan anticipated no development), consider these measurements:

o Roof-to-roof clearance is still just 43 feet between Grand View 548 and Lot 57 North, with Upper Snow King Loop running in between.

o Horizontal separation between Grand View 548 and the balconies of Lot 57 South is likely 45-50 feet. The south structure will be built to the very lot lines, so someone at street level or on the patio of a Grand View condominium will perceive three layers of balconies rising steeply above the road. This naturally has light, sound and privacy implications on our neighborhood character.

o The roofline setbacks on the top edge of the south building are a nice concession but have limited practical impact on the canyon effect since Lot 57 South's roof line is 19 feet higher than Grand View's and out of view at street level from most vantage points.

The depiction below illustrates how crowded this passage will feel from the street level.
Bear claims that these tight horizontal clearances are consistent with the separation between Grand View buildings. The critical difference: there is no road running between the Grand View buildings. The better comparison is the separation between Grand View 548 and the Love Ridge building downhill, which is nearly 53 feet and divided by Snow King Loop Road. This is 10 feet more separation than the revised plans would put between Grand View 548 and Lot 57 North.

2. Negative Parking and Walking Experience

Pedestrians and drivers will experience the canyon effect as an unwelcoming sense of constriction as they proceed uphill from Grand View Lodge and turn on Upper Snow King towards Lots 53 and 58. With inadequate parking, pedestrians will inevitably use Upper Snow King to walk uphill from the alley between the Lot 57's two building and Lots 53 and 58. There's no sidewalk because Lot 57 South is so close to the road and has no meaningful setback. This crowded arrangement violates at least two Master Plan principles: ". . . do not overwhelm the pedestrian

scale" and "require the structures to step back away from the street or plaza."

Planning has advised that the Master Plan does not dictate parking capacity, which is an important input to the pedestrian experience. This is unfortunate since Bear has sacrificed parking and walkability for maximum square footage. As you heard on April 16, residents, guests, caretakers, maintenance staff and rideshare drivers without dedicated parking will fend for themselves and compete for parking in Grand View and Love Ridge. Then they will have to walk uphill alongside a four-story building and through a 43-foot wide canyon to their destinations, but not on a sidewalk that should take them along Lot 57 South's entire length. This is a far cry from the welcoming and cohesive pedestrian experience anticipated by the Master Plan.

The depictions included with my May 14 submission illustrate this experience. Note the verticality and density of both Lot 57 buildings and the shadows cast across Upper Snow King Loop.

The street-level perspective looking west between Lot 57 South and Grand View 548 is a striking illustration of the canyon effect . . . even without showing the Lot 57 North building that would loom to the right in the distance. Note that Bear removed the sidewalk in front of the south building so there is even less buffer between structures. I acknowledge that Bear made some bulk reductions on the walls around the balconies.

3. Reliance on Master Plan Terms and Precedent / Expectation of Restraint

I purchased Grand View 548 in 2023. During pre-purchase diligence, I read the relevant Master Plan language. I also found Bear's Zoning Compliance Verification (ZCV) application, asking Planning to clarify development rights and opportunities on Lots 53, 57 and 58 in relation to the approved 2006 concept. Bear's ZCV referenced a 2021 ZCV response in which the Town affirmed that future development "must comply" with the requirements to maintain "bulk, scale and character consistency;" "to reduce bulk and mass;" and "to create a design that fits well with the topography and neighboring condominiums." I appreciate Planning's thoughtful work to enforce these standards in this proceeding.
I relied on these public records and took comfort that the Master Plan would be enforced with any eventual development being generally consistent with the 2006 concept.

Instead, we are faced with the prospect of a behemoth surrounding and towering over two sides of our building with less than 50 feet separation.

This is not an outcome that “we should have seen coming” just because we bought in a resort district. The Master Plan terms, the approved 2006 concepts, Planning’s ZCV interpretations, responsible due diligence, and this Commission’s sound judgment are the public checks on excessive development. We are not opposed to and not surprised by development categorically.

The Master Plan exists so that buyers and developers alike have predictability before investing in the Snow King community. The massive structures proposed by Bear were not predictable because they are clearly at odds with the 2006 concept that is a matter of Jackson’s public record. To quote Planning’s report, the south building is being placed “in a location that the Master Plan did not anticipate” and, even less predictably, would occupy virtually every available foot of the narrow property between the Cowboy Coaster and the road.

I fear that the Master Plan’s goals and prior interpretations will be loosely applied to Lot 57 because the Master Plan is less prescriptive than Town standards, and the Commission feels that they have no choice on May 21 except to advance the plans to Town Council. The Commission has the challenging responsibility to interpret Master Plan standards and precedent subjectively and then decide whether Bear’s plans are not just technically allowable, but also aesthetically suitable based on the bulk, scale and character of the neighborhood. This is not the case for the revised Lot 57 plans. They should be reject or approved conditionally.

4. Conclusion

The Master Plan must have force for those who purchased in Grand View or Love Ridge expecting restrained development and those who are considering buying or developing in Snow King in the future. The Master Plan gives certainly developers flexibility to build new properties, but not at the expense of neighborhood character, pedestrian experience and the other environmental factors set out in the Master Plan. The Commission should reject the current plans, or approve conditionally, requiring Bear to reimagine Lot 57 with compliant structure(s) before advancing to Town Council review.

Thank you for considering these comments.

Respectfully,

Kyle Levine

Your Name:	Kyle Levine
Your Company Name:	Blanche Neige LLC
Your Phone Number:	2063040170
Your Email Address:	kblsf@yahoo.com
Your City:	Jackson
Your State:	WY
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

Kyle Levine
Blanche Neige LLC
548 Snow King Loop Road
Unit 483
Jackson, WY 83001
kblsf@yahoo.com

May 14, 2025

Tyler Valentine
Senior Planner
Town of Jackson Planning and Building Dept.
tvalentine@jacksonwy.gov

Dear Mr. Valentine:

I'm writing once again as a property owner in Grand View building 548, which is adjacent to Lot 57 of Bear Development's pending project.

I attended the April 16 meeting by Zoom and was pleased that the Commission was engaged and inquisitive, agreeing with Planning's good recommendation to condition development on changes "geared at reducing the bulk and scale and improving the character" of the south building consistent with the Master Plan. I understand that the revised plans will be subject to further review on May 21 and have these additional comments.

The revised plans barely respond to Commission and Planning concerns and do not solve fundamental design flaws under the Master Plan.

1. Canyon Effect / Excessive Verticality and Density

Planning has "character-related concerns over the northeast portion of the south building because it is located close to the road and creates a canyon effect, which is more urban and not in character with surrounding developments that include adequate landscaping and space between the road and the buildings."

Several commissioners remarked on the large scale of Bear's two-building, 43,000 sq. ft. plan and the discrepancy with the 28,000 sq. ft. concept shown in the Master Plan and approved by the Town Council in 2006.

The canyon effect – effectively a result of the verticality noted by Chair Wilson and inadequate spacing or setbacks – remains a serious defect that has not been seriously addressed by Bear. **The footprint of Lot 57's buildings is exactly the same as presented on April 16.** Roofline pullbacks four stories above do nothing to mitigate the closeness that will be felt at street level.

I recognize that the Commission needs to reconcile the Master Plan's desire for design flexibility with the obligation to preserve bulk, scale and character consistency. But what's technically *allowed* isn't necessarily *character-consistent*. Planning's April 16 report explains the canyon effect as an instance of this tension.

> *"The cause of this canyon effect is because 1) the south building is proposed in a location that the Master Plan did not anticipate, but otherwise allows, and 2) the applicant is proposing more overall floor area and basement square footage on Lot 57 than shown on the conceptual site plan even though they are compliant with overall square footage, APOs, parking, FARs LSR, etc." (emphasis added.)*

As you noted, the dense layout proposed by Bear is an unfortunate function of Bear's ability to mix-and-match allowable square feet among its three parcels and thus exceed the Master Plan concept by 15,000+ sq. ft. while building to the very edge of the northeast property line. The Commission cannot endorse a plan of this density, even if cross-allocation itself is allowed under the Master Plan, because it does not fit with the neighborhood bulk, scale or character. Would this massive development be permitted if Lot 57 were an independent project without the benefit of bonus footprint allocation?

The canyon effect is a function of vertical and horizontal volume. Condition 5 offered solutions for both factors. Bear removed just 2% of the overall square footage from a portion of the top floor, helping slightly with vertical bulk and scale, but did nothing to change horizontal density driven by the structural footprint. If you don't have time to visit the site to see for yourself how little room there is for the proposed development (especially on the south arm, where the Master Plan anticipated no development), consider these measurements:

- Roof-to-roof clearance is still just **43 feet** between Grand View 548 and Lot 57 North, with Upper Snow King Loop running in between.

- Horizontal separation between Grand View 548 and the balconies of Lot 57 South is likely **45-50 feet**. Because the south structure will be built to the very lot lines, someone at street level or on the patio of a Grand View

condominium will perceive three layers of balconies rising steeply above the road. This naturally has light, sound and privacy implications on our neighborhood character.

- The roofline setbacks on the top edge of the south building are a nice concession but have limited practical impact on the canyon effect since Lot 57 South's roof line is **19 feet higher** than Grand View's and out of view at street level from most vantage points.

This depiction below illustrates how crowded this passage will feel from the street level.

Bear claims that these tight horizontal clearances are consistent with the separation between Grand View buildings. They ignore a critical difference: there is no road running between the Grand View buildings. The correct comparison is the separation between Grand View 548 and the Love Ridge building downhill, which is nearly **53 feet** and divided by Snow King Loop Road. This is 10 feet more separation than the revised plans would put between Grand View 548 and Lot 57 North.

2. Negative Parking and Walking Experience

Pedestrians and drivers will experience the canyon effect as an unwelcoming sense of constriction as they proceed uphill from Grand View Lodge and turn on Upper Snow King towards Lots 53 and 58. With inadequate parking, pedestrians will inevitably use Upper Snow King to walk uphill from the alley between the Lot 57's two building and Lots 53 and 58. There's no sidewalk because Lot 57 South is so close to the road and has no meaningful setback. This crowded arrangement violates at least two Master Plan principles: "***. . . do not overwhelm the pedestrian scale***" and "***require the structures to step back away from the street or plaza."***

Planning has advised that the Master Plan does not dictate parking capacity, which is an important input to the pedestrian experience. This is fortunate since Bear has sacrificed parking and walkability for maximum square footage. As you heard on April 16, residents, guests, caretakers, maintenance staff and rideshare drivers without dedicated parking will fend for themselves and compete for parking in Grand View and Love Ridge. Then they will have to walk uphill alongside a four-story building and through a 43-foot wide canyon to their destinations, but not via the sidewalk that *should* take them along Lot 57 South's entire length. This is a far cry from the welcoming and cohesive pedestrian experience anticipated by the Master Plan.

The depictions below illustrate this experience. Note the verticality and density of both Lot 57 buildings and the shadows cast across Upper Snow King Loop.



The street-level perspective looking west between Lot 57 South and Grand View 548 is a striking illustration of the canyon effect . . . even without showing the Lot 57 North building that would loom to the right in the distance. Note that Bear removed the sidewalk in front of the south building so there is even less buffer between structures. See page 7 of Bear's revised submission for a view of this corridor based on the current building design.



3. Reliance on Master Plan Terms and Precedent / Expectation of Restraint

I purchased Grand View 548 in 2023. During pre-purchase diligence, I read the relevant Master Plan language. I also found Bear's Zoning Compliance Verification (ZCV) application, asking Planning to clarify development rights and opportunities on Lots 53, 57 and 58 in relation to the approved 2006 concept. Bear's ZCV referenced a 2021 ZCV response in which the Town affirmed that future development "must comply" with the requirements to maintain "bulk, scale and character consistency;" "to reduce bulk and mass;" and "to create a design that fits well with the topography and neighboring condominiums." I appreciate Planning's thoughtful work to enforce these standards in this proceeding.

I relied on these public records and took comfort that the Master Plan would be enforced with any eventual development being generally consistent with the 2006 concept shown below in the upper right.



Instead, we are faced with the prospect of a behemoth surrounding and towering over two sides of our building with less than 50 feet separation.



This is not the outcome that we should have seen coming because we bought in a resort district. The Master Plan terms, the approved 2006 concepts, Planning's ZCV interpretations, responsible due diligence, and this Commission's sound judgment are the public checks on excessive development.

The Master Plan exists so that buyers and developers alike have predictability before investing in the Snow King community. The massive structures proposed by Bear were not predictable because they are clearly at odds with the 2006 concept that is a matter of Jackson's public record. To quote Planning's report, the south building is being placed "in a location that the Master Plan *did not anticipate*" and, even less predictably, would occupy virtually every available foot of the narrow property between the Cowboy Coaster and the road.

I fear that the Master Plan's goals and prior interpretations will be loosely applied to Lot 57 because the Master Plan is less prescriptive than Town standards. The Commission has the challenging responsibility to interpret Master Plan standards and precedent subjectively and then decide whether Bear's plans are not just technically allowable, but also aesthetically suitable based on the bulk, scale and character of the neighborhood. This is not the case for the revised Lot 57 plans.

Conclusion

The Master Plan must have force for those who purchased in Grand View or Love Ridge expecting restrained development and those who are considering buying or developing in Snow King in the future. The Master Plan gives certainly developers flexibility to build new properties, but not at the expense of neighborhood character, pedestrian experience and the other environmental factors set out in the Master Plan. **The Commission should reject the current plans and require Bear to reimagine Lot 57 with compliant structure(s) while development proceeds on Lots 53 and 58.**

Thank you for considering these comments in anticipation of the May 21 meeting.

Respectfully,

Kyle Levine

From: noreply@civicplus.com
To: anne@brilliantlydone.com; k.wilson2582@gmail.com; tomcatsmits@icloud.com; apetri@nwks.com; stephfellowswise@gmail.com; lauraabonich@gmail.com; Town of Jackson Planning Department; georgiews4@gmail.com
Subject: Online Form Submittal: Email the Planning Commission
Date: Tuesday, May 20, 2025 5:50:48 AM

Email the Planning Commission

Email Content:	I am writing to object to the Bear Development Plans for Snow King Loop, Lot 57. We are the owners of 548 Snow King Loop Unit 481, which is directly impacted by plans on Lot 57. When we purchased our unit we relied upon the Snow King Master Plan which we assumed would be enforced and govern the future development t of Lot 57. The revised plans, as submitted by Bear Development, do not comply with e Bulk, Scale and Character language which is contained in the Master Plan. We have objected to each of the Lot 57 plans as submitted. This latest proposal from Bear Development is NOT RESPONSIVE TO THE CONCERNS RAISED BY THE COMMISSION. The footprint of the buildings have not changed. The inclusion of the South Building is inconsistent with the Master Plan which contained only one building. The Lot 57 development plans are too much building on too little property that is inconsistent with the Bulk, Character and Scale of the rest of Snow King. We encourage the Planning Commission to reject the plans for Lot 57 and require a more thoughtful and responsive plan from Bear Development.
Your Name:	William and Deborah Hartmann
Your Company Name:	*Field not completed.*
Your Phone Number:	216-470-2101
Your Email Address:	WILLIAM.L.HARTMANN@gmail.com
Your City:	Jackson
Your State:	WY
Your Zip Code:	83001

Email not displaying correctly? View it in your browser.

From: Bills GMAIL
To: Tyler Valentine
Cc: Rich Lurie
Subject: Beast Development Plans for Lot 57
Date: Thursday, May 15, 2025 5:35:35 PM

Dear Mr Valentine

As you now know, I am a property owner in Grand View building 548 which is directly across from Lot 57. We own unit 481 which is impacted by the Bear Development plans for Lot 57.

When we purchased our unit, we were aware of and relying on the Snow King Master Plan which we assumed would be enforced on future development of Lot 57. We assumed we could rely on the **Bulk, Scale and Character** language which was contained in the Master Plan.

We have objected to the Bear Development plans at each of the previous proposals. This latest proposal from Bear Development is in our opinion Not Responsive to the Concerns Raised by the Commission and Do Not Follow the Master Plan.

Unless and Until Bear Development revises its plans for Lot 57 to reduce the Bulk, Scale and Character of the Buildings (including adhering to the plans for a single building on Lot 57) we will continue to object.

Our objections to the new plans can be highlighted as follows:

The footprint of the Lot 57 buildings is unchanged from the previous proposals

The inclusion of the South Building is inconsistent with the Master Plan

The canyon effect that is created by Lot 57 development is caused by the height and scale (square footage) of the Lot 57 buildings.

Further issues arise as a result of the lack of sidewalk that will force pedestrians in to the roadway. Unlike the rest of Snow King development, this project is jammed in to too small of a space.

In conclusion, the Lot 57 development plans are too much building on too little property that is inconsistent with the Bulk, Scale and Character of the rest of Snow King.

The revised plans do nothing to address our previous objections. We encourage the Planning and Building Commission to reject the plans for Lot 57 and require a more thoughtful and responsive plan from Bear Development.

Thank you for considering our views.

William Hartmann and Deborah Hartmann
548 Snoiw King Loop Unit 481
Sent from my iPad

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Town Council Meeting
Submitting Department:	JH Fire/EMS – Emergency Management	**Presenter:**	Rich Ochs
Agenda Item:	Adoption of Region 8 Hazard Mitigation Plan	**Public Comment:**	Yes

Purpose & Policy Considerations.
To consider adoption of the 2025–2030 Region 8 Hazard Mitigation Plan as an official planning document to guide the Town's efforts in reducing risks associated with natural hazards.

Requested Action.
Adopt the 2025–2030 Region 8 Hazard Mitigation Plan.

Recommendations.
Staff recommends adoption.

Background.
The Region 8 Hazard Mitigation Plan (HMP) is a multi-jurisdictional plan covering Teton County, including the Town of Jackson. It identifies strategies to reduce long-term risks from natural hazards. Specific to the Town of Jackson, strategies identified include stormwater management, flood mitigation along Flat Creek, advocating for wildfire mitigation measures near Town, updating hazardous slope building regulations, and maintaining the latest building codes. The current plan, adopted in 2020, expires on **May 29, 2025**.

This five-year update was developed by Teton County Emergency Management with technical assistance from WSP Engineering, a consulting firm retained by Wyoming Office of Homeland Security. Participating entities include Teton County, the Town of Jackson, the Teton Conservation District, Flat Creek Watershed Improvement District, and the Jackson Hole Airport .

The planning process was coordinated through the Local Emergency Planning Committee and is consistent with FEMA’s Disaster Mitigation Act of 2000 framework.

Analysis.
The HMP contains jurisdiction-specific risk assessments and mitigation strategies. Adoption signals the Town’s commitment to community resilience and interagency coordination. No regulatory or financial obligations are imposed by adoption.

Possible Alternatives.
- Approve the plan as presented.
- Request changes and defer approval.
- Decline adoption.

Comprehensive Plan & Priority Alignment.
Supports goals under the Comprehensive Plan related to **Ecosystem Stewardship** and **Quality of Life**, particularly through proactive disaster risk reduction and regional cooperation.

Fiscal Impact.
Neutral. Plan development was funded by the Wyoming Office of Homeland Security through the federal Emergency Management Performance Grant and state allocations and does not impose regulatory or financial obligations on the Town.

Staff Impact.
Neutral. Existing staff participated in planning. Ongoing implementation will be integrated into existing emergency management programs.

Attachments or Links.

- 2025 Region 8 Hazard Mitigation Plan
- Resolution for Adoption

Suggested Motion.
I move to approve Resolution 25-11, adopting the 2025–2030 Region 8 Hazard Mitigation Plan as an official planning document for the Town of Jackson.

Wyoming Region 8
Regional Hazard Mitigation Plan

for **Teton County**



2025–2030





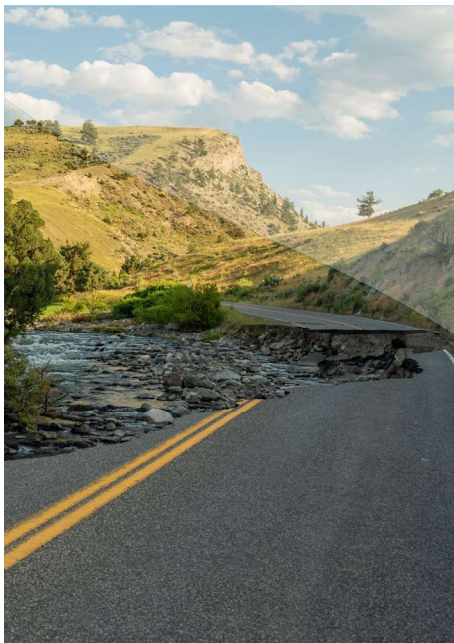


Table of Contents

1 Introduction 1-1
1.1 Purpose 1-1
1.2 Background and Scope 1-1
1.3 Plan Organization 1-2
1.4 Multi-Jurisdictional Planning 1-2
2 Community Profile 2-1
2.1 Geography and Climate 2-1
2.2 Population 2-4
2.3 Changes in Development 2-5
2.3.1 Development Since 2019 Regional HMP 2-7
2.3.2 Major Projects Since 2019 Regional HMP 2-7
2.3.3 Future Development 2-8
2.4 Economy 2-12
2.5 Capability Summary 2-13
2.5.1 Regulatory Mitigation Capabilities 2-14
2.5.2 Administrative/Technical Resources 2-17
2.5.3 Financial capabilities 2-19
2.5.4 Education and Outreach Capabilities 2-20
2.5.5 Opportunities for Enhancement 2-22
3 Planning Process 3-1
3.1 Background on Mitigation Planning in Region 8 3-1
3.2 Government Participation 3-1
3.3 The 10-Step Planning Process 3-2
3.3.1 Phase 1: Organize Resources 3-4
3.3.2 Phase 2: Assess Risks 3-12
3.3.3 Phase 3: Develop the Mitigation Plan 3-12
3.3.4 Phase 4: Implement the Plan and Monitor Progress 3-13
4 Hazard Identification and Risk Assessment (HIRA) 4-1
4.1 Hazard Identification 4-1
4.1.1 Results and Methodology 4-1
4.1.2 Disaster Declaration History 4-6
4.1.3 Assets Summary 4-7
4.1.4 Social Vulnerability and Community Resilience 4-12
4.2 Hazard Profiles 4-14
4.2.1 Avalanche 4-14
4.2.2 Dam/Levee Incident 4-22

4.2.3 Drought....4-34
4.2.4 Earthquake....4-42
4.2.5 Flood....4-56
4.2.6 Landslide....4-70
4.2.7 Severe Winter Storm....4-88
4.2.8 High Winds (Including Tornado)....4-96
4.2.9 Wildfire....4-104
4.2.10 Severe Summer Weather....4-121
5 Mitigation Strategy....5-1
5.1 Mitigation Strategy: Overview....5-1
5.2 Mitigation Goals....5-1
5.3 Identification and Analysis of Mitigation Actions....5-2
5.3.1 Prioritization Process....5-2
5.4 Mitigation Action Plan....5-3
5.4.1 Progress on Previous Mitigation Actions....5-3
5.4.2 2025 Mitigation Actions....5-10
6 Adoption, Implementation, and Maintenance....6-1
6.1 Formal Plan Adoption and Responsible Parties....6-1
6.2 Implementation of Mitigation Actions....6-1
6.3 Integration into Existing Plans and Procedures....6-2
6.4 Plan Maintenance and Evaluation Process....6-3
6.5 Continuing Public Participation....6-4

Figures

Figure 2-1 Wyoming Region 8 Planning Area Map....2-3
Figure 2-2 Zoning Map with Areas of Likely Growth....2-10
Figure 2-3 WUI Map....2-11
Figure 3-1 Public Survey Results – Mitigation Action Category Preferences....3-9
Figure 4-1 FEMA Lifeline Categories....4-8
Figure 4-2 Critical Facilities Overview Map....4-10
Figure 4-3 Region 8 Overall Social Vulnerability....4-13
Figure 4-4 Region 8 Community Resilience Rating....4-14
Figure 4-5 Snowslide Possibilities of Jackson Quadrangle Teton County, Wyoming....4-16
Figure 4-6 Teton County Dams....4-25
Figure 4-7 Teton County Areas Protected by levee....4-31
Figure 4-8 Teton County Drought History and Intensity, 2000 - 2023....4-37
Figure 4-9 Drought Conditions- March 7, 2024....4-38
Figure 4-10 Grand Teton Annual Visitation 1929 - 2021....4-40
Figure 4-11 Quaternary Faults in Teton County....4-43
Figure 4-12 Faults and Epicenters....4-47
Figure 4-13 Estimated Earthquake Impacts on Persons and Household....4-49

Figure 4-14 Teton County Peak Ground Acceleration 4-51
Figure 4-15 Estimated Building Damage by Occupancy 4-52
Figure 4-16 Expected Utility System Damage in Region 8 4-54
Figure 4-17 Teton County/Region 8 FEMA Flood Hazards 4.58
Figure 4-18 Jackson FEMA Flood Hazards 4.59
Figure 4-19 Flat Creek Watershed Improvement District FEMA Flood hazards 4.60
Figure 4-20 Wyoming Landslide Classifications 4-73
Figure 4-21 Wyoming Region 8 Landslide Susceptibility 4-74
Figure 4-22 Landslide Susceptibility in Jackson 4-75
Figure 4-23 Preliminary Landslide Susceptibility Map of Jackson Hole 4-76
Figure 4-24 Region 8 Historic Landslides 4-78
Figure 4-25 Jackson Historic Landslides 4-79
Figure 4-26 National Weather Service Wind-Chill Chart 4-91
Figure 4-27 Teton County Tornado Events 1950-2022 4-98
Figure 4-28 Teton County Wind Events 1950-2022 4-99
Figure 4-29 Wind Zones in the United States 4-100
Figure 4-30 Teton County Wildfire Risk 4-106
Figure 4-31 Town of Jackson Wildfire Risk 4-107
Figure 4-32 Flat Creek Watershed Improvement District Wildfire Risk 4-108
Figure 4-33 Jackson Hole Airport District Wildfire Risk 4-109
Figure 4-34 Teton County Past Wildfire Occurrences, 2000-2024 4-111
Figure 4-35 Projections of future evapotranspiration. 4-113
Figure 4-36 NWS Heat Index and Potential for Health Effects 4-123
Figure 4-37 Teton County Hail Events 1950-2022 4-124

Tables

Table 2-1 Region 8 Land Ownership 2-4
Table 2-2 Region 8 Population Distribution 2-4
Table 2-3 Region 8 Population Change 2010-2022 2-4
Table 2-4 Region 8 Demographic Profile 2-4
Table 2-5 Region 8 Economic Profile 2-12
Table 2-6 Teton County Regulatory Capability Assessment 2-14
Table 2-7 NFIP Status in Teton County 2-16
Table 2-8 Administrative and Technical Resources 2-17
Table 2-9 Financial Capabilities 2-19
Table 2-10 Education and Outreach Capabilities 2-20
Table 3-1 Mitigation Planning Process Used to Develop the Regional Hazard Mitigation Plan 3-3
Table 3-2 HMPC Members and Stakeholders by County 3-5
Table 3-3 Schedule of HMPC Meetings 3-7
Table 3-4 Schedule of Other Stakeholder Meetings 3-11
Table 4-1 Region 8 Overall Hazard Significance Summary Table 4-2
Table 4-2 Region 8 Overall Hazard Significance Summary by Jurisdiction 4-3
Table 4-3 Federally Declared Disasters in Planning Area 4-6
Table 4-4 Region 8 Total Lifeline Facilities by Jurisdiction and Community Lifeline 4-9
Table 4-5 Asset Inventory – Special Districts 4-11
Table 4-6 Region 8 Total Property Exposure by Jurisdiction 4-12
Table 4-7 R-Scale Scoring 4-17
Table 4-8 D-Scale Scoring 4-18
Table 4-9 Avalanche Fatalities in Teton County, 1964-2023 4-18
Table 4-10 Risk Summary by Jurisdiction: Avalanche 4-21

Table 4-11 Dams in Teton County 4-26
Table 4-12 Teton County Parcels at Risk to FEMA Area Protected by Levee Flood Hazard . 4-32
Table 4-13 Critical Facilities at Risk to Area Protected by Levee Flood Hazard by Jurisdiction 4-33
Table 4-14 RISK SUMMARY BY JURISDICTION: Dam /Levee Incident 4-34
Table 4-15 US Drought Monitor Classifications 4-36
Table 4-16 Teton County Weeks in Drought by Intensity, 2000 - 2023 4-36
Table 4-17 Teton County/Town of Jackson Agricultural Overview 4-39
Table 4-18 Risk Summary by Jurisdiction: Drought 4-41
Table 4-19 Modified Mercalli Intensity (MMI) Scale 4-44
Table 4-20 Earthquakes with a Magnitude greater than 4.1, 1959-2024 4-45
Table 4-21 Estimated 2500-Year Probabilistic Earthquake Impact on Persons and Households 4-50
Table 4-22 Region 8 economic impacts, 2,500-year probabilistic earthquake scenario 4-53
Table 4-23 Risk Summary by Jurisdiction: Earthquake 4-55
Table 4-24 Teton County NCEI Flood Events, 1998 – 2023 4-61
Table 4-25 Flood Vulnerable Population Estimate in Region 8 4-64
Table 4-26 Region 8 Parcels at risk to FEMA and HAZUS 1% flood hazards by jurisdiction. 4-65
Table 4-27 Region 8 Parcels at risk to FEMA 0.2% flood hazards by jurisdiction 4-65
Table 4-28 Region 8 Parcels at risk to FEMA Area Protected by Levee flood hazards by jurisdiction 4-66
Table 4-29 NFIP Policy and Insurance Claim Data for Region 8 4-67
Table 4-30 Critical Facilities at Risk to 1% Annual Chance Flood Hazard (FEMA & HAZUS) by Jurisdiction 4-68
Table 4-31 Critical Facilities at Risk to 0.2% Annual Chance Flood Hazard (FEMA) by Jurisdiction 4-68
Table 4-32 Critical Facilities at Risk to Areas Protected by Levee Flood Hazard (FEMA) by Jurisdiction 4-69
Table 4-33 Risk Summary by Jurisdiction: Flood 4-70
Table 4-34 Landslide Classification 4-71
Table 4-35 Landslides of Note in Wyoming Region 8 4-79
Table 4-36 Teton County Population at Risk to Landslide Susceptibility Summary 4-82
Table 4-37 Teton County Parcels at Risk to Landslide Susceptibility Summary 4-84
Table 4-38 Critical Facilities at Risk to Highest Landslide Susceptibility by Jurisdiction 4-85
Table 4-39 Critical Facilities at Risk to Moderately High Landslide Susceptibility by Jurisdiction 4-86
Table 4-40 Critical Facilities at Risk to Moderate Landslide Susceptibility by Jurisdiction 4-86
Table 4-41 Critical Facilities at Risk in Historic Landslide Areas by Jurisdiction 4-86
Table 4-42 Risk Summary by Jurisdiction: Landslide 4-88
Table 4-43 NWS Winter Weather Alert Categories 4-90
Table 4-44 Winter Weather Events Summary, 1996-2023 4-92
Table 4-45 Winter Weather Watches, Warnings, and Advisories for Teton County, 2005 – March 2024 4-92
Table 4-46 Risk Summary by Jurisdiction: Severe Winter Storm 4-95
Table 4-47 Beaufort Wind Scale 4-96
Table 4-48 The Fujita Scale and Enhanced Fujita Scale 4-97
Table 4-49 Summary of Losses by Hazard in Teton County, 1970-2023 4-101
Table 4-50 Risk Summary by Jurisdiction: High Winds 4-104
Table 4-51 Fire Size Classification 4-110
Table 4-52 Population Risk to Wildfire Hazards 4-113
Table 4-53 Teton County at Risk to Highest Wildfire Risk by Jurisdiction and County 4-115
Table 4-54 Teton County at Risk to High Wildfire Risk by Jurisdiction and County 4-115
Table 4-55 Teton County at Risk to Medium Wildfire Risk by Jurisdiction and County 4-116

Table 4-56 Wildfire Hazard Exposure 4-117
Table 4-57 Critical Facilities at Risk to Highest Wildfire 4-118
Table 4-58 Critical Facilities at Risk to High Wildfire 4-119
Table 4-59 Critical Facilities at Risk to Medium Wildfire 4-119
Table 4-60 Risk Summary by Jurisdiction: Wildfire 4-121
Table 4-61 Common Hailstone Measurements 4-125
Table 4-62 Summary of Historic summer weather Events and Losses 4-126
Table 4-63 Risk Summary by Jurisdiction: Severe Summer Weather 4-130
Table 5-1 Completed and Deleted Actions 5-4
Table 5-2 Summary of Actions by Jurisdiction 5-11
Table 5-3. Teton County Hazard Mitigation Actions 5-13

1 Introduction

1.1 Purpose

This plan is the 5-year update of the Wyoming Region 8 Hazard Mitigation Plan (HMP). The revision was completed in 2024 and will be effective for 2025-2030. Wyoming Region 8 (Region) has prepared this HMP to guide hazard mitigation planning to better protect the people and property of the Region from the effects of hazard events. The encompassing and participating jurisdictions include Teton County and the Town of Jackson, Teton Conservation District, Flat Creek Watershed Improvement District, and the Jackson Hole Airport. The purpose of this HMP is to identify policies, actions, and strategies that will help to reduce risk and prevent future losses. Hazard mitigation is best realized when community leaders, businesses, citizens, and other stakeholders join together to undertake a process of learning about hazards that can affect their area and use this knowledge to prioritize needs and develop a strategy for reducing damage. Hazard mitigation is most effective when it is based on a comprehensive long-term plan developed prior to a disaster or hazard event and considers both previous occurrences and future conditions.

This plan demonstrates the Region's commitment to reducing risks from hazards and serves as a tool to help decision-makers direct mitigation activities and resources. This plan was developed to ensure that Wyoming Region 8 and the participating jurisdictions qualify for federal disaster assistance, particularly from the Federal Emergency Management Agency (FEMA). This includes access to Hazard Mitigation Assistance (HMA) grants, such as the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), and the Building Resilient Infrastructure and Communities (BRIC) program. Additionally, the plan aims to strengthen the participating jurisdictions' resilience to disasters and demonstrates the Region's commitment to reducing risks from hazards and serves as a tool to help decision-makers direct mitigation activities and resources.

1.2 Background and Scope

Each year in the United States, disasters take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. However, this financial support only covers part of the total cost, as additional expenses incurred by insurance companies and non-governmental organizations are not reimbursed by taxpayers. Many disasters are predictable, and much of the damage caused by these events can be alleviated or even eliminated in advance.

Hazard mitigation is defined by FEMA as "any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event." The results of a three-year, congressionally mandated independent study to assess future savings from mitigation activities provides evidence that mitigation activities are highly cost-effective. On average, each dollar spent on mitigation saves society an average of $6 in avoided future losses in addition to saving lives and preventing injuries (Natural Hazard Mitigation Saves, 2019 Report).

Hazard mitigation planning is the process through which hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies to lessen impacts are developed, prioritized, and implemented. This plan documents the planning region's hazard mitigation planning process, identifies relevant hazards and risks, and identifies the strategies that each participating jurisdiction will use to decrease vulnerability and increase resiliency and sustainability.

This plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 (Public Law 106-390) and the implementing regulations set forth by the Interim Final Rule published in the Federal Register on February 26, 2002 (44 CFR §201.6) and finalized on

October 31, 2007 and updated in 2012 (hereafter, these requirements and regulations will be referred to collectively as the Disaster Mitigation Act (DMA 2000). On April 19, 2022 FEMA updated the State and Local Mitigation Policy Guides (policies). On April 19, 2023 they went into effect. This means that all state and local plans must meet the updated requirements. While the DMA 2000 emphasized the need for mitigation plans and more coordinated mitigation planning and implementation efforts, the regulations established the requirements that local hazard mitigation plans must meet in order for a local jurisdiction to be eligible for certain federal disaster assistance and hazard mitigation funding under the Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288). Because the planning area is subject to many kinds of hazards, access to these programs is vital.

Information in this plan will be used to help guide and coordinate mitigation activities and decisions for local land use policy in the future. Proactive mitigation planning will help reduce the cost of disaster response and recovery to communities and property owners by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruption. The jurisdictions in the planning area have been affected by hazards in the past and are committed to reducing future disaster impacts and maintaining eligibility for federal funding.

1.3 Plan Organization

The Wyoming Region 8 Regional Hazard Mitigation Plan is organized in alignment with the DMA 2000 planning requirements and the FEMA plan review crosswalk:

- Chapter 1: Introduction
- Chapter 2: Community Profile
- Chapter 3: Planning Process
- Chapter 4: Risk Assessment
- Chapter 5: Mitigation Strategy
- Chapter 6: Plan Adoption, Implementation, and Maintenance
- Appendices

1.4 Multi-Jurisdictional Planning

This plan covers Wyoming Region 8, which is one of eight homeland security planning regions designated by the Wyoming Office of Homeland Security (WOHS). Teton County is the only county within Region 8 and The Town of Jackson is the only incorporated community within Teton County. These two jurisdictions participated in and adopted the original Plan in 2004, and the pursuant updates in 2012, 2016, and 2020. Consistent with the 2020 update, this Plan includes the Teton Conservation District as a participating entity, with the Flat Creek Watershed Improvement District (FCWID) and the Jackson Airport Board (Airport) joining as new participating entities. Participation from Teton County, the Town of Jackson, the Teton Conservation District, the FCWID, and Airport took place in several ways, including:

- Providing key staff to participate in the Local Emergency Planning Committee (LEPC) meetings which served as the Hazard Mitigation Planning Committee (HMPC) for this update;
- Issuing news releases to staff and community members throughout the planning process;
- Posting project and community engagement information on websites, newsletters, and other outlets;
- Identifying actions taken on mitigation actions from the 2020 plan update;
- Providing information through a plan update guide on existing capabilities, hazard concerns, and related plans and documents;

- Providing data for GIS mapping and other risk assessment tasks;
- Providing contacts from which to obtain critical information;
- Providing feedback on plan drafts; and
- Adopting the plan once FEMA approval has been obtained.

Chapter 3 contains additional details on the planning process used to prepare the update of this plan in 2024.

2 Community Profile

This section provides a brief overview of the geography of the planning area. Additional geographic profiles of the participating jurisdictions are provided in the county annexes.

2.1 Geography and Climate

Wyoming Region 8 is comprised of Teton County in the northwest corner of Wyoming, covering an area of 4,216 square miles (10,920 km²). It is renowned for its mountain scenery, including the Teton Range, which gives the county its name. The county is home to two national parks: Grand Teton National Park in its entirety and 40.4% of Yellowstone National Park's total area.

The county seat and the only incorporated town in Teton County is Jackson, which serves as a gateway to both national parks. Other communities in the county include Alta, Hoback, Kelly, Teton Village, and Wilson. The region's economy is primarily supported by tourism, with millions of visitors drawn to the area each year for outdoor activities such as hiking, skiing, fishing, and wildlife viewing.

Geographically, Teton County is characterized by mountainous terrain and geologically active features. The highest point in the county is Grand Teton at 13,775 feet (4,199 m), while the lowest areas are around 6,000 feet (1,829 m) in elevation. The Snake River is the major waterway flowing through the county.

The climate in Teton County is characterized by long, cold winters with deep snow and short, dry, cool summers. Average winter temperatures can drop below 0°F (-18°C), while summer daytime temperatures typically range from 70-80°F (21-27°C). The area receives an average of 150-400 inches (381-1,016 cm) of snowfall annually, depending on elevation.

U.S. Highway 89 is a critical north-south corridor running through Teton County, serving as the main route for travelers heading to Grand Teton National Park from both the southern and northern directions. It intersects with U.S. Highway 191, another important route that provides access to the parks and supports local traffic. Wyoming Highway 22 connects Jackson with Teton Pass, serving as a key commuter route for Idaho residents and offering scenic access to recreational areas. Similarly, Wyoming Highway 390 leads to Teton Village, a well-known destination for skiing and outdoor activities. Additionally, U.S. Highway 26 traverse Togwotee Pass, connecting the Jackson area to central Wyoming. This route is essential for year-round travel, providing access through mountainous terrain and serving as a critic al transportation link for tourism, commerce, and emergency services in the region.

Public transportation in Teton County is primarily provided by the START Bus, which operates routes throughout Jackson and surrounding areas. The service is free within Jackson but requires fares for routes to Teton Village and other nearby locations such as Star Valley and Teton County, Idaho. During the summer months, the Alltrans Shuttle Service provides transportation to Idaho and Utah, including some airports. There is currently no public transit service connecting Jackson to Grand Teton or Yellowstone National Parks. Numerous private companies offer guided tours in the parks in both winter and summer.

The Jackson Hole Airport (JAC), located within Grand Teton National Park, is the primary airport serving Teton County and is a key entry point for tourists. Jackson Hole Airport is among the busiest airports in Wyoming. Additionally, Idaho Falls Regional Airport (IDA) and Salt Lake City International Airport (SLC) offer alternative access, with shuttle services available to Jackson. Highway 22 is not designed to fully accommodate the needs of both local residents and the seasonal influx of tourists in Teton County. While it serves as a vital commuter route, particularly for residents traveling from Idaho, it is not equipped to handle the substantial traffic demands during peak tourism season. The infrastructure limitations of Highway 22 can

lead to congestion and delays, impacting both everyday travel and the overall efficiency of the transportation network during high-demand periods. This system also helps manage traffic challenges in a rapidly growing area.

As of the 2020 census, Teton County had a population of 23,331. The county is notable for its high property values and wealth concentration, which has led to challenges in maintaining affordable housing for lower and middle-income residents. Additionally, the county is known for its commitment to preserving its natural and cultural heritage, with over 97% of its land under federal or state ownership.

A base map of the planning region is illustrated in Figure 2-1. Details of land type and ownership can be found in Table 2-1.

Figure 2-1 Wyoming Region 8 Planning Area Map

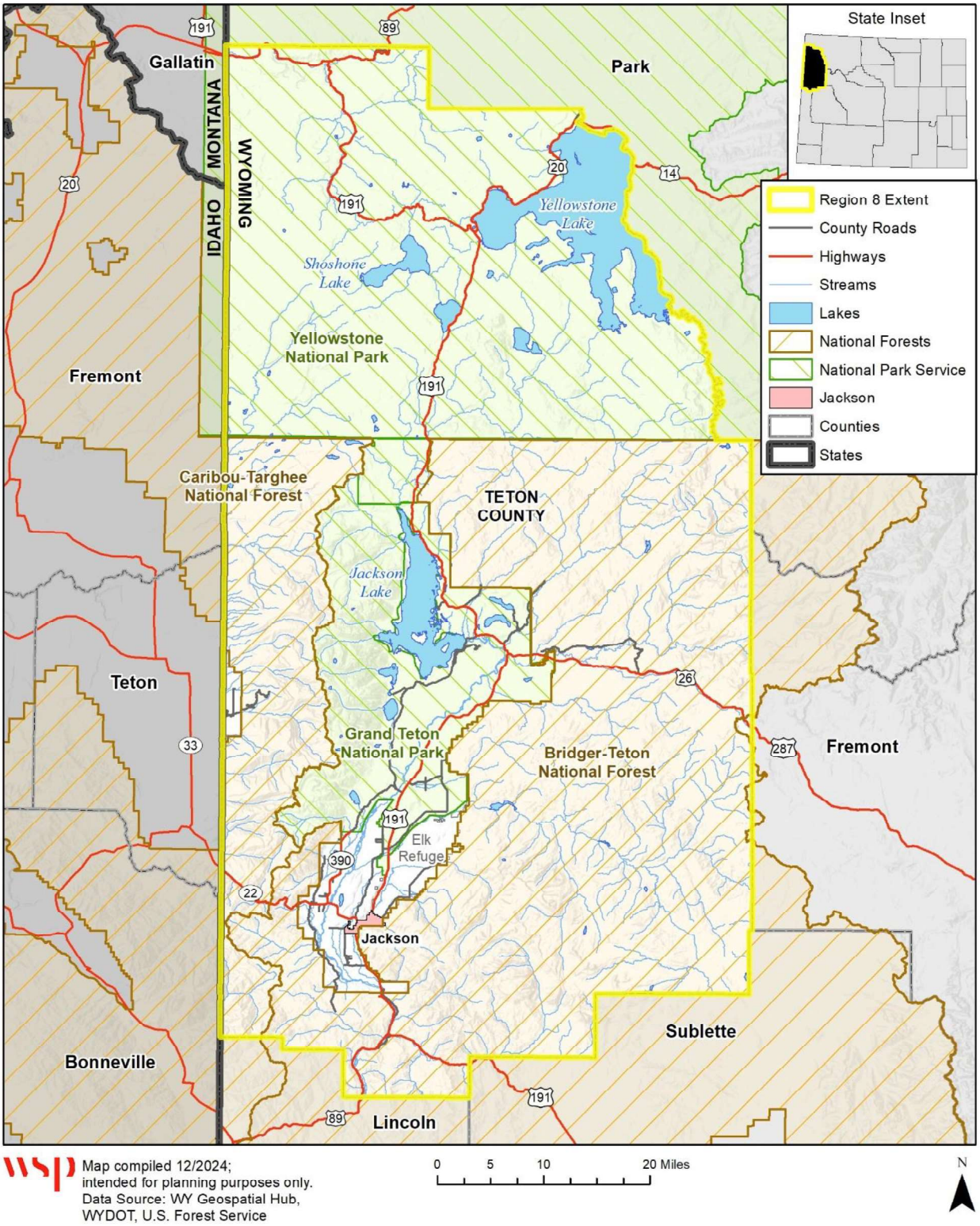


Table 2-1 Region 8 Land Ownership

LAND OWNERSHIP	ACREAGE	PERCENTAGE
Bureau of Land Management	2,452	0.09%
Bureau of Reclamation	9,279	0.34%
Fish and Wildlife Service	24,869	0.92%
Forest Service	1,363,299	50.45%
National Park Service	1,222,302	45.23%
City, County, Private, Other	80,009	2.96%
Total	2,702,208	--

Source: Teton County, ArcGIS Living Atlas of the World – USA Federal Lands, WSP GIS Analysis

2.2 Population

Table 2-2 describes the population distribution and change for the Region. Table 2-3 shows how the region's population has changed since the 2010 Census. As a whole, the Region increased in population by just under 10%, well above the state's overall growth of 3%.

Table 2-2 Region 8 Population Distribution

JURISDICTION	2020 CENSUS POPULATION	2022 ACS ESTIMATED POPULATION	% OF REGION TOTAL
Teton County	23,331	23,346	100
Region 8 Total	23,331	23,346	---

Source: US Census Bureau Decennial Census, ACS 5-Year Estimates 2022

Table 2-3 Region 8 Population Change 2010-2022

JURISDICTION	2010 CENSUS	2015	2022	% CHANGE
Teton County	21,294	22,311	23,346	9.64%
Region 8 Total	21,294	22,311	23,346	9.64%

Source: US Census Bureau Decennial Census, ACS 5-Year Estimates 2015 and 2022

Table 2-4 Region 8 Demographic Profile

CHARACTERISTIC	REGION 8
Population estimate	**23,346**
AGE AND SEX	
Median Age	**39.9**
Percent of population under 18	**17.6%**
Percent of population 65 and over	**16.6%**
Percent of population male	**51.9%**
Percent of population female	**48.1%**
Race and Ethnicity	
White alone	**79.7%**
Black or African American alone	**0.6%**
American Indian alone	**0.1%**
Asian alone	**1.3%**

CHARACTERISTIC	REGION 8
Native Hawaiian & Other Pacific Islander alone	**0.1%**
Some other race alone	**2.3%**
Two or more races	**0.6%**
Hispanic or Latino (of any race)	**15.2%**
Education	
High school graduate or higher, age 25 years+	**96.0%**
Bachelor's degree or higher, age 25 years+	**60.3%**
Vulnerable Populations	
Percent of population under 5 years old	**4.1%**
Percent of population 85 years and older	**1.2%**
Percent of population that speak English less than "very well"	**7.1%**
Percent of population with disabilities	**5.7%**
Percent of population without health insurance	**11.9%**
Percent of population in poverty	**6.9%**
Percent of population in deep poverty (<1/2 federal poverty level)	**2.6%**
Percent of population over 65 and in poverty	**1.3%**

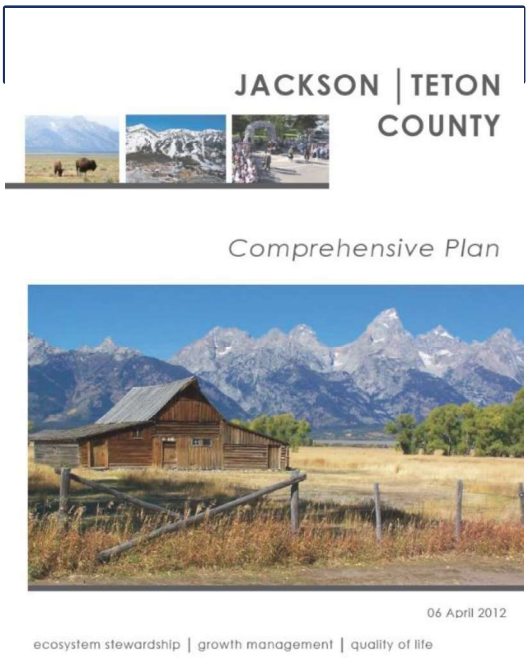
Source: U.S. Census Bureau, American Community Survey, 2022 5-Year Estimates
*Hispanic or Latino is considered an ethnicity, not a race. People who identify as Hispanic or Latino can belong to one or more races. Therefore, the total percentage can be greater than 100%.

2.3 Changes in Development

Despite its limited available land and annual influx of visitors, the county works hard to manage growth in a manner that maintains its western heritage and supports the natural resources that contribute to the local economy and provide quality of life for its residents. The Jackson/Teton County Comprehensive Plan, adopted in 2020 as a joint Town/County project after a five-year public engagement process, sets a combined vision for both government entities based on the following three common values.

- **Ecosystem Stewardship**: Protect the ecosystem's health, including native species, water, and climate, by preserving critical habitat, minimizing the impact of development on wildlife and water quality, and reducing local contributions to climate change. The goal is to preserve the environment for future generations, recognizing its importance for community well-being.
- **Growth Management**: Direct growth to areas with minimal environmental impact, using existing infrastructure to avoid habitat loss and maintain community character. Focus on balancing development needs with ecological preservation.
- **Quality of Life**: Promote diverse housing, economic opportunities for all, and alternative transportation. Ensure access to essential services, healthy living environments, and support individual and community well-being.

These values are analyzed annually in an "Indicator Report" to determine whether growth and development that is occurring is happening in a manner and in the locations that align with the stated values. The Indicator Report measures change and growth utilizing several metrics, the most important of which have become known as the 60/40 and 65% goals, which are described in more detail below.



The Comprehensive Plan sets a goal for 60% of all growth to occur within "Complete Neighborhoods," meaning areas with existing development and services. This target supports the community's three core values. Ecosystem Stewardship is upheld by directing development away from wildlife habitats, scenic areas, and open spaces. Growth Management is achieved by focusing development where infrastructure and services are already available. Quality of Life is enhanced by placing homes near jobs, services, and community spaces, which promotes energy efficiency and fosters a stronger sense of community.

The plan also sets a 65% target for local workforce residency. This goal supports Ecosystem Stewardship by reducing emissions and wildlife-vehicle collisions from commuting. It advances Growth Management by ensuring that housing demand is met locally rather than shifting development to other areas of the ecosystem. Finally, it enhances Quality of Life by enabling local workers to live in Jackson or nearby Complete Neighborhoods, where they can contribute to the community by volunteering, supporting local businesses, raising families, responding to emergencies, and engaging in civic life.

The following statistics are provided in the 2023 Annual Indicator Report.

Ecosystem Stewardship

- The community has prioritized preserving its ecosystem, with 97% of Teton County being public land. Since 2012, there has been a net gain of 515 acres conserved compared to developed land in rural areas.
- Greenhouse gas emissions have not decreased below 2012 levels, indicating that more action is needed to meet sustainability goals.

Growth Management

- The community's goal is to direct growth out of rural areas of habitat, scenery, and open space and into complete neighborhoods of infrastructure, amenities, and vitality.
- The goal is to direct at least 60% of growth into Complete Neighborhoods. In 2022, this goal was not met for the first time since 2017, with less than 60% of growth occurring in these areas. This is because 2022 also saw the lowest amount of residential growth since 2017. This drop is not expected to be the start of a new downward trend, with 2023 beginning with a very strong uptick in new development.
- The location of growth potential (defined as buildout minus what is already built) forecasts where future growth will occur based on remaining allowances. The community has also set a policy not to increase buildout – the maximum amount of development permitted throughout the community. Through various measures and initiatives, the community has successfully increased the allowed number of potential residential units by 2,034 since 2012. Those 2,034 units are considered the remaining "pool" of incentive units, to be utilized for needs such as workforce housing.

Workforce Housing

- There remains a significant shortage of workforce housing, despite efforts leading to 82% of units permitted being designated for workforce or affordable housing.
- The number of units in the workforce housing pipeline has reached an all-time high, with 395 units permitted, reflecting a shift towards creating more affordable options within Complete Neighborhoods.

Housing Affordability Challenges

- Home prices have surged by 48% per year since 2019, making ownership increasingly unaffordable relative to median income levels.
- Rents have also increased by 5% per year, further straining affordability for residents.

Economic Trends

- Per capita income has been growing at over 5% per year since 2008, but the pandemic has exacerbated disparities in housing affordability due to shifts in job types and income distribution.
- The community's wealth growth has been significant since 2002, highlighting an ongoing trend that impacts housing and economic conditions.

In summary, while there have been successes in conservation and directing growth into Complete Neighborhoods, challenges remain, particularly in housing affordability and greenhouse gas emissions. The community's ongoing efforts in workforce housing and ecosystem stewardship are critical as they work towards achieving their long-term vision and sustainability goals.

2.3.1 Development Since 2019 Regional HMP

- In the Town of Jackson, development has been focused on the redevelopment of existing properties and infill of a few vacant or underutilized areas.
- There has been a modest increase in residential development in hillside neighborhoods and steeper lots as the remaining lots are being developed.
- No known hazard problems have occurred with these developments, which are primarily single-family homes.
- Some redevelopment has occurred along Flat Creek (within the Town of Jackson and Flat Creek Watershed Improvement District), the primary flood hazard zone, but with either a 25-foot or 50-foot development setback from the creek, much of this hazard has been mitigated. Additionally, Flat Creek has not presented a significant flood hazard risk, apart from frazil ice in the winter.
- New development in the unincorporated areas and Teton Conservation District is restricted by limited private land and has not noticeably increased or decreased hazard vulnerability since the last plan was approved.
- No changes in development have occurred in hazard prone areas impacting the Jackson Hole Airport.

2.3.2 Major Projects Since 2019 Regional HMP

- The Growth Management Program was triggered in 2016 when residential growth exceeded 5% since the adoption of the Comprehensive Plan in 2012. The Growth Management Program (GMP) was a quantitative review program required by the

Comprehensive Plan at 5% residential growth. It was intended to use data presented in the Annual Indicator Report and other sources to evaluate whether the community was meeting the goals outlined in the Comprehensive Plan. The GMP also provided an opportunity to pause and assess whether the community's vision, values, principles, or policies had changed, allowing for adjustments to the implementation strategies accordingly. The update to the Comprehensive Plan was adopted in 2020.

- The 2024 Housing Supply Plan was prepared by the Housing Department to analyze progress meeting goals in the Housing Action Plan and Comprehensive Plan as well as identify corrective actions and new projects. It was approved on March 4, 2024.
- The Town of Jackson rezoned the Town Square Character District to align with the desired future character outlined in the Comprehensive Plan. Although the plan was completed in 2020, it has not yet been fully implemented.

Major projects that are upcoming or underway include:

- The County is updating the Natural Resources Regulations, which protect water bodies, wetlands, and wildlife habitat from the impacts of development. The community's goal is that only 40% of new development occurs in wildlife habitat. Achieving this goal will help protect the area's natural resources; however, there will still be a need for new development to minimize and mitigate its impacts. A draft update was released on September 5, 2024.
- The Town Parking Management Study will create a complete parking strategy that balances the community's goals for land use, transportation, and Town operations. It implements the Integrated Transportation Plan and the 2012 Comprehensive Plan and updates the 2003 Downtown Parking Study. As of 2024, phases one and two have been complete (*Commercial and Residential Areas Outside of the Downtown Core* and *Downtown Core (Downtown Parking Management Plan)*, respectively). Phases three and four remain (*Corridor Parking (Regional Corridor Parking Management Plan)* and *Communitywide TDM Scoping (Communitywide TDM Plan)*, respectively).

2.3.3 Future Development

Strong future growth in both commercial and residential development, particularly affordable housing, is anticipated over the next 10 years. This growth will be concentrated in downtown commercial zones, highway commercial zones, and high-density residential areas. Additionally, development is expected in the Northern South Park area, which is in Teton County but directly adjacent to the Town of Jackson.

The zoning map, Figure 2-2 below, indicates where growth is most likely to occur, particularly in the purple, pink, and red zones. The Town does not have extensive areas of 100-year or 500-year floodplain that is undeveloped, so new development in such areas is not expected to be significant. However, there are some opportunities for redevelopment or remodeling of homes and businesses within those zones. Wildfire remains a concern, with a number of properties, mostly single-family residences, located in the Wildland-Urban Interface (WUI). Some of these properties are vacant, while others may be redeveloped, as shown on the WUI map, Figure 2-3. The HMPC noted that preliminary presentations on the proposed expansion of the Wildland-Urban Interface (WUI) have been given to the County Commission and Town Council. However, no formal votes have been taken or approvals granted as this stage.

In the Town of Jackson, development in the last 5 years has been focused on redevelopment of existing properties and infill of a few vacant/underutilized properties. Residential development has gradually increased in hillside neighborhoods and on steeper lots as the final parcels are being developed. To date, these developments, mostly consisting of single-family homes, have

not encounters significant hazard-related issues. Some redevelopment has occurred along Flat Creek, which is considered the primary flood hazard zone in the area. However, with established 25-foot or 50-foot setbacks from the creek, much of the associate flood risk has been mitigated. Additionally, Flat Creek has not been identified as a high flood risk area, aside from occasional issues with frazzle ice during the winter months.

Projected future growth and development in the Town of Jackson is expected to be strong, particularly in both commercial and residential sectors, with a focus on affordable housing over the next 10 years. This growth will be concentrated in the downtown commercial zones, highway commercial zones, and high-density residential zones. Additionally, development is planned for the Northern South Park area, which is technically in Teton County, but it is directly adjacent to the Town of Jackson. The zoning map below highlights the primary growth areas in purple, pink, and red zones.

In terms of hazard areas and vulnerability, the Town does not have extensive areas within the 100-year or 500-year floodplain. Therefore, new development is not anticipated to occur in these floodplains. However, there may be some new opportunities for redevelopment or remodeling of homes and businesses within these zones. Wildfire risk remains a concern, as several properties, mostly single-family homes, are located in the Wildland-Urban Interface (WUI). Some of these properties are vacant, while others are redeveloped, as indicated in the WUI map below. Thus, while the planning area expects continued growth, special attention will be needed in the WUI and potential redevelopment area within the floodplains to mitigate hazards and vulnerability.

Figure 2-2 Zoning Map with Areas of Likely Growth

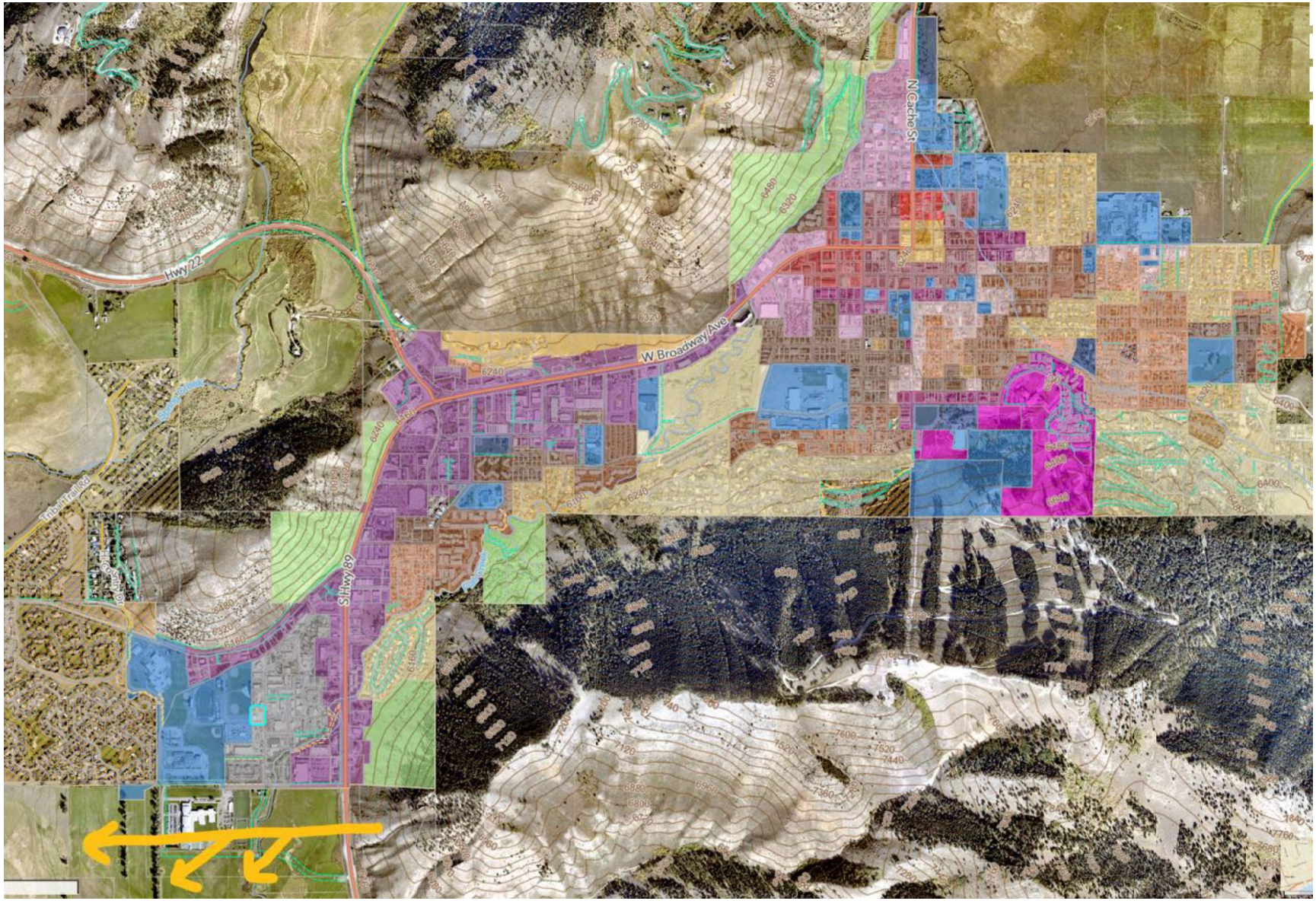
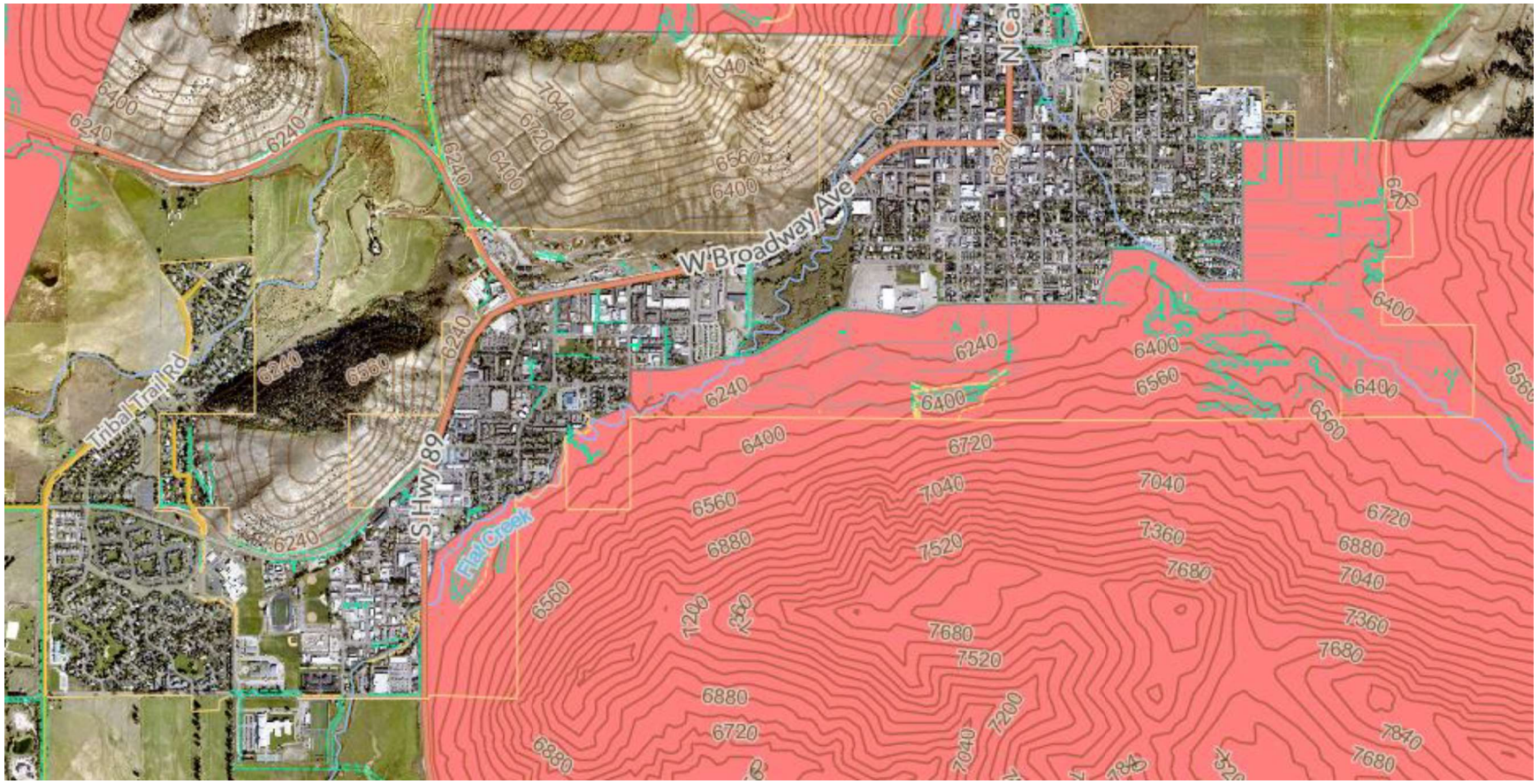


Figure 2-3 WUI Map



2.4 Economy

According to the U.S. Census Bureau, Region 8 has a dynamic economic profile. Approximately 20% of its workforce is involved in the arts, entertainment, recreation, and accommodation industry, followed by 18% in the educational services, health care assistance, and social assistance industry, and 15% in the retail trade industry. Additionally, 46% are in management, business, science, and arts occupations, while 24% are in service occupations.

The region experienced a 32% increase in total paid employees from 2000 to 2020, followed by an additional 7% increase between 2020 and 2022. Starting from a 2.3% unemployment rate in 2000, the region experienced a gradual decrease to 2.1% in 2008. The impact of the Great Recession briefly pushed the rate to 8.3%. The rate of unemployment then steadily fell following the Great Recession, hitting 2.8% in 2018, before spiking due to COVID-19 to 5.9%. It has since fallen to 1.6%, roughly half of the national average.

The region's median household income stands at $108,279, well above the national average of $75,149. Approximately 6.9% of the population falls below the poverty line, well below the national average of 12.5%.

Table 2-5 Region 8 Economic Profile

CHARACTERISTIC	REGION 8
Employment	
Total employment	15,156
Unemployment rate	1.6%
Per capita income	$76,296
Population % change, 2010-2020	9.6%
Persons in poverty	6.9%
Families in poverty	3.8%
Employers	
Total employer establishments	2,370
Total annual payroll	$1,227,465,000
Total employment	19,880
Employment growth, 2020-2022	8.3%
Employment By Industry	
Agriculture, forestry, fishing and hunting, and mining	2.7%
Construction	8.5%
Manufacturing	1.5%
Wholesale trade	1.3%
Retail trade	15.1%
Transportation and warehousing, and utilities	2.7%
Information	3.0%
Finance and insurance, and real estate and rental and leasing	7.1%
Professional, scientific, and management, and administrative and waste management services	13.5%
Educational services, and health care and social assistance	17.5%
Arts, entertainment, and recreation, and accommodation and food services	19.8%
Other services, except public administration	5.3%

CHARACTERISTIC	REGION 8
Public administration	2.2%
Employment By Occupation	
Management, business, science, and arts occupations	46.1%
Service occupations	23.7%
Sales and office occupations	17.9%
Natural resources, construction, and maintenance occupations	5.8%
Production, transportation, and material moving occupations	6.4%
Class of Worker	
Private wage and salary workers	77.2%
Government workers	13.0%
Self-employed in own not incorporated business workers	9.8%
Unpaid family workers	0.0%
Household Income	
Less than $10,000	1.9%
$10,000 to $14,999	2.1%
$15,000 to $24,999	5.9%
$25,000 to $34,999	3.2%
$35,000 to $49,999	5.2%
$50,000 to $74,999	14.8%
$75,000 to $99,999	13.4%
$100,000 to $149,999	19.3%
$150,000 to $199,999	11.7%
$200,000 or more	22.4%
Median household income	$108,279
Median monthly mortgage cost	$2,597
Median monthly rent (1-bedroom)	$2,628
Mean Annual Household Earnings by Source	
Labor earnings	87.0%
Social security	25.2%
Retirement income	17.7%
Supplemental security income	0.0%
Cash public assistance income	1.7%
Food stamp/SNAP	0.8%

Source: U.S. Census Bureau American Community Survey 2022 5-Year Estimates, 2022: ECNSVY Business Patterns County Business Patterns, Teton County Housing Department

2.5 Capability Summary

As part of this regional plan development, a mitigation capability assessment was conducted by Teton County and the Town of Jackson. Existing plans, policies, and procedures that contribute to reducing hazard losses were evaluated. Combining the risk assessment with the mitigation capability assessment provided a clearer understanding of the region's overall vulnerability to disasters, allowing the goals, objectives, and actions of the plan to be more accurately focused.

To conduct this assessment, a matrix was created to inventory common mitigation activities. Policies and programs that were either in place or could be implemented, if appropriate, were identified. A comprehensive review of current policies, regulations, plans, projects, and programs was then undertaken to determine their contributions to reducing hazard-related losses.

2.5.1 Regulatory Mitigation Capabilities

Table 2-6 provides an assessment of Teton County's regulatory mitigation capabilities, based on input collected from the HMPC via data collection guides and information contained on county and municipal websites.

Table 2-6 Teton County Regulatory Capability Assessment

Capability Type	Teton County	Town of Jackson	Flat Creek Watershed Improvement District	Jackson Hole Airport Board	Teton Conservation District
Plans					
Capital Improvements Plan	Yes	Yes	No	Yes	N/A
Climate Change Adaptation Plan	No	No	No	N/A	N/A
Community Wildfire Protection Plan	Yes	Yes	N/A	N/A	Yes
Comprehensive/Master Plan	Yes	Yes	No	Yes	N/A
Continuity of Operations Plan	No	No	No	Yes	N/A
Economic Development Plan	No	No	N/A	N/A	N/A
Land Use Plan	Yes	Yes	N/A	N/A	Yes
Local Emergency Operations Plan	Yes	Yes	Yes	N/A	No
Stormwater Management Plan	In process	In process	No	Yes	Yes
Transportation Plan	Yes	Yes	N/A	N/A	N/A
All Hazards Recovery Plan	Yes	Yes	No	Yes	N/A
Substantial Damage Plan	No	No	No	N/A	N/A
Land Use Planning and Ordinances					
Acquisition of land for open space and public recreation use	Yes	Yes	Yes	N/A	N/A
Building code	Yes	Yes	N/A	N/A	N/A
Flood insurance rate maps	Yes	Yes	N/A	N/A	N/A
Floodplain ordinance	Yes	Yes	N/A	N/A	N/A
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	Yes	Yes	N/A	N/A	N/A
Subdivision ordinance	Yes	Yes	Yes	N/A	N/A
Zoning ordinance	Yes	Yes	Yes	N/A	N/A

Source: Data provided by jurisdictions

- The Town and County **Capital Improvements Plans** are updated annually and can be utilized to implement mitigation projects. The Jackson Hole Airport Board Capital Improvements Plan is also updated annually as part of the budget process.

- The Town and County lack a formal **Climate Change Adaptation Plan**, but the Town incorporated adaptation into its 2024 **Sustainability Plan**. The Jackson Hole Airport Board is working on a **NetZero Plan** with the Federal Aviation Administration (FAA).
- The **Teton Conservation District's (TCD's) Flat Creek Watershed Management** Plan outlines strategies for managing water quality and habitat within the Flat Creek Watershed. Incorporating it into the assessment highlights efforts to mitigate flooding, improve water management, and persevere natural resources through land use policies and environmental regulations.
- The **Teton County Water Quality Master Plan** is a comprehensive plan guiding water quality protection through regulatory measures, including stormwater management, pollution control, and development standards. Including it in the assessment empathizes the county's commitment to sustainable water resource management and environmental health.
- The **Hazards Materials Emergency Response Plan** details emergency response procedures for hazardous materials incidents, including containment, evacuation protocols, and interagency coordination. Including it emphasizes Teton County's preparedness and capacity to manage chemical hazards, reducing public health and environmental risks.
- The **Community Wildfire Protection Plan** (CWPP) for the Town/County is due for an update in 2024/2025 and will include mitigation actions. The Teton Conservation District's CWPP, first created in 2005 and updated in 2014, will be revised by summer 2024. The Jackson Hole Airport Board has an **Airport Emergency Plan** for wildfire incidents on or in close proximity to the airport. The Airport Emergency Plan also addresses continuity of operations and emergency operations procedures.
- **Continuity of Operations Plans** are developed by individual departments; there is no overarching plan for the Town or County.
- The Flat Creek Watershed Improvement District's Emergency Operations Plan (EOP) addresses flooding hazards and was last updated in November 2021, with a new update underway.
- The **Land Use Plan** and **Land Development Regulations** (LDRs) for Jackson and the County govern zoning, development, and natural resource protection. The Airport Board's 2014 **Focus Master Plan** and **Airport Layout Plans** includes land use planning. Teton Conservation District's **Strategic** and **Long-Range Plan** outlines resource allocation and a vision for hazard mitigation.
- The Teton Conservation District leads efforts on the **Teton County Water Quality Management Plan**, mapping water resource sensitivity and vulnerability. The Town's LDRs include stormwater management provisions. The Airport Board incorporates stormwater management into its **Spill Prevention, Control, and Countermeasures Plan**.
- The Town and County **Transportation Plan**, last updated in September 2015, outlines transportation-related strategies. The Airport Board includes emergency transportation in its **Airport Emergency Plan**.
- The joint Town/County **All-Hazards Recovery Plan**, updated in 2022, emphasizes the integration of mitigation into recovery.

The Town of Jackson has comprehensive zoning and subdivision regulations covering land use, density, design, parking, landscaping, and development on steep slopes. Development is generally prohibited on slopes over 25%, and a Conditional Use Permit is required for slopes over 10%. Geotechnical reports are required for development on steep or historically unstable slopes, though updates to hazardous slope regulations have been passed by the Council.

The Fire Department enforces portions of the Wildland-Urban Interface (WUI) code for development in WUI areas, and the Engineering Department oversees floodplain and steep slope regulations. The Building Department enforces the adopted building codes, with plans to update to the 2024 versions, while the Fire and Engineering Departments handle specific responsibilities.

The list of building codes adopted by the Town is outlined below, with plans to adopt the updated 2024 versions of the same codes. The Building Department enforces these codes, with the exception of specific responsibilities handled by the Fire Department and Engineering Department. The Jackson Hole Airport Board follows Town/County building codes.

Current Adopted Codes

- 2021 International Energy Conservation Code
- National Electrical
- Fire/EMS- Electrical Division.
- 2024 International Building Code
- International Fire Code and International Wild land- Urban Interface
- 2024 International Fuel Gas Code
- 2024 International Mechanical Code
- 2024 International Plumbing Code
- 2024 International Residential Code

International Residential Code – Climatic and Geographic Design Criteria

- Flood Hazards - 1989
- Frost Line Depth - 34 inches
- Ground snow load - 93 pounds per square feet
- Ice Shield Underlayment Required - Yes
- Mean Annual Temp - 38 degrees
- Seismic Design Category - D
- Termite - None to Slight
- Weathering - Severe
- Wind Speed - 115 mph
- Winter Design Temperature - 30 degrees

NFIP Participation and Continued Compliance

Teton County and the Town of Jackson have adopted the minimum floodplain management criteria set by the National Flood Insurance Program (NFIP) through local regulations, along with the most recent effective Flood Insurance Rate Map (FIRM). In addition, both the County and Town implement and enforce local floodplain management regulations, which govern development within Special Flood Hazard Areas (SFHAs). This enforcement includes a permitting process to ensure compliance with established standards. Table 2-7 includes information on each jurisdiction's compliance with the NFIP.

Table 2-7 NFIP Status in Teton County

Jurisdiction	Date Joined	Effective Map Date	Floodplain Administrator
Teton County	05/04/89	09/16/15	County Engineer
Town of Jackson	05/04/89	09/16/15	Town Engineer

Source: NFIP Community Status Book, Town and County Floodplain Regulations

All substantial improvements and substantial damage reconstructions following an event must comply with current regulations set forth by the County and Town. In special flood hazard areas, new construction and substantial improvements must be anchored to prevent flotation or movement from flood forces, utilize flood-resistant materials, and be designed to minimize flood damage. Critical systems, including electrical, plumbing, and HVAC, must be designed to prevent water infiltration. Additionally, water supply and sewage systems must be protected from floodwater, and on-site waste disposal systems must be designed to avoid impairment or contamination during flooding. These standards ensure compliance with NFIP requirements.

2.5.2 Administrative/Technical Resources

Table 2-8 identifies the administrative and technical resources available to the County and Town.

Table 2-8 Administrative and Technical Resources

CAPABILITY TYPE	TETON COUNTY	TOWN OF JACKSON	FLAT CREEK WATERSHED IMPROVEMENT DISTRICT	JACKSON HOLE AIRPORT BOARD	TETON CONSERVATION DISTRICT
Administrative					
Building Official	Yes	Yes	Yes	Yes	N/A
Civil Engineer	Yes	Yes	Yes	Yes	N/A
Community Planner	Yes	Yes	Yes	N/A	N/A
Emergency Manager	Yes	Yes	Yes	Yes	N/A
Floodplain Administrator	Yes	Yes	Yes	N/A	N/A
GIS Coordinator	Yes	No	Yes	Yes	Yes
Planning Commission	Yes	Yes	Yes	N/A	N/A
Technical					
Grant writing	Yes	Yes	Yes	Yes	Yes
Hazard data and information	Yes	Yes	Yes	Yes	Yes
GIS analysis	Yes	No	Yes	N/A	Yes
Mutual aid agreements	Yes	Yes	Yes	Yes	No

Source: Data provided by jurisdictions

- Both the County **Building Official** and **Civil Engineer** for the Town and County states that staffing is sufficient to enforce regulations, though formal training in hazards and mitigation is lacking. Coordination between agencies is good with room for improvement.
- The Jackson Hole Airport Board Facilities Director acts as their **Building Official** and **Emergency Manager**. The Facilities Director feels there is good coordination between agency and staff. The Director believes staff are well-trained on hazards and mitigation, with sufficient personnel to enforce regulations.

- The Jackson Hole Airport Board contracts a **civil engineer** and **GIS coordinator.**
- The Town and County's **Emergency Management**, staffed by two people, faces challenges in keeping up with plan updates, grant administration, and maintaining response readiness. They have started creating an internal hazard database, with plans to expand this capability with a new County **GIS Coordinator** that started in March 2024.
- Teton Conservation District regularly uses **GIS** datasets to inform mitigation activities for vegetation, water, air, and soil.
- The County utilizes the towns **grant writing** staff, and the Town of Jackson has contracted grant writer services that can support the County. The county utilizes the new Wyoming Grants Management Office and the Technical Assistance Center at Montana State University. Teton Conservation District is finalizing a grant for winter ice flooding and supports grant writing for Western States Wildland Urban Interface grants, as well as providing grants and technical assistance for wildfire, flooding, and erosion control mitigation. The Jackson Hole Airport Board has the staff for day-to-day operations, but grants could provide additional support, though pursuing them diverts time and resources.
- The County participates in the **Wyoming Inter-County Mutual Aid Agreement** (WICMAA) and established an interstate **mutual aid agreement** with Teton County, Idaho, in 2023. They also have sheltering agreements with the American Red Cross, PAWS of Jackson Hole, and Teton County Voluntary Organizations Active in Disasters. The Town falls under each of these agreements, except for WICMAA.

Teton County Emergency Management

Teton County Emergency Management is a division of Teton County government. Its mission is to empower the whole community, including the county's visitors, to become more disaster-resilient through the coordination of disaster prevention, protection, response, recovery, and mitigation between a multitude of partners, both public and private. They are the clearinghouse for the Teton County/Town of Jackson whole community emergency planning efforts, which consists of several governmental emergency and mitigation plans, including this updated HMP. As such, Teton County Emergency Management is the local source for emergency planning and support, including these additional services:

- Training & Exercises
- Grant Assistance & Administration
- Emergency Operations Center Management
- Alert, Warning, and Notification (AWNs) System Coordination

In 2015, both Teton County and the Town of Jackson adopted resolutions to designate Teton County Emergency Management as the local homeland security program for both the county and the town to meet Wyoming state statutes, with the appointed Teton County Emergency Management Coordinator serving as the lead for Emergency Management efforts in both jurisdictions. Rich Ochs currently serves as the Teton County Emergency Management Coordinator, and as the local lead for this plan update.

Local Emergency Planning Committee and Planning Meetings

The Teton County Local Emergency (LEPC) has membership from a broad cross-section of the community including health care, public works, emergency services, elected officials, media, all levels of government, and the schools. The National Park Service (Grand Teton National Park) and Bridger-Teton National Forest have representatives on the LEPC and attended LEPC meetings where the update was discussed. The times, dates, and agendas of the LEPC meetings are posted on the County's website and legal ads with all the LEPC meetings for the year are posted semiannually.

2.5.3 Financial capabilities

Table 2-9 identifies the County and Town financial tools or resources that the jurisdictions have access to or are eligible to use and could potentially be used to help fund mitigation activities.

Table 2-9 Financial Capabilities

CAPABILITY TYPE	TETON COUNTY	TOWN OF JACKSON	FLAT CREEK WATERSHED IMPROVEMENT DISTRICT	JACKSON HOLE AIRPORT BOARD	TETON CONSERVATION DISTRICT
Capital improvements project funding	Yes	Yes	Yes	Yes	N/A
Community Development Block Grant	Yes	Yes	No	N/A	N/A
Federal funding programs (non- FEMA)	Yes	Yes	No	Yes	Yes
Fees for water, sewer, gas, or electric services	No	Yes	No	N/A	N/A
Impact fees for new development	Yes	Yes	No	Yes	N/A
State funding programs	No	Yes	No	Yes	Yes
Stormwater utility fee	No	No	No	N/A	N/A
FEMA funding	Yes	Yes	Yes	Yes	Yes

Source: Data provided by jurisdictions

- County and Town **Capital Improvements Project** funding has supported both past and future mitigation actions. The Jackson Hole Airport Board has used these funds for drainage improvements, as well as stormwater detention and filtration systems.
- **Community Development Block Grants** have been used in the past and could be utilized in the future for both Jackson and the County, but their use depends on approval from the State Land and Investments Board.
- Federal **non-FEMA funding**, particularly through USDA and land management agency grants, has supported wildfire mitigation efforts in the Town and County. The Jackson Hole Airport Board has received Airport Improvement Program and Bipartisan Infrastructure Law funding. Teton Conservation District commonly couples Natural Resources

Conservation Service (NRCS) funding with private land projects for erosion control, such as NRCS Emergency Watershed Program funds used for post-fire erosion management.

- While the Town of Jackson does have **fees for water and sewer** services, they are not specifically used for mitigation. The Lower Valley Energy Cooperative supplies gas and electric.
- County and Town **impact fees** for new development are directed toward housing mitigation, though it is unclear if any portion goes toward hazard mitigation. Impact fees from the Jackson Hole Airport Board We go towards improvements.
- Energy Mitigation Funds are collected as fees by the Planning & Buildings department for large-scale building construction projects to offset their environmental impact. These funds are later used to upgrade government facilities, making them more energy-efficient and reducing their overall carbon footprint.
- **FEMA funding** has primarily been used for writing mitigation plans. The County and Town have not successfully applied for FEMA mitigation grants, though some districts, like the Flat Creek Watershed Improvement District, have. FEMA funding for the Jackson Hole Airport Board is currently only used for disaster relief.
- The **Specific Purpose Excise Tax (SPET)** is a voter-approved sales tax of one cent per dollar spent by residents and visitors. Its purpose is to fund specific community projects without increase the overall tax rate. SPET will potentially have mitigation elements as part of construction.
- The Teton Conservation District regularly leverages **state funds** for hazard mitigation, including the Wyoming Water Development Office's Small Water Project Program, and plans to continue this practice. The town actively utilizes both state and federal funding sources, drawing on these resources for current projects as well as past initiatives.
- The Flat Creek Watershed Improvement District has the latitude (through state statute-defined parameters) to impose member assessments that can be put toward funding mitigation activities. This has taken place in the past and is a mechanism the district is currently using.
- A recommendation to establish a stormwater utility fund will be included in the Town's **Stormwater Management Program**. While such fun is not currently in place, a creation seems inevitable to support sustainable stormwater management and infrastructure improvements.

2.5.4 Education and Outreach Capabilities

Table 2-10 shows the education and outreach mitigation capabilities the County and jurisdictions have in place.

Table 2-10 Education and Outreach Capabilities

CAPABILITY TYPE	TETON COUNTY	TOWN OF JACKSON	FLAT CREEK WATERSHED IMPROVEMENT DISTRICT	JACKSON HOLE AIRPORT BOARD	TETON CONSERVATION DISTRICT
Community newsletters	Yes	Yes	No	Yes	Yes
Hazard awareness campaigns	Yes	Yes	No	Yes	Yes
Local news	Yes	Yes	No	Yes	Yes
Organizations that represent/advocate	Yes	Yes	No	N/A	N/A

CAPABILITY TYPE	TETON COUNTY	TOWN OF JACKSON	FLAT CREEK WATERSHED IMPROVEMENT DISTRICT	JACKSON HOLE AIRPORT BOARD	TETON CONSERVATION DISTRICT
for/interact with underserved and vulnerable communities					
Social media	Yes	Yes	No	Yes	Yes
Public Alert, Warning, and Notification systems	Yes	Yes	No	No	No
Other	No	No	Yes	No	No

Source: Data provided by jurisdictions

- The Town and County produce **electronic newsletters**, with the County's featuring an emergency management topic monthly. Teton Conservation District sends bi-weekly water updates, including flood and drought information, to approximately 150 email addresses, and a quarterly newsletter on natural resources to about 500 recipients, including hazard mitigation information when relevant.
- The Jackson Hole Airport Board has two staff members managing public relations across various platforms.
- Teton County is recognized as **StormReady** and serves as a **WeatherReady** Nation ambassador with the National Weather Service.
- Town and County Emergency Management shares monthly preparedness topics through ads, radio spots, social media, and press releases, and **conducts outreach** at local events. The Jackson Hole Airport Board participates in various **public awareness events**. Teton Conservation District administers a Wildfire Risk Reduction Program that includes **education and outreach**. It also leads the Teton Area Wildfire Protection Coalition, which features an educational component.
- The area has one daily print **newspaper**, the Jackson Hole News and Guide, and a longer-form **weekly publication**. Several local **online news providers** and several **radio stations**—Jackson Hole Radio Network (KMTN, KZJH, KJAX, and KSGT), Jackson Hole Community Radio (KHOL), Wyoming Public Media (KUWJ), and K-LOVE (KMLT)—serve the community. Spectrum provides cable television to some areas of the County but does not have a public access channel or local programming. Teton Conservation District maintains close contacts with Buckrail and the JH News and Guide for hazard mitigation stories.
- The Teton County Voluntary Organizations Active in Disaster consists of **local nonprofits** and houses of worship focused on disaster assistance, particularly for underserved communities. The Teton County Systems of Care is another nonprofit consortium providing various human services.
- The Town and County manage their own **social media** accounts, with many departments operating separate platforms. Teton Conservation District uses social media to communicate about all its programs. The Flat Creek Watershed Improvement District shares information through its website.
- Teton County Emergency Management oversees the Teton_WY Alerts system, powered by Everbridge, which provides **emergency notifications** and lower-priority preparedness messages via phone, text, email, and TTY.

2.5.5 Opportunities for Enhancement

Based on the capabilities assessment Teton County, the districts, and the Town of Jackson have several existing mechanisms in place to mitigate hazards. However, there are opportunities to expand or improve policies, programs, and fiscal capabilities to further protect the community. One key area for improvement is enhancing GIS capabilities within both the Town and County. Being able to effectively map and share hazard data with the public will be a crucial educational tool. The public must understand the hazards present in the area and how they relate to where they live and work. While the plan itself may not be widely read by the general public, mapping and making the data easily accessible online will bring the mitigation plan to life and improve public awareness.

Additionally, future improvements may involve providing more training for staff members on hazard mitigation and grant funding in partnership with the County and Conservation District. These training opportunities will equip staff with the knowledge to better integrate hazard information and mitigation projects into their departments, resulting in more informed personnel who can effectively communicate risks to the public. Other opportunities for enhancement are outlined below.

Teton County

- Consider developing a Substantial Damage Plan to guide safe, sustainable rebuilding after disasters, including levee failures, for the 3,117 residents living behind the 24.5 miles of levees along the Snake and Gros Ventre Rivers, which protect $7.7 billion in property value.
- Consider drafting a Regional Evacuation Plan to prepare strategies for managing evacuations which exceed the day-to-day capabilities of various agencies and normal route capacity.
- Consider implementing a seismic retrofitting program for critical facilities to address the projected damage to 9,768 buildings—approximately 72.9% of the total building stock—during a significant earthquake, including the potential destruction of 365 buildings.
- Explore options for upgrading stormwater management regulations to improve drainage infrastructure, including culverts, ditches, and storm drains, aimed at managing runoff from spring snowmelt and heavy rainstorms in the unincorporated County.
- Explore implementing water conservation programs that educate the community about efficient water use policies, addressing the impacts of climate change on snowpack and water availability.

Town of Jackson

- Consider employing a GIS coordinator to analyze spatial data and create detailed hazard maps, identifying areas at high risk for natural hazards, which will inform effective hazard mitigation planning.
- Consider developing a retrofitting program to reinforce older structures, particularly in downtown and older residential areas, to enhance resilience against seismic activity, prioritizing critical infrastructure such as schools, hospitals, fire stations, and government buildings due to the Town's proximity to the proximity to the Teton fault.
- Consider developing and maintaining clear evacuation plans and routes, complete with proper signage and emergency notifications, to ensure residents can evacuate safely in case of wildfire, given the Town’s reliance on key transportation routes like Highway 89 and Highway 22.

Flat Creek Watershed Improvement District

- Explore options for upgrading stormwater management regulations, including permeable pavements and green infrastructure, to reduce the impact of winter flooding in the planning area.

Jackson Hole Airport Board

- Explore the possibility of employing or contracting a full-time grant writer to research and identify funding sources at local, state, and federal levels, as well as private foundations, to support specific projects related to hazard mitigation, climate resilience, and community development.

Teton Conservation District

- Explore ongoing investment in community workshops and programs focused on drought-resistant landscaping and fuel reduction strategies to educate residents on mitigating wildfire risks due to prolonged drought.
- Consider hiring or contracting a Spanish Translator to ensure that key messaging about local natural hazard issues s effectively communicated to Spanish-speaking residents. It is important to direct this messaging through outlets and channels that are specifically accessed by Spanish speakers in the community to increase awareness and address potential barriers.

3 Planning Process

Requirements §201.6(b) and §201.6(c)(1): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

1) *An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;*
2) *An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and nonprofit interests to be involved in the planning process; and*
3) *Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.*

[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

3.1 Background on Mitigation Planning in Region 8

Teton County has a long history with hazard mitigation planning, beginning with the first plan developed in 2004, as well as the updates in 2010, 2016, and 2020 consistent with the five-year update requirement..

Regional Planning. In Wyoming, the Wyoming Office of Homeland Security (WOHS) utilizes a regional support structure to assist the counties with all aspects of emergency management, including planning. In 2016, the WOHS began the process of initiating the development of regional hazard mitigation plans statewide. While most of the regions comprise two to three counties, Region 8 includes only Teton County. This initiative recognized that the process of facilitating and developing or updating multi-jurisdictional hazard mitigation plans compliant with the Disaster Mitigation Act of 2000 is often beyond local capabilities and expertise. Instead of each county hiring consultants, the WOHS took the lead in procuring and funding a professional hazard mitigation planning consultant through a competitive bid process. WSP USA Environment and Infrastructure Inc. (WSP) was selected in 2019 to provide assistance to the State and planning regions under a five-year contract; the Region 8 planning effort began in early 2024.

3.2 Government Participation

Prior to initiating the development of this regional hazard mitigation plan's update in 2024, a substantial coordination effort took place to ensure the participation of all appropriate entities within Region 8. Teton County has an Emergency Management Coordinator (EMC), who was designated as the primary point of contact and lead coordinator for the plan update. The county EMC then contacted each of the former participating jurisdictions, as well as potentially eligible special districts, offering them the opportunity to participate in the 2024 update of the Region 8 Hazard Mitigation Plan.

Teton County and the Town of Jackson participated in and adopted the original HMP in 2004, as well as the prior three updates. Consistent with the 2020 update, this plan includes the Teton Conservation District as a participating entity. Additionally, following outreach to multiple special distircts, the 2024 update added the Jackson Hole Airport Board (Airport) and Flat Creek Watershed Improvement District as participating entities. The DMA planning

regulations and associated FEMA guidance stress that each local government seeking FEMA approval of their mitigation plan must participate in the planning effort in the following ways:

- Participate in the process as part of the Hazard Mitigation Planning Committee (HMPC);
- Detail areas within the planning area where the risk differs from that facing the entire area;
- Identify specific projects to be eligible for funding; and
- Have the governing board formally adopt the plan.

For the Region 8 Multi-Hazard Mitigation Plan's HMPC, "participation" meant:

- Attending and participating in HMPC meetings and workshops;
- Establishing or reconvening a local steering committee;
- Providing available data requested by the HMPC coordinator and WSP;
- Providing and updating the hazard profile and vulnerability details specific to jurisdictions;
- Developing, updating and providing input on the local mitigation strategy (action items and progress);
- Advertising and assisting with the public input process;
- Reviewing and commenting on plan drafts; and
- Coordinating the formal adoption of the plan by the governing boards.

Documentation of participation is included in Appendix A in the form of meeting sign in sheets, meeting summaries, and more.

Teton County Emergency Management worked in concert with the WOHS hazard mitigation planning consultant - WSP. As the planning consultant, WSP's role was to:

- Provide guidance on a planning organization for the entire planning area representative of the participants;
- Ensure the plan meets all the DMA requirements as established by federal regulations, following FEMA's most recent planning guidance;
- Facilitate the entire planning process;
- Identify the data requirements that the participating jurisdictions could provide, and conduct the research and documentation necessary to augment that data;
- Develop and help facilitate the public input process;
- Produce the draft and final plan documents; and
- Ensure acceptance and approval of the final Plan by WOHS and FEMA Region VIII

3.3 The 10-Step Planning Process

WSP established the planning process for the Region 8 plan using the DMA planning requirements and FEMA's associated guidance. This guidance is structured around a four-step process:

1. Organize the Planning Process Resources
2. Assess Risks
3. Develop a Mitigation Strategy
4. Adopt and Implement the Plan

Into this four-phase process, WSP integrated a more detailed 10-step planning process used for FEMA's Community Rating System (CRS) and Flood Mitigation Assistance (FMA) programs. Thus, the modified 10-step process used for this plan meets the requirements of FEMA's Hazard Mitigation Assistance (HMA) grant programs, the CRS program, and flood control projects authorized by the U.S. Army Corps of Engineers. FEMA's Local Mitigation Planning Handbook (updated in May 2023) recommends a nine-task process within the four-phase

process. Table 3-1 summarizes the four-step DMA process, the detailed CRS planning steps and work plan used to develop the plan, the nine handbook planning tasks from FEMA's 2013 Local Mitigation Planning Handbook, and where the results are captured in the Plan. The sections that follow describe each planning step in more detail.

Table 3-1 Mitigation Planning Process Used to Develop the Regional Hazard Mitigation Plan

FEMA 4 STEP GUIDANCE	COMMUNITY RATING SYSTEM (CRS) PLANNING STEPS (ACTIVITY 510) AND WSP WORK PLAN STEPS	FEMA LOCAL MITIGATION PLANNING HANDBOOK TASKS (44 CFR PART 201)	LOCATION IN PLAN
Step 1: Organize the Planning Process Resources	Step 1. Organize Resources	1: Determine the Planning Area and Resources	Chapters 1, 2 and 3
		2: Build the Planning Team 44 CFR 201.6(c)(1)	Chapter 3, Section 3.3.1
	Step 2. Involve the Public	3: Create an Outreach Strategy 44 CFR 201.6(b)(1)	Chapter 3, Section 3.3.1
	Step 3. Coordinate with Other Agencies	4: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)	Chapter 3, Section 3.3.1
Step 2: Assess Risks	Step 4. Assess the Hazard	5: Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)	Chapter 4
	Step 5. Assess the Problem		Chapter 4
Step 3: Develop a Mitigation Strategy	Step 6. Set Goals	6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i); 44 CFR 201.6(c)(3)(ii); and 44 CFR 201.6(c)(3)(iii)	Chapter 5, Section 5.2
	Step 7. Review Possible Activities		Chapter 5, Section 5.3
	Step 8. Draft an Action Plan		Chapter 5, Section 5.4
Step 4: Adopt and Implement the Plan	Step 9. Adopt the Plan	7: Review and Adopt the Plan	Chapter 6
	Step 10. Implement, Evaluate, Revise	8: Keep the Plan Current	Chapter 6
		9: Create a Safe and Resilient Community 44 CFR 201.6(c)(4)	Chapter 6

3.3.1 Phase 1: Organize Resources

Planning Step 1: Organize the Planning Effort

With the jurisdiction's commitment to develop a Regional Plan, WSP worked with WOHS and the County EMC to establish the framework and organization for the process. Organizational efforts were initiated to inform and educate the plan participants of the purpose of and need for a regional hazard mitigation plan. During the update of this Regional Plan, the planning process was directed through a regional planning committee composed of Teton County Emergency Mangagement (TCEM), as well as participating jurisdictions. For this update, the Teton County Local Emergency Planning Committee (LEPC) served as the Planning Team or Hazard Mitigation Planning Committee (HMPC). In addition to planning for chemical emergencies, Teton County's LEPC is a whole-community group that helps with the development and review of Teton County's canon of emergency plans including the Emergency Operations Plan, All-Hazards Recovery Plan, Integrated Preparedness Plan, Hazard Mitigation Plan, Hazardous Materials Emergency Response Plan, and Threat and Hazard Identification Risk Assessment. The LEPC has membership from a broad cross-section of the community including health care, public works, emergency services, elected officials, media, all levels of government, and the schools.

The planning consultant held an initial coordination call in November 2023 to discuss the organizational aspects of the planning process with TCEM. Participants on this call included the county EMC, WSP and the Wyoming Office of Homeland Security. Using FEMA's planning guidance, representative participants for the Region's HMPC base membership was established, with additional invitations extended as appropriate to other federal, state, and local stakeholders and the public throughout the planning process. The county EMC, with assistance from WSP, identified key county, municipal and other local government and stakeholder representatives. Letters of invitation were emailed to invite them to participate as members of the HMPC, and to attend a series of planning meetings. The list of agencies and individuals invited to participate on the HMPC is provided in Table 3-2. Those listed in the table attended at least one of the meetings. More details with documentation of participation and full meeting minutes included are in Appendix A.

Table 3-2 HMPC Members and Stakeholders by County

TETON COUNTY			
JURISDICTIONS AND STAKEHOLDERS	**TITLE**	**REPRESENTATIVES**	**ATTENDED PLANNING MEETINGS**
Teton County	Facilities Maintenance Manager	Josiah Nash	**X**
	Search and Rescue Coordinator	Mike Estes	**X**
	Public Information Officer	Kristen Waters	**X**
	Emergency Management Coordinator	Rich Ochs	**X**
	Chief Deputy Coroner	Russell Nelson	**X**
	Radio Coordinator	Quentin Johnston	**X**
	Emergency Management Program Specialist	Anna Day	**X**
	Community Health Manager / PIO	Rachel Wheeler	**X**
	GIS Administrator	Jansen Lyons	**X**
	Public Health Response Coordinator	McKinnley Cox	**X**
	Director of Planning and Building	Chris Neubecker	**X**
	Sheriff's Office- Dispatch Manager	Riclyn Betsinger	**X**
	Administrator	Jodie Pond	
	Sustainability Coordinator	Erik Kimball	**X**
Town of Jackson	Town Manager	Tyler Sinclair	**X**
	Town Engineer	Brian Lenz	**X**
	Public Works Director	Floren Poliseo	**X**
	Ecosystems Stewardship Administrator	Tanya Anderson	**X**
	Assistant Public Works Director	Johnny Ziem	**X**
	Jackson Police Department Lieutenant	Russ Ruschill	**X**
	Community Engagement Specialist	Susan Scarlata	**X**
Teton Conservation District	Land Resource Specialist	Robb Sgroi	**X**
	Water Resources Specialist	David Lee	**X**
	Executive Director	Carlin Girard	**X**
Flat Creek Watershed Improvement District	Chairman of the Board	Sandy Buckstaff	**X**
Jackson Hole Airport	Chief Operations Officer	Dustin Havel	**X**
	Operations Director	Alton George	**X**

TETON COUNTY			
Jackson Hole Fire/EMS	Interim Assistant Chief	Brian Coe	X
	Wildland Fire Prevention Specialist	Bobbi Clauson	X
	Interim Chief	Mike Moyer	X
	Administrative Assistant	Shannon Burns	X
Housing, Health, and Vulnerable populations and Non-Profits Stakeholders	Good Samaritan Mission - CEO	Wayne Richardson	X
	Teton County Voluntary Organizations Active in Disasters (VOAD) – Chairman	Rev. David Bott	X
	One22 Community Resource Center	Carey Stanley	X
	American Red Cross of Wyoming	Mary Lou Klene	X
	American Red Cross of Wyoming	Dee Buckstaff	
	Presbyterian Church of Jackson Hole	Michael Schrotz	X
	Jackson Hole Lions Club	Michael Schrotz	X
	Whole Food Rescue	Shel Hills	X
	Teton County VOAD – Secretary	Karen Walker	X
	PAWS Animal Welfare Group	Sam Diaz	X
Other Stakeholders (Neighboring jurisdictions, State and Federal Agencies, Lifeline providers)	Fremont County- Assistant EM Coordinator	Andrea Ladd	X
	Fremont County- EM Coordinator	Milan Vinich	X
	Jackson Hole Radio-Manager	Scott Anderson	X
	National Park Service- Emergency Services Coordinator	Levi Yardley	X
	Wyoming Office of Homeland Security- Grants/Finance Section Chief	Ashley Paulsrud	X
	Teton Outpatient Services- Administrator	Phil Ramsey	X
	Teton Village Water & Sewer	Alan Svalberg	X
	Integrated Solid Waste and Recycling	Becky Kieffer	
	Teton County School District – Executive Director of Communications and District Services	Charlotte Reynolds	X

During the plan development process, communication amongst the LEPC occurred through a combination of face-to-face meetings, monthly conference calls, web-based meetings, phone calls, and email correspondence. Targeted input for each participating jurisdiction was collected with a Plan Update Guide (PUG) and Mitigation Action Tracker that was developed by WSP but distributed through the county EMC.

Following the initial kickoff webinar on January 18, 2024, two primary planning workshops with the HMPC were held during the plan's development during March and June 2024. The full schedule of Planning Team Meetings is provided in Table 3-3below. The bi-monthly (held on odd-numbered months) LEPC meetings were used as additional check-ins on the planning effort and in several cases attended by the WSP planning consultants to provide an update on progress or coordination on planning items. In addition, monthly conference calls were held with the EMC and WSP to discuss the process including upcoming milestones and information needs. The sign-in sheets and agendas for each of the meetings are included in Appendix A.

Table 3-3 Schedule of HMPC Meetings

MEETING AND TOPIC	DATE	MEETING TYPE	LOCATION
Initial Coordination Call	11/20/23	Virtual	
HMP Update Kickoff and LEPC Meeting	1/18/24	Hybrid	Teton County EOC
HIRA Overview LEPC Meeting	3/21/24	Hybrid	Teton County EOC
Mitigation Goals Update and Action Status/LEPC Meeting	5/16/24	Hybrid	Teton County EOC
Mitigation Strategy Workshop Meeting	6/11/24	Hybrid	Teton County Library
July LEPC Meeting – check in meeting	7/18/24	Hybrid	Teton County EOC
September LEPC Meeting – check in on draft plan	9/19/24	Hybrid	Teton County EOC

During the kickoff meeting, WSP presented information on the scope and purpose of the plan update, participation requirements of HMPC members, and the proposed project work plan and schedule. Plans for public involvement (Step 2) and coordination with other agencies and departments (Step 3) were discussed. The HMPC reviewed the hazard identification information for the Region and refined the list of identified hazards to mirror that of the Wyoming Hazard Mitigation Plan.

In follow-up to the meeting, WSP provided a Geographic Information Systems (GIS) data needs worksheet, a Plan Update Guide to facilitate the collection of information needed to support the plan update, and a summary of the conference call/webinar. The WSP Plan Update Guide helped to facilitate the collection of information needed to support the plan update, such as data on historic hazard events, values at risk, and current capabilities. Participating jursidications completed and returned the worksheets in the Plan Collection Guide to Teton County's EMC and WSP. WSP integrated this information into the plan, supporting the update of Chapters 2 and 4.

In some cases, HMPC meetings were supplemented with additional meetings, emails, and telephone discussions to further engage stakeholders in the process. During the planning process the EMC regularly engaged participating jurisdictions and County departments for additional discussions on the planning effort in addition to stakeholders described in Planning Step 3 below.

Planning Step 2: Involve the Public

The 2024 planning process informed and involved the public early in the process. In some cases, the LEPC meetings included members of the public, such as Community Emergency Response Team members. Public outreach included press releases, social media notices, and a survey. Social media was commonly used to share information related to hazards, and to inform the public on ways to share input on the plan update process. A project backgrounder was developed to share with the public and interested stakeholders.

2024 Public Survey

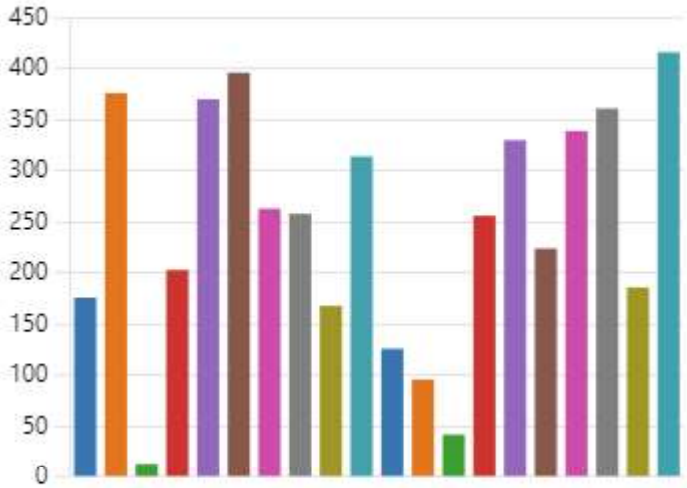
During the regional planning process and drafting stage, a public survey was developed as a tool to gather public input to inform the update process. The survey was for the public to provide feedback on topics related to hazard concerns and reducing hazard impacts. The survey provided an opportunity for public input during the planning process prior to finalization of the plan update. The survey gathered public feedback on concerns about wildfires, floods, winter storms and other hazards, and solicited input on strategies to reduce their impacts. The survey was released as an online tool in early March and closed on April 12, 2024. The county EMC emailed the link to the public survey to the LEPC, asking them to share it with the public, or post it to their social media page. The survey was also distributed through a Town of Jackson employee email group and an all employee group for Teton County. Additionally, a Teton_WY Alerts powered by Everbridge notification was sent to over 15,000 subscribers on March 8, 2024 informing them of the plan update and requesting they fill out an online survey to provide plan feedback. In addition the survey was emailed to the County Voluntary Organizations Active in Disasters (VOAD) group.

A total of 622 public responses were received across the entire region. The results of the survey are summarized here, captured in Appendix A, and were shared with the LEPC to inform the planning process. The highest rated hazards in Region 8 were wildfire, severe winter weather, and avalanche.

Figure 3-1 displays the results from Question 4, which reads: *The following types of mitigation actions may be considered in this plan. Please indicate all the types of mitigation actions that you think should have the highest priority in Wyoming Region 8 Hazard Mitgation Plan. These results will be considered during the planning process*. The results indicated wildfire defensible space promotion and assistance as the most important mitigation action category. Other high rated actions included generators for critical facilities, wildfire fuels treatment projects, and critical faciltities protection. Excerpts of responses to two open ended questions were provided to the CPTs during the mitigation strategy workshops: “Do you have information on specific hazard issues/problem areas that you would like the planning committee to consider? “ and “Please comment on any other pre-disaster strategies that the planning committee should consider for reducing future losses caused by natural disasters”. Additional results of the survey are included in Appendix A, Planning Process Documentation.

Figure 3-1 Public Survey Results – Mitigation Action Category Preferences

Expanded indoor/outdoor warning	176
Wildfire/Grass fire fuels treatment projects	376
Tornado safe rooms	13
Continued participation in the National Flood Insurance Program	203
Critical facilities protection (water, public safety, shelters)	370
Generators for critical facilities	396
Planning/Zoning to avoid impacts to future development	263
Public Education/Awareness on hazards	258
Stormwater drainage improvements	168
Forest health/watershed protection	314
Flood mitigation for residential properties	126
Education and discounts on Flood Insurance	96
Flood prone property buyout	42
Water conservation	256
Evacuation route development	330
Dam safety	224
Transportation lifeline resiliency (including rockfall/landslide or avalanche mitigation)	339
Utility lifeline resiliency (including strengthening power line infrastructure from wind impacts)	361
Landslide hazard mitigation	186
Wildfire defensible space promotion and assistance	416



Question 6 of the Public Survey said *please comment on any other pre-disaster strategies that the planning committee should consider for reducing future losses caused by natural disasters.* Some common themes among responses are noted below:

- "Because we have so many newcomers to the valley, education on risks and mitigation is vital."
- "Encourage new development to be resilient (designed for future conditions, efficient, built away from flood zones and WUI, landscaped for resilience)".
- "Cannot emphasize the wildfire hazard reduction enough here- needs to be much more particular in more rural areas of the county and in Wilson".
- "Expanding all roadways in and out of Jackson to four lanes, including 22, Teton Pass, & the Village Road. Our current infrastructure cannot safely or efficiently accommodate the population."
- "Plan for if the Snake River Bridge is compromised; tunnel under Teton Pass; traffic safety; lack of egress".
- "Planning for evacuation transportation for residents who will not be able to leave if this is not provided. Some accommodation for pets should be included or people will not go."
- "The lives you save through this planning process may be all of ours. Thank you."

The above comments were shared with the LEPC during the mitigation strategy update process for consideration.

Prior to finalizing the update, a draft of the regional plan was made available to the public for review and comment. The plan was placed on the Wyoming OHS's web page, and the counties used social media, a press release and email blasts to announce the public comment period. An online feedback form was provided to collect specific comments. Four persons viewed the comment form and left comments, which were shared with the HMPC prior to completion of the final plan. Multiple of these comments concerned the county's plans and abilities concerning evacuations, particularly with wildfire, wishing to ensure there is adequate planning and redundancy in the event of a widespread evacauation. This concern is supported by multiple mitigation actions identified in Chapter 5. These comments were shared with the HMPC and resulted in minimal changes in the final plan, as these comments are largely addressed by other planning efforts being undertaken by the County. The full comments can be viewed in Appendix A for consideration in future plan updates.

Planning Step 3: Coordinate with Other Departments and Agencies

Early in the planning process, the HMPC determined that data collection, mitigation strategy development, and plan approval would be greatly enhanced by inviting state and federal agencies and organizations to participate in the process. Neighboring communities and regional agencies involved in hazard mitigation activities (such as the Conservation District and federal land management agencies), agencies that have the authority to regulate development (local governments), as well as other interests, businesses, academia and other private and non-profit interests, were also invited to provide feedback. Other interests included community lifeline/infrastructure such as rural electric cooperatives and industry representatives. Based on their involvement in hazard mitigation activities or their role in land stewardship in the Region, representatives from several state and federal agencies and local businesses were included in the HMPC in 2024 and are noted in Table 3-2. The National Park Service and the Bridger-Teton National Forest had representatives on the LEPC and attended LEPC meetings where the update was discussed.

Nonprofits and community-organizations that represent socially vulnerable populations, public health, and housing were specifically invited to particpate in the plan update process. Some organizations, such as the Red Cross, the Teton County School District and St John's

Medical Center were already members of the LEPC. Outreach on the planning effort in an effort to reach socially vulnerable populations was also done through the Teton Volunteer Organizations Active in Disasters (VOAD), which met on a quarterly basis and provided a forum for discussing related concerns.

Many of these stakeholders participated in planning meetings or were provided an opportunity to review the draft plan before it was finalized. Some of the State and Federal agencies which were invited to participate in the process attended meetings, provided data and information for the plan update, or provided feedback.

Stakeholder Engagement and Feedback

As noted, standing quarterly meetings of the VOAD were used to engage additional stakeholders in the planning effort. In February, the meeting featured a presentation by the new CEO of the Good Samaritan Mission, who provided an update to the Local Emergency Planning Committee (LEPC) on their efforts to strengthen disaster relief support, including plans to expand kitchen and laundry facilities at their shelter and community center. WSP gave a brief overview of the planning process, emphasizing the importance of involving the group and outreach to vulnerable populations. Following the meeting

The April VOAD meeting revisited key points from the February session, stressing the need to enhance emergency notifications to better reach underserved communities, such as Spanish-speaking populations.

The VOAD raised several questions for the teams to explore further regarding vulnerable populations within the planning area. Undocumented individuals, who often work with the Good Samaritan Mission, are particularly vulnerable due to unstable housing and employment conditions. The Good Samaritan Mission also identified additional non-profit organizations in Teton County that support these communities and can play a role in engaging them in the planning process.

An invite to the June HMPC meeting was extended to certain VOAD members and housing agencies/advocacy groups. Other meetings were used to connect with stakeholders and note the plan update effort. These are show in the table below. The Teton Flood Stakeholder Meeting was another opportunity to connect with stakeholders and help inform the planning effort the status of hazards related to flooding and dams. At the meeting, the National Weather Service reported no major flood concerns but noted that conditions depend on the rate of snowmelt. The Safety of Dams Inspection for five dams was also completed, with no issues identified and minimal risk of property damage downstream. The Wyoming Office of the State Engineer Dam Safety division was contacted early in the planning process to provide insight on available dam inundation mapping. This coordination helped inform the dam failure hazard section in Chapter 4 and resulted in clarification on what could and could not be divulged in the public facing HMP document.

Additional coordination and email questionnaires occurred with the Teton Housing Authority and the Teton County floodplain manager.

Table 3-4 Schedule of Other Stakeholder Meetings

MEETING NAME	DATE
VOAD Meeting	2/21/24
VOAD Meeting	4/17/24
Teton Flood Stakeholder Meeting	5/14/24

Other Community Planning Efforts and Hazard Mitigation Activities

Coordination with other community planning efforts is an important aspect of mitigation planning. Hazard mitigation planning involves identifying existing policies, tools, and actions that will reduce a community's risk and vulnerability from natural hazards. The County and Town of Jackson use a variety of comprehensive planning mechanisms, such as master plans and ordinances, to guide growth and development. Integrating existing planning efforts and mitigation policies and action strategies into these plans establishes a credible and comprehensive HMP that ties into and supports other community programs. The development of this plan incorporated information from the following existing plans, studies, reports, and initiatives as well as other relevant data from neighboring communities and other jurisdictions.

- County comprehensive plan – informed capabilities assessment, growth and development trends
- Community Wildfire Protection Plan – informed risk assessment, capabilities, mitigation strategies
- Wyoming Hazard Mitigation Plan (2020)-informed risk assessment, goals update.

Other documents were reviewed and cited, as appropriate, during the collection of data to support Planning Steps 4 and 5, which include the hazard identification, vulnerability assessment, and capability assessment.

The HMP has also been incorporated by reference in other County and Town planning documents. This is detailed in Section 6.3 Incorporation into Existing Plans and Procedures.

3.3.2 Phase 2: Assess Risks

Planning Steps 4 and 5: Identify the Hazards and Assess the Risks

WSP led the HMPC in the effort to identify and document all the hazards that have impacted or could impact the planning area. The existing hazard mitigation plan, and Wyoming Hazard Mitigation Plan provided a basis for many of the hazard profiles. Where data permitted, Geographic Information Systems (GIS) was used to display, analyze, and quantify hazards and vulnerabilities. Sophisticated analyses for flood, landslide and wildfire hazards were performed by WSP that included an analysis of flood risk based on the Digital Flood Insurance Rate Maps (DFIRMs), where available. A more detailed description of the risk assessment process and the results are included in Chapter 4 Risk Assessment.

Also included in the 2025 plan is an updated capability assessment to review and document the planning area's current capabilities to mitigate risk and vulnerability from natural hazards. By collecting information about existing government programs, policies, regulations, ordinances, and emergency plans, the HMPC can assess those activities and measures already in place that contribute to mitigating some of the risks and vulnerabilities identified. The results of this assessment are captured in Chapter 2.

3.3.3 Phase 3: Develop the Mitigation Plan

Planning Steps 6 and 7: Set Goals and Review Possible Activities

WSP facilitated discussion sessions with the HMPC that described the purpose and the process of updating planning goals, a comprehensive range of mitigation alternatives, and a method of selecting and defending recommended mitigation actions using a series of selection criteria. This process was used to update and enhance the mitigation action plan, which is the essence of the planning process and one of the most important outcomes of this effort. The action plan

and the process used to identify and prioritize mitigation actions is described in greater detail in Chapter 5 Mitigation Strategy.

Planning Step 8: Draft an Action Plan

Based on input from the HMPC regarding the draft risk assessment and the goals and activities identified in Planning Steps 6 and 7, WSP produced a complete first draft of the Regional Plan. This complete draft was shared for HMPC review and comment; HMPC comments were integrated into the second draft, which was advertised and distributed to collect public input and comments. Other agencies, including Wyoming Safety of Dams Program in the State Engineer's Office, and neighboring county emergency managers (Fremont, Lincoln, Park and Sublette in WY, and Teton, Fremont, and Bonneville counties in Idaho) were invited to comment on this draft as well. WSP integrated comments and issues from the public, as appropriate, along with additional internal review comments, and produced a final draft for the Wyoming Office of Homeland Security and FEMA Region VIII to review and approve, contingent upon final adoption by the governing boards of each participating jurisdiction.

3.3.4 Phase 4: Implement the Plan and Monitor Progress

Planning Step 9: Adopt the Plan

To secure buy-in and officially implement the plan, the plan was adopted by the governing boards of each participating jurisdiction. As the adoption process takes place after FEMA's review and approval of the plan, copies of the adoption resolution will be included electronically in Appendix B Records of Adoption.

Planning Step 10: Implement, Evaluate, and Revise the Plan

The true worth of any mitigation plan is in the effectiveness of its implementation. Each recommended action includes key descriptors, such as a lead manager and possible funding sources, to help initiate implementation. Progress on the implementation of specific actions identified in the plan is captured in the mitigation action plan summary table in Chapter 5 Mitigation Strategy. An overall implementation strategy is described in Chapter 6 Plan Adoption, Implementation and Maintenance.

Finally, there are numerous organizations within the Region 8 planning area whose goals and interests interface with hazard mitigation. Coordination with these other planning efforts, as addressed in Planning Step 3, is important to the ongoing success of this plan and mitigation in Region 8 and is addressed further in Chapter 6. A plan update and maintenance schedule and a strategy for continued public involvement are also included in Chapter 6.

4 Hazard Identification and Risk Assessment (HIRA)

As defined by the Federal Emergency Management Agency (FEMA), risk is a combination of hazard, vulnerability, and exposure. "It is the impact that a hazard would have on people, services, facilities, and structures in a community and refers to the likelihood of a hazard event resulting in an adverse condition that causes injury or damage."

The risk assessment process identifies and profiles relevant hazards and assesses the exposure of lives, property, and infrastructure to these hazards. The process allows for a better understanding of a jurisdiction's potential risk to hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

This risk assessment builds upon the methodology described in the 2023 FEMA Local Mitigation Planning Handbook, which recommends a five-step process for conducting a risk assessment:

1. Identify Hazards
2. Describe Hazards
3. Identify Community Assets
4. Analyze Risks
5. Summarize Vulnerability

Data collected through this process has been incorporated into the following sections of this chapter:

Section 4.1 Hazard Identification identifies the hazards that threaten the planning area and describes why some hazards have been omitted from further consideration.

Section 4.2 Hazard Profiles discusses the threat to the planning area and describes previous occurrences of hazard events, the likelihood of future occurrences, and the Region's vulnerability to particular hazard events.

4.1 Hazard Identification

Requirement §201.6(c)(2)(i):
[The risk assessment shall include a] description of the type of all natural hazards that can affect the jurisdiction.

4.1.1 Results and Methodology

The 2020 Region 8 HMP considered a total of 11 hazards to profile in the risk assessment for that plan. These include:

- Dam Failure
- Drought
- Earthquake/Liquefaction
- Flood/Flash Flood
- Hail
- Landslide
- Lightning
- Avalanche
- Tornado
- Wildland Fire
- Winter Storm

Using existing hazards data, plans from participating jurisdictions, and input gained through planning and public meetings, the HMPC of Teton County refined this above list of hazards for the plan update. Hazards data from FEMA, the Wyoming Office of Homeland Security (including the 2020 State of Wyoming Multi-Hazard Mitigation Plan), the National Oceanic and Atmospheric Administration, neighboring county hazard mitigation plans, and many other sources were examined to assess the significance of these hazards to the planning area. The

hazards evaluated in this plan include those that have occurred historically or have the potential to cause significant human and/or monetary losses in the future.

Each of the hazards previously profiled are still profiled in this HMP update, however some have been renamed or combined with other hazards. The final list of hazards identified and investigated for the 2025 Region 8 Multi-Hazard Mitigation Plan includes:

- Avalanche
- Dam/Levee Incident
- Drought
- Earthquake
- Flood
- Landslide
- Severe Summer Weather (Hail/Extreme Heat/Lightning/Thunderstorms)
- Severe Winter Weather
- High Winds (including Tornado)
- Wildfire

Since the 2020 plan, changes to the hazards list include the addition of levee incidents to the dam incident chapter, and the tornado hazard profile was expanded to evaluate windstorms and microbursts as well. Similarly, hail and lightning are now included in the broader Severe Summer Weather hazard profile, which covers other typical summer weather hazards like extreme heat and thunderstorms.

Members of the HMPC used a hazards worksheet to rate the significance of hazards that could potentially affect the region. Significance was measured in general terms, focusing on key criteria such as the likelihood of the event, past occurrences, spatial extent, and damage and casualty potential.

Table 4-1 Region 8 Overall Hazard Significance Summary Table

HAZARD	GEOGRAPHIC EXTENT	FREQUENCY OF OCCURRENCE	POTENTIAL MAGNITUDE/ SEVERITY	TETON COUNTY OVERALL SIGNIFICANCE
Avalanche	Limited	Highly Likely	Limited	**Medium**
Dam/Levee Incident	Significant	Unlikely	Critical	**Medium**
Drought	Extensive	Likely	Moderate	**Medium**
Earthquake	Significant	Occasional	Catastrophic	**High**
Flood	Limited	Likely	Limited	**High**
Landslide	Limited	Likely	Critical	**Medium**
Severe Summer Weather (Hail/ Extreme Heat/ Lightning/ Thunderstorms)	Limited	Highly Likely	Limited	**Low**
Severe Winter Weather (including Extreme Cold)	Extensive	Highly Likely	Limited	**Medium**
High Winds (including Tornado)	Significant	Likely	Limited	**Medium**
Wildfire	Extensive	Highly Likely	Critical	**High**

Table 4-2 represents the worksheet used to identify and rate the hazards and is a composite that includes input from all the participating jurisdictions. Note that the significance of the hazard may vary from jurisdiction to jurisdiction. In some cases, the priorities changed during the 2024 update based on input from the HMPC. Other changes in the hazard identification list are noted with an asterisk in the table below.

Table 4-2 Region 8 Overall Hazard Significance Summary by Jurisdiction

HAZARD	TETON COUNTY	JACKSON	TETON CONSERVATION DISTRICT	FLAT CREEK WATERSHED IMPROVEMENT DISTRICT	JACKSON HOLE AIRPORT BOARD
Avalanche	Medium	Medium	NA	Medium	NA
Dam/Levee Incident	Medium	NA	Low	NA	NA
Drought	Medium	Medium	Medium	Medium	Medium
Earthquake	High	High	High	High	High
Flood	High*	Medium	Medium	Medium	Medium
Landslide	Medium*	Low	Low	Low	NA
Severe Summer Weather (Hail/Extreme Heat/Lightning/ Thunderstorms)	Low	Low	NA	NA	Low
Severe Winter Weather (Including Extreme Cold)	Medium	Medium	Medium	Medium	Medium
High Winds (including Tornado)	Medium	Low	Low	NA	Low
Wildfire	High	High	High	High	High

*Flood changed from medium to high, landslide low to medium

Other hazards in the Wyoming State Hazard Mitigation Plan were considered but not profiled in the plan because they either were not present, had a very low probability, or did not have a historical record of impact on property or life safety. Those hazards were:

- Expansive Soils
- Land Subsidence
- Windblown Deposits
- Volcanism/Eruption

While the region would be vulnerable to an eruption of the Yellowstone Caldera due to its location in close proximity to Yellowstone National Park, a large-scale eruption would have catastrophic global impacts. Because of the overly long expected occurrence of frequency (greater than 10,000 years) for explosive volcanism at Yellowstone, and the fact that a mitigation plan is not possible for an event of this magnitude, it was not analyzed in this document. However, the influence of the volcano and its geologic processes on local seismic activity is discussed in the earthquake profile.

Other hazards considered during plan update discussions included human-caused ones such as cyber-attacks, terrorism, and hazardous materials incidents. FEMA defines natural hazards as those which are caused by natural events that pose a threat to lives, property, and other assets, such as hurricanes, earthquakes, and tornadoes. Human-caused or technological hazards on the other hand are those which are caused by tools, machines, and substances used in everyday life and/or intentional acts caused by people attacking or damaging what is valuable in a society. Examples include hazardous materials releases, major computer system failures (e.g., 911 system), terrorist attacks, and riots. Human-caused hazards are not required to be addressed per the FEMA planning requirements thus the focus of the plan remains primarily on natural hazards, but these and other hazards may be revisited in future updates.

In the process of evaluating hazards, consideration of hazards which trigger or are triggered by other hazards was given.

Each hazard is profiled in a similar format that is described below:

Hazard Description

This subsection gives a description of the hazard and associated problems, followed by details on the hazard specific to the Region.

Location

This subsection discusses which areas of the Region are most likely to be affected by a hazard event.

- **Limited**: Less than 10% of the planning area
- **Significant**: 10 to 50% of the planning area
- **Extensive**: 50 to 100% of the planning area

Extent (Magnitude)

This subsection discusses the potential magnitude of impacts, or 'extent' as defined by FEMA, from a hazard event. Magnitude classifications are as follows:

- **Catastrophic**—More than 50% of property severely damaged, and/or facilities are inoperable or closed for more than 30 days. More than 50% agricultural losses. Multiple fatalities and injuries. Critical indirect impacts.
- **Critical**—25 to 50% of property severely damaged, and/or facilities are inoperable or closed for at least 2 weeks. 10-50% agricultural losses. Injuries and/or illnesses result in permanent disability and some fatalities. Moderate indirect impacts.
- **Limited**—10 to 25% of area affected. Some injuries, complete shutdown of critical facilities for more than one week, more than 10% of property is severely damaged.
- **Negligible**—Less than 10% of area affected. Minor injuries, minimal quality-of-life impact, shutdown of critical facilities and services for 24 hours or less, less than 10% of property is severely damaged.

Previous Occurrences

This subsection contains information on historic incidents, including impacts where known. Information provided by the HMPC is included here along with information from other data sources, including the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI – formerly the National Climatic Data Center (NCDC)). and SHELDUS (where information is referenced from the State Hazard Mitigation Plan).

SHELDUS is a county-level data set for the United States that tracks 18 types of natural hazard events along with associated property and crop losses, injuries, and fatalities. In 2014 this formerly free database transitioned into a fee-based service. Due to this and the availability of similar data in NCEI databases it was not used as a resource during the 2023 regional plan update except for when the data was already available.

When available, tables showing county-specific data from the NCEI and SHELDUS databases may be found in each hazard profile.

Probability of Future Occurrences

The frequency of past events is used in this section to gauge the likelihood of future occurrences. Based on historical data, the likelihood of future occurrences is categorized into one of the following classifications:

- **Highly Likely**—Near 100% chance of occurrence in next year, or happens every year.
- **Likely**—Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less.
- **Occasional**—Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years.
- **Unlikely**—Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.

The frequency, or chance of occurrence, was calculated where possible based on existing data. Frequency was determined by dividing the number of events observed by the number of years and multiplying by 100. Stated mathematically, the methodology for calculating the probability of future occurrences is:

$$\frac{\textbf{\# of known events}}{\text{years of historic record}} \text{ x100}$$

This gives the percent chance of the event happening in any given year. An example would be three droughts occurring over a 30-year period which equates to 10% chance of that hazard occurring any given year.

Climate Change Impacts

This subsection to the Frequency/Likelihood of Occurrence section discusses the potential impacts of future changing conditions in the climate and how those changes may increase or decrease natural hazards frequency and intensity.

Vulnerability Assessment

Vulnerability is the measurement of exposed structures, critical facilities, or populations relative to the risk of the hazard. For most hazards, vulnerability is a best estimate. Some hazards, such as flood, affect specific areas so that exposure can be quantified, and vulnerability assessments result in a more specific approximation. Other hazards, such as tornados, are random and unpredictable in location and duration that only approximate methods can be applied.

Land Use and Development Trends

This section describes how vulnerability may be changing due to development trends.

Risk Summary

This section summarizes risk within the county according to the area affected, likelihood, and magnitude of impacts. If the hazard has impacts on specific towns, cities, or districts in the region they are noted here, where applicable.

4.1.2 Disaster Declaration History

As part of the hazard identification process, the HMPC researched past events that triggered federal and/or state emergency or disaster declarations in the planning area. Federal and/or state disaster declarations may be granted when the severity and magnitude of an event surpasses the ability of the local government to respond and recover. Disaster assistance is supplemental and sequential. When the local government's capacity has been surpassed, a state disaster declaration may be issued, allowing for the provision of state assistance. Should the disaster be so severe that both the local and state governments' capacities are exceeded, a federal emergency or disaster declaration may be issued allowing for the provision of federal assistance.

The federal government may issue a disaster declaration through FEMA, the U.S. Department of Agriculture (USDA), and/or the Small Business Administration (SBA). FEMA also issues emergency declarations, which are more limited in scope and without the long-term federal recovery programs of major disaster declarations. The quantity and types of damage are the determining factors.

A USDA declaration will result in the implementation of the Emergency Loan Program through the Farm Services Agency. This program enables eligible farmers and ranchers in the affected county as well as contiguous counties to apply for low interest loans. A USDA declaration will automatically follow a major disaster declaration for counties designated major disaster areas and those that are contiguous to declared counties, including those that are across state lines. As part of an agreement with the USDA, the SBA offers low interest loans for eligible businesses that suffer economic losses in declared and contiguous counties that have been declared by the USDA. These loans are referred to as Economic Injury Disaster Loans.

Fire Management Assistance Grant funding is available to state, local and tribal governments, for the mitigation, management, and control of fires on publicly or privately-owned forests or grasslands, which threaten such destruction as would constitute a major disaster. The Fire Management Assistance declaration process is initiated when a State submits a request for assistance to the Federal Emergency Management Agency (FEMA) Regional Director at the time a "threat of major disaster" exists. The entire process is accomplished on an expedited basis and a FEMA decision is rendered in a matter of hours. The Fire Management Assistance Grant Program (FMAGP) provides a 75 percent Federal cost share, and the State pays the remaining 25 percent for actual costs.

Federally declared disasters for Teton County are listed in the Table below. There have not been any state-declared disasters beyond these that have reached the criteria for a federal declaration.

Table 4-3 Federally Declared Disasters in Planning Area

DISASTER NUMBER	DECLARATION DATE	INCIDENT TYPE	TITLE	INCIDENT BEGIN DATE	INCIDENT END DATE
4535	4/11/2020	Biological	Wyoming Covid-19 Pandemic	1/20/2020	5/11/2023
3479	3/13/2020	Biological	Wyoming Covid-19	1/20/2020	5/11/2023
4306	3/21/2017	Severe Storms	Severe Winter Storm and	2/6/2017	2/7/2017

DISASTER NUMBER	DECLARATION DATE	INCIDENT TYPE	TITLE	INCIDENT BEGIN DATE	INCIDENT END DATE
			Straight-line winds		
4007	7/22/2011	Severe Storms	Severe Storms, Flooding, and Landslides	5/18/2011	7/8/2011
2367	7/26/2001	Fire	Green Knoll Wildfire	7/23/2001	8/8/2001

Source: FEMA, https://www.fema.gov/disasters

4.1.3 Assets Summary

Assets inventoried for the purpose of determining vulnerability include people, structures, critical facilities, and natural, historic, or cultural resources. For the regional planning process available GIS databases were utilized. Address Points, Parcels, and Assessor data for Teton County was obtained from the Wyoming Department of Revenue's Property Tax Division in June of 2023; this information provided the basis for building exposure and property types. A critical facilities layer was created through the combination of the 2020 Hazard Mitigation Plan, 2023 Homeland Infrastructure Foundation-Level Data (HIFLD) databases, 2024 National Inventory of Dams, and the 2024 National Bridge Inventory. HIFLD is national geospatial data that is open public domain that can be used to support community preparedness, resiliency, research, and other capacities. A critical facility is defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. Where applicable, this information was used in an overlay analysis for hazards such as flood, landslide, and wildfire.

FEMA organizes critical facilities in eight lifeline categories as shown in Figure 4-1.

Figure 4-1 FEMA Lifeline Categories



Source: FEMA Toolkit Version 2.1

These lifeline categories standardize the classification of critical facilities and infrastructure that provide indispensable service, operation, or function to a community. A lifeline is defined as providing indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security. These categorizations are particularly useful as they:

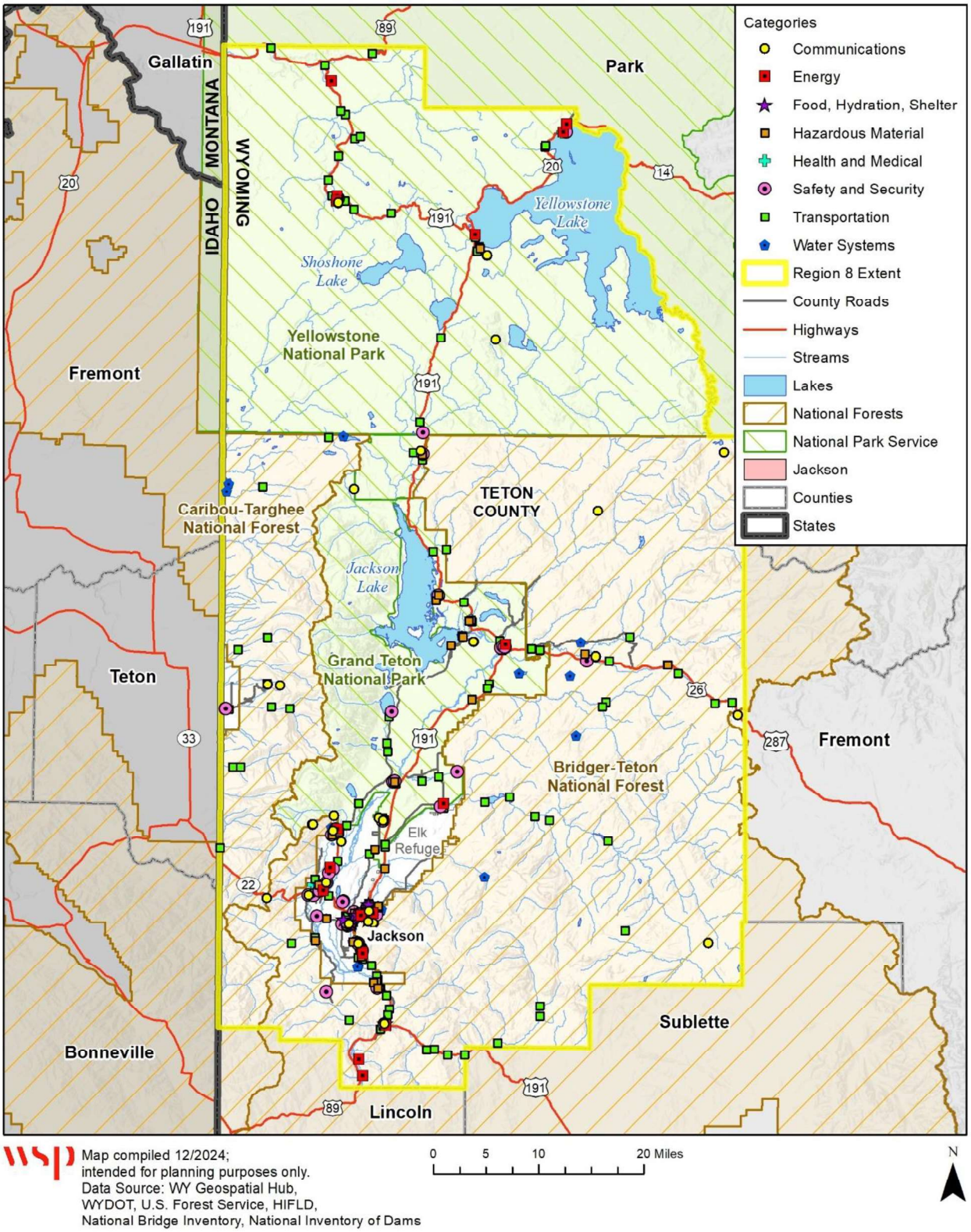
- Enable effort consolidations between government and other organizations (e.g., infrastructure owners and operators).
- Enable integration of preparedness efforts among plans; easier identification of unmet critical facility needs.
- Refine sources and products to enhance awareness, capability gaps, and progress towards stabilization.
- Enhance communication amongst critical entities, while enabling complex interdependencies between government assets.
- Highlight lifeline related priority areas regarding general operations as well as response efforts.

Table 4-4 Region 8 Total Lifeline Facilities by Jurisdiction and Community Lifeline

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	2	3	14	7	26	25	7	1	16	**101**
Unincorporated	38	16	2	41	9	46	108	26	12	**298**
Total	**40**	**19**	**16**	**48**	**35**	**71**	**115**	**27**	**28**	**399**

Source: Teton County, Emergency Management, HIFLD, National Inventory of Dams, National Bridge Inventory, WSP Analysis

Figure 4-2 Critical Facilities Overview Map



Assets specific to the participating special districts were also inventoried during the 2024 update. These are summarized by district in the table below, with potential vulnerability notes:

Table 4-5 Asset Inventory – Special Districts

NAME OF ASSET	APPROXIMATE REPLACEMENT VALUE	HAZARD SPECIFIC CONCERNS
Jackson Hole Airport		
Terminal Building	$103,000,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Control Tower Building	$7,725,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Lighting Control Building	$1,000,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Hangar #1	$2,545,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
QTA – Rental Car Facility	$13,390,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Hangar #2	$3,227,700	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Admin Building- Office Trailer	$477,177	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Hangar #5	$8,940,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Hangar #3	$40,000,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Fuel Facility	$20,000,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Perimeter Fence	$2,000,000	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Vehicle Gates	$164,800	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Lift Station	$353,290	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Parcs System	$566,500	Earthquake, Severe Weather (Summer and Winter), Flood, Tornado/Windstorm, Wildfire,
Teton Conservation District		
TCD Server @ TCD Office	$50,000	While backed up, flooding, fire, or earthquake could quickly diminish TCD's responsiveness with data and information if the TCD Server failed.
Flat Creek Watershed Improvement District		
TOJ Drinking Water Well #5		Wintertime flooding
TOJ Sanitary Sewer Collection System		Wintertime flooding
Public Streets and Pathways		Wintertime flooding
Residential Housing		Wintertime flooding

Source: Plan Update Guide input from districts

Table 4-6 below contains a summary of improved property exposure across Region 8, organized by jurisdiction and property type.

Table 4-6 Region 8 Total Property Exposure by Jurisdiction

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE
Jackson	Com. Vacant Land	4	4	$33,491,798	$33,491,798	**$66,983,596**
	Commercial	856	1,156	$2,323,232,052	$2,323,232,052	**$4,646,464,104**
	Multi-Use	32	65	$17,404,763	$17,404,763	**$34,809,526**
	Res. Vacant Land	12	12	$28,423,181	$14,211,591	**$42,634,772**
	Residential	3,238	3,361	$3,588,540,544	$1,794,270,272	**$5,382,810,816**
	Total	**4,142**	**4,598**	**$5,991,092,338**	**$4,182,610,476**	**$10,173,702,814**
Unincorporated	Agricultural	120	136	$232,472,292	$232,472,292	**$464,944,584**
	Com. Vacant Land	7	107	$1,608,461	$1,608,461	**$3,216,922**
	Commercial	324	403	$923,299,601	$923,299,601	**$1,846,599,202**
	Multi-Use	5	5	$8,952,465	$8,952,465	**$17,904,930**
	Res. Vacant Land	36	38	$66,399,396	$33,199,698	**$99,599,094**
	Residential	6,683	6,750	$18,766,432,349	$9,383,216,175	**$28,149,648,524**
	Total	**7,175**	**7,439**	**$19,999,164,564**	**$10,582,748,692**	**$30,581,913,256**
	Grand Total	**11,317**	**12,037**	**$25,990,256,902**	**$14,765,359,167**	**$40,755,616,069**

Source: Teton County, Wyoming CAMA 2024, WSP GIS Analysis

4.1.4 Social Vulnerability and Community Resilience

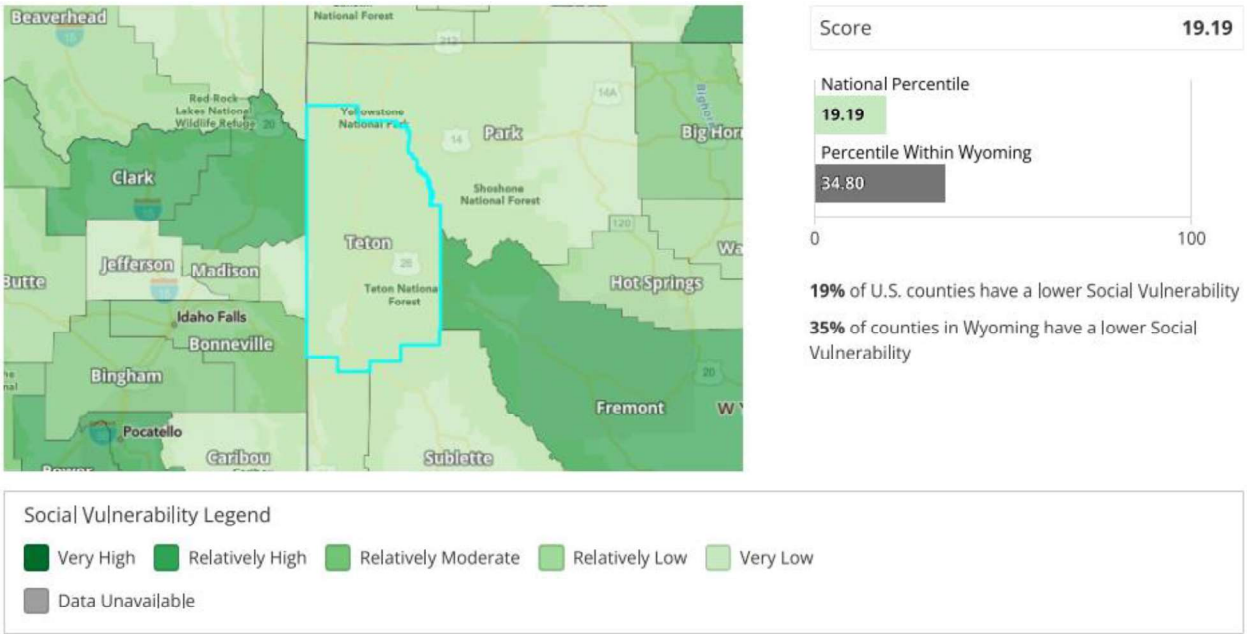
Social vulnerability refers to the increased susceptibility of certain social groups to the adverse impacts of natural hazards. This vulnerability may manifest in disproportionate rates of mortality, injury, loss, or disruption of livelihoods within these communities. Social vulnerability considerations were included in this plan update to identify populations across the planning area that might be more vulnerable to hazard impacts based on a variety of factors.

Community resilience refers to the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions, and withstand recovery from disruptions. It reflects how well a community can recover after a disaster.

The term vulnerability should be used to describe the communities more vulnerable to a risk or hazard, such as high vulnerability due to wildfires or floods based upon geography, topography, hydrology, or weather. Referencing people themselves directly with the term vulnerability causes individual community members to be seen with a deficit lens, leaving the impression that the vulnerability is a result of a lack of responsibility and/or adequate planning of the individual. Instead, vulnerability only occurs when the system that the individual is part of fails to provide equitable accessibility to resources or services, known as access and functional needs, for the individual to survive, respond to, and recover from an event. Barriers that may be exacerbated by certain social and economic factors – including race, age, income, renter status, or institutionalized living – directly affect a community's ability to prepare for, respond to, and recover from hazards and disasters. The concept of social vulnerability helps explain why communities often experience a hazard event differently, even when they experience the same physical impacts or property loss.

The Centers for Disease Control and Prevention (CDC) has developed a social vulnerability index (SVI) to measure the resiliency of communities when confronted by external stresses such as natural or human-caused disasters. The SVI is broken down by county to the census tract level and provides insight into particularly vulnerable populations. The National Risk Index (NRI) uses the CDC SVI data that can be used as a side-by-side comparison of social vulnerability across the region, Figure 4-3 below displays the overall social vulnerability for region 8. Social groups in Teton County have a Very Low susceptibility to the adverse impacts of natural hazards when compared to the rest of the U.S.

Figure 4-3 Region 8 Overall Social Vulnerability



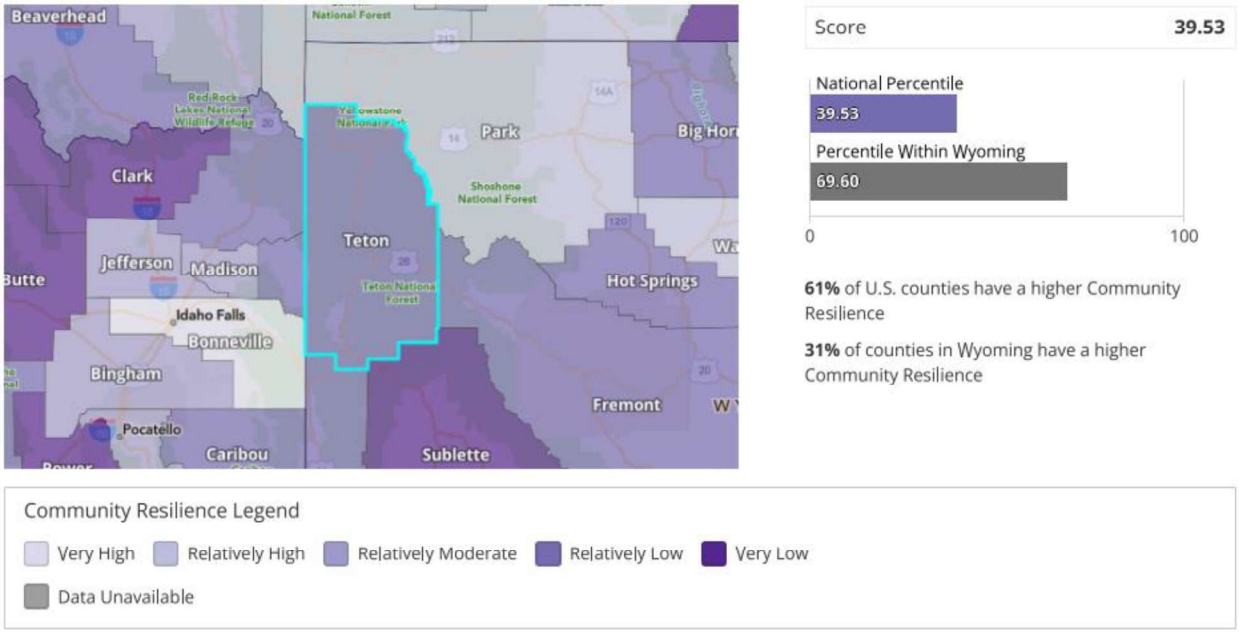
Source: National Risk Index

Related to social vulnerability, the NRI utilizes community resilience as a “consequence reduction component". Community Resilience can essentially be thought of as an inverse to social vulnerability. The NRI defines community resilience as the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions. There are multiple, well-established ways to define community resilience at the local level, and key drivers of resilience vary between locations. Because there are no nationally available, bottom-up community resilience indices available, the Social Vulnerability and Community Resilience Working Group chose to utilize a top-down approach. The NRI relies on using broad factors to define resilience at a national level and create a comparative metric to use as a risk factor.

The Community Resilience score is a consequence reduction risk factor and represents the relative level of community resilience in comparison to all other communities at the same level. A higher Community Resilience score results in a lower Risk Index score. Because Community Resilience is unique to a geographic location—specifically, a county—it is a geographic risk factor. Community resilience data are supported by the University of South Carolina’s Hazards and Vulnerability Research Institute (HVRI) Baseline Resilience Indicators for Communities (BRIC). HVRI BRIC provides a sound methodology for quantifying community resilience by identifying the ability of a community to prepare and plan for, absorb, recover from, and more successfully adapt to the impacts of natural hazards. The HVRI BRIC dataset includes a set of 49 indicators that represent six types of resilience: social, economic,

community capital, institutional capacity, housing/infrastructure, and environmental. It uses a local scale within a nationwide scope, and the national dataset serves as a baseline for measuring relative resilience. The data can be used to compare one place to another and determine specific drivers of resilience, and a higher HVRI BRIC score indicates a stronger and more resilient community. Figure 4-4 below shows the community resilience rating for Teton county.

Figure 4-4 Region 8 Community Resilience Rating



Source: National Risk Index

4.2 Hazard Profiles

4.2.1 Avalanche

Description

An avalanche refers to the rapid movement of a mass of snow down a slope, often triggered by severe weather conditions, posing a threat to people's safety, and causing damage. While most avalanches in Wyoming occur in mountainous regions above the timberline and in sheltered areas where snow tends to accumulate, they can also happen on gentler slopes below the timberline, like gullies or road cuts. Four essential factors contribute to avalanche formation: slope, snow cover, a weak layer within the snowpack, and a trigger mechanism.

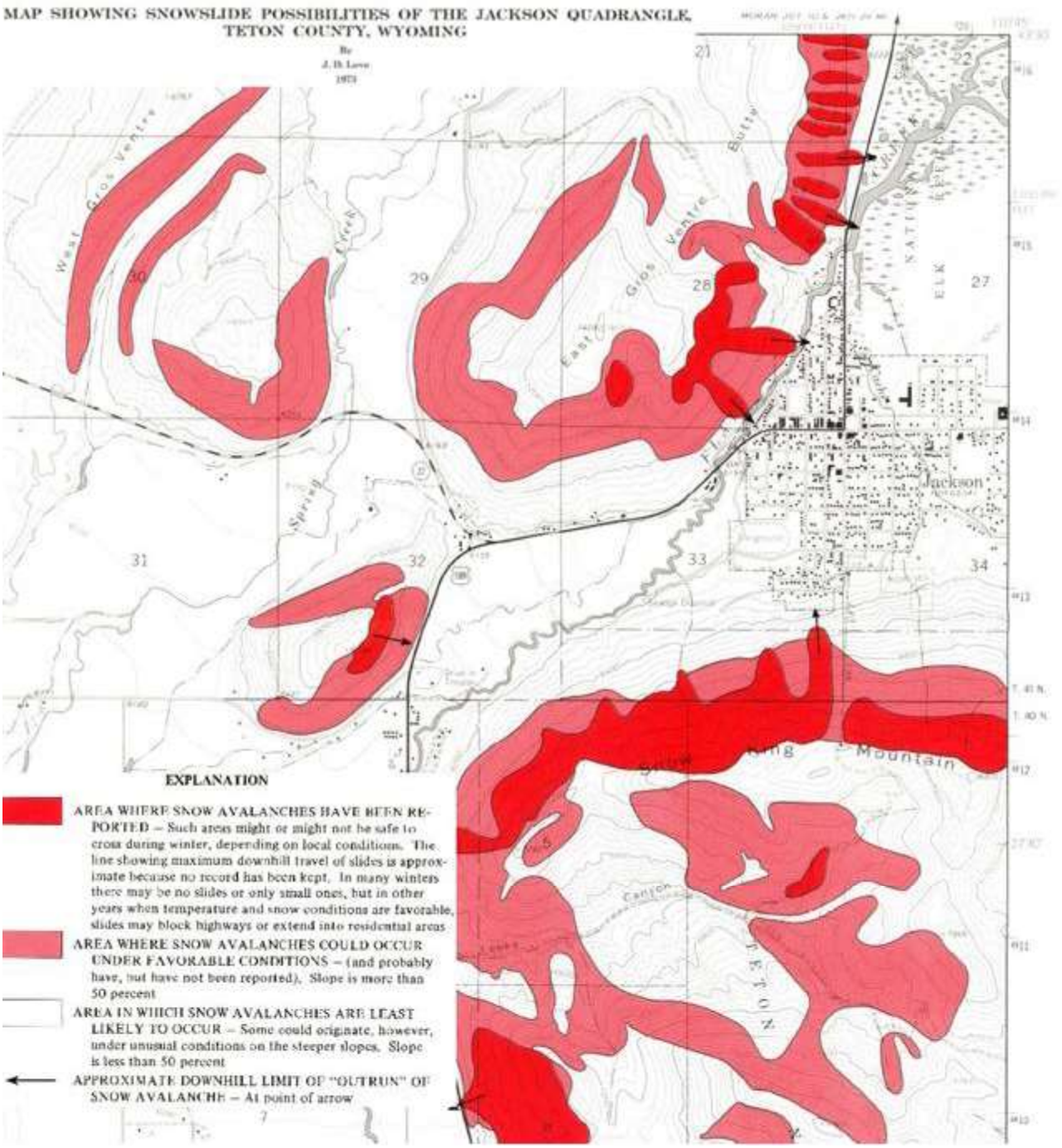
Weak layers within the snowpack fail to support the weight above, leading to the collapse of the snow cover and its rapid downhill movement. Avalanches can release either as loose snowslides and can be categorized as wet or dry depending on the moisture content of the snow. Loose avalanches involve deeper layers of snow losing cohesion due to failure of lower, weaker layers. Both types can travel long distances on gentle terrain, causing damages to buildings, cabins, and infrastructure, such as electrical transmission lines. Avalanches are triggered by human activity or environmental factors like wind loading, precipitation, or temperature changes. Human-triggered avalanches commonly occur in backcountry areas where skiers, hikers, or other outdoor enthusiasts venture.

An avalanche path typically consists of a starting zone where the avalanche initiates, a track where it gains speed and momentum, and a turnout zone where it slows down and debris accumulates. While many avalanches do not result in significant damage, the risk is heightened when people or property intersects their paths. Communication and transportation networks face the greatest risk, along with winter recreationists. Increased development in mountainous regions and the popularity of winter sports have heightened the risk of avalanches. Due to its rural nature, snowpack, varied terrain, and mountain recreational activities, Wyoming is among the states with the highest avalanche hazards.

Location

In Teton County, avalanches are more common in mountainous terrain above the timberline and in leeward slopes where snow tends to accumulate. About 90% of all avalanches start on slopes of 30-45 degrees; about 98% of all avalanches occur on slopes of 25-50 degrees. Avalanches are more prevalent in Teton County compared to the Town of Jackson, simply because more avalanche-prone areas exist outside of the Town. According to the U.S. Geological Survey, the Town of Jackson is vulnerable to multiple areas of avalanche (see Figure below). It is important to note that this data is from 1973; digital information for the Jackson area and County was not available. County Emergency Management noted a resource for avalanche location is the WYDOT District 3 Snow Avalanche Atlas for Lincoln, Sublette, and Teton Counties, compiled in 2004, that contains photos and descriptions of paths crossing highway infrastructure. In the Town, the primary areas of risk are associated with Snow King Mountain, including the ski area and the steeper slopes that flank the ski resort to the east and west. However, avalanches have occurred on east slope of the East Gros Ventre Butte. According to local emergency management these have temporarily dammed Flat Creek, causing flooding issues, and damaged parked vehicles. The more expansive county lands include countless avalanche paths in the Teton and Absaroka Ranges and the Gros Ventre Mountains, including areas along Teton and Togwotee passes. Areas of increased activity by backcountry users (skiers, snowboarders, snowshoers, and snowmobilers) exist along the passes as well as adjacent to both Jackson Hole Mountain Resort (JHMR) and Grand Targhee Mountain Resort, where gated access to backcountry areas sees prevalent skier traffic.

Figure 4-5 Snowslide Possibilities of Jackson Quadrangle Teton County, Wyoming



Source: USGS J.D. Love 1973

Extent (Magnitude)

A number of weather and terrain factors determine avalanche magnitude and severity.

- Weather:
  - Storms – A large percentage of avalanches occur during and shortly after storms.

  - Rate of snowfall – Snow falling at a rate of 1 inch or more per hour significantly increases avalanche danger.
  - Temperature – Storms starting with low temperatures and dry snow, followed by rising temperatures and wet snow, are more likely to cause avalanches than storms that start warm and then cool.
  - Wet snow –Spring weather with warm, moist winds and cloudy nights, as well as rainstorms, can cause wet snow avalanches by warming the snowpack and decreasing its strength. Wet snow avalanches are more likely to occur on sun-exposed terrain and under exposed rocks or cliffs.
- Terrain:
  - Ground cover – Large rocks, trees, and heavy shrubs anchor snow.
  - Slope profile – Dangerous slab avalanches are more likely to occur on convex slopes.
  - Slope aspect – Leeward facing slopes are dangerous because windblown snow adds depth and creates dense slabs. South-facing slopes are more dangerous in the springtime.
  - Slope steepness – Avalanches are most common on slopes of 30 to 45 degrees.

Additional factors contributing to avalanche hazard are old snow depth, old snow surface, new snow depth, new snow type, density, precipitation intensity, settlement, wind direction and speed, temperature, and subsurface snow crystal structure.

The exponential force and volume of snow involved in an avalanche can bury victims under tons of debris. Mitigation measures, including avalanche forecasting, monitoring, and safety protocols, can help minimize the impact of avalanches and protecting lives and property.

There are two distinct scales for measuring avalanche magnitude which include the Relative Size Scale, or R-Scale, and the Destructive Size Scale, or D-scale. Both scales are qualitative tools that aid in communicating avalanche activity, reporting events, and analyzing historical occurrences. While they offer some structure for assessing avalanche magnitude, the scoring along these scales remains subjective and relies on consistency among observers to ensure accurate estimates of magnitude. The R-scale provides a straightforward estimate of avalanche size based on volume relative to the path in which it occurs. Avalanches up to R5 and D4 are possible in the county

Table 4-7 R-Scale Scoring

SCORE	DESCRIPTION
R1	Very small, relative to path
R2	Small, relative to path
R3	Medium, relative to path
R4	Large, relative to path
R5	Major/Maximum, relative to path

Source: Thompson Pass

The D-Scale evaluates the destructive capacity of an avalanche. Occasionally, half-sizes are included in this scale, and it incorporates elements for both mass and path length corresponding to each score along the scale. It is a possibility for avalanches up to a D4 to occur in Teton County.

Table 4-8 D-Scale Scoring

SCORE	DESCRIPTION	TYPICAL MASS	TYPICAL LENGTH
D1	Relatively harmless to people	< 10 Tons	10 Meters
D2	Could bury, injure, or kill a person	100 Tons	100 Meters
D3	Could bury and destroy a car, damage a truck, destroy a wood frame house, or break a few trees	1,000 Tons	1,000 Meters
D4	Could destroy a railway car, large truck, several buildings, or a substantial amount of forest	10,000 Tons	2,000 Meters
D5	Could gouge the landscape- largest snow avalanche known.	100,000 Tons	3,000 Meters

Source: Thompson Pass

Previous Occurrences

Avalanches occur frequently in the County. However, due to isolated nature of these incidents few avalanches are widely recorded. Still, avalanches have the capability to incur major damages when people are involved, and Teton County is especially susceptible due to its mountainous terrain and popularity among winter recreationists.

According to Bridger-Teton Avalanche Center, there were 33 fatalities related to avalanches between 1964-2023.

Table 4-9 Avalanche Fatalities in Teton County, 1964-2023

COUNTY	LOCATION	DATE	ACTIVITY/TRAVEL	NUMBER OF FATALITIES
Teton	Snow King Mountain	12-Mar-64	Patroller	1
Teton	Glacier Gulch, Teton Range	16-Jan-74	Backcountry Skier	1
Teton	Glacier Gulch, Teton Range	16-Jan-74	Backcountry Skier	1
Teton	Glacier Gulch, Teton Range	16-Jan-74	Backcountry Skier	1
Teton	South Leigh Canyon, Teton Range	20-Mar-76	Backcountry Skier	1
Teton	Grand Teton, Teton Range	26-Apr-79	Climber	1
Teton	Grand Teton, Teton Range	26-Apr-79	Climber	1
Teton	Ferrin's Slide, Snow King Mt	16-Feb-84	Lift Skier Out of Area	1
Teton	Mt Wister, Teton Range	3-Feb-85	Climber	1
Teton	Rendezvous Mountain, Teton Range	2-Dec-85	Patroller	1
Teton	Rendezvous Mountain, Teton Range	17-Feb-86	Patroller	1
Teton	Dry Ridge, Teton Range	28-Feb-92	Snowmobiler	1
Teton	Simpson Peak, Togwotee Pass	28-Dec-92	Backcountry Skier	1
Teton	Taylor Mountain, Teton Range	19-Apr-95	Backcountry Skier	1

COUNTY	LOCATION	DATE	ACTIVITY/TRAVEL	NUMBER OF FATALITIES
Teton	Factory Hill, Yellowstone	3-Mar-97	Backcountry Skier	1
Teton	Factory Hill, Yellowstone	3-Mar-97	Backcountry Skier	1
Teton	Dry Lake Creek, Togwotee Pass	4-Jan-99	Snowmobiler	1
Teton	Rendezvous Mountain, Teton Range	19-Jan-99	Lift Skier	1
Teton	Glory Bowl, Teton Range	1-Dec-00	Backcountry Snowboarder	1
Teton	Titmouse Ridge, Teton Pass	9-Dec-00	Backcountry Skier	1
Teton	Pyramid, Teton Range	19-Jan-16	Backcountry Snowboarder	1
Teton	Ralph's Slide, Teton Range	24-Jan-16	Lift Skier Out of Area	2
Teton	Fred's Saddle Backside, Teton Range	21-Feb-16	Lift Skier Out of Area	1
Teton	Steve Baugh Bowl, Teton Range	23-Dec-16	Lift Snowboarder Out of Area	1
Teton	East Leidy Mountain, Togwotee Pass	22-Apr-18	Snowmobiler	1
Teton	Mt Leidy, Togwotee Pass	9-Jan-19	Snowmobiler	1
Teton	Breccia Cliffs Area, Togwotee Pass	4-Mar-19	Snowmobiler	1
Teton	Taylor Mountain	1-Apr-20	Snowboarder	1
Teton	Austin Canyon	3-Apr-20	Snowmobile	1
Teton	Togwotee Pass	18-Feb-21	Snowmobile	1
Teton	Peak 9775, Teton Range	22-Feb-21	Snowboarder	1
Teton	South Fork of Game Creek	17-Mar-22	Backcountry Skiing	1
Teton	Poker Flats	23-Feb-23	Snowmobile	1

Source: Bridger-Teton Avalanche Center, https://bridgertetonavalanchecenter.org/wyoming-fatalities-by-date-list/

Probability of Future Occurrences

Avalanches are most likely to occur between November and April, with the January, February, and March being the peak months. Snow avalanches may stop in the starting zone, track, or run-out zone, depending on the amount and condition of the snow in the path. Bridger-Teton Avalanche Center has helped forecast and identify avalanche risks throughout the area. By utilizing this tool, outdoor enthusiasts and others participating in activities that may be at risk of avalanches, are able to receive up-to-date information on weather conditions, snow stability, and avalanche dangers ratings for the area.

Teton County's mountainous terrain and winter climate can make it inherently prone to avalanches that will recur multiple time annually, especially in areas with steep slopes and heavy snow accumulation. As human activity increases in avalanche-prone regions the likelihood of triggering avalanches may also rise. Bridger-Teton Avalanche Center has reported approximately 33 deaths related to avalanches since 1964 throughout Teton County. This is approximately 0.56 fatalities per year in the last 59 years. This is a slight decrease from 2.2 fatalities per year on average noted in the 2015 version of this plan. The probability of future occurrences in Teton County is rated as **Highly Likely**.

Climate Change Impacts

As precipitation patterns tend toward more extremes, the frequency of avalanches may be expected to increase. Many avalanches take place following unusually heavy snowfall that occurs in a short period of time. Scattered snowfall early in winter may result in an increase in

avalanche activity by creating a thin snowpack that becomes structurally weaker as winter progresses. New layers of snow may not bond well to the weak base layer at the bottom of the snowpack, creating prime conditions for avalanches. Similar conditions in early to mid-spring may replicate this process, leading to increased avalanche activity as snow accumulation has already begun to thaw with the warmer season. In other words, as more snow piles on top of the weak layer, and temperatures remain warm, the upper moisture-laden layers become vulnerable to sliding.

Increasing temperatures will also result in more precipitation falling as rain instead of snow. Over time this may decrease the risk of avalanche due to a dramatically reduced snowpack. However, this could result in more wet snow avalanches from rain on snow events.

Vulnerability Assessment

Areas within Teton County and the Town of Jackson where avalanche activity intersects with recreational activities, transportation routes, and infrastructure pose the greatest risks. In Teton County areas of steep slopes near WY Highway 22 over Teton Pass and US Highway 26 over Togwotee Pass frequented by winter backcountry enthusiasts such as skiers, snowboarders, snowmobilers, and snowshoers are considered high-risk zones.

PEOPLE

Life safety is most threatened by this hazard with the potential for deaths and injury (approximately 2 deaths per year on average). Outdoor recreationists who travel into backcountry areas are at most risk. Additionally, avalanche incidents involving search and rescue teams can put these personnel at risk. The key actions to limiting impacts to individuals recreating in avalanche prone areas include spreading knowledge and awareness of the hazard and being properly equipped for self-rescue. Risk to motorists on Highway 22 over Teton Pass is controlled through WYDOT periodic closures for avalanche mitigation during times of high avalanche potential. Socially vulnerable populations are not more at risk to avalanches, but there is concern for those who live in surrounding areas and must commute to work due to high housing costs and low housing availability within the region This causes local workers to have to travel from surrounding towns through passes and canyons that can be shut down due to avalanches.

BUILT ENVIRONMENT

In the Town of Jackson, key concerns lie in regions along the western to northern slopes of Snow King Mountain, where some development has taken place along its base. Other areas by Jackson include the East Gros Ventre Butte above Flat Creek, below which lies some commercial and residential development.

ECONOMY

Transportation networks are limited in the region and vulnerable to avalanches. Transportation obstruction due to avalanche can temporarily prevent the transportation of goods, as well as disrupt commuting and emergency response and service provision. Thus, periodic economic impacts are expected annually. Pre-emptive closures of these roads by officials for avalanche mitigation or due to high avalanche danger also occur but are in the interest of public safety.

CRITICAL FACILITIES AND LIFELINES

Infrastructure elements such as roads in the county are susceptible to avalanches, leading to disruptions in transportation. Teton County noted that avalanches can temporarily shut down major highways such as Highway 22 (Teton Pass), South Highway 89 (Rafter J area, Snake River Canyon), North Highway 89 (National Wildlife Art Museum area) and Highway 191 (Hoback Canyon) (Teton County Wyoming, 2024). Teton pass is periodically closed in winter for avalanche safety and mitigation. There are very limited alternative detour options when these happen. County Emergency Management in 2024 noted a trend towards more county roads being affected by avalanches in recent years, with an incident on Spring Gulch Road in the

winter of 2024. Avalanches also have capacity to affect power line, communications, and natural gas pipe infrastructure, but the extent of exposure and risk to this infrastructure is unknown.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

Avalanches are a natural process in landscapes where they occur. However, large avalanches may alter the natural landscape, damaging tress and in some cases removing areas of forest and creating piles of woody debris. Loss of vegetation on the mountains may expose soil, leading to secondary impacts such as landslides and debris flows. Snow removal and storage from large avalanches can also be a logistical challenge.

Land Use and Development Trends

No specific new growth or development within the County, Town of Jackson, or the Teton Conservation District in the past five years has significantly altered the county's avalanche risk. Snow King Mountain and Jackson Hole Mountain Resort adhere to Resort Master Plans, which delineate proposed development and redevelopment areas while also managing growth and development to safeguard users and steer clear of natural hazard zones. The Jackson-Teton County Comprehensive Plan Policy 3.4.b aims to "protect Development Against Avalanches and Landslides" and underscores the risk of avalanches displacing buildings or entrapping occupants. The policy recommends restricting development within 100-year avalanche paths and installing mitigation measures where development occurs within these zones. A large portion of Teton County that is prone to avalanches is within National Forests and National Parks, meaning that there are limited buildable areas. Due to these factors direct avalanche vulnerability to structures is very limited and has not increased since the last plan update.

Risk Summary

In summary, the avalanche hazard is rated as **medium** significance for Teton County. Variations in risk by jurisdiction are summarized in the table below, as well as key issues form the vulnerability assessment.

- Overall, avalanches are rated as a **medium** significance in the planning area.
- Avalanches cause two primary impacts hazards in Teton County: roadblocks and risk to human life, primarily backcountry users.
- Historically, there has been at least one fatality due to avalanche annually, making the likelihood of future occurrence **Highly Likely**.
- Updated avalanche mapping was noted as a need during the 2024 planning effort.
- Due to the remote location of most avalanches economic impacts are generally minor; therefore, magnitude is **limited**.
- Winter recreationists and first responders are most likely to be affected by avalanches, although rare urban avalanches have occurred.
- Additionally, as a popular backcountry recreation spot for visitors, a high risk exists for individuals unfamiliar with recognizing avalanche terrain.
- Related hazards: Severe Winter Weather, Windstorm, Flood

Table 4-10 Risk Summary by Jurisdiction: Avalanche

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Medium	Widespread backcountry areas and transportation corridors in risk areas; some county roads affected.

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
Town of Jackson	High	Three entry/exit points to the town are at high risk of cutting off access to the town if an avalanche were to occur.
Teton Conservation District	NA	Not considered to have risk to District facilities/assets
Flat Creek Watershed Association	Medium	Some potential to temporarily dam the creek and cause flooding. An avalanche occurring in the area upstream of the Flat Creek Water Improvement District could cause flooding issues in the watershed and surrounding areas.
Jackson Hole Airport	NA	No steep slopes

4.2.2 Dam/Levee Incident

Description

Dams are barriers constructed across a watercourse that stores, controls, or diverts water. They're designed for a variety of uses, including flood protection, power, agriculture and irrigation, water supply, and recreation. They're typically composed of earth, rock, concrete, or mine tailings. The water impounded behind a dam is referred to as the reservoir and is usually measured in acre-feet, with one acre-foot being the volume of water that covers one acre of land to a depth of one foot. Dams and reservoirs serve a very important role for Wyoming residents and industry. However, there is the risk that dams can fail, either completely or partially, and become a significant hazard for those downstream.

Dam incident refers to the uncontrolled release of impounded water, resulting in downstream flooding that can affect life and property. Several factors that influence the potential severity of a full or partial dam failure, including the volume of water impounded, the type of dam, and amount of development and infrastructure located downstream.

Dam failure occurs when the dam's capacity to retain water is compromised, in part or in its entirety. These failures can be triggered by various factors or sources, including:

- Prolonged periods of rainfall and flooding, which result in overtopping
- Earthquake
- Inadequate spillway capacity resulting in excess overtopping flows
- Internal erosion caused by embankment or foundation leakage or piping or animal activity
- Improper design
- Age
- Improper maintenance
- Negligent operation
- Failure of upstream dams on the same waterway
- Vandalism or terrorism

Other unforeseen failures can result from unusual events like seismic activity (earthquakes), deliberate acts of sabotage or vandalism, or complex, multifaceted causes. These failures can be challenging to predict and prevent due to their diverse and often unexpected nature.

It's important to note that dam emergencies are not solely restricted to complete dam failure. Large spillway discharges that can cause downstream flooding or flooding upstream due to

backwater effects or high-water levels are also considered dam emergencies, potentially resulting in substantial property damage and loss of life.

In addition to dams, Teton County also has levees that pose flood risks. A levee is an earthen embankment constructed along the banks of rivers, canals, and coastlines to protect adjacent lands from flooding by reinforcing the banks. However, by confining the flow, levees can also increase the speed of the water. Floodwalls are concrete structures, often components of levee systems, designed for urban areas where there is insufficient room for earthen levees. Levees can *reduce* the risk to individuals and structures behind them, but they do not eliminate risk entirely. Levees are designed to protect against a specific flood level; severe weather could create a higher flood level that the levee cannot withstand. When levees, floodwalls, and their auxiliary structures are stressed beyond their capabilities to withstand floods, levee failure can result in loss of life and injuries as well as damages to property, the environment, and the economy. For purposes of this discussion, levee failure will refer to both overtopping and breach of a levee as defined in the U.S. Army Corps of Engineers' Publication - *So You Live Behind a Levee!* (https://www.spl.usace.army.mil/Portals/17/SoYouLiveBehindLevee.pdf).

- **Overtopping** occurs when floodwaters exceed the height of a levee and flow over its crown. As the water passes over the top, it may erode the levee, worsening the flooding and potentially causing an opening, or breach, in the levee.
- **Breaching** - A levee breach occurs when part of a levee gives way, creating an opening through which floodwaters may pass. A breach may occur gradually or suddenly. The most dangerous breaches happen quickly during periods of high water. The resulting torrent can quickly swamp a large area behind the failed levee with little or no warning.

Location

In 1981, the U.S. Army Corps of Engineers completed an inspection program for nonfederal dams under the National Dam Inspection Act (P.L. 92-367). This was a four-year work effort and included compiling an inventory of about 50,000 dams and conducting a review of each state's capabilities, practices, and regulations regarding design, construction, operation, and maintenance of dams. Part of the inspection included evaluating the selected dams and assigning a hazard potential based on the effects downstream, should one of the dams fail. The dams were rated (1) High, (2) Significant, and (3) Low hazard, just like the classification adopted by FEMA. The Corps of Engineers based the hazard potential designation on such items as acre-feet capacity of the dam, distance from nearest community downstream, population density of the community, and age of the dam**.**

The Wyoming State Engineers Office (WSEO) inspects dams over 20 feet high or with a storage capacity of 50 acre-feet or more, although smaller dams are also inspected in highly populated areas. As a part of the regulatory process, the WSEO inspects these dams once every five years.

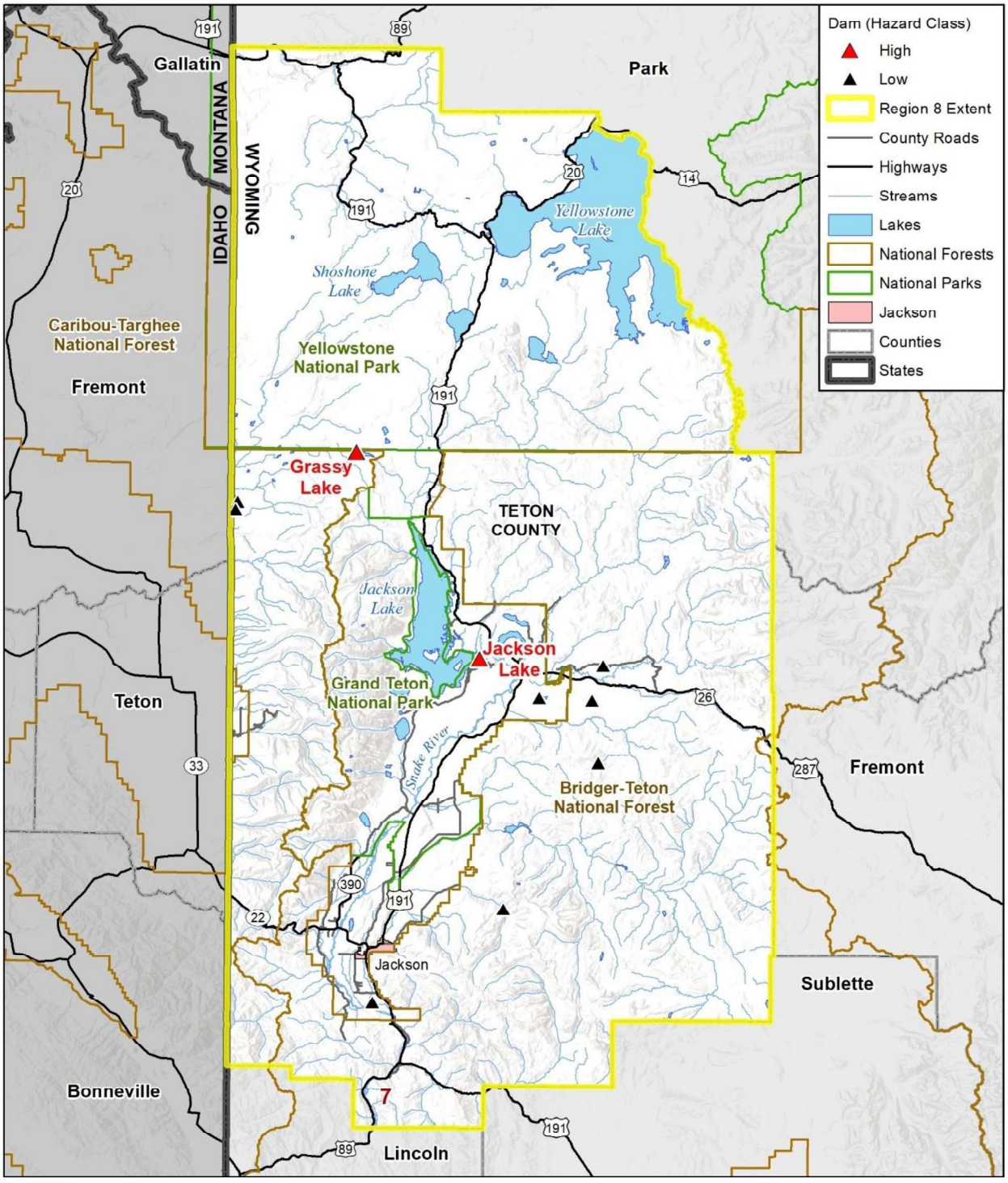
There are currently 1,495 dams in Wyoming shown in the Army Corps of Engineers' National Inventory of Dams (http://nid.usace.army.mil). Teton County has 10 dams that are inspected by the Wyoming State Engineer's Office. The average age of these dams is 73. Of the 10, two dams are considered high hazard, the rest are low hazard dams. The high hazard dams are Jackson Lake (including Jackson Lake North and South Dikes) and Grassy Lake dams, which both are federally owned and have emergency action plans on file. The primary purposes of Jackson Lake are flood control and irrigation storage, while the primary purpose of Grassy Lake is irrigation storage. Table 4-11 provides details of the dams in Teton County.

Teton County also has a network of levees that play a crucial role in managing water flow and mitigating flood risks The Teton County Road and Levee Division collaborates with the Army Corp. of Engineers, stationed in Walla Walla, WA. The Snake River and Gros Ventre Levee System have 24.5 miles of levees along the Snake and Gros Ventre Rivers in Teton County. The

levee system begins approximately 11 miles south of Jackson Lake, from slightly downstream of the town of Moose and extends downstream nearly to the South Highway 89 bridge over the Snake River south of South Park (see Section titled *Vulnerability Assessment*). These 24.5 miles of levees were built by the Corps of Engineers and are maintained by Corps of Engineers with assistance from Teton County. There are some private levees that were built and are maintained by private landowners. These levees play a crucial role in flood management, protecting the area from potential flood damage, especially during periods of high-water flow.

The Army Corps of Engineers comes to Jackson Hole in July of each year to complete an inspection of the levees. This ensures the levees remain effective in protecting the community. During this inspection, the Fall Rehabilitation Schedule is decided by evaluating the amount of riprap lost during the spring runoff. The Fall Rehab is completed in October, which is when the Snake River is at its lowest. (https://www.tetoncountywy.gov/555/Levee-Systems-Facts).

Figure 4-6 Teton County Dams



Map compiled 4/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, U.S. Forest Service,
National Inventory of Dams

Table 4-11 Dams in Teton County

NAME	HAZARD LEVEL	OWNER	PRIMARY PURPOSE	YEAR COMPLETED	RIVER	NEAREST DOWNSTREAM COMMUNITY (DISTANCE TO COMMUNITY)
Grassy Lake	High	Bureau of Reclamation	Irrigation	1938	Grassy Creek	St. Anthony, Idaho (53 mi)
Jackson Lake	High	Bureau of Reclamation	Flood Control	1911	North Fork Snake River	Moose (23 mi)
Indian Lake	Low	Squirrel Creek Irrigation Company	Irrigation	1954	Indian Lake Basin	St. Anthony, Idaho (36 mi)
Tracy Lake	Low	Fir Creek, LLC	Recreation	1928	Randolph Creek	Moose (24 mi)
Bergman Lake	Low	Ronald Bergman	Irrigation	1953	Indian Creek	St. Anthony, Idaho (35 mi)
Porter	Low	Leeks Canyon Ranch, LLC	Irrigation	1951	Wallace Creek	Moose (22 mi)
UHL	Low	Jack e. Stark, Grand Teton National Forest	Irrigation; Fish and Wildlife Pond	1948	Spread Creek	Moose (17 mi)
Flat Creek Ranch	Low	Homestead Company, LLC.	Fish and Wildlife Pond	1967	Flat Creek	N/A
Jackson Wastewater Treatment Plant ENL.	Low	Town of Jackson	Debris Control	1980	Snake River Off stream	Hoback (14 mi)
Leidy lake	Low	Wyoming Game and Fish Department	Fish and Wildlife Pond	1983	Leidy Creek	Moose (42 mi)

Source: National Inventory of Dams

Extent (Magnitude)

Dam failures result in a unique source of flash flooding, when a large amount of previously detained water is suddenly released into a previously dry area due to a failure in some way of the dam. Dams are organized into three classes. The State of Wyoming has adopted FEMA's risk classifications as set forth in FEMA's Federal Guidelines for Dam Safety: Hazard Potential Classification System for Dams. These guidelines define High Hazard (Class I) dams as those rated based on an expected loss of human life, should the dam fail, and Significant Hazard (Class II) dams as those rated based on expected significant damage, but not loss of human life. Significant damage refers to structural damage where humans live, work, or recreate, or public or private facilities exclusive of unpaved roads and picnic areas. Damage refers to making the structures inhabitable or inoperable. Low hazard dams would have minimal downstream impacts from a failure.

Levee failures also can occur suddenly and cause extensive loss of life and/or property. Advance warning of possible failure, and the potential for evacuation, depends on the mode of failure and preparedness of emergency managers. For example, if heavy precipitation occurs with the potential to cause runoff sufficient to overtop levees, evacuation may be possible. However, this is not always the case. Levee failures can also cause secondary hazards downstream, including extensive flooding, heavy erosion and sedimentation, and landslides.

The severity and magnitude of a given dam or levee incident will vary greatly on a case-by-case basis depending on a wide variety of factors, such as the level of development and population in the inundation area and the degree of the dam incident. In general, for the purposes of this plan, the extent is considered **critical** due to the presence of two High Hazard dams. There is potential for severe impacts to occur, however unlikely they may be. Information on potential impacts of specific failures to particular dams is considered sensitive and is not detailed in this plan due to the State Engineer for Wyoming Safety of Dams Program concerns. However, emergency management coordinators have access to inundation maps contained in the emergency action plans for the High and Significant Hazard dams in the state. Currently, there are no High Hazard dams outside of Teton County that would be any threat to property or population.

Potential impacts could include injury and loss of life, property damage, damage to infrastructure, drinking water contamination, loss of crops and livestock, evacuations, sheltering, and associated costs, interruption of commerce and transportation, search and rescue, and clean-up costs. In addition, dam incidents and associated flooding can cause damage to and loss of irrigation structures such as headgates and ditches. Loss or damage to water structures negatively impacts agricultural producers of crops and livestock—and can be costly to repair.

Loss of Life determinations are highly influenced by three factors: the number of people occupying the dam or levee inundation area, the amount of warning that is provided to the people exposed to dangerous flooding, and the severity of the flooding. There is the potential for loss of life downstream of the high hazard dams in the County, but also potential lead time for warning and evacuation due the distance the water would need to travel before populated areas would be impacted.

Jackson Lake Dam impounds about ¼ cubic mile of water behind a 65-ft tall dam structure. The Snake River downstream from the dam is relatively steep (~10 ft/mile drop) and has a well-defined valley. A catastrophic failure of the Jackson Lake Dam could result in very high flood depths moving at a high rate of speed, causing impacts on the high end of what is described above to areas of the unincorporated county.

Previous Occurrences

Teton County has one documented dam failure-type incident related to a landslide dam that resulted in the infamous Kelly Flood. On June 23, 1925, part of the northern face of Sheep Mountain became unstable after weeks of heavy rain and slid into the Gros Ventre River. The 50 million cubic yards of sedimentary rock formed a natural dam 200 feet high and 400 yards wide that created Lower Slide Lake. On May 18th, 1927, a portion of the natural dam broke during a spring with heavy runoff causing a flash flood to rush down the Gros Ventre River. The flood was at least six feet deep for at least 25 miles downstream and wiped out the town of Kelly six miles downstream. Six people died, and many others lost everything they owned. Fifteen miles downstream in Wilson, six feet of water inundated the town and hundreds of farm animals died. There was heavy livestock loss, ranger buildings were destroyed, irrigation head gates were washed away, and a bridge was washed out ($75,000 to $150,000 damage). The American Red Cross had expenditures of $12,201. In narrower sections of the Snake River near Hoback, flood waters rose as much as 50 feet. The next day the waters reached Idaho Falls, Idaho and covered lowland sections there.

The American Red Cross, Wyoming State Government, Wyoming Governor Emerson, and the Highway Department responded. Total damages surpassed $500,000. You can still see the bald rock on the north face of Sheep Mountain (Sleeping Indian) as a reminder of this tragic event.

Additionally, the LEPC noted that a landslide dam was created on Crystal Creek by the Crystal Peak landslide in 2008 in an area that has seen recurring landslides in the Bridger-Teton National Forest.

The impact from Kelly flood incident in Teton County was significant, equivalent to $6.7 million in 2015 dollars. Lives lost in 1927 were partly due to attempts to save belongings or not heeding warnings.

No levee failures have occurred in Teton County.

Probability of Future Events

Dam failures in the United States typically occur in one of four ways:

- Dam overtopping occurs when the water level behind the dam exceeds the top of the dam. Overtopping accounts for 34% of all dam failures, and can occur due to inadequate spillway design, settlement of the dam crest, blockage of spillways, and other factors.
- Foundation defects due to differential settlement, slides, slope instability, uplift pressures, and foundation seepage can also cause dam failure. These account for 30% of all dam failures.
- Internal erosion of piping of an earth dam takes place when water that seeps through the dam carries soil particles away from the embankment, filters, drains, foundation, or abutments of the dam. Failure due to piping and seepage accounts for 20% of all failures.
- Failure due to problems with conduits and valves, typically caused by the piping of embankment material into conduits through joints or cracks, constitutes 10% of all failures.

The remaining 6% of U.S. dam failures are due to miscellaneous causes. Many dam failures in the United States have been secondary results of other disasters. The prominent causes are earthquakes, landslides, extreme storms, massive snowmelt, equipment malfunction, structural damage, foundation failures, and sabotage.

Poor construction, lack of maintenance and repair, and deficient operational procedures are preventable or correctable by a program of regular inspections. Terrorism and vandalism are

serious concerns that all operators of public facilities must plan for; these threats are under continuous review by public safety agencies.

Levee failures are largely similar in cause to dam failures and overtopping is an especially important concern. The relatively long nature of levee structures creates extensive opportunity for failures to occur. This amplifies the resources needed to maintain a reasonable inspection and maintenance schedule.

All of these factors considered, and taking into consideration the record of past events, the likelihood of a catastrophic dam failure or incident in Region 8 is unlikely, but still possible. This gives a probability rating for dam failure of **Unlikely**. A number of the dam failures in Wyoming and other Rocky Mountain states occurred because of snowmelt flooding that exceeded the capacity and strength of levees and dams. Wyoming's dams will continue to be tested by snowmelt, heavy rains, and other types of floods every year. The entire Region remains at risk to dam failures from the high and low hazard dams located throughout the county. In addition, the other low hazard dams could potentially fail more frequently and but cause fewer issues downstream.

Climate Change Impacts

As dam infrastructure ages, its performance and reliability may decline, posing risks to safety, functionality, and efficiency. Infrastructure materials, such as concrete, steel, and asphalt, can deteriorate over time due to exposure to environmental factors such as moisture, temperature variations, chemicals, and UV radiation. This degradation can lead to cracks, rust, and weakening of structural elements, thus increasing the risk of dam failure.

As temperatures rise and precipitation patterns skew toward extreme ends of the spectrum (both drought and deluge), the impacts to aging infrastructure may be accelerated. Intense extreme rainfall events can lead to greater inflows of water into reservoirs, which may exceed a dam's capacity, potentially leading to dam overtopping and failure. On the other end of the spectrum, prolonged droughts can result in lower levels of water in reservoirs, exposing more infrastructure to aging elements, and increasing susceptibility to structural issues. These same issues- Intense rainfall and flooding, temperature change, frequent storms and cumulative damage by repeated events can plague levees as well. Proactive monitoring and maintenance will be needed to ensure the safety of dams and levees in Teton County.

Vulnerability Assessment

Both Jackson Lake Dam and Grassy Lake Dam are considered high-hazard dams; that is, these two dams could result in significant damage and loss of life downstream if they were to fail, either naturally or due to mis-operation. While Grassy Lake Dam is in Teton County, WY, much of the risk associated with a failure of the Grassy Lake Dam exists in Idaho. As a result, no dam failure mapping was produced for a failure scenario of the Grassy Lake Dam. Due to homeland security concerns inundation mapping is not available for federal dams including the US Bureau of Reclamation owned Jackson Lake Dam. Hard copy maps are available to Teton County Emergency Management within the dams' Emergency Action Plan.

PEOPLE

Dam incidents can result in sudden and massive flooding, posing severe risk to human life. People living in dam inundation areas may have limited time to evacuate, leading to casualties and injuries. Those at greatest risk are those in affected areas who have access and functional needs, such as those with disabilities, injuries, limited access to transportation or financial resources, the elderly, and people experiencing homelessness.

According to the National Levee Database, approximately 3,117 people live behind levees in Teton County, the majority of which are along the Snake and Gros Ventre Rivers. This value is similar to the 3,786 people estimated to live behind levees in Teton County by an analysis

presented in the flood section of this HMP (see Section 4.2.5, especially Table 4-25 and surrounding text). These residents are also vulnerable to the impacts of flooding in the event of a levee failure or overtopping, which also may occur as a compounding impact of a dam incident.

BUILT ENVIRONMENT

The sudden release of water from a failed dam can cause widespread property damage. Homes, buildings, and infrastructure in the floodplain can be severely damaged or destroyed, as these properties would experience the largest, most destructive surge of water. Low-lying areas are also vulnerable as dam waters settle and collect.

Similar to the flood vulnerability analysis conducted for the plan update and described in Section 4.2.5, a vulnerability analysis was done for people and property located in "Areas Protected by Levee" designated by FEMA for Teton County. The levee system along the Snake River in unincorporated Teton County is protecting a great deal of property value from the impacts of flooding, with an estimated total property value of approximately $7.7 billion protected. This is vulnerable to loss or damage in the event of a partial or complete failure of this levee system. Figure 4-7 shows the areas protected by the northern half of the levee system and Table 4-12 provides an analysis of asset value at risk to failure of the entire levee system.

Figure 4-7 Teton County Areas Protected by levee

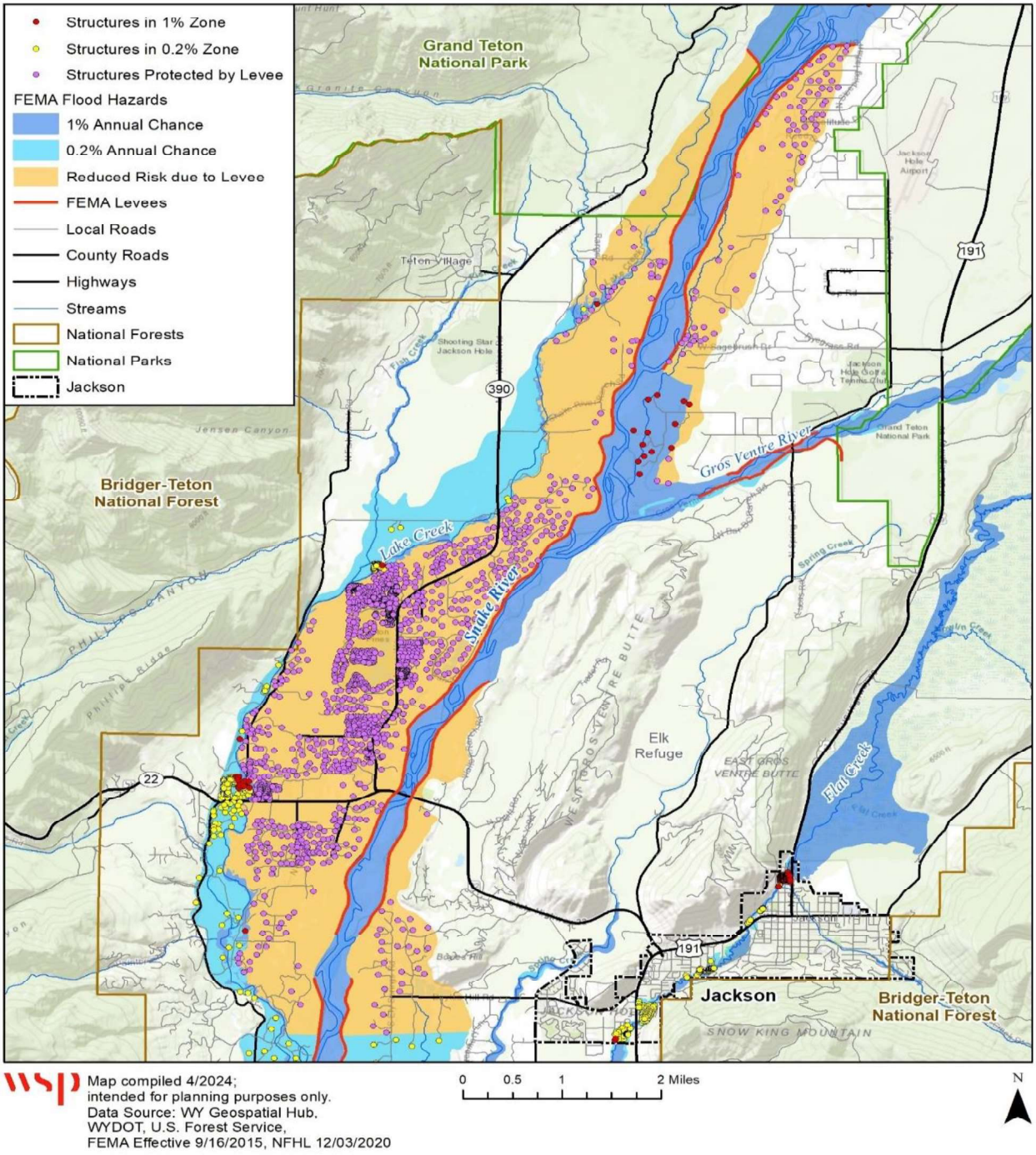


Table 4-12 Teton County Parcels at Risk to FEMA Area Protected by Levee Flood Hazard

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	ESTIMATED LOSSES
Unincorporated	Agricultural	14	14	$30,734,697	$30,734,697	$61,469,394	$15,367,349
	Com. Vacant Land	2	4	$368,384	$368,384	$736,768	$184,192
	Commercial	52	59	$115,245,119	$115,245,119	$230,490,238	$57,622,560
	Multi-Use	2	2	$4,995,641	$4,995,641	$9,991,282	$2,497,821
	Res. Vacant Land	2	2	$484,230	$242,115	$726,345	$181,586
	Residential	1,591	1,621	$4,915,740,370	$2,457,870,185	$7,373,610,555	$1,843,402,639
	Total	**1,663**	**1,702**	**$5,067,568,441**	**$2,609,456,141**	**$7,677,024,582**	**$1,919,256,146**

Source: Teton County, Wyoming CAMA 2024, FEMA NFHL Effective Date 9/16/2015, WSP GIS Analysis

ECONOMY

Dam incidents could cause significant economic disruptions in the affected region. Businesses may suffer damage or destruction, leading to income losses and reduced economic activity. Long-term loss of water in a reservoir, which may be critical for potable water needs, can interrupt the water supply, affecting drinking water availability, agricultural needs, and industrial water usage.

CRITICAL FACILITIES AND LIFELINES

Roads, bridges, utility lines, and other critical infrastructure exists in the likely path of dam inundation and could be damaged or destroyed. Loss of this infrastructure may disrupt transportation, communication, and access to essential services. Loss of these facilities could create additional isolation issues for the inundation areas.

The analysis presented in Table 4-13 is based on the 500-year floodplain inundation area for the Jackson Lake Dam described in the vulnerability assessment. In the event of a catastrophic failure of Jackson Lake Dam the floodwater flow could be up to 30 times greater.

Dams are critical facilities themselves and can be affected by other hazards, notably flooding, earthquakes, and landslides. The High Hazard dams have emergency spillways designed to alleviate excess flow and prevent overtopping.

Table 4-13 Critical Facilities at Risk to Area Protected by Levee Flood Hazard by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	-	-	-	-	-	-	**0**
Unincorporated	1	2	-	2	2	8	1	2	1	**19**
Total	**1**	**2**	**0**	**2**	**2**	**8**	**1**	**2**	**1**	**19**

Source: Teton County, FEMA NFHL & HAZUS-MH MR2, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

Reservoirs held behind dams affect many ecological aspects of a river. River topography and dynamics depend on a wide range of flows, but rivers below dams often experience long periods of very stable flow conditions or saw-tooth flow (when water volumes rapidly oscillate between higher and lower flow volumes) patterns caused by intermittent releases. Water releases from dams usually contain very little suspended sediment, which can lead to scouring of riverbeds and banks.

The environment would be vulnerable to a number of risks in the event of dam failure. The inundation could introduce many foreign elements into local waterways, potentially causing the destruction of downstream habitats.

Land Use and Development Trends

Continued maintenance and operation of the Jackson Lake Dam by the US Bureau of Reclamation is necessary to ensure sunny day failures are avoided. Increases in property values and additional development in the desirable Snake River corridor may increase the overall potential for losses, including loss of life.

No specific new growth or development within the County, Town of Jackson, or the Teton Conservation District in the past five years has significantly altered the general risk to impacts of dam failure. While current land use practices do not specifically account for rare but catastrophic events like that associated with failure of the Jackson Lake Dam, however the Town of Jackson is not within the inundation zone of any high hazard dams. Teton Conservation District has minimal physical assets, none of which are exposed to dam inundation.

Risk Summary

In 2004, the U.S. Department of the Interior- Bureau of Reclamation released Technical Memorandum No. JL-8313-4, which reported findings from a seismic risk analysis of the Jackson Lake Dam and Jackson Lake. The findings concluded that the total seismic hazard at Jackson Lake Dam is generally dominated by ground motions produced by the Teton Fault, and that the earthen embankment portion of the dam is at higher risk due to susceptibility to long-period ground motion. Risk Score is summarized for the Dam Failure Hazard below. While dam failures are somewhat rare events, they can have catastrophic consequences and associated damages and have the potential to impact large areas given the large quantities of water being impounded.

Table 4-14 RISK SUMMARY BY JURISDICTION: Dam /Levee Incident

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Medium	Development in Snake River corridor in risk areas; some county roads affected including state highway bridges.
Town of Jackson	NA	No dams or levees upstream
Teton Conservation District	Low	Not considered to have significant impacts to District facilities.
Flat Creek Watershed Association	NA	No dams or levees upstream
Jackson Hole Airport	NA	Not in dam or levee inundation area.

4.2.3 Drought

Description

Drought is described as a protracted period of deficient precipitation resulting in extensive damage to vegetation. Of all the natural weather-related disasters, drought is by far the costliest to our society. It indirectly kills more people, animals, and plants than the combined effects of hurricanes, floods, tornadoes, blizzards, and wildfires. And, unlike other disasters that quickly come and go, drought's long-term, unrelenting destruction has been responsible in the past for mass migrations and lost civilizations. The 1980 and 1988 droughts in the U.S. resulted in approximately 17,500 heat-related deaths and an economic cost of over $100 billion. Drought occurs in four stages and is defined as a function of its magnitude (dryness), duration, and regional coverage. Severity, the most commonly used term for measuring drought, is a combination of magnitude and duration.

The first stage of drought is known as a meteorological drought. The conditions at this stage include any precipitation shortfall of 75% of normal for three months or longer. The second stage is known as agricultural drought. Soil moisture is deficient to the point where plants are

stressed, and biomass (yield) is reduced. The third stage is the hydrological drought. Reduced stream flow (inflow) to reservoirs and lakes is the most obvious sign that a serious drought is in progress. The fourth stage is the socioeconomic drought. This final stage refers to the situation that occurs when physical water shortage begins to affect people.

As these stages evolve over time, the impacts to the economy, society, and environment can converge into an emergency situation. Without reservoir water to irrigate farms, food supplies are in jeopardy. Without spring rains for the prairie grasslands, open range grazing is compromised. Without groundwater for municipalities, the hardships to communities can result in increases in mental and physical stress as well as conflicts over the use of whatever limited water is available. Without water, wetlands disappear. Other animal and plant species also suffer from lack of (or degraded) proper food, nutrients, water, and habitat. The quality of any remaining water decreases due to its higher salinity concentration. There is also an increased risk of fires, and air quality degrades as a result of increased soil erosion particles in strong winds (blowing dust).

Location

In Wyoming and throughout the Columbia River Basin, specifically the Snake River, along with the Missouri River Basin, drought is a recurring climatic phenomenon. According to the NOAA NIDIS, moderate to severe droughts have become commonplace in much of the state since 1999, owing to its natural climate. Among these, the multi-year drought spanning from 1999 to 2009 stands out as one of the most severe in living memory. However, the region has a history of enduring prolonged drought events, with notable occurrences in the 1930s and 1950s that significantly impacted water supplies, agriculture, energy, transportation, and ecosystems (https://www.drought.gov/states/Wyoming).

More recently, lower summer snowmelt runoff, warming temperatures, and reduced precipitation have all been reported by the US. Department of Interior as contributing to a drought within the Columbia River Basin. NOAA's National Integrated Drought Information System (NIDIS) has 21,294 people within the county as affected by drought in 2024, with Teton National Forest having the most intense drought and being listed as "Extreme Drought".

The Missouri River Basin experienced short-duration droughts that brought disruption. The intense summertime drought of 2012 caught the region off guard, especially following the devastating floods of 2011, which had led many to anticipate continued flooding. Responding to these challenges, NOAA's National Integrated Drought Information System (NIDIS) initiated the Missouri River Basin Drought Early Warning System (DEWS) in 2014. This system serves as a collaborative network of regional and national partners, aimed at sharing information and coordinating actions to aid communities in mitigating the impacts of drought. Wyoming is also affiliated with the Intermountain West DEWS.

The years 2020-2021 witnessed another significant drought event in the same area, amounting to billions of dollars in damages and reverberating impacts on communities, ecosystems, water resources, and agricultural systems across the region. According to USDAAs of April 4, 2023, drought conditions have improved across much of the western United States compared to 2021 and 2022, including Wyoming.

Extent (Magnitude)

The U.S. Drought Monitor is an accepted and widely used site for obtaining and summarizing drought information, as it integrates data from several other sources including the Palmer Drought Index, Soil Moisture Models, U.S. Geological Survey Weekly Stream Flows, Standardized Precipitation Index, and the Satellite Vegetation Health Index. It includes drought intensity categories for measuring dry conditions across counties, states, and regions

of the U.S., so that drought can be quantified. These categories range from “abnormally dry” to “exceptional drought.” Table 5 below shows the different classifications.

Table 4-15 US Drought Monitor Classifications

NDMC* Drought Category	Return Period (Years)	Description of Possible Impacts
D0	3 to 4	**Going into drought:** • Short-term dryness. • Slowing growth of crops or pastures. • Fire risk above average. **Coming out of drought:** • Some lingering water deficits. • Pastures or crops not fully recovered.
D1	5 to 9	Some damage to crops or pastures, fire risk high, streams, reservoirs, or wells low, some water shortages (developing or imminent), voluntary water use restrictions requested.
D2	10 to 17	Crop or pasture losses likely, fire risk very high, water shortages common, water restrictions imposed.
D3	18 to 43	Major crop and pasture losses, extreme fire danger, widespread water shortages or restrictions.
D4	43+	Exceptional and widespread crop and pasture losses, exceptional fire risk, shortages of water in reservoirs, streams, and wells creating water emergencies.

*Source: National Drought Mitigation Center

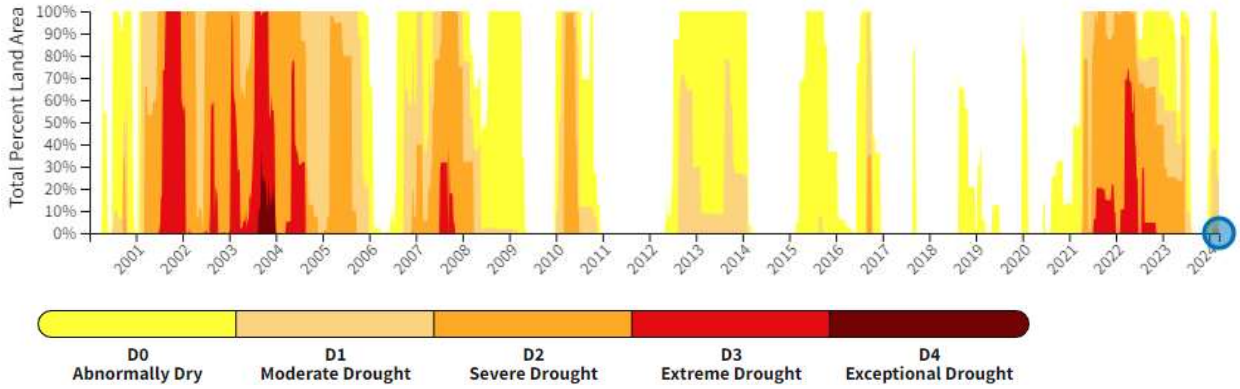
According to U.S. Drought Monitor records, in the 1199-week period from January 1, 2000, through December 31, 2023, the Teton County spent 921 weeks (76.81% of the time) in some level of drought, defined as D0 or worse conditions. Weeks in drought are summarized in Table 4-16 and shown in time series in Figure 4-8.

Table 4-16 Teton County Weeks in Drought by Intensity, 2000 - 2023

CATEGORY	DROUGHT SEVERITY	PALMER DROUGHT INDEX	STANDARDIZED PRECIPITATION INDEX (SPI)	TETON COUNTY WEEKS IN DROUGHT, 2001 - 2024
D0	Minor	-1.0 to -1.9	-0.5 to -0.7	921
D1	Moderate	-2.0 to -2.9	-0.8 to -1.2	661
D2	Severe	-3.0 to -3.9	-1.3 to -1.5	439
D3	Extreme	-4.0 to -4.9	-1.6 to -1.9	208
D4	Exceptional	-5.0 or less	Less than -2	20

Source: U.S. Drought Monitor

Figure 4-8 Teton County Drought History and Intensity, 2000 - 2023



Source: U.S. Drought Monitor

Drought impacts can be wide-reaching: economic, environmental, and societal. The most significant impacts are to water-intensive activities such as agriculture, wildfire protection, municipal usage, commerce, and tourism and recreation. Water quality deterioration can also occur during a drought. A reduction of electric power generation is also a potential problem. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding. Drought impacts increase with the duration of a drought as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. In the future, climate change is likely to increase the magnitude and severity droughts in Teton County.

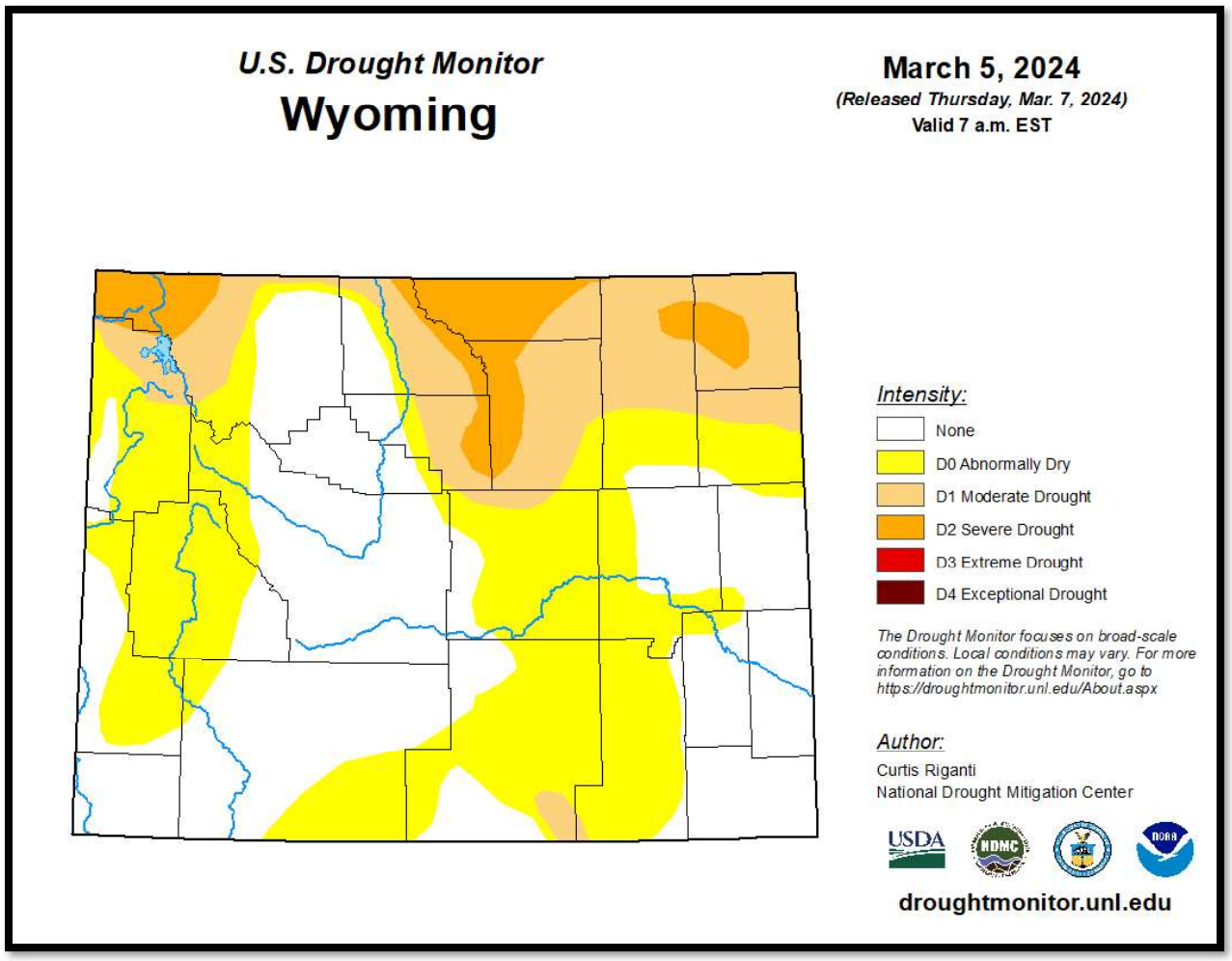
Previous Occurrences

The worst drought period in Teton County and the Town of Jackson over the last 20 years was in late 2003, occurring in the middle of the 1999-2009 statewide drought. A look at the climate record from September 30, 2003, shows that the entire county was in Extreme Drought (Category D3) with northwest portions of the county west of the Tetons and north into western Yellowstone in Exceptional Drought (Category D4).

During the summers of 2021, 2022, and 2023, Teton County was again designated as a disaster area from severe drought. By early April 2021, 100% of Teton County, Wyoming was classified as being in drought, and in mid- July, all portions of Teton County were upgraded to Severe Drought. Teton Conservation District noted 30-year low stream flows in a few tributaries, including the Buffalo Fork, the Gros Ventre, Pacific Creek, Cache Creek, and others. Jackson Hole Airport was also experiencing below average stream flows and the lowest ground water levels that have been observed in the twelve-year period of record from 2010 to 2020 (https://www.tetonconservation.org/blog/2022/7/29/how-do-we-know-were-in-a-drought).

In 2019, Wyoming experienced its 45th warmest July of the last 125 years. Only Climate Divisions (CD) 5 and 6, in the northeast, had rankings that were in the cooler half of years. These two divisions saw their 55th and 43rd coolest Julys, respectively. CD 10 had the lowest warm ranking finishing the month as the 29th warmest July since 1895.

Figure 4-9 Drought Conditions- March 7, 2024



Probability of Future Events

Based on the record of previous occurrences, droughts tend to occur at least every 10 years and sometimes last for multiple years, giving the planning area a likely probability of future occurrence. Droughts are often regional events, impacting multiple counties and states simultaneously. According to the Wyoming State Climate Office, Wyoming is the 5th driest state in the US and drought is expected to be a normal occurrence due to the State's natural climate. According to the 2015 States at Risk Report Card by Climate Central, Wyoming faces an average drought threat compared to other states across the US and summer droughts are predicted to get worse by 2050. Climate Central also reports that summer precipitation in Teton County has decreased since 1970 and is predicted to continue to trend in that direction.

Climate Change Impacts

Based on findings from the 2023 Fifth National Climate Assessment, the Northern Great Plains region is expected to experience a notable rise in drought occurrences. Projections suggest localized droughts will intensify by 2040, followed by a broader regional increase by 2070. Various climate scenarios indicate a concerning trend of more frequent moderate, severe, and extreme droughts, with anticipated occurrences rising by approximately 10% and 20% by 2050 and 2100, respectively. Notably, droughts experienced in the upper Missouri River basin

(which a small portion of northern Teton County extends into) from 2000 to 2010 marked the most severe in recorded history, underscoring the urgency of addressing this issue. Additionally, the emergence of flash droughts poses a growing concern, warranting proactive measures to mitigate their impacts. According to the National Oceanic and Atmospheric Administration (NOAA), flash droughts are the rapid onset of drought conditions set in motion by lower-than-normal rates of precipitation, accompanied by abnormally high temperatures, winds, and radiation. Seasonal precipitation patterns are projected to shift, leading to dryer summers and less precipitation as snow in early spring and late fall seasons. This, coupled with earlier spring runoff, is projected to result in longer duration in droughts statewide.

Vulnerability

Drought can have broad-reaching impacts throughout the County and Town of Jackson, ranging from water users (recreational, agricultural, etc.) to economic, social, and commercial impacts.

PEOPLE

During times of prolonged drought, water scarcity can cause an increase in food prices and a decrease in water quality. Food shortages and water scarcity can lead to malnutrition and related health problems. Additionally, drought conditions can create an environment conducive to the spread of disease due to decreased water quality and inadequate access to clean water. Indirectly, drought can lead to respiratory issues as dust increases due to dry soil and reduced vegetation cover. Drought can also prime environments for wildfire, which can in turn increase respiratory issues through the inhalation of smoke and other volatile organic compounds (VOCs). These issues resulting from drought can cause the displacement of individuals, families, or whole communities, leading to humanitarian issues and increased challenges for host communities.

BUILT ENVIRONMENT

Typically, structures are not directly vulnerable to drought, although secondary, indirect, and compound impacts may increase vulnerability. Reduced soil moisture can lead to subsidence, which can cause structural damage to buildings and roadways. Impacts may include cracked foundations and walls and sinking roads and potholes. The rehydrating of soils can further compound these issues.

ECONOMY

Economically, the recreation/tourism and agricultural sectors are the most vulnerable to drought and will benefit the most from mitigation efforts. According to data from NOAA, as of March 2024, the areas affected by drought have led to an estimated 10,818 acres of hay being impacted, alongside 2,483 cattle and 163 sheep.

The types of crops grown in the Snake/Salt River basin are greatly influenced by climate. Typical farmland in the basin is in the high mountain valleys where there is low to moderate precipitation. These valleys have relatively short growing seasons and long winters with significant accumulations of snow. Hard frosts have been observed in every month of the year. Because of these conditions typical crops consist of alfalfa, small grains (mainly barley with some oats), and native hay and grass.

Table 4-17 Teton County/Town of Jackson Agricultural Overview

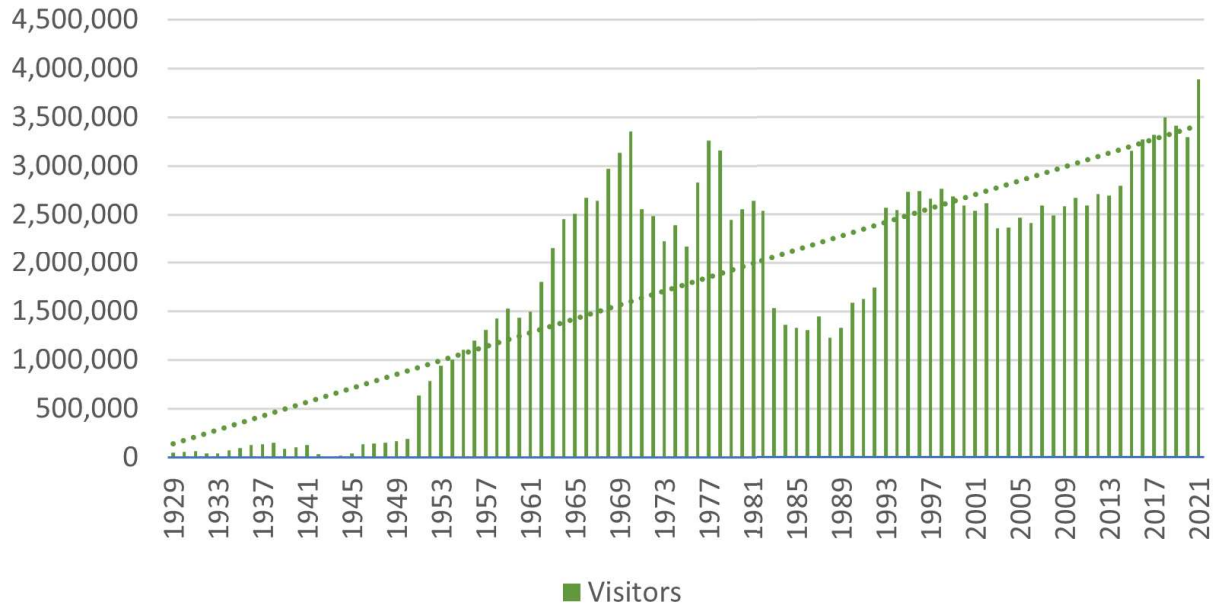
	2022 CENSUS OF AGRICULTURE	CHANGE SINCE 2017
Number of Farms	111	-22%
Land in Farms	38,130 acres	-44%
Average Size of Farm	344 acres	-28%

	2022 CENSUS OF AGRICULTURE	CHANGE SINCE 2017
Market Value of Products Sold by Farm	$98,047	-21
Farm-Related Income by Farm	$128,720	6%
Total Farm Production Expenses by Farm	$117,048	-31%
Net Cash Farm Income by Farm	12,579	96%

Source: USDA, Census of Agriculture 2023

Outdoor recreation and tourism, which are important to the region's economy, are also vulnerable to drought. Recreation is generally considered a non-consumptive use of water; there is, however, a significant amount of recreational activity within Teton County, and this is a driving force behind the tourism industry that impacts both the County and the Town of Jackson. People travel from around the world in order to boat, fish, ski, camp, and hike in this part of Wyoming. Tourism has a major impact on the economies of the communities in the basin, with much of the tourism being linked to Grand Teton and Yellowstone National Parks. Many of the draws of these parks are water related, with the most notable water features within the basin being Jackson Lake and the Snake River. Thousands visit the river each year for rafting, kayaking, fishing, and other activities. In addition to the Snake River and Jackson Lake, there are numerous rivers, streams, and lakes throughout the basin that are used for recreation as well as agriculture. A drought in certain areas that rely heavily on the Columbia Basin for agricultural production can cause the draining of other local sources, such as Jackson Lake. Other activities that utilize or require water in some form include waterfowl hunting and winter sports such as skiing.

Figure 4-10 Grand Teton Annual Visitation 1929 - 2021



Source: National Park Service, 2022

CRITICAL FACILITIES AND LIFELINES

Drought can stress water supply systems, including reservoirs, water treatment plants, and pipes. In addition to reduced water availability for domestic, industrial, and agricultural uses, reduced water levels can lead to the accumulation of sediments and debris, impacting the functionality of pipes and other water infrastructure.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

Reduced water availability can impact plant growth and the survival rate of various animal species. Over time, this can lead to habitat degradation and fragmentation, which in turn, can result in a decline in biodiversity and the loss of plant and animal species. One specific example of this is the increased stress of drought periods cause on conifer species weakens their ability to defend themselves against infestations of pine bark beetles. This further leads to widespread die offs in conifer stands, which leads to ecological disruptions, increased wildfire risk, and associated economic impacts. Drought also can impact fish populations particularly on the smaller streams in the region.

Impacts such as these can further impair cultural practices that are dependent on native habitats.

Land Use and Development Trends

No specific new growth or development within the County, Town of Jackson, or the Teton Conservation District in the past five years has significantly altered the regions vulnerability to drought. The 2012 Jackson Teton County Comprehensive Plan was reevaluated in 2016 upon hitting the 5% growth trigger. This led to the adoption of an updated plan in November 2020, which prioritizes steering growth towards regions equipped with existing infrastructure and services to foster 'Complete Neighborhoods.' With freshwater resources dwindling and the energy demand for potable water escalating, the revised plan underscores the importance of water conservation. The intent is to not only preserve water to safeguard aquifer reservoirs for future generations but also preserves ecosystems and honors downstream users. To incentivize water conservation, the plan advocates for municipal pricing structures that accurately reflect the true long-term production costs while promoting water-saving behaviors. Additionally, the plan advocates for practices that reduce water consumption, such as utilizing native species for landscaping. Local programs and initiatives have been established that aim to protect water resources and water quality, like the Jackson Hole Clean Water Coalition's Trout-Friendly Lawns program. This program, among other strategies, includes a homeowner certification whereby property owners pledge to follow recommended best practices for water conservation and beneficial water quality techniques to protect the planning area's water resources. Due to these initiatives' drought vulnerability has not increased due to growth and development since the last plan update.

Risk Summary

Table 4-18 Risk Summary by Jurisdiction: Drought

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Medium	Impacts to local economy including recreation and tourism, ranching and agriculture
Town of Jackson	Medium	Impacts to local economy including recreation and tourism
Teton Conservation District	Medium	Loss of forage yield for wildlife and domestic animals. Decreased fuel moisture leading to vulnerable wildfire conditions. Reduced inflow to reservoirs and less water in hydrologic storage systems means less irrigation, recreation, wildlife habitat, hydropower. Ecosystem stress.
Flat Creek Watershed Association	Medium	Potential to affect stream flows, water quality, and fish habitat within the district boundaries.

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
Jackson Hole Airport	Medium	Impacts to local economy including recreation and tourism causing decrease in visitation.

4.2.4 Earthquake

Description

An earthquake is generally defined as a sudden motion or trembling in the earth caused by the abrupt release of strain accumulated within or along the edge of the earth's tectonic plates. The most common types of earthquakes are caused by movements along faults or by volcanic forces, although they can also result from explosions, cavern collapse, and other minor causes not related to slowly accumulated strains. The crust may first bend and then, when the stress exceeds the strength of the rocks, break and snap to a new position. In the process of breaking, vibrations called "seismic waves" are generated. These waves travel outward from the source of the earthquake at varying speeds.

Earthquakes can last from a few seconds to over five minutes; they may also occur as a series of tremors over several days. The actual movement of the ground in an earthquake is seldom the direct cause of injury or death. Casualties generally result from falling objects and debris, because the shocks shake, damage, or demolish buildings and other structures. Disruption of communications, electrical power supplies and gas, sewer, and water lines should be expected. Earthquakes may trigger fires, dam failures, landslides, or releases of hazardous material, compounding their disastrous effects.

Earthquakes tend to reoccur along faults, which are zones of weakness in the crust. Even if a fault zone has recently experienced an earthquake, there is no guarantee that all the stress has been relieved. Another earthquake could still occur. Small, local faults produce lower magnitude quakes, but ground shaking can be strong, and damage can be significant in areas close to the fault. In contrast, large regional faults can generate earthquakes of great magnitudes but, because of their distance and depth, they may result in only moderate shaking in an area.

Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks, such as water, power, communication, and transportation lines. Other damaging effects of earthquakes include surface rupture, fissuring, ground settlement, and permanent horizontal and vertical shifting of the ground. Secondary impacts can include landslides, seiches, liquefaction, fires, and dam failure. The combination of widespread primary and secondary effects from large earthquakes makes this hazard potentially devastating.

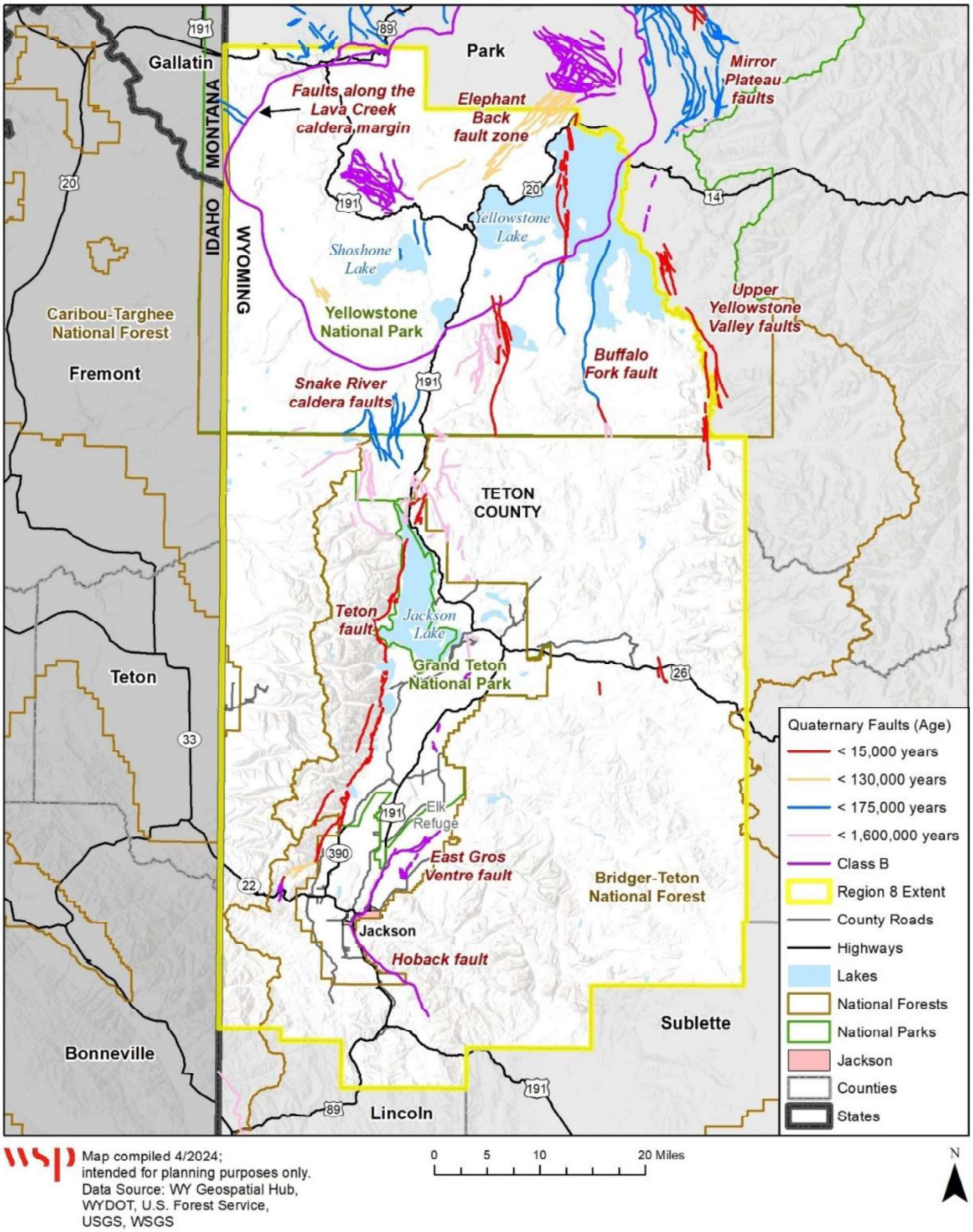
Part of what makes earthquakes so destructive is that they generally occur without warning. The main shock of an earthquake can usually be measured in seconds, and rarely lasts for more than a minute. Aftershocks can occur within the days, weeks, and even months following a major earthquake.

Location

Teton County is located in an area of significant seismic activity within Wyoming, nestled along and in proximity to major, active fault lines. The two main faults in the County are the Hoback Fault and the Teton Fault. Although large earthquakes in Teton County are less frequent compared to other areas, they can occur due to the geological complexities of the region. The state's most powerful earthquake was recorded nearby Yellowstone National Park, on August

18, 1959. This event registered a magnitude of 6.5 and was classified as an aftershock of the Hebgen Lake, Montana Earthquake.

Figure 4-11 Quaternary Faults in Teton County



Extent (Magnitude)

Frequently, the most conspicuous aftermath of an earthquake arises from the vertical and/or horizontal shifting of the ground along fault lines. This displacement has the potential to sever transportation, energy, utility, and communication networks, potentially affecting numerous systems and individuals. Moreover, structures situated directly above fault lines may sustain severe and complete damage due to these ground movements. However, the primary cause of damage during earthquake events is typically the shaking itself. This shaking can give rise to several additional phenomena including:

- Further ground displacement
- Landslides and avalanches
- Liquefaction and subsidence
- Seismic seiches

The energy released during an earthquake is commonly quantified using Ritcher Magnitude, measured directly from seismic recording. Seismologists utilize the moment magnitude scale (MMS or denoted as MW or M) to gauge earthquake size based on energy release. Developed in the 1970s as an advancement over the Ritcher scale, the moment magnitude scale maintains a similar range of magnitude values while employing distinct formulas. Intensity, another measure of earthquake severity, reflects the degree of ground shaking felt by humans or the resulting structural damage, as indicated on the Modified Mercalli scale. Seismic shaking typically inflicts the most damage to structures during earthquakes. Seismic seiches occur in standing bodies of water and can occur due to earthquakes. Seiches are standing waves that oscillate at the surface of the water. Larger ones can be very destructive and cause flooding.

Table 4-19 Modified Mercalli Intensity (MMI) Scale

MMI	FELT INTENSITY	ACCELERATION (%G) (PGA)
I	Not felt except by a very few people under special conditions. Detected mostly by instruments.	<0.17
II	Felt by a few people, especially those on upper floors of buildings. Suspended objects may swing.	0.17 – 1.4
III	Felt noticeably indoors. Standing automobiles may rock slightly.	0.17 – 1.4
IV	Felt by many people indoors, by a few outdoors. At night, some people are awakened. Dishes, windows, and doors rattle.	1.4 – 3.9
V	Felt by nearly everyone. Many people are awakened. Some dishes and windows are broken. Unstable objects are overturned.	3.9 – 9.2
VI	Felt by everyone. Many people become frightened and run outdoors. Some heavy furniture is moved. Some plaster falls.	9.2 – 18
VII	Most people are alarmed and run outside. Damage is negligible in buildings of good construction, considerable in buildings of poor construction.	18 – 34
VIII	Damage is slight in specially designed structures, considerable in ordinary buildings, great in poorly built structures. Heavy furniture is overturned.	34 – 65
IX	Damage is considerable in specially designed buildings. Buildings shift from their foundations and partly collapse. Underground pipes are broken.	65 – 124
X	Some well-built wooden structures are destroyed. Most masonry structures are destroyed. The ground is badly cracked. Considerable landslides occur on steep slopes.	>124
XI	Few, if any, masonry structures remain standing. Rails are bent. Broad fissures appear in the ground.	>124

MMI	FELT INTENSITY	ACCELERATION (%G) (PGA)
XII	Virtually total destruction. Waves are seen on the ground surface. Objects are thrown in the air.	>124

Source: USGS. http://earthquake.usgs.gov/learn/topics/mercalli.php, Modified Mercalli Intensity and peak ground acceleration (PGA) (Wald, et al 1999).

Previous Occurrences

Earthquakes are common across the state of Wyoming. Teton County and the Town of Jackson are located in a region known for significant earthquake activity in Wyoming, situated along and near major, active fault systems. The largest earthquake in the state occurred nearby, in Yellowstone National Park, on August 18, 1959. The earthquake was a magnitude of 7.3 and hit approximately 10.4 km away from West Yellowstone, Montana. The earthquakes greater than magnitude 4.1 are listed in Table 4-20 below.

Table 4-20 Earthquakes with a Magnitude greater than 4.1, 1959-2024

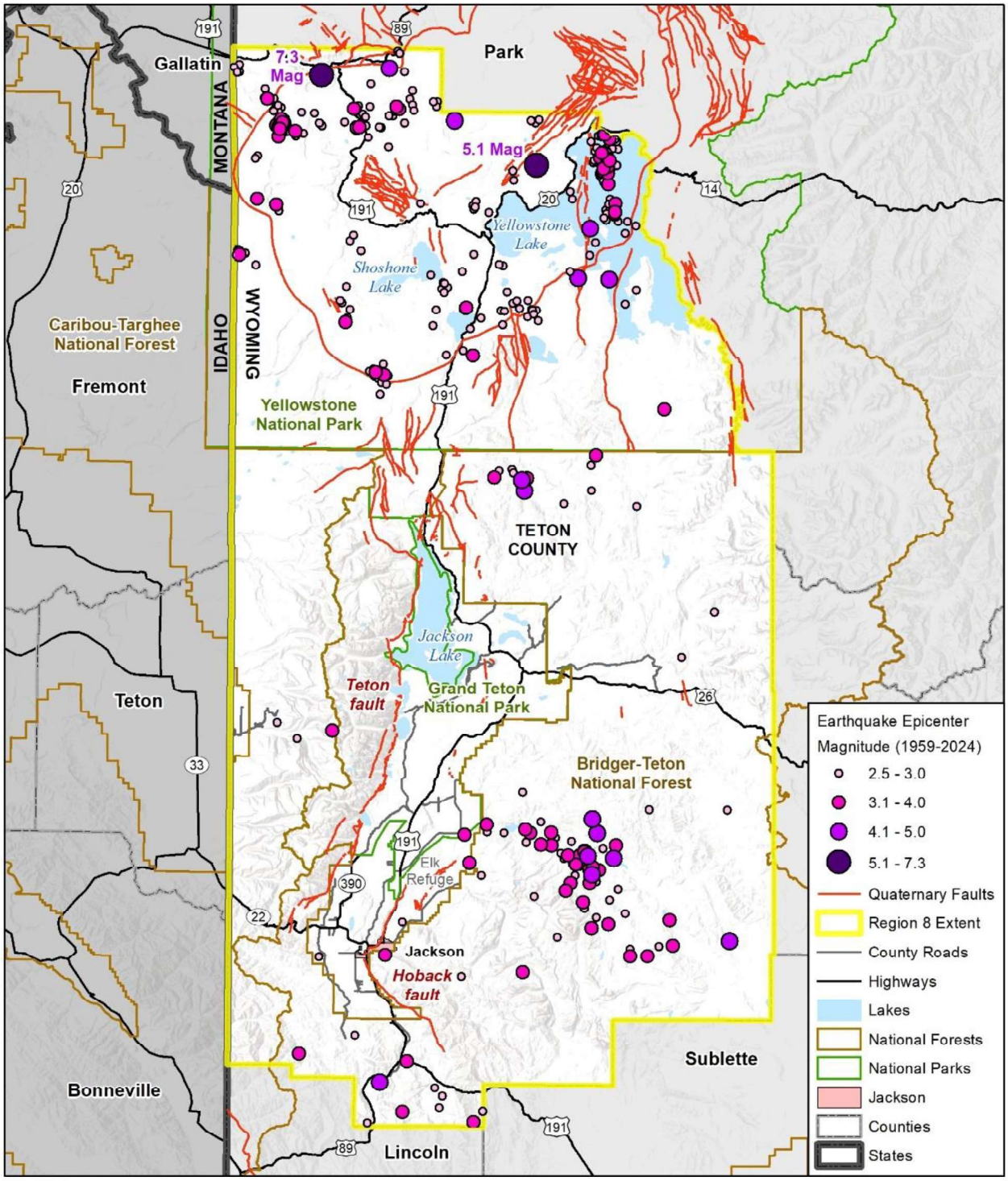
DATE	MAGNITUDE	APPROXIMATE LOCATION
8/18/1959	7.3	The 1959 Hebgen Lake, Wyoming
3/31/1973	5.1	51 km ESE of West Yellowstone, Wyoming
1/7/2004	5	20 km ESE of Kelly, Wyoming
3/28/1973	5	62 km ESE of West Yellowstone, Wyoming
8/27/2016	4.8	4 km ENE of Bondurant, Wyoming
8/5/2010	4.8	19 km E of Kelly, Wyoming
8/21/1985	4.8	12 km S of Hoback, Wyoming
12/28/1993	4.7	38 km NE of Bondurant, Wyoming
2/6/1983	4.7	37 km ESE of West Yellowstone, Wyoming
9/7/1985	4.6	14 km SSE of Hoback, Wyoming
3/30/1973	4.6	68 km ESE of West Yellowstone, Wyoming
12/28/2008	4.6	58 km SSE of Mammoth, Wyoming
12/20/1983	4.5	1 km NE of Hoback, Wyoming
3/28/1973	4.5	64 km ESE of West Yellowstone, Wyoming
8/30/1974	4.5	27 km E of West Yellowstone, Wyoming
8/21/2003	4.5	53 km N of Kelly, Wyoming
10/24/2010	4.4	20 km E of Kelly, Wyoming
6/20/1998	4.4	8 km E of Hoback, Wyoming
9/27/2001	4.3	35 km WSW of Dubois, Wyoming
8/21/2003	4.3	53 km N of Kelly, Wyoming
8/5/2010	4.2	19 km E of Kelly, Wyoming
10/22/2002	4.2	10 km SSW of Hoback, Wyoming
8/30/1985	4.2	10 km ESE of Alpine Northeast, Wyoming
8/17/2010	4.1	22 km E of Kelly, Wyoming

Source: USGS

There are approximately 80 Quaternary faults throughout the State of Wyoming. Two main fault systems outside of Yellowstone National Park lie within Teton County and could impact the Town of Jackson: The Teton Fault and Hoback Fault.

Fault systems to the North and South also have the potential to impact the county. Proximity to the Yellowstone Hotspot and active tectonics create conditions that increase the occurrence and presence of fractures and faults in Teton County and northwestern Wyoming in general. Figure 4-12 presents the location of Quaternary Faults in the planning area, as well as historic epicenter locations.

Figure 4-12 Faults and Epicenters



Probability of Future Events

The U.S. Geological Survey (USGS) releases probabilistic acceleration maps for different time frames, including 5000-, 1000-, and 2,500-year intervals. These maps indicate the likelihood of certain acceleration levels being reached or surpassed within those times frames by expressing the probability of such occurrences within shorter intervals. For instance, a 10% probability of acceleration being reached or exceeded in 50 years is roughly equivalent to a 100% probability of exceeding it within 500 years.

Historically, the USGS has produced probabilistic acceleration maps for Wyoming. Previously, the 500-year map was commonly used for planning purposes for typical structures and served as the foundation for the prevailing Uniform Building Code. However, the updated International Buildings Code now utilizes a 2,500-year map as the reference for building design. These maps reflect the current understanding of seismic activity in Wyoming.

In many regions of Wyoming, ground accelerations depicted on the USGS maps may be augmented due to local soil conditions. For example, if soft, saturated sediments may exist at the surface and seismic waves pass through them, surface ground accelerations typically exceed those experiences if only bedrock were present. Consequently, the ground accelerations indicated on the USGS maps may underestimate the local hazard, as they are based on expectations for firm soil or rock at the surface.

Teton County is situated in a seismically active region, with known fault lines such as the Teton Fault posing potential earthquake risks. The probability of future earthquakes in the county is influenced by factors such as the tectonic settings, historical seismicity, and ongoing geological processes. Ongoing research and monitoring efforts help improve our understanding of seismic hazards and inform emergency preparedness and building code regulations to enhance resilience to earthquake events.

Climate Change Impacts

The impacts of global climate change on earthquake intensity and probability are largely unknown, but there is not expected to be a direct correlation.

Vulnerability Assessment

Numerous factors contribute to determining areas of vulnerability such as historical earthquake occurrence, proximity to faults, soil characteristics, building construction, and population density. Wyoming Geologic Survey noted that earthquakes below a 2.5 magnitude are not typically felt by people on ground surface. Although, damages occur at magnitudes greater than 5.0.

PEOPLE

The entire population within the region faces potential exposure to both direct and indirect impact from earthquakes. The extent of this exposure hinges on various factors, such as the age and construction materials of buildings, underlying soil types, proximity to fault lines and earthquakes epicenter, and more. Whether affected directly or indirectly, the entire population will inevitably contend with the aftermath of an earthquake to varying degrees. Business disruptions may hinder employment opportunities, road closures could isolate communities, and utility service disruptions form the from the earthquake itself.

Three population groups are particularly vulnerable to earthquake hazards:

- **Linguistically Isolated Populations**—Problems arise when there is an urgent need to inform non-English speaking residents of an earthquake event. They are vulnerable because of difficulties in understanding hazard-related information from predominantly English-speaking media and government agencies.

- **Population below Poverty Level**—Families and individuals with incomes below the poverty level may lack the financial resources to improve their homes to prevent or mitigate earthquake damage. Poorer residents are also less likely to have insurance to compensate for losses in earthquakes.
- **Population over 65 Years Old**—This population group is vulnerable because they are more likely to need special medical attention, which may not be available due to isolation caused by earthquakes. Elderly residents also have more difficulty leaving their homes during earthquake events and could be stranded in dangerous situations.

Casualty impacts on persons in the planning area were estimated for the 2,500-Year Probabilistic Earthquake. Casualty levels as defined by HAZUS-MH 6.1 are described as follows:

- Level 1: Injuries will require medical attention, but hospitalization is not needed.
- Level 2: Injuries will require hospitalization but are not considered life-threatening.
- Level 3: Injuries will require hospitalization and can become life-threatening if not promptly treated.
- Level 4: Victims are killed by the earthquake.

Figure 4-13 Estimated Earthquake Impacts on Persons and Household

SCENARIO	NUMBER OF DISPLACED HOUSEHOLDS	NUMBER OF PERSONS REQUIRING SHORT-TERM SHELTER
2,500-Year Earthquake	717	287

Source: HAZUS-MH 6.1 Global Summary Report, WSP Analysis

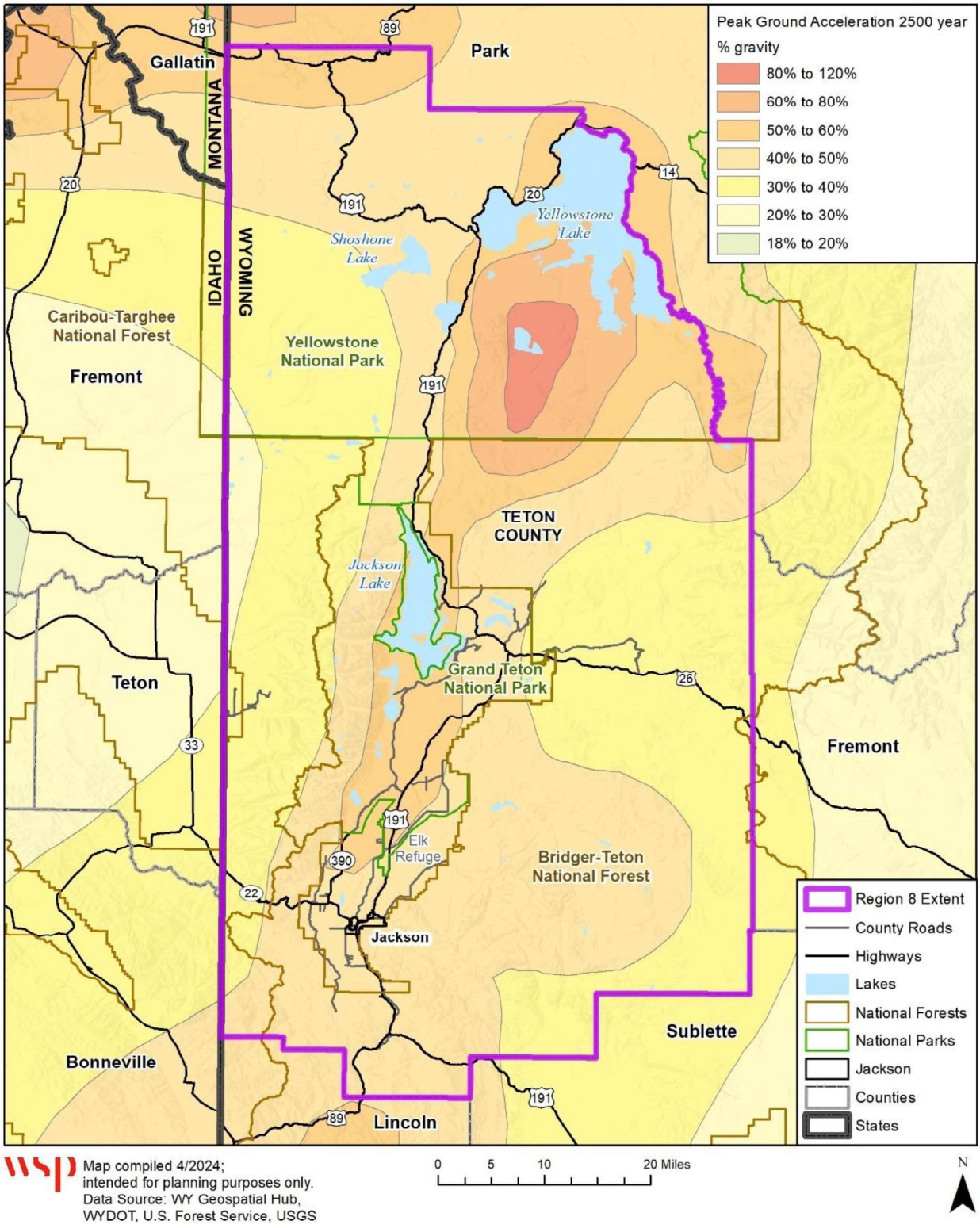
These impacts are summarized below. The casualty estimates are provided for three times of day: 2:00 AM, 2:00 PM, and 5:00 PM, The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considered that the educational, commercial, and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 4-21 Estimated 2500-Year Probabilistic Earthquake Impact on Persons and Households

		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	1.69	0.41	0.06	0.12
	Commuting	0.01	0.01	0.02	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.94	0.22	0.03	0.06
	Other-Residential	26.80	6.28	0.79	1.55
	Single Family	68.69	16.05	2.07	4.04
	Total	**98**	**23**	**3**	**6**
2 PM	Commercial	104.16	25.33	3.63	7.08
	Commuting	0.08	0.11	0.18	0.03
	Educational	7.66	1.61	0.21	0.41
	Hotels	0.00	0.00	0.00	0.00
	Industrial	6.92	1.59	0.22	0.43
	Other-Residential	13.79	3.31	0.44	0.82
	Single Family	35.71	8.54	1.16	2.14
	Total	**168**	**40**	**6**	**11**
5 PM	Commercial	58.34	14.20	2.05	3.94
	Commuting	1.83	2.59	4.19	0.82
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	4.33	1.00	0.14	0.27
	Other-Residential	10.49	2.51	0.33	0.62
	Single Family	27.26	6.52	0.88	1.63
	Total	**102**	**27**	**8**	**7**

Source: HAZUS-MH 6.1 Global Summary Report, WSP Analysis

Figure 4-14 Teton County Peak Ground Acceleration



BUILT ENVIRONMENT

The built environment of Teton County remains highly vulnerable to the impacts of earthquakes, despite the area not experiencing seismic activity as frequently or as intensely as

other earthquake-prone regions. Even moderate earthquakes can result in substantial structural damage to buildings, bridges, roads, and other critical infrastructure. Depending on the earthquake's magnitude and proximity, the severity of damage can vary from minor cosmetic issues, such as cracks in walls and foundations, to the complete collapse of structures.

According to HAZUS simulation results, 9,768 buildings in the planning area—approximately 72.9% of the total building stock—are projected to experience some degree of damage during a significant earthquake event. This could range from minor repairs to moderate damage that requires temporary relocation of occupants, to major structural failures or even total destruction. The simulation further estimates that 365 buildings will be completely destroyed, posing a serious risk to residents, local businesses, and public safety.

Figure 4-15 Estimated Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	17.70	0.49	21.37	0.46	21.42	0.57	8.11	0.78	2.40	0.66
Commercial	334.32	9.23	412.12	8.90	455.79	12.23	192.10	18.38	55.66	15.24
Education	12.55	0.35	9.88	0.21	7.57	0.20	1.80	0.17	0.20	0.06
Government	12.09	0.33	15.12	0.33	16.23	0.44	6.52	0.62	1.04	0.28
Industrial	53.98	1.49	70.75	1.53	74.87	2.01	28.24	2.70	7.15	1.96
Other Residential	252.42	6.97	347.22	7.50	367.88	9.87	164.54	15.74	53.93	14.77
Religion	9.15	0.25	11.56	0.25	13.39	0.36	6.23	0.60	1.68	0.46
Single Family	2931.23	80.90	3744.32	80.83	2768.67	74.31	637.60	61.01	243.17	66.58
Total	**3,623**		**4,632**		**3,726**		**1,045**		**365**	

Source: HAZUS-MH 6.1 Global Summary Report, WSP Analysis

ECONOMY

Earthquakes can have both direct and indirect impacts on economy. Direct impacts manifest as physical damages and losses to buildings and infrastructure. Indirect effects are often felt through factors like lost wages decreased business income, relocation expenses, and other costs associated with recovery efforts. The table below represents data on capital stock and income losses in Region 8, illustrating the economic repercussions on seismic events.

Table 4-22 Region 8 economic impacts, 2,500-year probabilistic earthquake scenario

		CAPITAL STOCK LOSSES (THOUSANDS OF DOLLARS)					INCOME LOSSES (THOUSANDS OF DOLLARS)			
County	Structural	Non-Structural	Contents	Inventory	Loss Ratio (%)	Relocation	Capital-Related	Wages	Rental	Total Loss
Teton	**$161,066**	**$646,493**	**$228,162**	**$17,015**	**10.54%**	**$94,802**	**$71,366**	**$79,284**	**$57,700**	**$1,355,889**

Source: HAZUS-MH 6.1 Global Summary Report, WSP Analysis

CRITICAL FACILITIES AND LIFELINES

All critical facilities and infrastructure within the planning area face exposure to earthquake hazards. Disruptions to transportation corridors during seismic events may lead to hazardous material releases into the surrounding environment. Structural ruptures during earthquakes pose the risk of hazardous material leakage into the surrounding areas or nearby waterways, posing significant environmental threats.

The damage incurred by transportation corridors and communication lines could hinder the efficacy of first responders in post-earthquake response efforts. Government facilities and personnel within the incident area might require temporary relocation of operations due to damage. Local regulatory waivers may become necessary, and the public's confidence in the government's ability to respond and recover may be dimmish without timely and effective planning, response, and recovery measures.

Major earthquakes could necessitate disaster declarations and aid programs, potentially impacting funding and administrative resources allocated for regular operations or requiring alterations to existing operating procedures. HAZUS-MH 6.1 categorizes critical facilities' vulnerability to earthquake damage into two tiers: moderate damage or complete destruction. However, specific damages to facilities were not indicated in these categories through the analysis conducted for the Wyoming State Hazard Mitigation Plan. While the potential for damage to the transportation system and utility lifelines exists, precise loss figures at the county level were unavailable from the HAZUS analysis.

HAZUS-MH 6.1 simulation results classify the vulnerability of essential facilities to earthquake damage two ways, as experiencing at least moderate damage or complete damage. Simulation results are in the table below.

Figure 4-16 Expected Utility System Damage in Region 8

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	1	1	0	0	1
Waste Water	2	2	0	0	2
Natural Gas	0	0	0	0	0
Oil Systems	0	0	0	0	0
Electrical Power	0	0	0	0	0
Communication	9	9	0	0	9

Source: HAZUS-MH 6.1 Global Summary Report, WSP Analysis

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

The environmental impacts of earthquakes can extend well beyond the immediate shaking of the ground, as secondary hazards triggered by seismic events often lead to even greater destruction. One of the most common and severe secondary effects are landslides. When earthquakes occur in hilly or mountainous terrain, the intense ground motion can destabilize slopes, triggering landslides that can devastate nearby ecosystems and habitats. These landslides can bury vegetation, alter the course of streams and rivers, and create debris flows that threaten both natural landscapes and built environments. In addition to direct physical

damage, landslides can also release large amounts of sediment into waterways, degrading water quality and disrupting aquatic habitats.

The destruction of historic buildings can have cascading social and economic effects. Beyond the immediate loss of culturally significant architecture, the damage or collapse of these buildings can lead to the displacement of residents and businesses, disrupting the community's fabric. Furthermore, the high cost of restoring or retrofitting historic structures to withstand future earthquakes can pose a substantial financial burden on property owners and local governments.

Land Use and Development Trends

In Teton County, development activities are regulated according to their Land Development Regulations, particularly in relation to seismic hazards. Unstable soils stipulates that no physical development, use, development options, or subdivision is permissible on unstable soil unless determined otherwise by the County Engineer, with certain exceptions. Foremost, it is important that all structures adhere to Building Codes concerning seismic hazards. Additionally, if proposed physical development lies within 200 feet of a fault line, the County Engineer may request a report from a geotechnical engineer registered in the State of Wyoming. Teton County and the Town of Jackson have recently adopted provisions ensuring that construction standards align with current seismic safety guidelines. The development trends in Teton County concerning earthquake resilience encompass a comprehensive strategy. This strategy integrates compliance with building codes, bolstering infrastructure resilience, thoughtful land-use planning, public education initiative, and effective emergency preparedness measures. Due to these initiatives' earthquake vulnerability has not increased within the County, Town of Jackson, or the Teton Conservation District due to growth and development since the last plan update.

Risk Summary

Overall, earthquake is considered a **high** significance hazard due to the presence of multiple faults and a history of damaging earthquakes. Teton County is located east of the Teton Fault, which is a significant geological feature known for its tectonic activity. According to the National Park Service the Teton Fault is still active, meaning that the fault has generated an earthquake within the past 10,000 years.

Table 4-23 Risk Summary by Jurisdiction: Earthquake

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	High	Widespread backcountry areas and transportation corridors in risk areas; some county roads affected.
Town of Jackson	High	Some potential to affect limited developed areas in Town limits
Teton Conservation District	High	TCD server at the TCD Office, while backed up, earthquake could quickly diminish TCD's responsiveness with data and information if the TCD Server failed.
Flat Creek Watershed Association	High	Earthquakes could cause landslides or avalanches off East Gros Ventre Butte into Flat Creek. This would cause catchment of water and cause property damage.
Jackson Hole Airport	High	Potential for runway infrastructure damage, damage to airport terminal and hangers, control tower, fueling facilities and vehicle gates. See asset list in Section 4.1.3.

4.2.5 Flood

Description

Flooding can be defined as the temporary inundation of normally dry land, often due to excessive rainfall, rapid snowmelt, or ice melt, and can be broken into two main categories: River Flooding and Flash Flooding.

Riverine flooding is defined as the overflow of rivers, streams, drains, and lakes due to excessive rainfall, rapid snowmelt, or ice melt. The areas adjacent to rivers and stream banks that carry excess floodwater during rapid runoff are called floodplains. A floodplain is defined as the lowland and relatively flat area adjoining a river or stream. The terms "base flood", "100-year flood", and "1% annual chance flood" refer to the area in the floodplain that is subject to a one percent or greater chance of flooding in any given year. Floodplains are part of a larger entity called a basin, which is defined as all the land drained by a river and its branches.

Gauges along streams and rain gages throughout the state provide for an early flood warning system. River flooding usually develops over the course of several hours or even days depending on the basin characteristics and the position of the particular reach of the stream. The NWS provides flood forecasts for Wyoming. Flood warnings are issued over emergency alert system (EAS) radio and television messages as well as the NOAA Weather Radio People in the paths of river floods may have time to take appropriate actions to limit harm to themselves and their property.

A **flash flood** is an event that occurs when water levels rise at an extremely fast rate as a result of intense rainfall over a brief period, sometimes combined with rapid snowmelt, ice jam release, frozen ground, saturated soil, or impermeable surfaces. Ice jam flooding is a form of flash flooding that occurs when ice breaks up in moving waterways, and then stacks on itself where channels narrow. This creates a natural dam, often causing flooding within minutes of the dam formation. Flash Flood warnings also use EAS radio and the NOAA weather Radio, as well as Wireless Emergency Alerts.

Floods can and have caused significant damage in Region 8 and are one of the more significant natural hazards in the Region and the country as a whole. Floods can cause millions of dollars in damage in just a few hours or days. Causes of flooding relevant to the Region include:

- Rain in a general storm system
- Rain in a localized intense thunderstorm
- Melting snow
- Rain on melting snow
- Urban stormwater drainage
- Hail drifts clogging stormwater drainage
- Ice Jams
- Dam failure
- Levee Failure
- Rain on fire damaged watersheds
- Frazil Ice

The 100-year or 1% annual chance flood is the national standard to which communities regulate their floodplains through the National Flood Insurance Program. This is also called the Special Flood Hazard Area (SFHA) on flood insurance maps and in floodplain management ordinances.

The potential for flooding can change and increase through various land use changes and changes to land surface. A change in the built environment can create localized flooding problems inside and outside of natural floodplains, by altering or confining watersheds or natural drainage channels. These changes are commonly created by human activities. Flooding in the communities in Region 8 could be exacerbated by inadequate drainage and channel systems that would not stand up to the 1% annual chance flood. Inadequate culverts and drainage systems can flood adjacent properties.

Increased chance for flooding can also be created by other hazards such as wildfires. Wildfires create hydrophobic soils, a hardening or "glazing" of the earth's surface that prevents rainfall from being absorbed into the ground, thereby increasing runoff, erosion, and downstream sedimentation of channels.

FRAZIL ICE

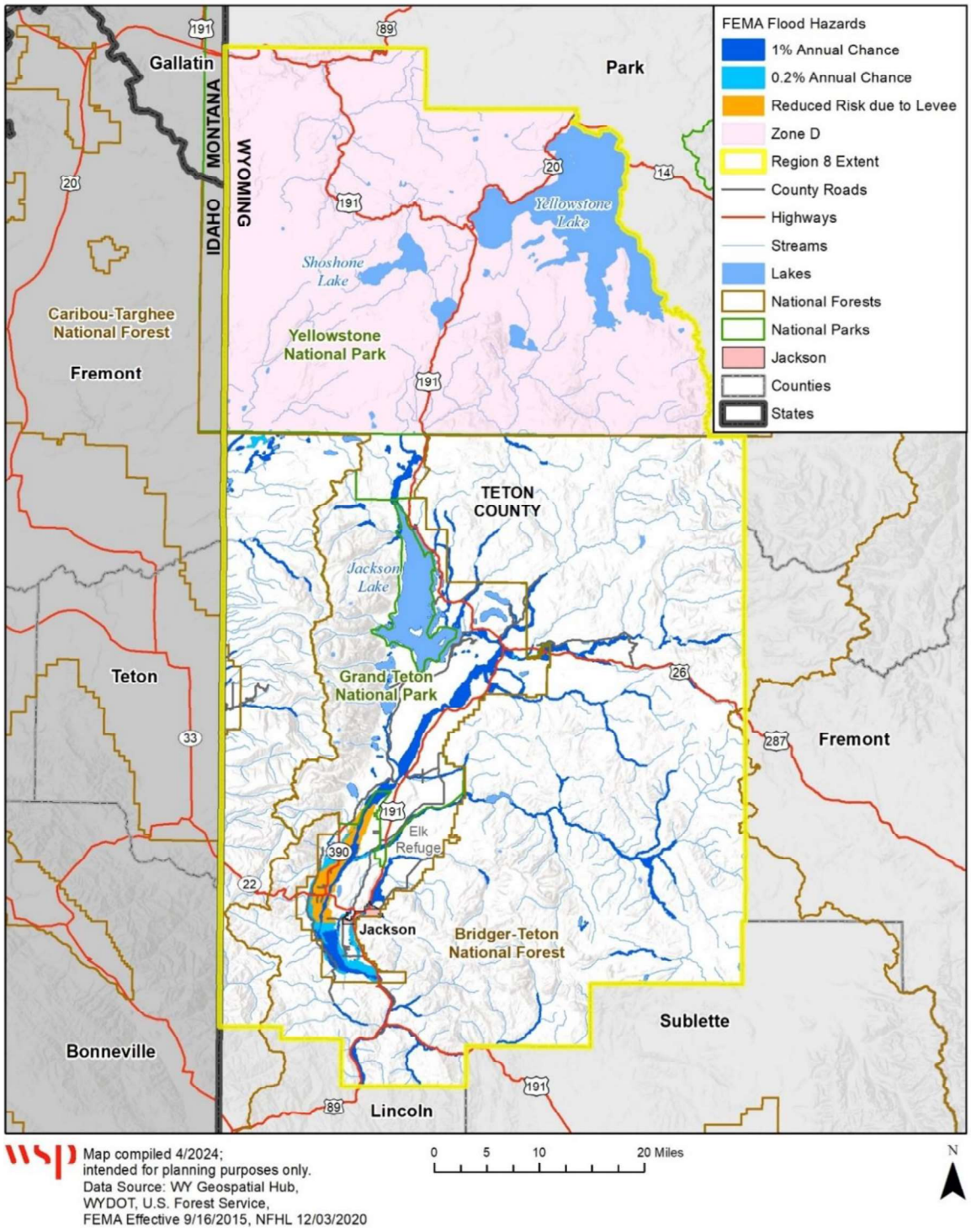
A unique phenomenon during winter months is the formation of Frazil or Anchor Ice, particularly in Flat Creek. Frazil ice is a collection of loose, randomly oriented ice crystals which form when water temperatures drop below freezing. The water becomes super cooled and the turbulence in the water causes small ice crystals to form and remain suspended in the water. Unlike regular ice, frazil ice is not buoyant and tends to accumulate on the upstream side of rocks and other objects in the stream bed. This causes the creek to freeze from the bottom up and creates two primary hazards: reducing the overall volume of the creek bed and forcing water out over the banks. When frazil ice becomes dislodged from its anchor on the creek bed it then floats to the top in large chunks. This can lead to the formation of ice jams that cause flooding by blocking the flow of water and causing an overflow on the banks sometimes resulting in a flash flood.

Location

Flood hazards throughout Region 8 exist along all major and minor rivers and streams throughout the county. Adequacy of storm drainage systems, presence of frazil ice, and other factors can contribute to, or exacerbate, flooding conditions in both Teton County and the Town of Jackson. Information reflected on the updated FIRM and FIS have been incorporated into this Plan. The main source of hazard data made available to the County and Town used in this plan to assess risk and vulnerability is the FEMA National Flood Hazard Layer data (effective 9/15/2015 plus all effective Letters of Map Revision as of 12/3/2020).

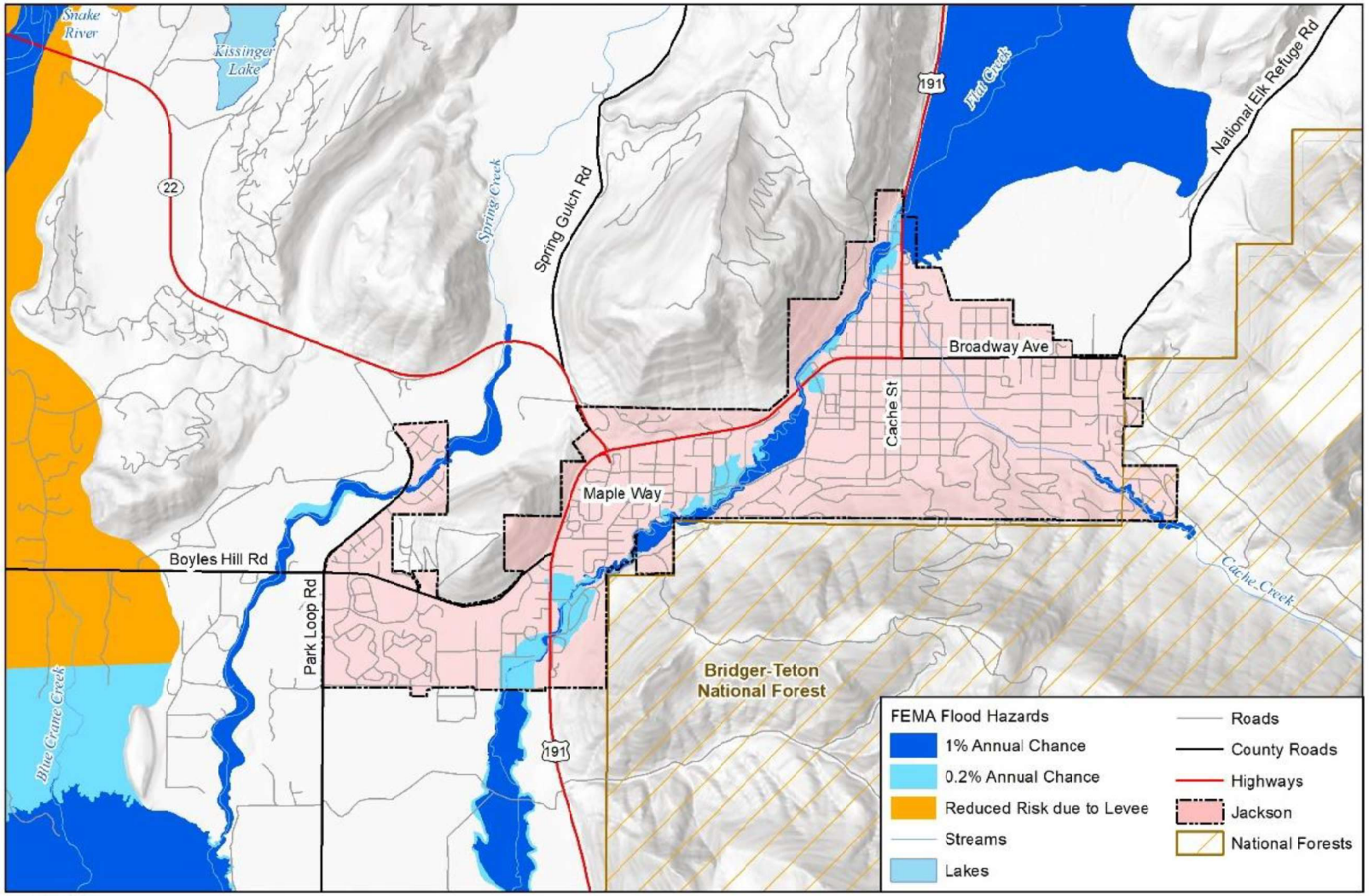
The streams studied in the county's FIS include the Snake and Gros Ventre Rivers; Flat, Fish, Teton, Lake, Cache, and Spring Creeks; and Buffalo Fork. Each of these waterways and their floodplains are shown in Figure 4-17.

Figure 4-17 Teton County/Region 8 FEMA Flood Hazards



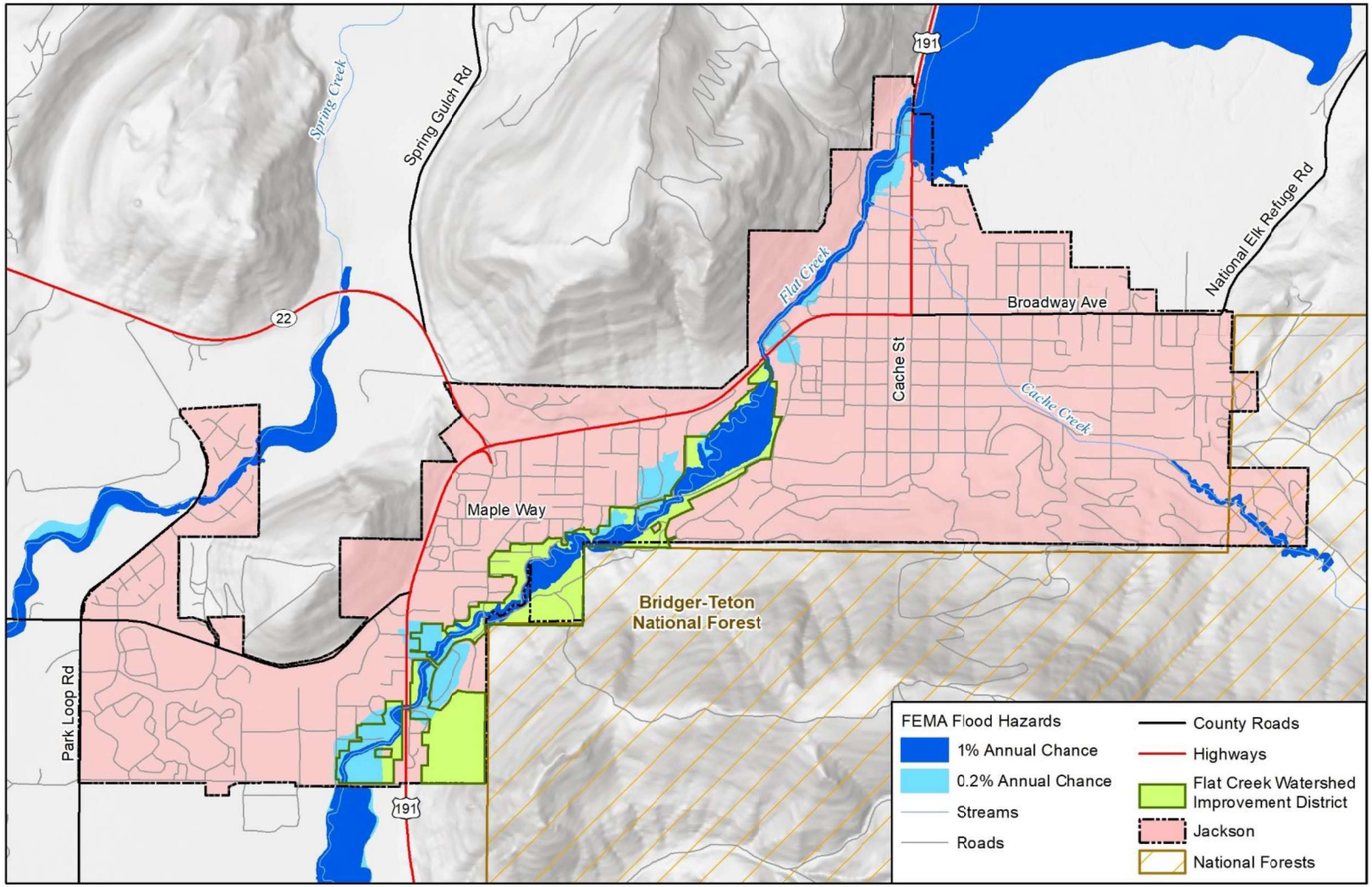
Within the Town of Jackson, most flooding originates from Flat Creek in the winter months. This is often the result of frazil ice buildup. Cache Creek also poses a risk, as does nuisance snowmelt flooding. See Figure 4-18 Jackson FEMA Flood Hazards and Figure 4-19 below.

Figure 4-18 Jackson FEMA Flood Hazards



Map compiled 2/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, National Forest System,
FEMA Effective 9/16/2015, NFHL 12/03/2020

Figure 4-19 Flat Creek Watershed Improvement District FEMA Flood hazards



Map compiled 4/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, U.S. Forest Service, FCWID,
FEMA Effective 9/16/2015, NFHL 12/03/2020

Extent (Magnitude)

Magnitude and severity can be described or evaluated in terms of a combination of the different levels of impact that a community sustains from a hazard event. Specific examples of negative impacts from flooding in Region 8 span a comprehensive range and are summarized as follows:

- Floods cause damage to private property that often creates financial hardship for individuals and families;
- Floods cause damage to public infrastructure resulting in increased public expenditures and demand for tax dollars;
- Floods cause loss of personal income for agricultural producers that experience flood damages;
- Floods cause loss of income to businesses relying on recreational uses of regional waterways;
- Floods cause emotional distress on individuals and families; and
- Floods can cause injury and death.

Flood recurrence intervals describe the statistical expectation of inundation frequency. Typical recurrence intervals include the list below, all of which can be experienced in Teton County:

- 10 years (10% probability of occurring in any given year)
- 25 years (4% probability of occurring in any given year)
- 50 years (2% probability of occurring in any given year)
- 100 years (1% probability of occurring in any given year)
- 500 years (0.2% probability of occurring in any given year)

Floods present a risk to life and property, including buildings, their contents, and their use. Floods can affect crops and livestock. Floods can also affect lifeline utilities (e.g., water, sewage, and power), transportation, jobs, tourism, the environment, and the local and regional economies. The impact of a flood event can vary based on geographic location to waterways, soil content and ground cover, and construction. The extent of the damage of flooding ranges from very narrow to widespread based on the type of flooding and other circumstances such as previous rainfall, rate of precipitation accumulation, and the time of year. Shallow flooding to flood depths of several feet are possible throughout the Region, depending on a variety of factors including the local topography, runoff, rainfall rate, and duration of precipitation.

Previous Occurrences

A brief history of the National Centers for Environmental Information (NCEI) recorded floods in the Region is presented in Table 4-24 below. This is not a complete record of all past events in the county but includes details from events which have been reported to the NCEI database where available.

Table 4-24 Teton County NCEI Flood Events, 1998 – 2023

TYPE	LOCATION	DATE	PROPERTY DAMAGE	CROP DAMAGE
Flood	Jackson	7/7/1998	$0	$0
Flash Flood	Wilson	7/26/2007	$50,000	$0
Flash Flood	Hoback Junction	8/17/2007	$10,000	$0

TYPE	LOCATION	DATE	PROPERTY DAMAGE	CROP DAMAGE
Flash Flood	Jackson	8/18/2007	$20,000	$0
Flood	Jackson	12/11/2011	$15,000	$0
Flash Flood	Jenny Lake	8/13/2014	$10,000	$0
Flood	Jackson Hole	3/23/2018	$10,000	$0
Flood	Valley	2/24/2023	$0	$0
		Total	$115,000	$0

Source: NCEI Data

Perhaps the most notable flood event in the county, and an infamous example of cascading hazard events, was the Kelly Flash Flood. On June 23, 1925, an unstable slope on the northern face of Sheep Mountain slid into the Gros Ventre River, resulting in a natural dam 200 feet high which created Lower Slide Lake. Nearly two years later on May 18, 1927, a portion of the natural dam suddenly broke and released a flash flood at least 6 feet deep for at least 25 miles downstream. The flood wiped out the town of Kelly and six people died, with significant property damage and agricultural losses as well. According to the Teton County Emergency Management website, hundreds of farm animals were killed and in Wilson 6 feet of water inundated the town, while narrower sections of the Snake River near Hoback, saw flood waters rise as much as 50 feet. The next day the waters reached Idaho Falls, ID and covered lowland sections there.

Observed flood discharges provide a means for tracking the magnitude and frequency of floods, no matter how large or how small. Tracking streamflow provides water and floodplain managers, as well as ecologists, climate scientists, water quality professionals, and others with an understanding of fluctuations in water levels resulting from rainfall, snowmelt, drought, and other climate impacts. In Teton County and the Town of Jackson, there are a total of 21 functioning stream gages actively measuring streamflow data.

Probability of Future Events

Flood probability, or frequency, is commonly based on the chance of flooding in any given year. Realistically, both Teton County and the Town of Jackson are prone to smaller but more frequent flooding events as a result of high snowfall totals and warming spring temperatures. Rainfall events occurring during Spring months can exacerbate flooding associated with snowmelt runoff. Larger flooding events are also possible under these same conditions.

Judging by the historical flood record for the Region, a flood of at least minimal magnitude occurs once every 3 years, on average, within the planning area. Most of these floods' extents were less than the 100-year flood; the chance of a 100-year flood occurring in any given year in the Region is 1%. Using the guidelines outlined in Section 4.1.1 a damaging flood has a **Likely** occurrence rating, meaning that a flood has a 10-100% chance of occurrence in the next year somewhere in the Region.

Climate Change Impacts

Use of historical hydrologic data has long been the standard of practice for designing and operating water supply and flood protection projects. For example, historical data are used for flood forecasting models and to forecast snowmelt runoff for water supply. However, the hydrologic record cannot reliably be used to predict changes in frequency and severity of extreme climate events such as floods because this method of

forecasting assumes that the climate of the future will be similar to that of the period of historical record. Climate change is already impacting water resources, and resource managers have observed the following:

- Historical hydrologic patterns can no longer be solely relied upon to forecast the water future.
- Precipitation and runoff patterns are changing, increasing the uncertainty for water supply and quality, flood management, and ecosystem functions.
- Extreme climatic events will become more frequent, necessitating improvement in flood protection, drought preparedness, and emergency response.

Additionally, precipitation changes do not have a one-to-one relation with flooding. Many factors influence flooding, including presence of frozen soils, snowpack accumulation, storm tracks, and rainfall rates. According to the Fifth National Climate Assessment, trends show the Northern Great Plains region, which includes Wyoming in this report, would expect to see some of the highest increases in annual flooding damage costs in the contiguous US.

The amount of snow is critical for water supply and environmental needs, but so is the timing of snowmelt runoff into rivers and streams. Rising snowlines caused by climate change will allow more mountain area to contribute to peak storm runoff. High frequency flood events (e.g., 10-year floods) in particular will likely increase with a changing climate. Along with reductions in the amount of the snowpack and accelerated snowmelt, scientists project greater storm intensity, resulting in more direct runoff and flooding. Changes in watershed vegetation and soil moisture conditions will likewise change runoff and recharge patterns. As stream flows and velocities change, erosion patterns will also change, altering channel shapes and depths, possibly increasing sedimentation behind dams, and affecting habitat and water quality. With potential increases in the frequency and intensity of wildfires due to climate change, there is potential for more floods following fire, which increase sediment loads and water quality impacts.

Vulnerability Assessment

PEOPLE

Vulnerable populations in Region 8 include residents living in known flood prone areas or near areas vulnerable to flash floods. Certain populations are particularly vulnerable. This may include the elderly and very young; those living in long-term care facilities; mobile homes; hospitals; low-income housing areas; temporary shelters; people who do not speak English well; tourists and visitors; and those with developmental, physical, or sensory disabilities. These populations may be more vulnerable to both the direct impacts of flooding, as well as experiencing increased difficulty in recovery, due to limitations in mobility and accessibility, income restrictions, challenges in receiving and understanding warnings, or unfamiliarity with surroundings.

During this Regional Plan's update, an estimate of the population exposed to flooding was created using a GIS overlay of latest National Flood Hazard Layer (NFHL), and HAZUS 100-year flood hazard areas where NFHL was not available, to determine potentially flooded parcels. The flood-impacted population for the region was then calculated by taking the number of residential units in the 100-year areas protected by levee, and 500-year floodplains and multiplying that number by the average household size of 2.33 for unincorporated residents per household and 2.45 within the Town of Jackson, based on the US Census Bureau's ACS estimates. The results for Teton County are displayed below in Table 4-25.

Table 4-25 Flood Vulnerable Population Estimate in Region 8

JURISDICTION	1% ANNUAL CHANCE FLOOD	0.2% ANNUAL CHANCE FLOOD	AREA PROTECTED BY LEVEE	TOTAL
Jackson	17	287	-	304
Unincorporated	347	543	3,786	4,676
Total	**364**	**830**	**3,786**	**4,980**

Source: Teton County, Wyoming CAMA 2024, FEMA NFHL, HAZUS, Census Bureau average household estimates, WSP GIS Analysis

BUILT ENVIRONMENT

A flood vulnerability assessment was performed for Region 8 using Geographic Information Systems (GIS). The flood vulnerability assessment was performed for Teton County using the following GIS methodology. The County's parcel layer, address point data, and associated assessor's building improvement valuation data were provided by the County and were used as the basis for the inventory. GIS was used to spatially join the address point layer to the County parcel layer to obtain the number of buildings per parcel. Only parcels with improvement values greater than zero were used in the analysis. This method assumes that improved parcels have a structure of some type. The latest 12/03/2020 FEMA National Flood Hazard Layer and a HAZUS 100-year flood layer, were used to supplement areas where FEMA had not mapped portions of Teton County, were then overlaid in GIS on the joined address point and parcel layers to identify structures that would likely be inundated during a 1% annual chance and 0.2% annual chance flood event. Building improvement values for those points were then extracted from the parcel/assessor's data and summed for each jurisdiction in the study area. Content values were estimated for the buildings based on their occupancy type, using FEMA methodology. This includes 100% of the structure value for agricultural, commercial, and exempt structures, 50% for residential structures, and 150% for industrial structures. Building and content values were totaled, and a 25% loss factor was applied to the totals, also based on FEMA depth damage functions (assuming a two-foot-deep flood). The summarized results for the Region are shown below in Table 4-26 through Table 4-28.

Table 4-26 Region 8 Parcels at risk to FEMA and HAZUS 1% flood hazards by jurisdiction

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	ESTIMATED LOSSES
Jackson	Commercial	2	43	$19,193,182	$19,193,182	$38,386,364	$9,596,591
	Residential	7	7	$3,018,864	$1,509,432	$4,528,296	$1,132,074
	Total	**9**	**50**	**$22,212,046**	**$20,702,614**	**$42,914,660**	**$10,728,665**
Unincorporated	Agricultural	6	6	$10,913,323	$10,913,323	$21,826,646	$5,456,662
	Residential	148	149	$405,555,124	$202,777,562	$608,332,686	$152,083,172
	Total	**154**	**155**	**$416,468,447**	**$213,690,885**	**$630,159,332**	**$157,539,833**
	Grand Total	**163**	**205**	**$438,680,493**	**$234,393,499**	**$673,073,992**	**$168,268,498**

Source: Teton County, Wyoming CAMA 2024, FEMA NFHL Effective Date 9/16/2015, HAZUS, WSP GIS Analysis

Table 4-27 Region 8 Parcels at risk to FEMA 0.2% flood hazards by jurisdiction

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	ESTIMATED LOSSES
Jackson	Commercial	31	80	$73,081,417	$73,081,417	$146,162,834	$36,540,709
	Multi-Use	1	3	$54,607	$54,607	$109,214	$27,304
	Residential	114	114	$95,655,002	$47,827,501	$143,482,503	$35,870,626
	Total	**146**	**197**	**$168,791,026**	**$120,963,525**	**$289,754,551**	**$72,438,638**
Unincorporated	Agricultural	7	12	$12,800,717	$12,800,717	$25,601,434	$6,400,359
	Commercial	12	13	$26,168,186	$26,168,186	$52,336,372	$13,084,093
	Residential	232	233	$631,895,087	$315,947,544	$947,842,631	$236,960,658
	Total	**251**	**258**	**$670,863,990**	**$354,916,447**	**$1,025,780,437**	**$256,445,109**
	Grand Total	**397**	**455**	**$839,655,016**	**$475,879,972**	**$1,315,534,988**	**$328,883,747**

Source: Teton County, Wyoming CAMA 2024, FEMA NFHL Effective Date 9/16/2015, WSP GIS Analysis

Table 4-28 Region 8 Parcels at risk to FEMA Area Protected by Levee flood hazards by jurisdiction

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	ESTIMATED LOSSES
Unincorporated	Agricultural	14	14	$30,734,697	$30,734,697	$61,469,394	$15,367,349
	Com Vacant Land	2	4	$368,384	$368,384	$736,768	$184,192
	Commercial	52	59	$115,245,119	$115,245,119	$230,490,238	$57,622,560
	Multi-Use	2	2	$4,995,641	$4,995,641	$9,991,282	$2,497,821
	Res Vacant Land	2	2	$484,230	$242,115	$726,345	$181,586
	Residential	1,591	1,621	$4,915,740,370	$2,457,870,185	$7,373,610,555	$1,843,402,639
	Total	**1,663**	**1,702**	**$5,067,568,441**	**$2,609,456,141**	**$7,677,024,582**	**$1,919,256,146**

Source: Teton County, Wyoming CAMA 2024, FEMA NFHL Effective Date 9/16/2015, WSP GIS Analysis

NFIP CLAIMS ANALYSIS

Another method of examining the magnitude and severity of flooding in the Region is to examine the damage losses and payments from the National Flood Insurance Program (NFIP). Teton County and the Town of Jackson are both participants in the NFIP. This information is not comprehensive, because it only reflects the communities that participate in the NFIP, but it is a useful overview of flood damages in the region. The information summarized in Table 4-29 below represents the composite of unincorporated and community-specific policies, claims and payments. According to statistics from the National Flood Insurance Program (http://www.fema.gov/policy-claim-statistics-flood-insurance/policy-claim-statistics-flood-insurance/policy-claim-13) there have been a total of 24 flood insurance claims filed between 1/1/1978 and 02/02/2024 in the region. The total payments made on these claims was $116,896. As of 02/02/2024, there were 349 flood insurance policies in force in the Region for a total coverage of $119,944,000.

Table 4-29 NFIP Policy and Insurance Claim Data for Region 8

LOCATION	POLICIES	COVERAGE "INSURANCE IN FORCE"	# OF CLAIMS "CLOSED PAID LOSSES"	PAID LOSSES "$ OF CLOSED PAID LOSSES"	REPETITIVE LOSSES	SUBSTANTIAL DAMAGE CLAIMS	# OF POLICIES IN A ZONES	# OF POLICIES IN **NON-A** ZONES
Town of Jackson	46	$13,644,000	2	$6,613	0	0	11	35
Teton County	303	$101,300,000	22	$110,284	0	0	29	272
Region Total	**349**	**$114,944,000**	**24**	**$116,896**	**0**	**0**	**40**	**307**

Source: FEMA Policy and Claim Statistics http://www.fema.gov/policy-claim-statistics-flood-insurance and State of Wyoming Department of Homeland Security, NFIP Coordinator as 05/2022

Repetitive Loss is defined as an NFIP Insured property that has experienced 4 or more paid losses in excess of $1,000, two paid losses in excess of $1,000 within any rolling 10-year period, or three or more paid losses that equal or exceed the current value of the insured property. Neither Teton County nor the Town of Jackson have any listed repetitive loss properties or severe repetitive loss properties at the time of this risk assessment in 2024.

ECONOMY

Flooding can have a major negative impact on the economy. Based on the flood loss analysis, there are 43 commercial structures worth an estimated $38.4 million in total value directly at risk to flooding in the 1% annual chance floodplain, and 93 commercial structures worth $198.5 million located in the 0.2% annual chance floodplain. Based on the loss analysis this could result in approximately $59 million in direct losses. This does not account for other indirect losses such as business interruption, reduced tourism and visitation, lost wages, and other downtime costs.

These indirect losses can also have a significant economic cost. Flood events can cut off customer access to a business as well as close a business for repairs or permanently. A quick response to the needs of businesses affected by flood events can help a community maintain economic vitality in the face of flood damage. Responses to business damages can include funding to assist owners in elevating or relocating flood-prone business structures.

CRITICAL FACILITIES AND LIFELINES

GIS analysis of flood hazards in Region 8 indicates that there are 66 critical facilities and/or community assets that are potentially exposed to flood hazards. There are 57 facilities in the 1% annual chance floodplain shown in Table 4-30, nine in the 0.2% annual chance floodplain shown in Table 4-31 and 17 facilities within the areas protected by levee. One limitation to the HIFLD data is a lack of potable water facilities. Gaining access to this type of information would enhance the results of the critical facility risk analysis. Replacement values were not available with the data; thus, an estimate of potential monetary loss could not be performed. Impacts to any of these facilities could have wide ranging ramifications, in addition to property damage and other cascading impacts.

Table 4-30 Critical Facilities at Risk to 1% Annual Chance Flood Hazard (FEMA & HAZUS) by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNTY
Jackson		-	-	-	-	-	5	-	-	**5**
Unincorporated	-	1	-	1	-	3	45	3	-	**53**
Total	**0**	**1**	**0**	**1**	**0**	**3**	**50**	**3**	**0**	**58**

Source: Teton County, FEMA NFHL & HAZUS, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-31 Critical Facilities at Risk to 0.2% Annual Chance Flood Hazard (FEMA) by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	1	2	-	-	-	-	-	-	**3**
Unincorporated	1	-	-	3	-	1	-	2	2	**9**
Total	**1**	**1**	**2**	**3**	**0**	**1**	**0**	**2**	**2**	**12**

Source: Teton County, FEMA NFHL, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-32 Critical Facilities at Risk to Areas Protected by Levee Flood Hazard (FEMA) by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	-	-	-	-	-	-	**0**
Unincorporated	1	2	-	2	2	8	1	2	1	**19**
Total	**1**	**2**	**0**	**2**	**2**	**8**	**1**	**2**	**1**	**19**

Source: Teton County, FEMA NFHL, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

District specific GIS analysis did not yield risk to FCWID, Teton Conservation District, or Airport facilities.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

The natural environment is generally resilient to impacts of flooding, as flooding is a natural and necessary process for the overall health of ecosystems. However, areas where natural landscapes and soil compositions have been altered by human development or after periods of previous disasters such as drought and fire can see increased vulnerability to flooding. Wetlands, for example, exist because of natural flooding incidents. Areas that are no longer wetlands may suffer from oversaturation of water, as will areas that are particularly impacted by drought. Areas recently suffering from wildfire damage may see increased erosion because of flooding, which can permanently alter an ecological system.

Pollution from roads, such as oil, and hazardous materials can wash into rivers and streams. During floods, these can settle onto normally dry soils, polluting them for agricultural uses. Human development such as bridge abutments can increase stream bank erosion, causing rivers and streams to migrate into non-natural courses.

Tourism and outdoor recreation are a vital part of the Region's economy. If part of the planning area were significantly damaged by flooding, tourism and outdoor recreation could potentially suffer. Areas of downtown Jackson with historic buildings may have a risk of flooding as well.

In November 2016, Teton Conservation District (TCD), with funding from the Wyoming Water Development Office (WDDO), completed a watershed study in the Upper Snake River Basin. The purpose of the study was to evaluate watershed conditions, needs, and opportunities on irrigated lands, range lands, wetlands and streams. The result of the study was a watershed plan created by the project consultants, Olsson Associates, outlining possible land and water improvements that could be made in partnership with landowners. While this Plan has a larger focus than just flooding and floodplain management, it includes issues discussion and watershed management approaches for dealing with flooding, flood mitigation, and floodplain use and development. Specifically, the study discusses:

- Fish passage for native species as it applies to stormwater infrastructure and mitigation design
- Engineered wetland design for flood, water quality, and ecosystem mitigation
- Winter flooding along Flat Creek that continues to impact the residents of Jackson

- Water availability for fire suppression throughout the planning area (an important consideration for wildland fire fighting)
- Levee improvements (along the Snake River and elsewhere) to provide continued flood protection

Land Use and Development Trends

No specific new growth or development within the County, Town of Jackson, or the Teton Conservation District in the past five years has significantly altered the general flood risk of the area. For the NFIP participating communities of Teton County and Town of Jackson, floodplain management practices implemented through local floodplain management ordinances is intended to promote wise use flood hazard areas and mitigate the flood risk to new development in floodplains.

Risk Summary

Overall, flooding is a **high** significance hazard in the region. The Region floods, on average, once every few years, having damaged homes, infrastructure (roads, railroads, bridges, culverts), and causing agricultural losses in the past. Flood risk varies by jurisdiction and this risk is summarized in the table below.

Table 4-33 Risk Summary by Jurisdiction: Flood

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	High	Development in Snake River corridor in risk areas; some county roads affected including state highway bridges.
Town of Jackson	Medium	Residential and commercial development along Flat Creek at risk. Substation on Flat Creek at intersection of Karns Meadow Dr and W Snow King Ave
Teton Conservation District	Medium	Not considered to have significant impacts to District facilities.
Flat Creek Watershed Association	Medium	Residential and commercial development along Flat Creek at risk.
Jackson Hole Airport	Medium	Not in dam or levee inundation area but some stormwater drainage issues.

4.2.6 Landslide

Description

A landslide is a variety of mass movement processes that generate a downslope movement of soil, rock, and vegetation under gravitational influence. Landslides are a serious geologic hazard common to almost every state in the United States. It is estimated by the U.S. Geological Survey that nationally they cause between $2 billion and $4 billion in damages, and from 25 to 50 deaths annually. While some landslides develop gradually, others strike suddenly, fueled by factors like water saturation, erosion, construction, human activity, loss of vegetation from wildfires, alternate freezing or thawing, seismic activity, and volcanic eruptions.

Areas that are generally prone to landslide hazards include existing old landslides; the bases of steep slopes; the bases of drainage channels; and developed hillsides where leach-field septic systems are used. Landslides are often a secondary hazard related to other natural disasters such as rainstorms and earthquakes.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompany these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides. Generally, significant land sliding follows periods of above-average precipitation over an extended period. It is on these days of intense rainfall that slides are most likely.

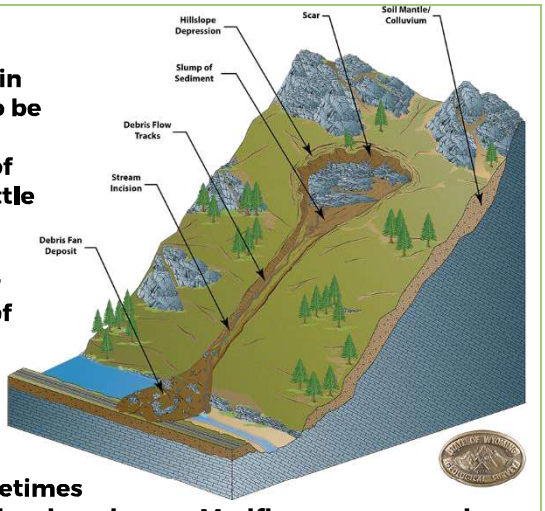
Slope failures typically damage or destroy portions of roads, sewer and water lines, homes and public buildings, and other utility lines. Even small-scale landslides are expensive due to clean-up costs that may include debris clearance from streets, drains, streams and reservoirs; new or renewed support for road embankments and slopes; minor vehicle and building damage; personal injury; and livestock, timber, crop and fencing losses and damaged utility systems.

There are many types of landslides present in Wyoming. To properly describe landslide types, the Geologic Hazards Section of the Wyoming State Geological Survey developed a landslide classification modified from Varnes (1978) and Campbell (1985) seen in Figure 4-20. The classification includes type of movement (falls, topples, slides, lateral spreads, and flows) and the type of material (bedrock, debris, and earth). While individual landslide types can occur in nature, most landslides are complex or composed of combinations of basic types of landslides.

Table 4-34 Landslide Classification

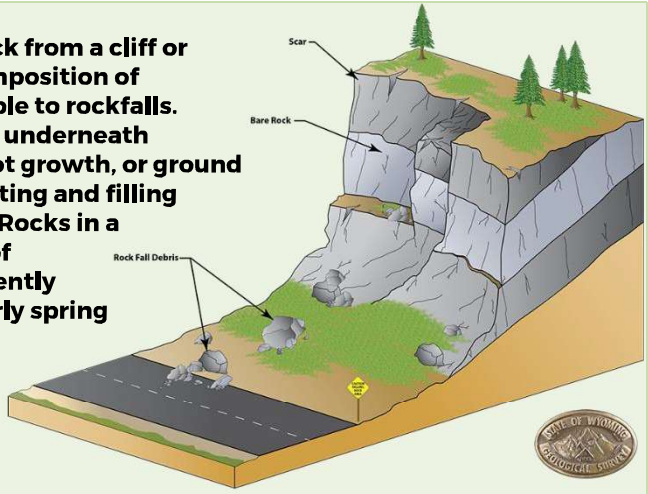
Debris Flow

A mass of loose, water-laden, and poorly sorted debris of fragmented rock, soil, and mud that surges down a slope in response to gravitational processes. Debris flows can also be referred to as mudslides, mudflows, lahars, or debris avalanches. These flows generally occur during periods of intense rainfall or rapid snowmelt and may occur with little onset warning, similar to a flash flood. They usually start on steep hillsides as shallow landslides that liquefy and accelerate to speeds that are typically about 10 miles per hour but can exceed 35 miles per hour. The consistency of debris flow ranges from watery mud to thick, rocky mud that can carry large items such as boulders, trees, and even cars. Debris flows from many different sources can combine in channels, and their destructive power may be greatly increased. When the flows reach the flatter ground, the debris spreads over a broad area, sometimes accumulating in thick deposits that can wreak havoc in developed areas. Mudflows are covered under the National Flood Insurance Program; however, landslides are not.



Falls

A rockfall is the falling of a detached mass of rock from a cliff or down a very steep slope. Weathering and decomposition of geological materials produce conditions favorable to rockfalls. Rockfalls are caused by the loss of support from underneath through erosion or triggered by ice wedging, root growth, or ground shaking. Changes to an area or slope such as cutting and filling activities can also increase the risk of a rockfall. Rocks in a rockfall can be of any dimension, from the size of baseballs to houses. Rockfalls occur most frequently in mountains or other steep areas during the early spring when there is abundant moisture and repeated freezing and thawing. Rockfalls are a serious geological hazard that can threaten human life, impact transportation corridors and communication systems, and result in other property damage.



Spring is typically the landslide/rockfall season in Wyoming as snow melts and saturates soils and temperatures enter into freeze/thaw cycles. Rockfall and landslides are influenced by seasonal patterns, precipitation, and temperature patterns. Earthquakes could trigger rockfalls and landslides too.

Topples

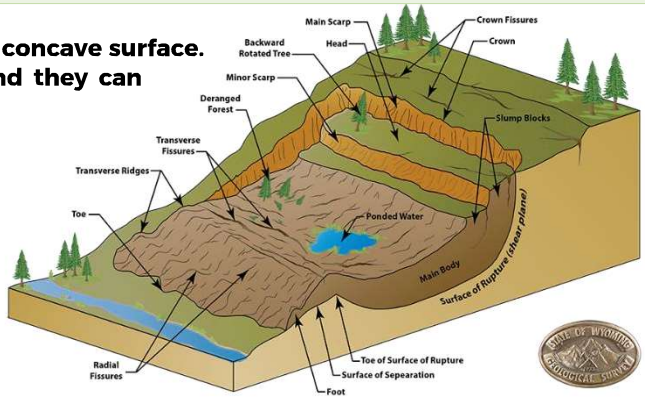
Comparable to falls, but the primary motion involves forward rotation and mass movement of rock or debris out of a slope face.

Creep

Slow movement of a material down a slope.

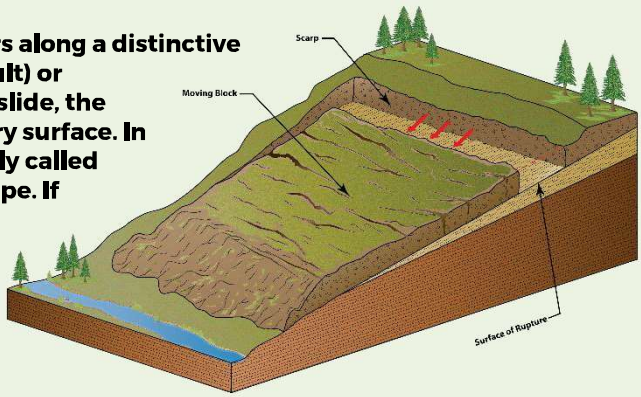
Rotational (slump)

Block of material moving down a slope along a concave surface. Rotational slides are usually called slumps, and they can occur in bedrock, debris, or earth.



Translational (slide)

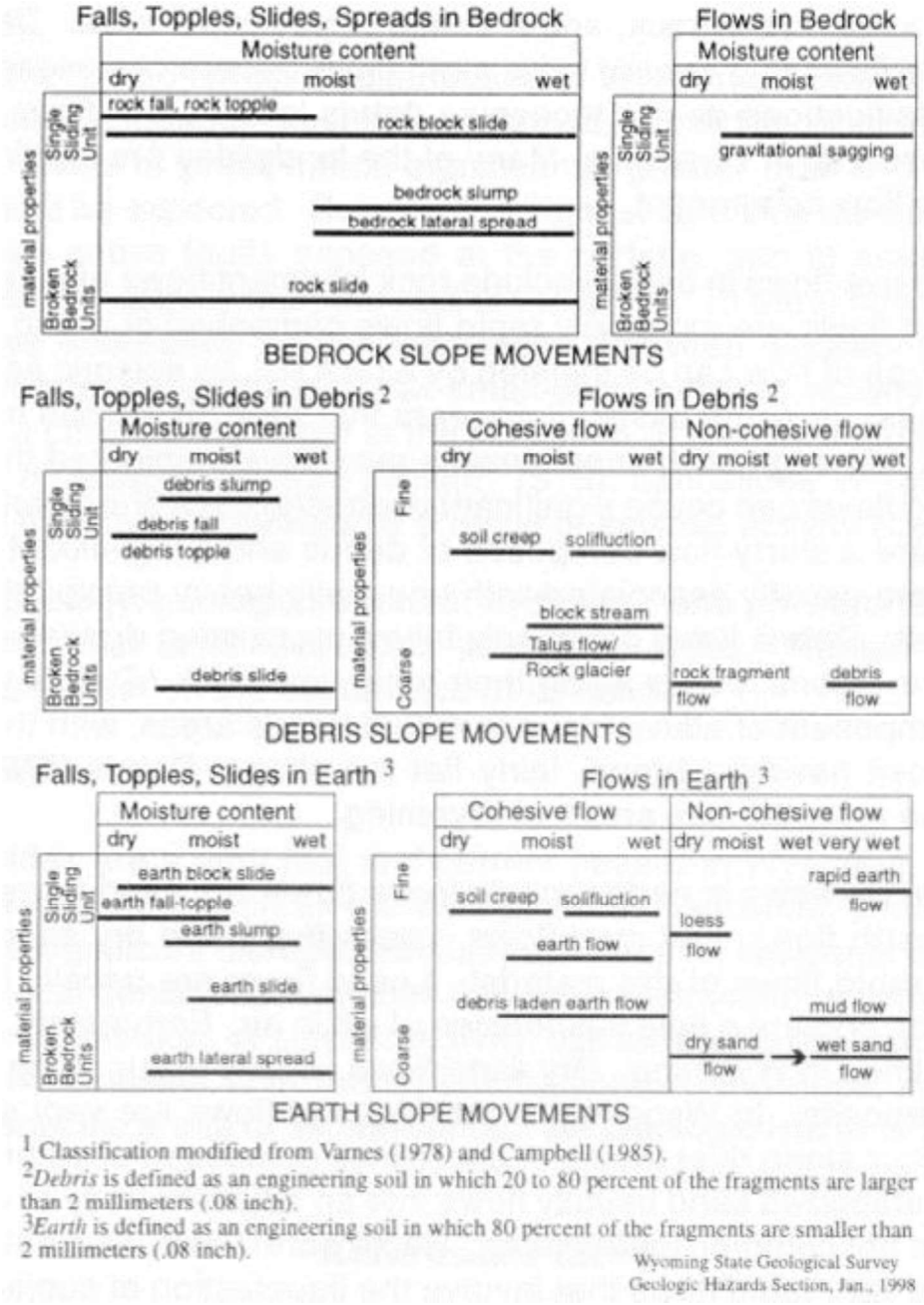
Block of material moving down-slope that occurs along a distinctive surface of weakness (soil horizon, bedding or fault) or parallel to the ground surface. In a translational slide, the surface of rupture is a planar or gently undulatory surface. In bedrock and earth, translational slides are usually called block slides if an intact mass slides down the slope. If rock fragments or debris slide down a slope on a distinct shear plane, the movements are called rockslides or debris slides.



Lateral spreads

Lateral spreads are characterized by lateral extension movements in a fractured mass. Lateral spread movements may occur in bedrock and soil due to liquefaction or plastic flow of subjacent materials, or in bedrock without a well-defined basal shear surface or zone of plastic flow. Lateral spreads in bedrock without a well-defined zone of shearing or flow, usually occur on ridge crests.

Figure 4-20 Wyoming Landslide Classifications



Source: Wyoming State Geological Survey

Location

Landslides are one of the most common geologic hazards in Wyoming. Landslides occur every year in Wyoming. The area susceptible to landslides is primarily outside of municipalities in more remote areas, however, there is a great deal of outdoor recreation trails and roadways that exist in this overlay. Figure 4-21 shows the significant geographic extent of landslide susceptibility in the County. When landslides do occur in populated areas, they can cause significant damage and loss of life.

Figure 4-22 shows the Town of Jackson is susceptible to landslides on the outskirts of the planning area. Landslide prone areas include existing old landslides, the bases of steep slopes, the bases of drainage channels, and developed hillsides where leach-field septic systems are used. Areas that are typically considered safe from landslides include areas that have not moved in the past, relatively flat-lying areas away from sudden changes in slope, and areas at the top or along ridges, set back from the tops of slopes.

Figure 4-21 Wyoming Region 8 Landslide Susceptibility

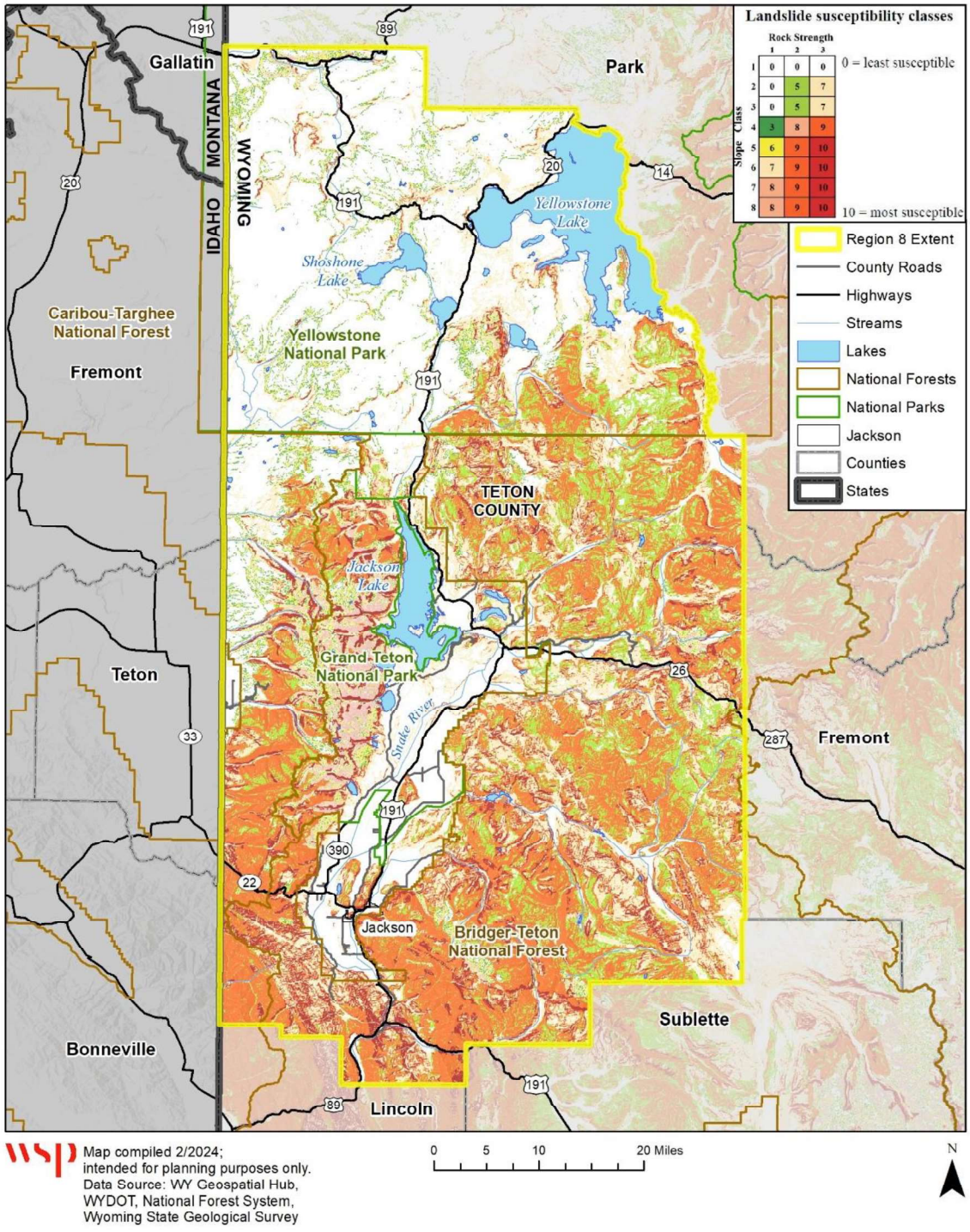
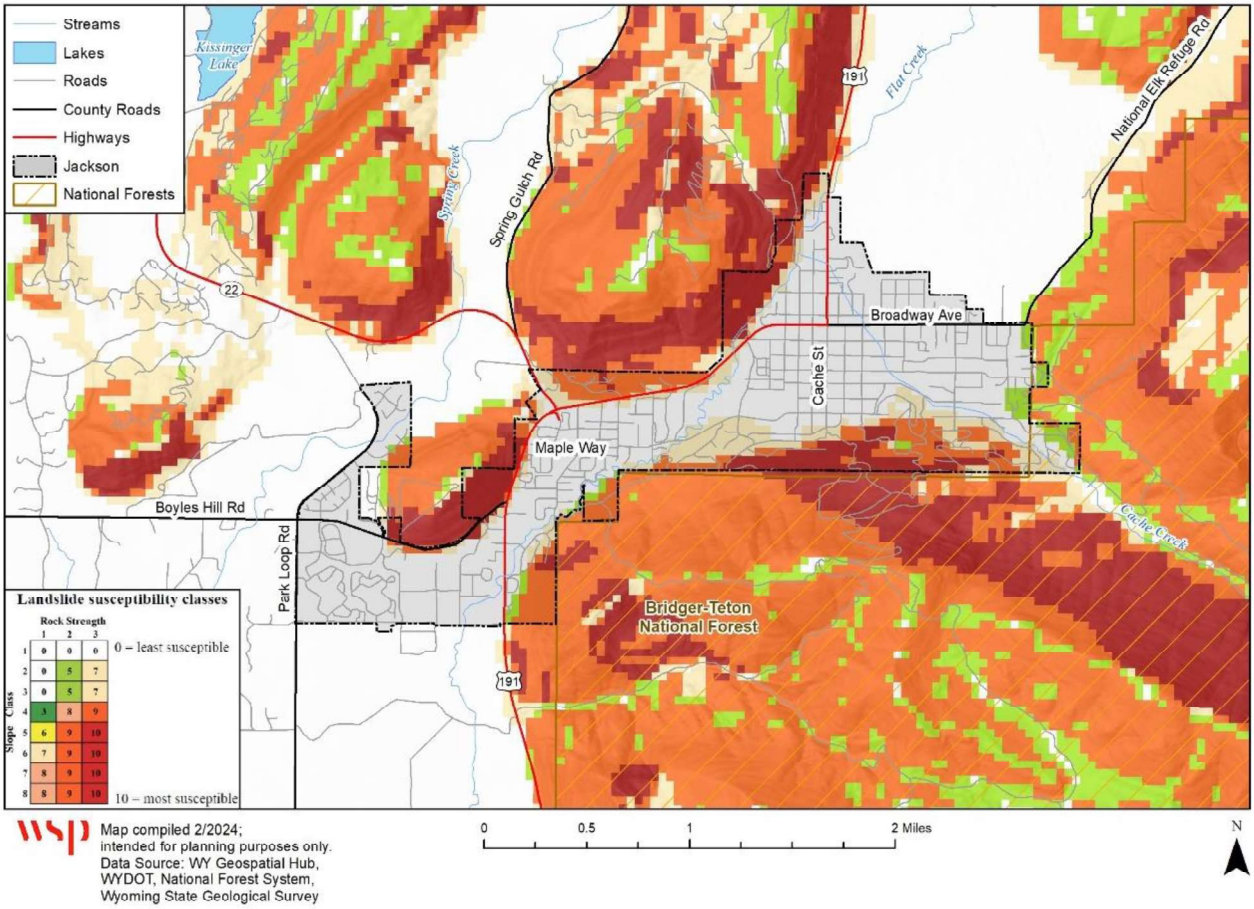
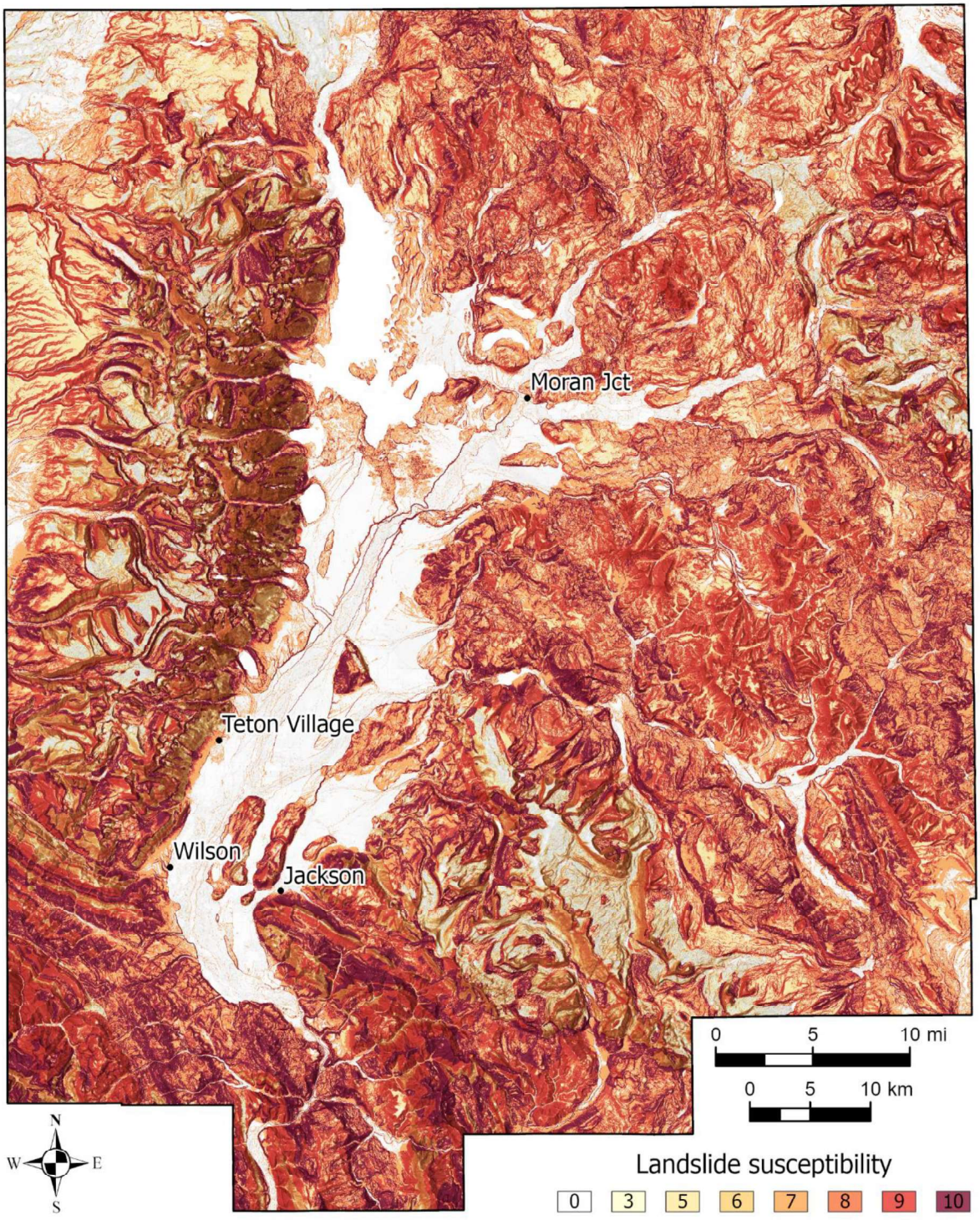


Figure 4-22 Landslide Susceptibility in Jackson



To improve upon future understanding of landslide vulnerability in Region 8, Wyoming State Geological Survey (WSGS) has also been developing new, high-resolution landslide susceptibility mapping, shown in Figure 4-23 below. This map is a preliminary map of susceptibility to deep-seated landslides in southern Teton County, primarily highlighting the vicinity of Jackson Hole. Landslide susceptibility is classified into eight bins, with higher numbers and darker colors representing greater susceptibility. The susceptibility raster has a 10-meter resolution and was produced by intersecting data on rock strength (from geologic maps, primarily 1:24,000-scale) and slope angle (from bare-earth lidar digital elevation models, down-sampled to 10-meter resolution) following methods modified from Wittke and Stafford (2019) and references therein. This susceptibility map is an unpublished draft as of December 2024, and it will be superseded by a forthcoming WSGS publication. This preliminary figure is not for distribution or use outside of the Teton County Hazard Mitigation Plan.

Figure 4-23 Preliminary Landslide Susceptibility Map of Jackson Hole



Source: Wyoming State Geological Survey, December 2024

Extent (Magnitude)

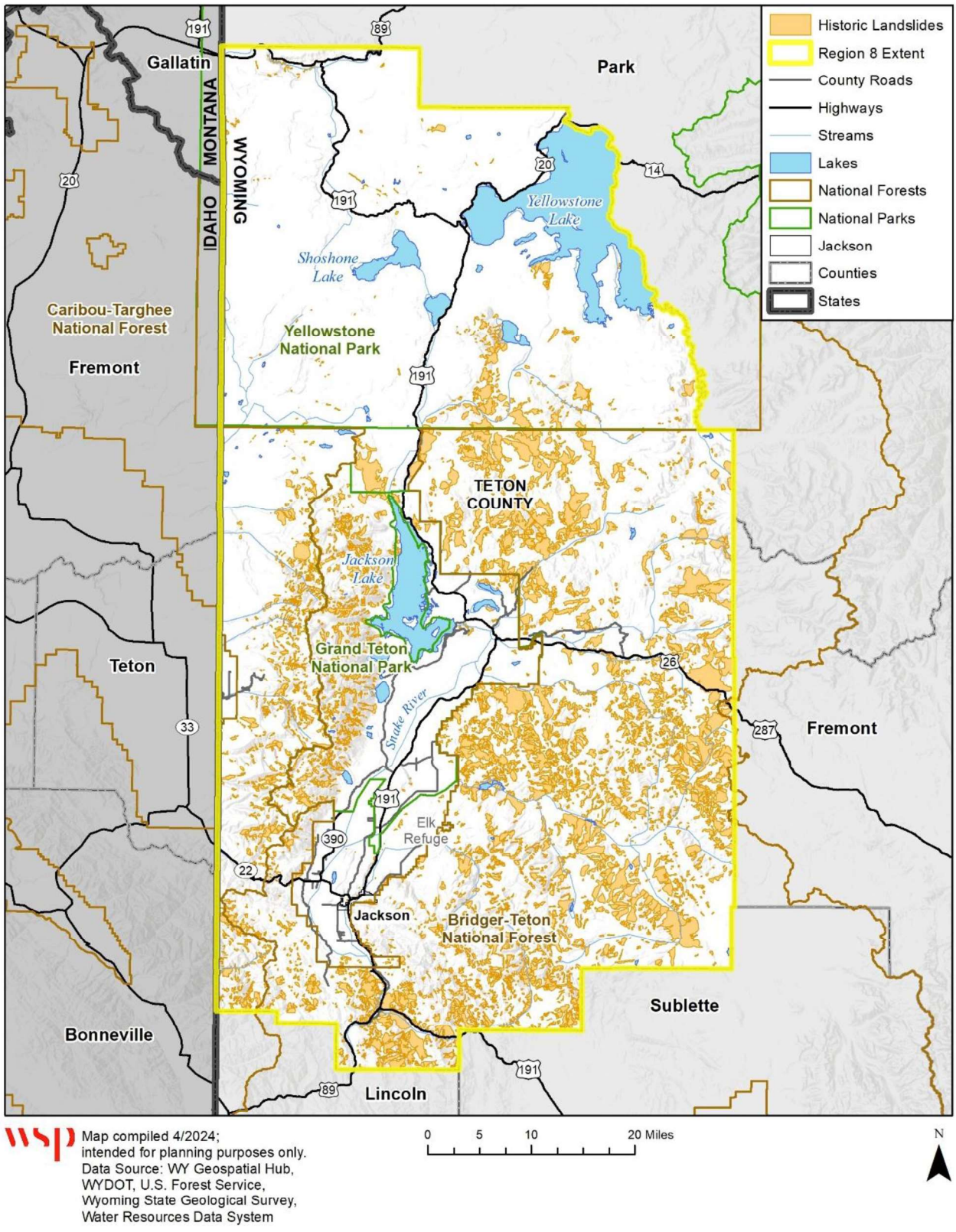
There are three measures of future landslide impacts – historic dollar damages, estimated yearly damages, and building exposure values. There is not enough current data to estimate

historic or yearly dollar damages. In general terms, landslides can threaten human life, impact transportation corridors and communication systems, and cause damage to property and other infrastructure. Actual losses can range from mere inconvenience based on inability to access roads, to high maintenance costs where even very slow or small-scale destructive slides are involved. The potential magnitude of landslides, rockfall and debris flows would typically be isolated in the region, given that most landslide events occur in mountainous areas away from city limits. However, even a small, isolated event has the potential to close state or U.S. highways in the region, resulting in long detours for days or weeks. With the added cost of detours and the potential for life safety impacts, some landslides could have greater costs.

Previous Occurrences

Landslides, debris flows, and rockfalls occur regularly in Wyoming and the Region, though limited information was available on previous occurrences that caused a particularly high amount of damage or incurred some other cost or unique impact. Figure 4-24 displays data on historical landsides in Teton County, which has a primary concentration in mountainous areas. Additionally, Figure 4-25 shows historic landslide events in the Town of Jackson, which has occurred along its city limits. Landslides of note in Region 8 are listed in Table 4-35 and described below.

Figure 4-24 Region 8 Historic Landslides



Map compiled 4/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, U.S. Forest Service,
Wyoming State Geological Survey,
Water Resources Data System

Figure 4-25 Jackson Historic Landslides

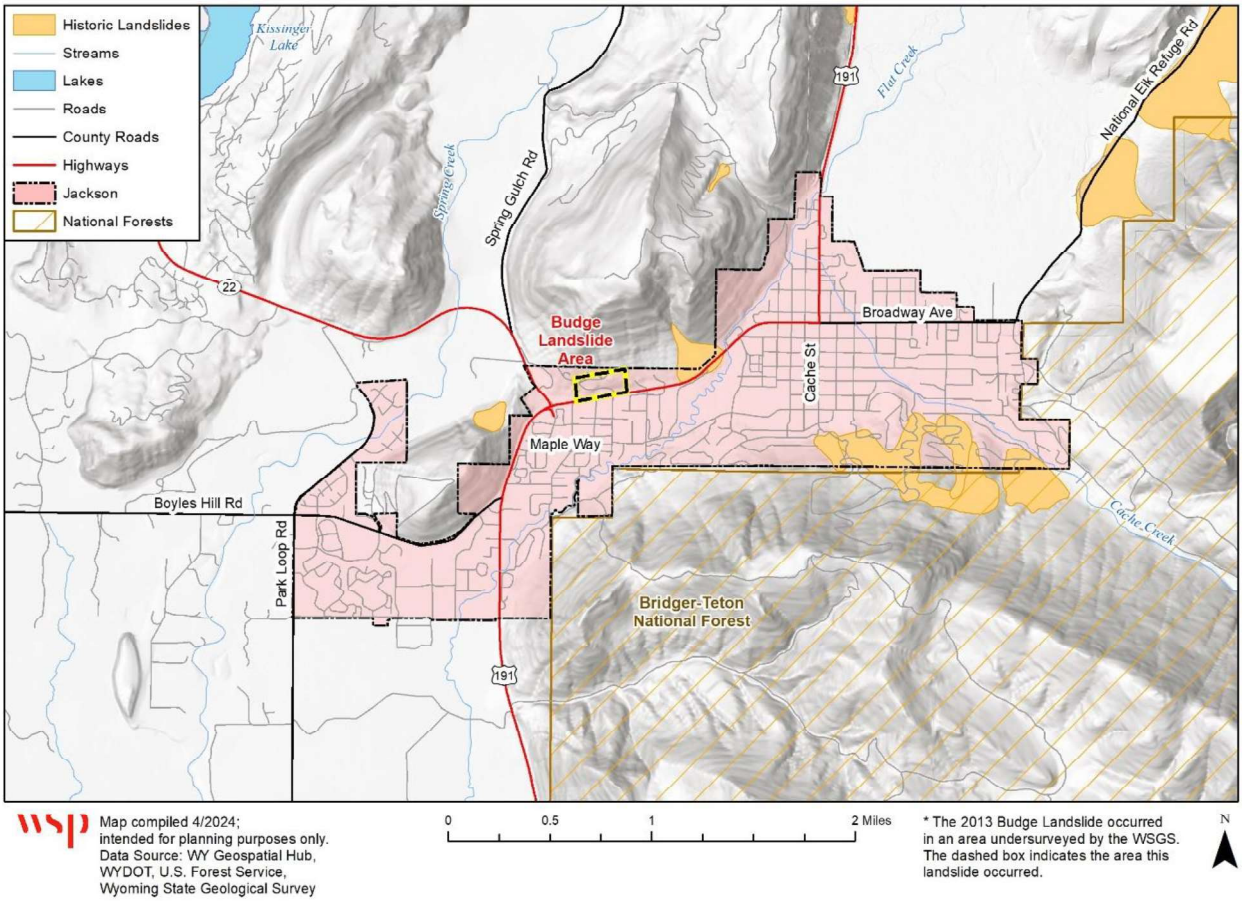


Table 4-35 Landslides of Note in Wyoming Region 8

LANDSLIDE REFERENCE NAME	YEAR
Gros Ventre Slide	6/22/1925
Crystal Peak Slide	2007-2012
Double Draw Slide	5/14/2011
West Broadway (Budge) Slide	5/16/2014
Teton Pass	5/8/2016
Cave Falls	6/7/2016
Granite Creek Earthquake	8/27/2016
Avalanche on Teton Pass	12/16/2016
Twin Pine Landslide on Highway 89	3/16/2017
Porcupine Landslide	2/8/2018
Budge Drive Slide	8/3/2018
WY22 and Hoback Canyon	4/10/2023
Periodic Springs Trail Mudslide	6/15/2023
Teton Pass Highway 22 Landslide/Embankment Failure	6/8/2024

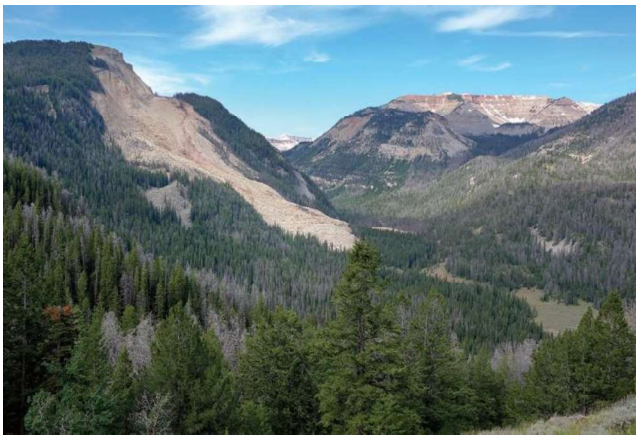
Source: NASA Landslide Viewer

GROS VENTRE SLIDE

In the 1920s, persistent small earthquakes shook parts of Teton County, particularly the eastern side, culminating in a magnitude 4 earthquake on June 22, 1925. The following day, a local farmer witnessed a 30-to-40-foot-high riverbank collapse into the Gros Ventre River, triggering the catastrophic Gros Ventre Slide. This event, estimated to have moved 50 million cubic yards of debris over 1.5 miles, formed Lower Slide Lake when it dammed the river. Although no casualties occurred during the slide, a flash flood resulting from the dam's breach claimed six lives in the town of Kelly two years later.

CRYSTAL PEAK SLIDE

In 2007, significant movement of earth on the northern flank of Crystal Peak in the Gros Ventre Wilderness caused the descent of bus-sized boulders, trees, silt, dirt, and mud into the valley below. Subsequent years saw the continuation of this process, with silt and sediment from the upper mountain forming an alluvial fan feature in 2008, diverting Crystal Creek across the valley. Further flows in 2009 and 2010 deepened the valley with rock and sediment, while in 2012, the emergence of Crystal Lake marked the formation of a lake above the earthen obstruction of Crystal Creek. These slides prompted significant alterations to the Crystal Creek Trail by Bridger-Teton National Forest staff, impacting recreational access and travel within the Gros Ventre Wilderness area.



Crystal Peak Slide. Photo courtesy Dina Mishev- Jackson Hole Magazine

DOUBLE DRAW SLIDE

The state experienced record snowpack and above-average precipitation in the spring of 2011, leading to a significant landslide in Snake River Canyon on May 14, 2011. This slow-moving mass of mud, rock, and trees crossed South Highway 89, blocking approximately 300 feet of the road and covering the pavement to depths of up to 50 feet before flowing into the Snake River. The landslide spanned about 2,000 feet, and contractors removed an estimated 200,000 cubic yards of debris. The closure of the commuter corridor for residents of Alpine and Star Valley lasted nearly two weeks, forcing the approximately 5,740 vehicles that commute to and from Jackson each day to take a 74-mile detour through Idaho and Teton Pass. In response to the severe storms, flooding, and landslides affecting multiple counties, President Obama declared a major disaster for the State of Wyoming on July 22, 2011.



Photo courtesy Teton Squadron Civil Air Patrol

WEST BROADWAY (BUDGE) SLIDE

The Budge Drive Landslide (later named the West Broadway Slide) originated behind a steep rock face formed by extensive quarrying from the late 1950s to the 1970s. With slopes up to 55 degrees, significantly steeper than the region's typical 15-degree slopes, the site became destabilized. The presence of highly fractured andesite overlying clays facilitated water flow, creating conditions for potential slipping.

On May 29, 2014, a high rate of precipitation and snow melt triggered rapid motion of this slide. But the fractures surrounding the slide mass began to form and nucleate by the fall to winter of 2011, potentially influenced by factors like a water leak, quarrying, or previous instability. Deformation of a home at 1045 Budge Drive began in fall to winter 2011, escalating to significant sinking by April 2014, accompanied by movement of the landslide's toe towards West Broadway, prompting considerations for future slope stability measures by the Town of Jackson and Teton County.



Photo courtesy JH News and Guide

In 2018, Budge Drive experienced another slow-moving landslide as a result of heavy rain and snowmelt. The slide moved on average, a quarter-inch every month and an inch during wet weather. The slide cut off access to a 60-person neighborhood and threatened town utilities, including a water line.

2024 TETON PASS (BIG FILL) LANDSLIDE

June 8, 2024, a 10 mile stretch of Teton Pass closed due to a landslide/highway embankment failure on Highway 22 which caused significant impacts to the area's workforce and economy. The slide impacted at least 2,500 people that live on the other side of the pass who commute to work, or 15% of Teton County's workforce. This event led to the catastrophic failure of the roadway. On June 21st the U.S. Department of Transportation awarded the WYDOT $6 million to offset the costs of repairs as well as make a detour. The temporary detour was put into place on June 28th, 2024 near the Idaho and Wyoming border to also restore critical access to tourist destinations such as Jackson Hole and Grand Teton National Park. The next phase of construction included the Wyoming Transmission Commission awarding a $12 million bid to Ames Construction on August 2nd. Since then, WYDOT and Ames Construction have been working 24/7 to rebuild Highway 22 and the surrounding area.

Probability of Future Events

The probability of a landslide causing damage in the Region is difficult to determine because of the poor historic data. However, WSGS mentions that landslides are one of the most common geologic hazards in Wyoming. Landslides also occur every year in Wyoming, however, most occur in remote areas and do not typically cause damage. In addition, given the analysis of topographic map quadrangles by the WSGS, along with landslide-prone location data, it is reasonable to assume that damaging events have between 10 and 100% chance of occurrence on an annual basis. Therefore, landslides, rockfalls or debris flows are likely to occur. Heavy periods of precipitation or significant development could affect slope stability. Typically, there is a landslide/rockfall 'season' that coincides with increased freeze-thaw cycles and wetter weather in the spring and early summer, as previously mentioned.

Climate Change Impacts

With climate change driving up temperatures, altering precipitation patterns, increasing the risk of wildfires, and diminishing snow caps, the likelihood of landslides is on the rise. The Fifth National Climate Assessment highlights a concerning trend: all states within the Northern Great Plains region experienced their wettest five-year period between 1995 and 2019. This pattern is indicative of broader shifts in precipitation patterns—both in terms of quantity, timing, and type—that are anticipated to unfold throughout the twenty-first century.

In Teton County, the projections indicate a significant increase in precipitation. This uptick in precipitation, particularly in the form of extreme events during both summer and winter seasons, is poised to heighten the vulnerability to landslides. Compounding this risk is the ongoing transition from snow-dominated to rain-dominated precipitation, a transition already in progress and expected to persist. The dwindling snow cover not only exacerbates the threat of landslides but also introduces additional risks, particularly concerning wildfires. In Wyoming, where wildfires are primarily ignited by lightning strikes rather than human activity, snow cover has mitigated winter wildfires. However, as snow cover diminishes, the potential for wildfires escalates, setting the stage for a cascade of secondary hazards, including landslides and debris flows. Following a wildfire, the absence of vegetation to stabilize slopes, coupled with the increased runoff resulting from burned soil surfaces, creates conditions ripe for landslide activity.

Vulnerability Assessment

PEOPLE

People could be susceptible if they are caught in a landslide or debris flow, potentially leading to injury or death. There is a danger to drivers operating vehicles, as rocks and debris can strike vehicles passing through the hazard area or cause dangerous shifts in roadways.

Similar to the methodology used in the flood section, the total people at risk were estimated by multiplying the average number of persons per household in the Town of Jackson (2.45 persons) and the County (2.33 persons) with the number of residential parcels in landslide-prone areas to estimate the population residing in landslide hazard areas. As shown in Table 4-36, there are approximately 5,257 people potentially residing in landslide susceptible areas.

Table 4-36 Teton County Population at Risk to Landslide Susceptibility Summary

JURISDICTION	STRUCTURE COUNT HIGHEST	STRUCTURE COUNT MODERATELY HIGH	STRUCTURE COUNT MODERATE	TOTAL RESIDENTIAL COUNT	POPULATION
Jackson	239	500	64	803	1,967
Unincorporated	276	1,040	96	1,412	3,290
Total	**515**	**1,540**	**160**	**2,215**	**5,257**

Source: Teton County, Wyoming CAMA 2024, Wyoming State Geological Survey, WSP GIS Analysis

BUILT ENVIRONMENT

Slope failures typically damage or destroy portions of roads, sewer and water lines, homes and public buildings, and other utility lines. Even small-scale landslides are expensive due to clean-up costs that may include debris clearance from streets, drains, streams and reservoirs; new or renewed support for road embankments and slopes; minor vehicle and building damage; personal injury; and livestock, timber, crop and fencing losses and damaged utility systems.

GIS analysis was used to estimate Region 8's potential property losses in a landslide scenario. The county parcel layers were used as the basis for the inventory of developed parcels, which was based on address points and assessor parcel data. Overlaid is landslide susceptibility data provided by Wyoming State Geological Survey. The summarized results for the Region are shown below in Table 4-37.

Table 4-37 Teton County Parcels at Risk to Landslide Susceptibility Summary

JURISDICTION	TOTAL PARCELS	STRUCTURE COUNT HIGHEST	STRUCTURE COUNT MODERATELY HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Jackson	910	302	604	65	971	$1,455,495,603	$919,042,360	$2,374,537,963
Unincorporated	1,495	281	1,116	176	1,573	$5,457,088,061	$2,945,115,705	$8,402,203,766
Total	**2,405**	**583**	**1,720**	**241**	**2,544**	**$6,912,583,664**	**$3,864,158,065**	**$10,776,741,729**

Source: Teton County, Wyoming CAMA 2024, Wyoming State Geological Survey, WSP GIS Analysis

ECONOMY

Economic impacts typically center around transportation routes temporarily closed by debris flow or landslide activity. These roads may be used to transport goods across the County or provide access for tourists and local workers. Teton County's economy strongly relies on tourism, hosting popular outdoor recreation spaces such as Jackson Hole Ski Resort, Grand Teton National Park, and a substantial portion of Yellowstone National Park. Given the region's reputation for breathtaking landscapes and outdoor recreational activities such as hiking, skiing, and wildlife viewing, any disruption caused by landslides could minimize these recreation opportunities and deter tourists from visiting. Road closures, trail damage, or the perception of increased risk due to landslides might lead to decreased visitor numbers and revenue loss for businesses reliant on tourism. Road closures also close off routes to businesses and schools, reducing the ability of employees. The Big Fill landslide is an example of this, with 15% of Teton's workforce unable to get to work due to damage to Highway 22.

CRITICAL FACILITIES AND LIFELINES

To assess the potential impact of landslides on critical facilities and lifelines, a Geographic Information System (GIS) overlay was conducted using landslide susceptibility, historic hazard layers, and critical facility point data. However, due to the unavailability of replacement values within the data, a precise estimate of potential monetary loss could not be determined. Nonetheless, the consequences of damage to these facilities extend beyond mere property loss, potentially triggering cascading impacts throughout various sectors. Summary tables of the GIS analysis results are shown below. Each table includes only the facilities located within that specific hazard ranking; they are not cumulative of the categories below them.

Table 4-38 Critical Facilities at Risk to Highest Landslide Susceptibility by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	1	1	-	-	-	1	3
Unincorporated	9	1	1	1	-	2	4	3	3	24
Total	**9**	**1**	**1**	**2**	**1**	**2**	**4**	**3**	**4**	**27**

Source: Teton County, Emergency Management, Wyoming State Geological Survey, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-39 Critical Facilities at Risk to Moderately High Landslide Susceptibility by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	1	-	1	1	2	1	-	1	7
Unincorporated	4	1	-	10	3	8	27	7	4	**64**
Total	**4**	**2**	**0**	**11**	**4**	**10**	**28**	**7**	**5**	**71**

Source: Teton County, Wyoming State Geological Survey, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-40 Critical Facilities at Risk to Moderate Landslide Susceptibility by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	-	-	-	-	-	-	0
Unincorporated	4	1	-	1	-	1	4	1	-	12
Total	**4**	**1**	**0**	**1**	**0**	**1**	**4**	**1**	**0**	**12**

Source: Teton County, Emergency Management, Wyoming State Geological Survey, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-41 Critical Facilities at Risk in Historic Landslide Areas by Jurisdiction

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	-	-	-	-	-	-	0
Unincorporated	2	-	-	-	-	-	4	1	-	7
Total	**2**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**7**

Source: Teton County, Wyoming State Geological Survey, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

District specific GIS analysis did not yield risk to FCWID or Airport facilities.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

As primarily a natural process, landslides and debris flows can have varying impacts on the natural environment. Debris flows have the potential to permanently alter the natural landscape. The impacts of landslides and debris flows on historical and cultural structures would be similar to the impacts on the general property.

Land Use and Development Trends

The occurrence of landslides is highly dependent upon availability of moisture, soil saturation, and freeze/thaw cycles. Teton County and the Town of Jackson should expect to see landslide activity that is commensurate with rainfall frequency and intensity as well as snowpack condition. The same climate impacts that bring heavy snowfall to the Tetons and surrounding ranges in the planning area can also create conditions of rapid warming and snowmelt, which can increase landslide activity, especially the rockfall variety in steep terrain. Continued development and re-development, including reconstruction, road repairs and maintenance, and other uses near and along hillsides, especially in areas surrounding the Town of Jackson like Snow King Mountain, East and West Gros Ventre Buttes, and Boyles Hill, as well as areas along the base of the Tetons in the County, perpetuates the risk associated with these areas.

While there are existing vulnerabilities and exposure to landslides as discussed throughout this chapter, new development over the past 5 years has not significantly increased or altered the overall vulnerability of the County, Town of Jackson, or Teton Conservation District. The Jackson Teton County Comprehensive Plan include policies specific to landslides including policy 3.4.b avoiding development in potential landslide paths, Policy 3.4.c prohibiting new development on steep slopes, and policy 3.4.d limiting new development on poor soils susceptible to erosion. In addition, the level of disturbance required to develop on steep slopes has a disproportionate impact on natural resources. Slope development also poses difficulties for emergency access. Development on steep slopes will be avoided to the greatest extent possible. When development is not avoidable, it should employ best management practices for slope stabilization, erosion control and stormwater management. Impacts should be reduced by minimizing disturbance and adapting development to fit the topography, rather than modifying the topography to accommodate development. Hillside Land Development Regulations (LDRs) are currently being updated by the Town of Jackson with the goal of improving landslide information and establishing best practices for identifying, avoiding, and mitigating hazards in hillside development. Current regulations focus solely on slope angle and ignore soil conditions, slide history, and other factors.

Risk Summary

Landslide hazard has **medium** overall significance for Teton County. Landslides are one of the most common geologic hazards in Wyoming with a likely probability for future occurrences. While the area susceptible to landslides is primarily outside of municipalities, there is a great deal of outdoor recreation trails and roadways that exist in this overlay, making the geographic extent significant. Activities and hazards that trigger landslides tend to be wildfires, flooding, alternate freezing, seismic activity, construction, and human activity. This often leads to moderate impacts such as road closures causing long detours or clogging up drainage channels where leach-field septic systems are used.

Table 4-42 Risk Summary by Jurisdiction: Landslide

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Medium	Impacts to transportation network are the greatest vulnerability; past events have cut off Teton County by blocking or destroying highways.
Town of Jackson	Low	Areas along the municipal boundaries of Jackson are exposed to landslide risk, which could result in direct damage to buildings and infrastructure, as well as increased risk of injuries.
Teton Conservation District	Low	Not considered to have impacts to District facilities. Landslides could cause a natural dam or increased sedimentation.
Flat Creek Watershed Association	Low	Landslides can alter or block streams and increase downstream sedimentation
Jackson Hole Airport	NA	The airport is not exposed to landslide risk

4.2.7 Severe Winter Storm

Description

The National Weather Service defines a storm as "any disturbed state of the atmosphere, especially affecting the Earth's surface, and strongly implying destructive and otherwise unpleasant weather." Winter storms, then, are storms that occur during the winter months and produce snow, ice, freezing rain, sleet, and/or cold temperatures. Winter storms are a yearly occurrence in climates where precipitation may freeze and are not always considered a disaster or hazard. Disasters occur when severe storms impact the operations of the affected community by damaging property, stalling the delivery of critical services, or causing injuries or deaths among the population.

For the purposes of this planning element, severe winter storms are those which produce heavy snow, significant ice accumulation, or prolonged blizzard conditions. The National Weather Association (NWA) Online Glossary does not define a 'severe winter storm.' However, it does define a Severe Local Storm as "A convective storm that usually covers a relatively small geographic area, or moves in a narrow path, and is sufficiently intense to threaten life and/or property." Therefore, while the term 'severe winter storm' is not an official term from the NWA, it is drawn from other official definitions and is intended to reflect these standards as much as possible while still addressing the specific needs of this Plan.

Heavy snow can immobilize a region, stranding commuters, stopping the flow of supplies, and disrupting emergency and medical services. Accumulations of snow can collapse roofs and knock down trees and power lines. In rural areas, homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, damage repair, and business losses can have a tremendous impact on cities and towns. Heavy accumulations of ice can bring down trees, electrical wires, telephone poles and lines, and communication towers. Communications and power can be disrupted for days until damages are repaired. Even small accumulations of ice may cause extreme hazards to motorists and pedestrians. Some winter storms are accompanied by strong winds, creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chills. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines. Blowing snow can

reduce visibilities to only a few feet in areas where there are no trees or buildings. Serious vehicle accidents can result with injuries and deaths. Extreme cold often accompanies a winter storm or is left in its wake. It is most likely to occur in the winter months of December, January, and February. Prolonged exposure to the cold can cause frostbite or hypothermia and can become life-threatening. Infants and the elderly are most susceptible. Pipes may freeze and burst in homes or buildings that are poorly insulated or without heat. Extreme cold can disrupt or impair communications facilities. Extreme cold temperatures can destroy crops and cause utility outages, leaving people without water or power until the utility companies are able to restore service. What constitutes extremely cold temperatures varies across different areas of the United States, based on normal climate temperatures for the time of year. In Wyoming, cold temperatures are normal during the winter. When temperatures drop at least 20 degrees below normal winter lows, the cold is considered extreme and begins to impact the daily operations of the region. Extreme cold/wind chill impacts plants, animals, and water supplies. The effects of extremely cold temperatures are amplified by strong to high winds that can accompany winter storms. Wind-chill measures how wind and cold feel on exposed skin and is not a direct measurement of temperature. As wind increases, heat is carried away from the body faster, driving down the body temperature, which in turn causes the constriction of blood vessels, and increases the likelihood of severe injury or death to exposed persons. Animals are also affected by wind-chill; however, cars, buildings, and other objects are not.

Location

Winter storms are a yearly feature of the Wyoming climate and may occur anywhere in the state. Generally, severe winter storms and extreme cold events are considered regional, which implies the storms impact multiple counties or a large area simultaneously, often for extended time periods. It is possible for the geographic extent of the hazard to vary significantly within a single county - a regional storm may directly impact only a small portion of the planning area while still extending over a large portion of the surrounding area. Therefore, they are considered to have an extensive geographic impact rating.

Zones containing higher elevations (Teton and Gros Ventre Mountains & Yellowstone National Park), on average, see higher snowfall totals from the same storm system that impacts the Jackson Hole forecast zone, where smaller amounts are comparatively more typical.

Extent (Magnitude)

The damages caused by severe winter storms, blizzards and extreme cold vary and are dependent on several factors: the duration of the storm; the geographic extent; the time of year; meteorological factors such as wind, moisture content of the snow, ground, and air temperatures; and the advance warning of the storm. Impacts from the storm dictate the magnitude of the event, meaning that the amount of snow may not always directly correlate to how bad the storm is. Damaged power lines and dangerous or impassable roadways may impede the delivery of critical services such as medical and emergency assistance, the delivery of food supplies and medications, or even the provision of basic utilities such as heat and running water. When events are preceded by an extended warning time, it is possible to mitigate the effects of insufficient supply levels or to test emergency generators, which may prevent some of the previously described impacts from occurring. Unanticipated storms increase the number of people stranded, both in cars and at public locations, which may increase the number of injuries and deaths attributed to the event (often caused by exposure) and place additional strain on public sheltering capacities. The weight of the snow, driven by the water content, influences the potential for damages caused to structures and trees. Lighter snow caused by extreme cold may increase the damages to livestock, agriculture, and landscaping due to freezing conditions. Winter storms which go through periods of thaw and freeze prolong dangerous icy conditions, increasing the likelihood of frozen and damaged

water pipes, impassable or dangerous roadways, damaged communication lines, or more extensive damages to infrastructure and structures caused by seeping water freezing under roofs, porches, patios, inside sidings, or causing damage to vehicles. Extreme cold can also impact livestock and even crops if the event occurs during certain times of the year.

In addition to the variety of potential impacts discussed above, there are also several different magnitude scales useful in describing the potential range of severity of winter storm events. The National Weather Service (NWS) describes different types of snow events as the following:

- Blizzard - Winds of 35 mph or more with snow and blowing snow reducing visibility to less than ¼ mile for at least 3 hours.
- Blowing Snow - Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
- Snow Squalls - Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
- Snow Showers - Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
- Snow Flurries - Light snow falling for short durations with little or no accumulation.

Winter storm watches and warnings issued by the National Weather Service (NWS) may also be helpful for determining the difference between a seasonal winter storm and a severe winter storm. Warnings are issued if the storm is producing or suspected of producing heavy snow or significant ice accumulations. Watches are usually issued 24 to 36 hours in advance for storms capable of producing those conditions, though criteria may vary between locations. Winter Weather Advisories are issued when a low-pressure system produces a combination of winter weather that presents a hazard but does not meet warning criteria. Descriptions of various NWS winter weather alerts are provided in Table 4-43.

Table 4-43 NWS Winter Weather Alert Categories

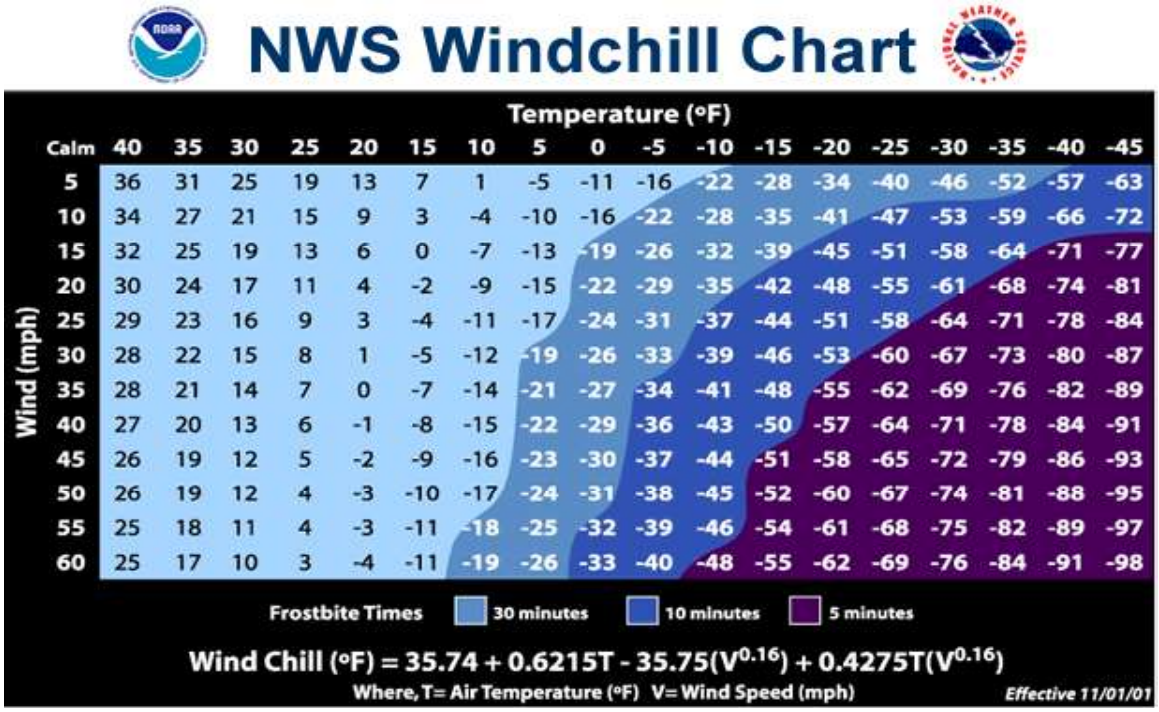
ALERT NAME	ALERT DESCRIPTION
Winter Weather Advisory	This alert may be issued for a variety of severe conditions. Weather advisories may be announced for snow, blowing or drifting snow, freezing drizzle, freezing rain, or a combination of weather events.
Winter Storm Watch	Severe winter weather conditions may affect your area (freezing rain, sleet or heavy snow may occur separately or in combination)
Winter Storm Warning	Severe winter weather conditions are occurring or imminent.
Freezing rain or freezing drizzle	Rain or drizzle is likely to freeze upon impact, resulting in a coating of ice glaze on roads and all other exposed objects.
Sleet	Small particles of ice usually mixed with rain. If enough sleet accumulates on the ground, it makes travel hazardous.
Blizzard Warning	Sustained wind speeds of at least 35 mph with visibility reduced to ¼ mile or less, for at least 3 hours accompanied by considerable falling or blowing snow. This alert is the most perilous winter storm with visibility dangerously restricted
Snow Squall Warning	Quick, intense bursts of snow, accompanied by strong gusty winds. Expected rapid reduction of visibility, these are typically issued as smaller polygons, like tornado warnings, along transportation corridors. They are short-fuse products that typically last 30 to 60 minutes.
Frost/Freeze Warning	Below freezing temperatures are expected and may cause significant damage to plants, crops and fruit trees.

ALERT NAME	ALERT DESCRIPTION
Wind Chill	A strong wind combined with a temperature slightly below freezing can have the same chilling effect as a temperature nearly 50 degrees lower in a calm atmosphere. The combined cooling power of the wind and temperature on exposed flesh is called the wind - chill factor.

Source: National Weather Service

In 2001, the NWS implemented an updated Wind-Chill Temperature index. This index was developed to describe the relative discomfort/danger resulting from the combination of wind and temperature. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature.

Figure 4-26 National Weather Service Wind-Chill Chart



Source: NOAA

Previous Occurrences

For a record of previous occurrences, the NOAA National Centers for Environmental Information (NCEI) database was used. NCEI data on winter storms and extreme cold events in Region 8 extends from January 1996 through October 2023. During that time, Region 8 experienced 459 winter weather incidents, including blizzards, extreme cold/wind chill, heavy snow, winter storms, and winter weather. It is important to note that this database is comprised of information that is reported to NOAA, so the records are likely incomplete regarding the total number of events as only those with measurable impacts typically get reported. Table 4-44 includes a breakdown of the reported events. The Region experiences an average of 17 winter weather incidents annually. There have been no reported fatalities associated with these incidents, and one reported injury. (Many minor injuries from winter weather likely go unreported.) Total reported property damages in the Region amounted to $1,100,000, the majority of which occurred in a single storm on October 15, 1998.

Table 4-44 Winter Weather Events Summary, 1996-2023

EVENT TYPE	NUMBER OF EVENTS	FATALITIES/ INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Blizzard	2	0 / 0	$0	$0
Extreme Cold/ Wind Chill	15	0 / 0	$0	$0
Heavy Snow	84	0 / 0	$0	$0
Winter Storm	354	0 / 1	$1,100,000	$0
Winter Weather	4	0 / 0	$0	$0
Total	**459**	**0 / 1**	**$1,100,000**	**$0**

Source: NCEI

As shown in Table 4-45 above, Teton County falls into 3 different NWS forecast zones. The NWS has issued 482 Advisories, Watches, and/or Warnings concerning winter weather phenomena specifically for the Jackson Hole forecast zone between 2005 and March 2024, as shown in Table 4-45 which also includes information from the Teton & Gros Ventre Mountains and Yellowstone National Park forecast zones.

Table 4-45 Winter Weather Watches, Warnings, and Advisories for Teton County, 2005 – March 2024

	JACKSON HOLE ZONE	TETON & GROS VENTRE ZONE	YELLOWSTONE NP ZONE
Blizzard Warning	1	0	0
Freeze Warning	27	0	0
Freeze Watch	9	0	0
Snow Advisory	41	59	58
Wind Chill Advisory	2	2	1
Wind Chill Warning	3	3	3
Winter Storm Warning	109	169	96
Winter Storm Watch	95	146	111
Winter Weather Advisory	195	300	259
Total	**482**	**679**	**528**

Source: Iowa State University Environmental Mesonet Database (https://mesonet.agron.iastate.edu/vtec/search.php#byugc)

The winter of 2018-2019 was one of the snowiest on record for the Jackson area. Prior to February 2019, the snowiest February on record was 1978, when 33 inches were recorded that month. By February 21, 2019, Jackson had received 41.5 inches of snow for the month, easily surpassing the previous record from 1978. By the end of the month, February 2019 would go down as the second snowiest month ever recorded for Jackson, totaling 51.8 inches. The record stands at 56 inches recorded for January of 1969.

The winter season of 2022-2023 also saw much heavier snowfalls and colder than average temperatures throughout Teton County and the Jackson Hole Valley. According to data from Bridger-Teton National Forest, total snowfall for the season recorded on in the Rocky Mountains within Grand Teton National Park from October 1, 2022 to April 1, 2023 was 572 inches, which was only four inches shy of the record seasonal snowfall set during the winter of

1996-1997. Snowfall and accumulated snow depths are typically much lower in the Town of Jackson and areas of the Jackson Hole Valley.

(https://www.mountainweather.com/2023/04/jacksons-cold-and-snowy-winter-of-2022-23/#:~:text=In%20the%20bigger%20picture%2C%20the,snowfall%20during%20that%20same%20period.)

Probability of Future Events

Winter storms and extreme cold are an annual occurrence in Wyoming, often occurring multiple times each winter, and affecting entire regions in their size and scope. Since 1996, Teton County has averaged 17 recorded severe winter weather events per year according to the NCEI database. Additionally, as shown in Table 4-45 based on the number of NWS winter weather watches and warnings, the number of issuances varies depending on the forecast zone and phenomena; however this provides an average of between 25 and 36 issuances per year across the county, further indicating how this hazard is all but guaranteed to occur multiple times per year in the future.

It is important to note that the lack of specific historical accounts on extreme cold temperatures does not necessarily indicate a low frequency of occurrence. Residents of Wyoming are used to cold weather and may be less likely to report events that might be considered extreme in other areas.

Climate Change Impacts

One possible outcome of a warming climate are warmer winters, the benefits of which may include lower winter heating demand, less cold stress on humans and animals, and a longer growing season. According to the Fifth National Climate Assessment, increasing average temperatures have occurred across all seasons, but are most pronounced in winter for the Northern Great Plains region (which includes Wyoming). Climate models from the University of Wyoming predict warmer temperatures in the winter months. This could lead to more precipitation and a greater intensity of storms.

Protect Our Winters, a 501(c)(3) nonprofit, identified a strong positive relationship between skier visits and snow cover and/or snow water equivalent. During high snow years, their analysis showed increased participation levels in snow sports resulting in more jobs and added economic value. In low-snow years, participation drops, resulting in lost jobs and reduced revenue. The effects of low snow years impact the economy more dramatically than those of high snow years.

Vulnerability Assessment

PEOPLE

Winter storms in the Region, including strong winds and blizzard conditions, may cause localized power and phone outages, closures of streets, highways, schools, businesses, and non-essential government operations, and increase the likelihood of winter-weather related injury or death. People may be stranded in vehicles or other locations not suited to sheltering operations or isolated from essential services. A winter storm can escalate, creating life threatening situations when emergency response is limited by severe winter conditions. Other issues associated with severe winter storms include the threat of physical overexertion that may lead to heart attacks or strokes. Snow removal costs can pose significant budget impacts, as can repairing the associated damages caused by downed power lines, trees, structural damages, etc. Heavy snowfall during winter can also lead to flooding or landslides during the spring if the area snowpack melts too quickly.

Extreme cold/wind chill pose the greatest danger to outdoor laborers, such as highway crews, police and fire personnel, and construction. The elderly, children, people in poor physical

health, and the homeless are also vulnerable to exposure. Overall, the population has a medium exposure to severe cold.

Severe winter weather also increases the vulnerability of the commuting population. While there is no way to quantify which of these accidents occur during severe winter storms versus regular winter storms, the numbers indicate that winter driving conditions raise the vulnerability of the commuting population.

BUILT ENVIRONMENT

The built environments vulnerability to severe winter weather includes physical damage caused by high winds, ice, or snowpack and melting snow. Vehicles may be damaged as well or left temporarily unusable due to the driving conditions created by severe winter weather. Contents of homes, storage units, warehouses and storefronts may be damaged if the structures are compromised or fail due to excessive snow loading. Very wet snowpacks down densely and is very heavy. This may cause strain on structures, leading to partial or entire collapses of walls, roofs, or windows in extreme cases. Crops, livestock, and other agricultural operations are also vulnerable to severe winter storms.

Extreme cold/wind chill presents a minimal risk to structures; however, it is common for damage to occur when water pipes freeze and break. Homes without adequate insulation or heating may put owners at a higher risk for damages or cold-related injury. Vehicles may not start or may stall once started due to the cold temperatures and the risks of carbon monoxide poisoning or structure fires increases as individuals attempt to warm cars in garages and use space heaters. Driving conditions may deteriorate if extreme cold/wind chill prolongs icy road conditions, which will impact commutes and emergency response times as well. Landscaping and agricultural products may be damaged or destroyed by unseasonable occurrences of extreme cold/wind chill, causing plants to freeze and die. This may increase the indirect vulnerabilities to severe cold by causing greater economic costs and losses for the year. The overall vulnerability of general property is low.

ECONOMY

The regional economy in the winter is dependent on winter storms to bring snow to the ski areas and visitors to enjoy the recreational opportunities that are common in the winter. Economic impacts can result when road closures block travel and transportation of goods into the region, however these are usually temporary.

CRITICAL FACILITIES AND LIFELINES

Ice or heavy accumulations of snow, particularly with blowing and drifting, can significantly impact roadways and commuters that use them. Storms and storm warnings also require vast amounts of overtime for County and local highway and streets departments to remove snow and melt ice. Further, as is described in the avalanche hazard section, many commuters to and from the Jackson Hole area rely on high mountain passes or steep canyons for commuter travel. Highway 22 over Teton Pass from Idaho to Wyoming is the most heavily traveled of these routes, as the local workforce has access to more affordable home prices in areas like Victor and Driggs, ID. Responding to the effects of a winter storm is made difficult for certain county services due to development in remote or hard-to-access locations. Grand Targhee Resort and the Alta area of Teton County are especially difficult for emergency service access, as getting there requires a 45-mile drive over Teton Pass, north through Idaho, and back into Wyoming via Ski Hill Rd.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

Natural resources may be damaged by the severe winter weather, including broken trees and death of unsheltered wildlife. Unseasonable storms may damage or kill plant and wildlife,

which may impact natural food chains until the next growing season. Historical areas may be more vulnerable to severe winter storms due to construction and age of structures. Cultural resources generally experience the same vulnerabilities outlined in General Property, in addition to lost revenue impacts due to transportation impacts. The overall vulnerability of these resources is medium.

Land Use and Development Trends

The county has experienced a notable increase in residential development as individuals are drawn to the scenic and recreational opportunities the area offers. As areas are being developed the County Building Codes Resolution of Teton County requires in sections 35-9-101 through 35-9-121 that structural supports of roofs must be designed to resist wind, snow, and earthquake loads. Additionally, the county requires that any new buildings being constructed should have an ice and water shield on the roof, which is an underlayment designed to be installed underneath a shingle, tile, or metal roof. This is not required by code in many other counties but due to the amount of winter storms in the region every year, Teton County requires it. Measures such as this have ensured that risk and vulnerability to winter storms has not been increased significantly for the County, Town of Jackson, or Teton Conservation District due to growth over the last 5 years.

Additionally, there has been a strong effort and focus to balance development with environmental conservation, resulting in stringent land use regulations aimed at preserving the county's natural resources and wildlife habitats. The ongoing challenge for Teton County is to manage growth sustainably while maintaining the delicate balance between development and conservation.

Risk Summary

While winter storms are characteristic of the planning area, in general, Teton County, the Town of Jackson, and residents have adapted to the consequences of this hazard, and impacts are less severe than they would be in other planning areas where winter storms are less common.

Table 4-46 Risk Summary by Jurisdiction: Severe Winter Storm

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Medium	Winter storms typically affect a large area, with potential for localized variations in the severity. Vulnerability and impacts generally do not vary between jurisdictions. Structural damage, power outages, and transportation disruptions are all common impacts.
Town of Jackson	Medium	Vulnerability and impacts generally do not vary between jurisdictions. Structural damage, power outages, and transportation disruptions are all common impacts.
Teton Conservation District	Medium	Vulnerability and impacts generally do not vary between jurisdictions. Structural damage, power outages, and transportation disruptions are all common impacts.
Flat Creek Watershed Association	Medium	Frazil ice could cause the overflow of certain areas within the watershed and damage property. Additionally, power outages and transportation disruptions are also common impacts of winter storms in this area.
Jackson Hole Airport	Medium	Winter storms can often cause delays and sometimes temporarily ground flights. Even if the airport remains open, closures of North Highway 89 can prevent travelers from getting to or leaving the

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
		airport and also prevent delivery of critical supplies to the airport, including fuel.

4.2.8 High Winds (Including Tornado)

Description

High Winds

High winds/windstorms, the most prevalent form of severe weather, often accompany severe thunderstorms, known as convective windstorms. These events pose significant risks, including property and crop damage, threats to public safety, and disruptions to utilities and communications. Straight-line winds, which are lacking rotation, can occasionally surpass speeds of 100 miles per hour (mph). The National Weather Service (NWS) defines high winds as sustained speeds of 40 mph or greater lasting for at least an hour, or speeds exceeding 58 mph regardless of duration.

The NCEI database categorizes wind events into three categories: high winds, strong winds, and thunderstorm winds. The key divergence between high winds and thunderstorm winds in the National Centers for Environmental Information (NCEI) dataset lies in their timing and reporting scale. High winds are most frequently reported in winter months (December, January, and February) and are recorded on a zonal scale, whereas thunderstorm winds are most reported in the summer months (June, July, and August) and recorded on a local county or city scale. Strong winds on the other hand originate from thunderstorms and can range from 32 to 73 mph. Strong winds are the least frequently documented category of wind in Teton County. Despite these differences, the winds speeds and associated impacts from these winds are comparable.

Wind speed is also rated on the Beaufort wind scale (Table 4-47). The Beaufort wind scale is particularly useful for estimating wind speed in the absence of instrumentation. This HMP update uses the aforementioned NCEI wind speed classifications and data to evaluate wind hazard extent.

Table 4-47 Beaufort Wind Scale

FORCE	SPEED (MPH)	DESCRIPTION
0	0-1	Calm
1	1-3	Light Air
2	4-7	Light Breeze
3	8-12	Gentle Breeze
4	13-18	Moderate Breeze
5	19-24	Fresh Breeze
6	25-31	Strong Breeze
7	32-38	Near Gale
8	39-46	Gale
9	47-54	Severe Gale
10	55-63	Storm

Source: NWS

Tornadoes

Tornadoes are one of the destructive types of severe weather. Tornadoes are violently rotating columns of air, formed by a combination of atmospheric instability and wind shear. Instability occurs when warm, moist air is wedged under drier, cooler air aloft. This warm air rises, causing the intense updrafts and downdrafts seen in strong thunderstorms — the incubators of tornadoes. Wind shear refers to changes in wind direction and speed at different elevations in the atmosphere. The combination of instability and wind shear forms the rotating column of air that we associate with a tornado. Tornadoes that form over water are known as waterspouts. Tornadoes that do not reach the ground surface are simply referred to as funnel clouds.

Until 2006, tornadoes were categorized by the Fujita Scale based on the tornado's wind speed. The Enhanced Fujita (EF) Scale was implemented in place of the Fujita Scale and began operational use on February 1, 2007. A comparison of the Fujita and EF scales and wind speeds is summarized in Table 4-48 The EF-scale has six categories from zero to five representing increasing degrees of damage. It was revised to better align wind speeds closely with associated storm damage. It also adds more types of structures as well as vegetation, expands degrees of damage, and better accounts for variables such as differences in construction quality. The EF-scale is a set of wind estimates based on damage. It uses three-second estimated gusts at the point of damage. These estimates vary with height and exposure. Forensic meteorologists use 28 damage indicators and up to 9 degrees of damage to assign estimated speeds to the wind gusts. Table 4-48 describes the EF-scale ratings versus the previous Fujita Scale used prior to 2007 (NOAA 2007).

Table 4-48 The Fujita Scale and Enhanced Fujita Scale

FUJITA SCALE			DERIVED EF SCALE		OPERATIONAL EF SCALE	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Notes:
EF = Enhanced Fujita; F = Fujita; mph = Miles per Hour

Location

Teton County is susceptible to tornadoes, as well as the entire State of Wyoming. While some areas may have seen more tornadoes than others, this is more of a statistical anomaly than a casual result. Like other hazard events, greatest losses are likely to be in cities, where there is a

greater concentration of infrastructure. Figure 4-27 through Figure 4-28 displays the location of historic tornado and wind events in Teton County from 1950-2022.

Figure 4-27 Teton County Tornado Events 1950-2022

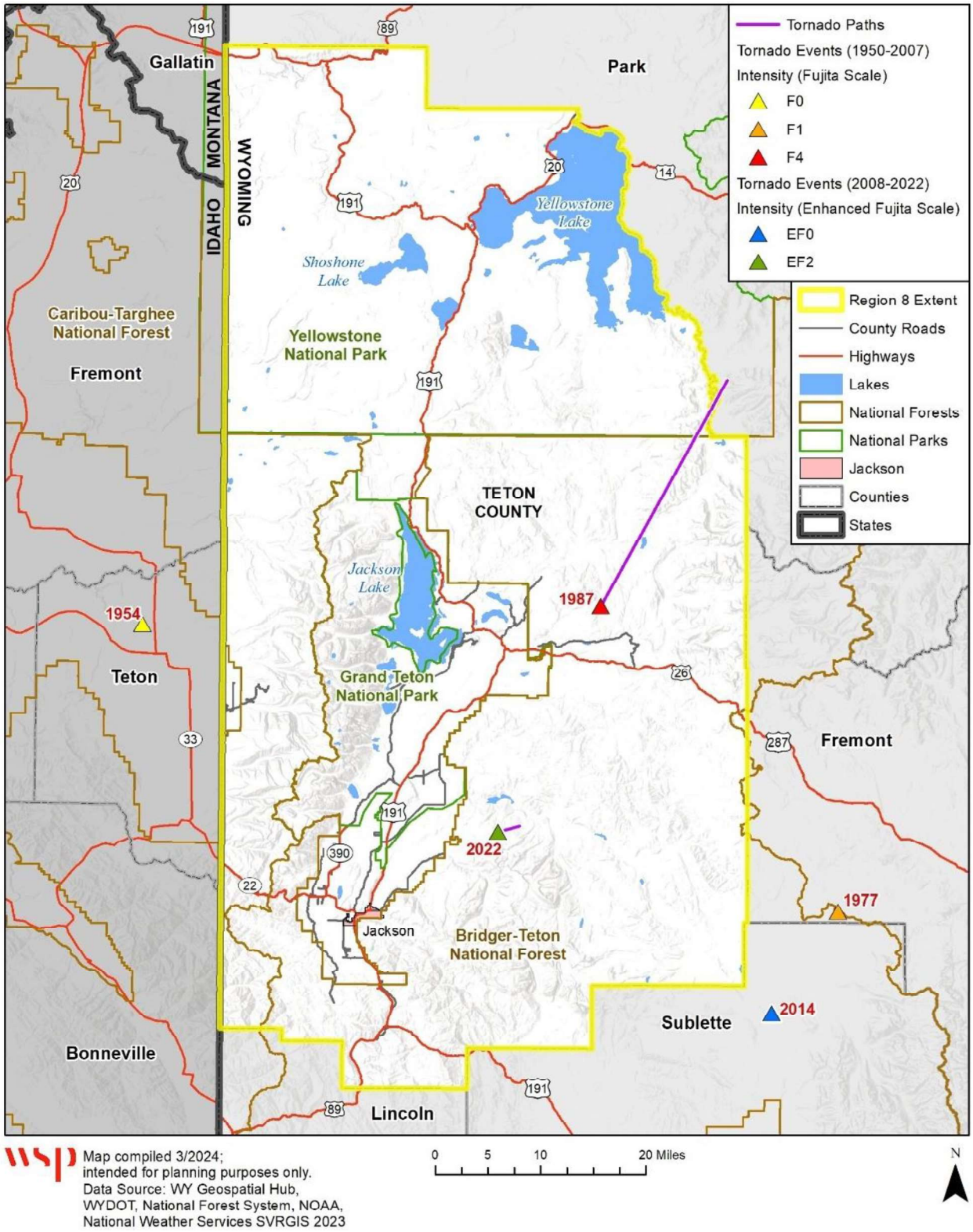
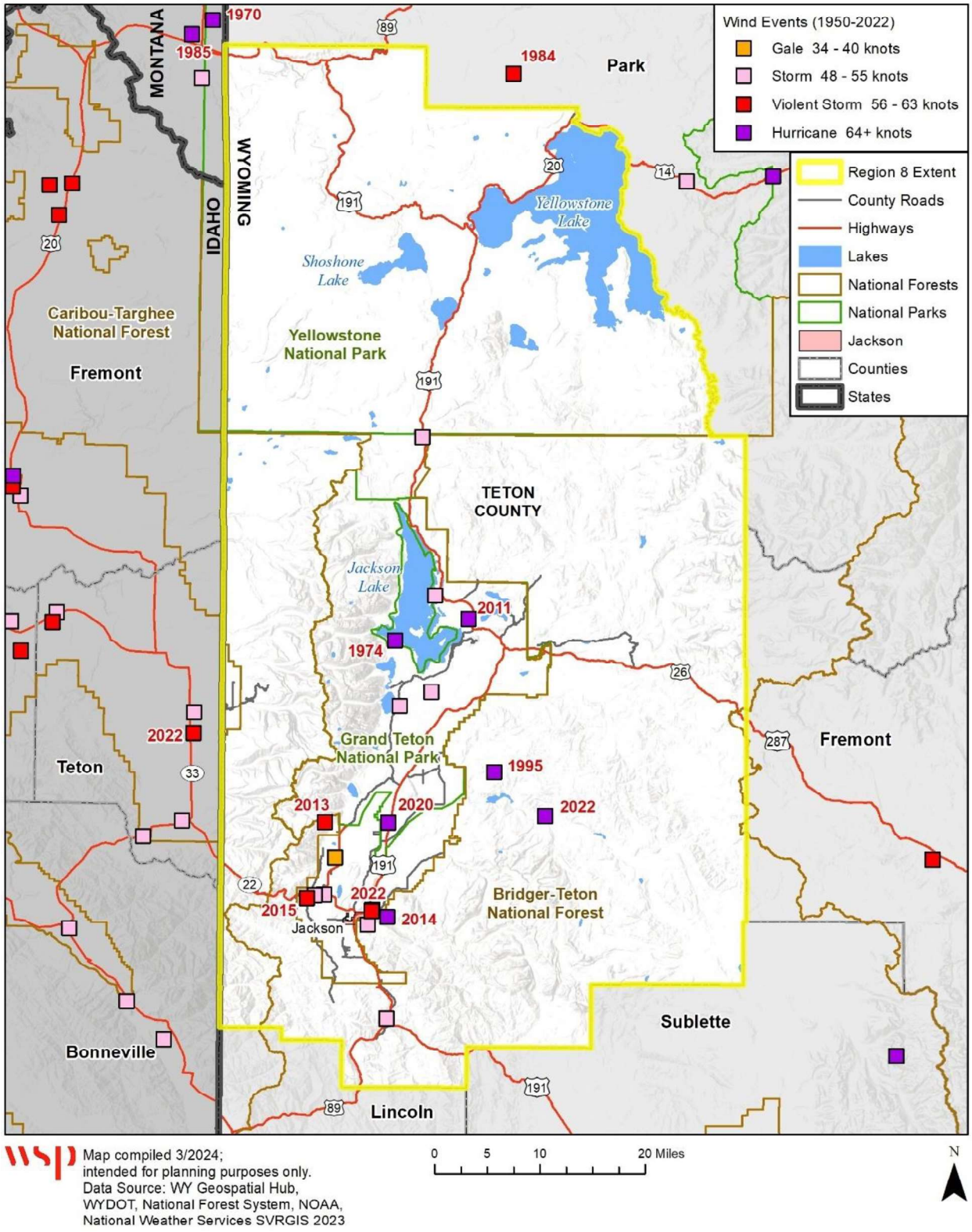


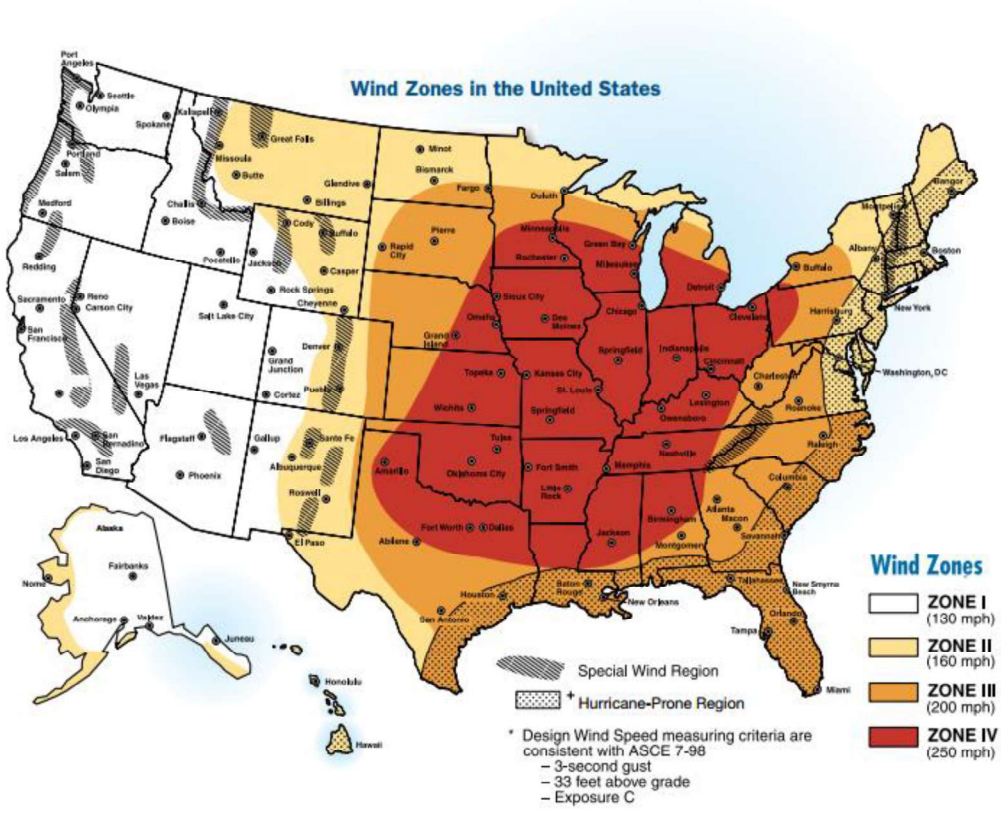
Figure 4-28 Teton County Wind Events 1950-2022



Extent (Magnitude)

The National Weather Service considers tornadoes to be among nature's most violent storms. The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Tornadic winds can cause people and autos to become airborne, rip ordinary homes to shreds, and turn broken glass and other debris into lethal missiles. Even weaker tornados can cause large economic damages. The wind zone map shown below indicates the potential magnitude of wind speeds. Teton County is located in Zone I, which can expect winds up to 130 mph. While F4 tornadoes have been the strongest recorded in the Region, it is possible stronger tornadoes could occur.

Figure 4-29 Wind Zones in the United States



Source: FEMA

Though the strength of the tornado often dictates the impacts, it is important to remember that the location (rural or urban) of the tornado is just as important when assessing these risks, and location is a random factor. Impacts can vary depending on multiple factors, including the size and strength of a tornado, and its path.

Previous Occurrences

The NCEI database was used to gather information on tornadoes and severe windstorms in Teton County. The NCEI data is a comprehensive list of oceanic, atmospheric, and geophysical data across the United States and aggregated by county and zone. The NCEI uses unique methods of recording various hazards.

The NCEI database reported 68 windstorm events and 2 tornado events since 1970. A summary of these events is captured in Table 4-49 In total, over $3.5 million was lost in property

damages and $0 lost in crop damages. No fatalities have occurred due to severe windstorms and tornadoes, although there were 4 injuries reported in the County. It is important to note that due to the nature of NCEI data, losses from unreported events are not included in the dataset and some losses may be duplicated between jurisdictions, therefore, the real losses from severe windstorms and tornadoes are likely different than what is displayed in the table below, but estimates are useful for planning purposes.

Table 4-49 Summary of Losses by Hazard in Teton County, 1970-2023

	DEATHS	INJURIES	PROPERTY LOSS	CROP LOSS	DAYS WITH EVENTS	TOTAL EVENTS
High Wind	0	3	$554,000	$0	13	17
Strong Wind	0	0	$0	$0	0	0
Thunderstorm Wind	0	1	$487,000	$0	43	51
Tornadoes	0	0	$2,500,000	$0	2	2
Total	**0**	**4**	**$3,541,000**	**$0**	**58**	**70**

Source: NCEI, Table by WSP

The NCEI reported details on significant events in Teton County:

- **July 21, 1987**: Teton County experienced the strongest tornado ever recorded in the State of Wyoming. Based off the Fujita Scale, the tornado was estimated to be an F4/EF4. While it has since been surpassed by several others, at the time this was the highest elevation tornado known in the United States. Over 1,000,000 trees were knocked down as the tornado tracked through altitudes up to 10,000 feet with wind speeds of 207 to 260 mph. The tornado event caused $2,500,000 in damages, due to the blown down timber.
- **August 5, 1996**: A high wind event took place in Yellowstone Nation Park causing $54,000 in property loss. Wind gusts in the County reached approximately 82 mph.
- **March 16, 1999**: A high wind event occurred in the county with wind gusts reaching 84 mph. There was a significant amount damage to property and trees throughout the county, causing approximately $500,000 in property damages.
- **February 9, 2017**: In February of 2017 the region experienced a winter storm that cut power to many homes, primarily due to wind damages throughout the County. A State of Emergency was declared for the Teton Village Area of Jackson Hole. The storm downed 17 transmission poles/towers resulting in the loss of power for residents served by Lower Valley Energy. Wind and flooding from this storm caused approximately $2.42 million in damage, resulting in a Federal Disaster Declaration under the Stafford Act. The county received FEMA Public Assistance funding to support. Lower Valley Energy was able to use funds from the Hazard Mitigation Program during their cleanup effort. This event was classified by FEMA as a severe storm and information is not included in the table above, which only includes data from NCEI.
- **July 24, 2023**: A thunderstorm occurred at the Sweetwater County airport, shortly moving into Teton County. There was a wind gust that was reported to reach 61 mph at the Jackson Hole Airport, that caused power outages in Wilson. There was approximately $250,000 in property damages.

Probability of Future Events

According to the NCEI dataset, there has been 70 total recorded severe windstorm and tornado events over the past 53 years in Teton County since 1970. The probability of future

occurrences would be rated as **likely**. Tornado is the least documented type of windstorm in Teton County and thunderstorm winds are the most common. In the county, there has been only two recorded tornados. As mentioned previously, the tornado that occurred in 2017 caused approximately $2,800,000 in damages and the closure of popular sites such as Grand Teton National Park.

Climate Change Impacts

For some types of extreme weather events, such as tornadoes and severe thunderstorms, more research is also needed to understand how climate change will affect them. These events occur over much smaller scales, which makes observations and modeling more challenging. Projecting the future influence of climate change on these events can also be complicated by the fact that some of the risk factors for these events may increase with climate change, while others may decrease, like the complexity of predicting future wind patterns.

Vulnerability Assessment

Due to the rural makeup, the county has historically experienced minimal impact on people and property during tornado incidents. The F-scale ratings assigned to historical tornadoes in the region are relatively low, largely due to limited recorded damage. However, if these tornadoes had struck one of the numerous communities in the region instead of timberland, remote areas, and farmland, the recorded damage could be significantly more severe. Tornadoes strike randomly across the county, making all structures, critical facilities, essential services, and populations vulnerable to their unpredictable paths.

PEOPLE

The entire planning area is at risk of windstorms and tornadoes, with certain areas being more exposed due to their geographic positioning and local weather patterns. Populations residing at higher elevations, surrounded by extensive tree cover and power lines, may face heightened vulnerability to wind damage and power outages. Although tornadoes typically form in flat plains where conditions are optimal, they have been known to cross rivers and traverse mountainous terrain.

Vulnerable populations encompass the elderly, low-income individuals, linguistically isolated communities, those with life threatening illnesses, and residents dwelling in areas isolated from major road networks. Severe wind or tornado-induced power outages can pose life-threatening situations for individuals reliant on electricity for medical equipment. These groups may endure isolation and increased exposure during thunderstorm wind, high wind, and tornado occurrences, potentially suffering from secondary effects of the hazards.

Individuals caught in the path of a tornado without access to suitable shelter face heightened vulnerability. This includes the outdoors, in vehicles, or lacking access to basements, cellars, or designated safe rooms. Hikers and climbers in the region may also be more susceptible to severe weather events. Visitors to the area might not be fully aware of how swiftly thunderstorms can develop in mountainous regions.

BUILT ENVIRONMENT

All properties are potentially exposed to damage during thunderstorms and high winds, with those in poor condition or situated in particularly vulnerable areas facing the greatest risk. While damage is often minimal and goes unreported, properties located at higher elevations or on ridges may be more susceptible to wind damage. Additionally, properties situated beneath or near overhead lines or large trees are at risk of damage in the event of a collapse.

Similar to severe winds, buildings are potentially exposed, and some are more susceptible to tornadoes. Older buildings in the area may have been constructed to lower code standards or none at all, rendering them more vulnerable to severe wind and tornado events. Mobile homes are disproportionately at risk due to their design, and tornadoes frequently generate flying

debris that can cause damage to homes, vehicles, and the landscape. In Teton County, property damages resulting from wind and tornadoes exceeded $3.5 million. Reported impacts of high winds in the planning area include damage to trees, mobile homes, roofs, power lines, and vehicles.

ECONOMY

Tornado and windstorm events can cause significant damages to commercial and private structures. Debris from these hazard events would need to be collected and properly disposed of. Such an event would likely have sustainably negative effects on the local economy, such as tourism. Businesses throughout the county can also face disruptions in operations due to damages to facilities. This can also lead to infrastructure repair. Teton County has had approximately $3,541,000 in property damages from wind and tornadoes since 1970, with the most recent 2017 storm causing $2,800,000 in damage. Many local businesses also lost income due to closing for several days during peak season.

CRITICAL FACILITIES AND LIFELINES

The primary transportation disruptions resulting from windstorms and tornadoes typically involve road closures and loss of access. These events can inflict significant damage to trees and power lines, leading to the obstruction of roads with debris, hindering transportation, isolating communities, and disrupting both inbound and outbound travel. Of particular concern are roads that provide access to remote areas and vulnerable populations such as the elderly.

Among the most common challenges associated with these weather events is the loss of utilities. Downed power lines can trigger widespread blackouts, effectively isolating large areas, a scenario documented numerous times in the National Centers for Environmental Information (NCEI) dataset. Furthermore, disruptions to phone, water, and sewer systems may occur. The loss of electricity and phone connectivity could leave certain populations stranded, as residents would be unable to request assistance.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

Tornadoes and windstorms pose a risk to the environment, natural, and cultural resources throughout the County. Trees are particularly vulnerable to wind damage during tornadoes, with broken branches and limbs becoming airborne debris that can cause property damage. According to NOAA, Wyoming is the windiest state in the country. With little variety in elevation and lack of vegetation, the southern half of the state has experienced the highest wind speeds. However Teton and neighboring Fremont County have had a jet stream produce over 100 mph winds from Idaho. Throughout the county and state historic buildings constructed before modern building codes are also more susceptible to tornado/windstorm hazards.

Land Use and Development Trends

While significant growth and development in Teton County have occurred since the last plan update, which has increased exposure of critical facilities and property to the impacts of high winds, it has not significantly altered the vulnerability to this hazard for the County, Town of Jackson, or Teton Conservation District. The prevalence of open space and sporadic development throughout Teton County generally lowers the risk to damage to existing development from tornadoes, while tornado occurrence remains possible. High winds are more likely to cause damage as they impact a larger area at once than tornadoes do.. The ability to withstand impacts lies in sound land use practices and consistent enforcement of codes and regulations for new construction. Development regulations that require safe rooms, basements, or other structures that reduce risk to people would decrease vulnerability but may not be cost-effective given the relative infrequency of damaging tornadoes in Teton County.

Risk Summary

- Severe windstorms (high wind and thunderstorm wind) and tornado events are rated as Low overall significance for Teton County.
- These events can impact anywhere in the planning region; therefore, the hazard extent is rated as Significant.
- The NCEI data reported 70 events with severe weather since 1970. Therefore, the future occurrence is rated as Likely.
- The NCEI reported no deaths, 4 injuries, and $3,541,000 million in property damages there the magnitude is rated Limited.
- Related Hazards: Wildfire, Severe Summer Weather, Severe Winter Weather, Transportation Accidents

Table 4-50 Risk Summary by Jurisdiction: High Winds

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Medium	People who are dependent on electricity and populations who work outdoors or in transportation are most vulnerable to severe windstorm events and tornadoes. Individuals living in mobile homes are also disproportionately likely to experience losses from wind and tornado events.
Town of Jackson	Low	Power outages and damage to buildings are frequently reported impacts to property of severe windstorm events and tornadoes. Significant economic losses are possible in the event of a severe windstorm or tornado due to infrastructure repair and business/service disruptions.
Teton Conservation District	Low	Damages to trees from windstorms are the greatest impacts.
Flat Creek Watershed Association	N/A	No impacts.
Jackson Hole Airport	Low	High winds can potentially cause delays and sometimes temporarily ground flights. Microbursts can affect takeoff of an aircraft by reducing lift, increasing drag, and decreasing engine thrust. Microburst mitigation is important especially with high wind speeds in Wyoming.

4.2.9 Wildfire

Description

A wildfire is characterized as a highly destructive fire or any instance of uncontrolled burning in grasslands, brush, or woodlands. The encroachment of wildfires into urban areas is on the rise, driven by population growth near forested settings. According to the National Interagency Fire Center (NIFC), a “wildland fire” refers to any non-structure fire occurring in natural terrain excluding prescribed fires. The term “wildland/urban interface” (WUI) is commonly used in

wildfire management to describe areas where the man-made structures are built near or within natural terrain, posing a high risk of wildland fires.

The direction a slope faces known as “aspect”, and the arrangement of vegetation on hillsides significantly influence wildfire susceptibility. High temperatures, low humidity, wind, and lightning are key weather components affecting wildfire potential. Drought conditions exacerbate the risk by drying out fuels, making them more prone to ignition and intense burning. Wind, particularly influential, can accelerate fire spread regardless of temperature and humidity.

As Wyoming’s population and wildland/urban interface expand, the wildfire risk escalates. Decades of fire suppression have led to dense vegetation growth, increasing the potential fuel load for wildfires. The growth of densely populated forests within the wildland/urban interface amplifies the threat of catastrophic wildfires. While wildfires historically played a natural role in Western landscapes, their effects vary depending on the resources at risk. While some species thrive following fire, others face negative impacts, highlighting the complex relationship between wildfires and their ecosystems.

Location

Over the last 25 years, Teton County and Town of Jackson have endured notable wildfire seasons. While fire is a natural phenomenon vital for ecosystem health in many vegetation types in this area, its impact on private and crucial community infrastructure can be severe. Teton County can have dry, hot summers that make it easier for wildfire ignition with the blend of forests, grasslands, and sagebrush. Over time, the county has experienced wildfires of different sizes and intensities. Figure 4-30 and Figure 4-31 shows the areas at greatest risks of wildfire, based on WYWRAP (Wyoming Wildfire Risk Assessment Portal) data, in Teton County and Town of Jackson, and Figure 4-32 and Figure 4-33 show the risk for FCWID and the Jackson Hole Airport District, respectively. While the threat of wildfire is statewide and regionwide, the greatest risk to people and property is concentrated near inhabited areas.

Figure 4-30 Teton County Wildfire Risk

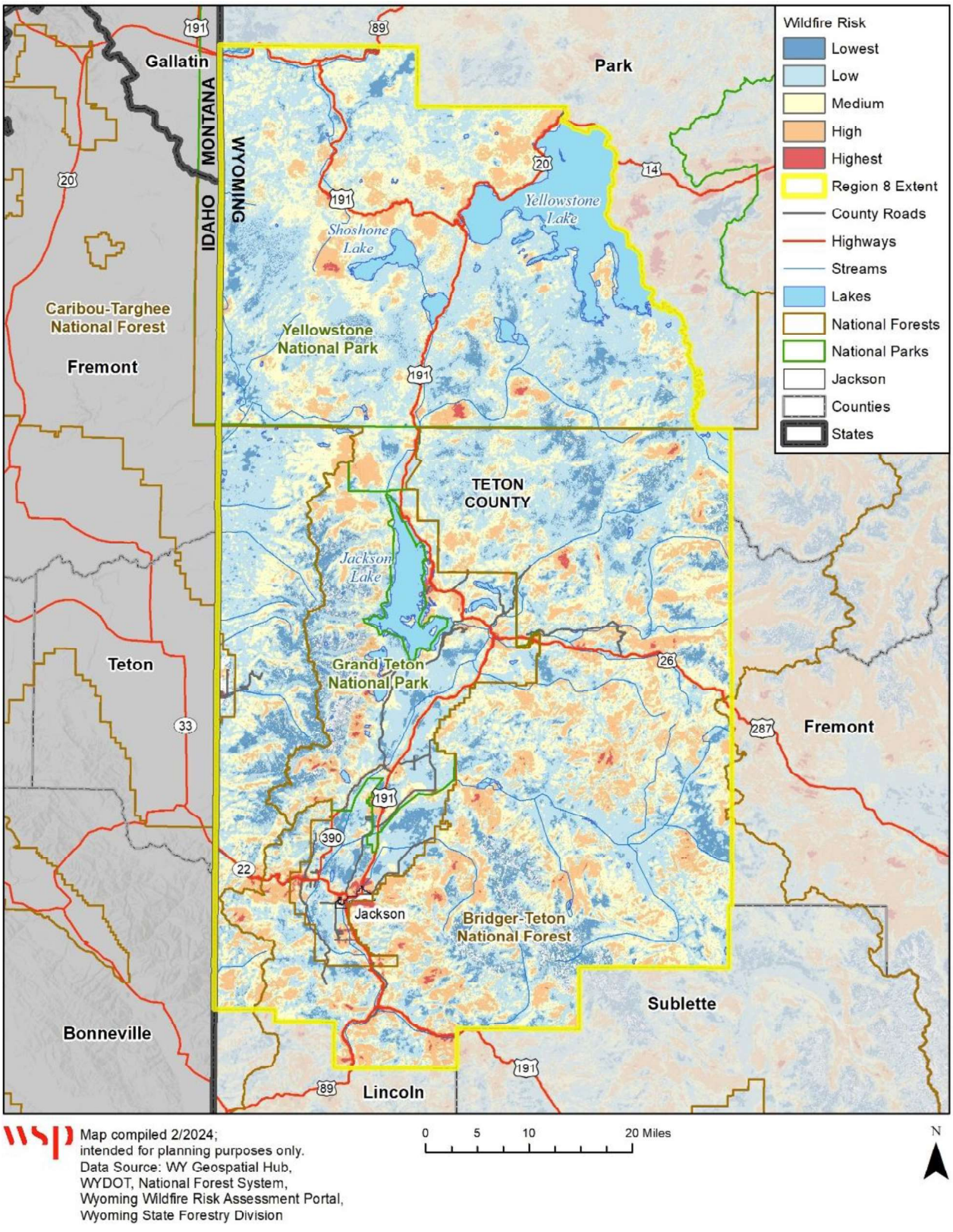
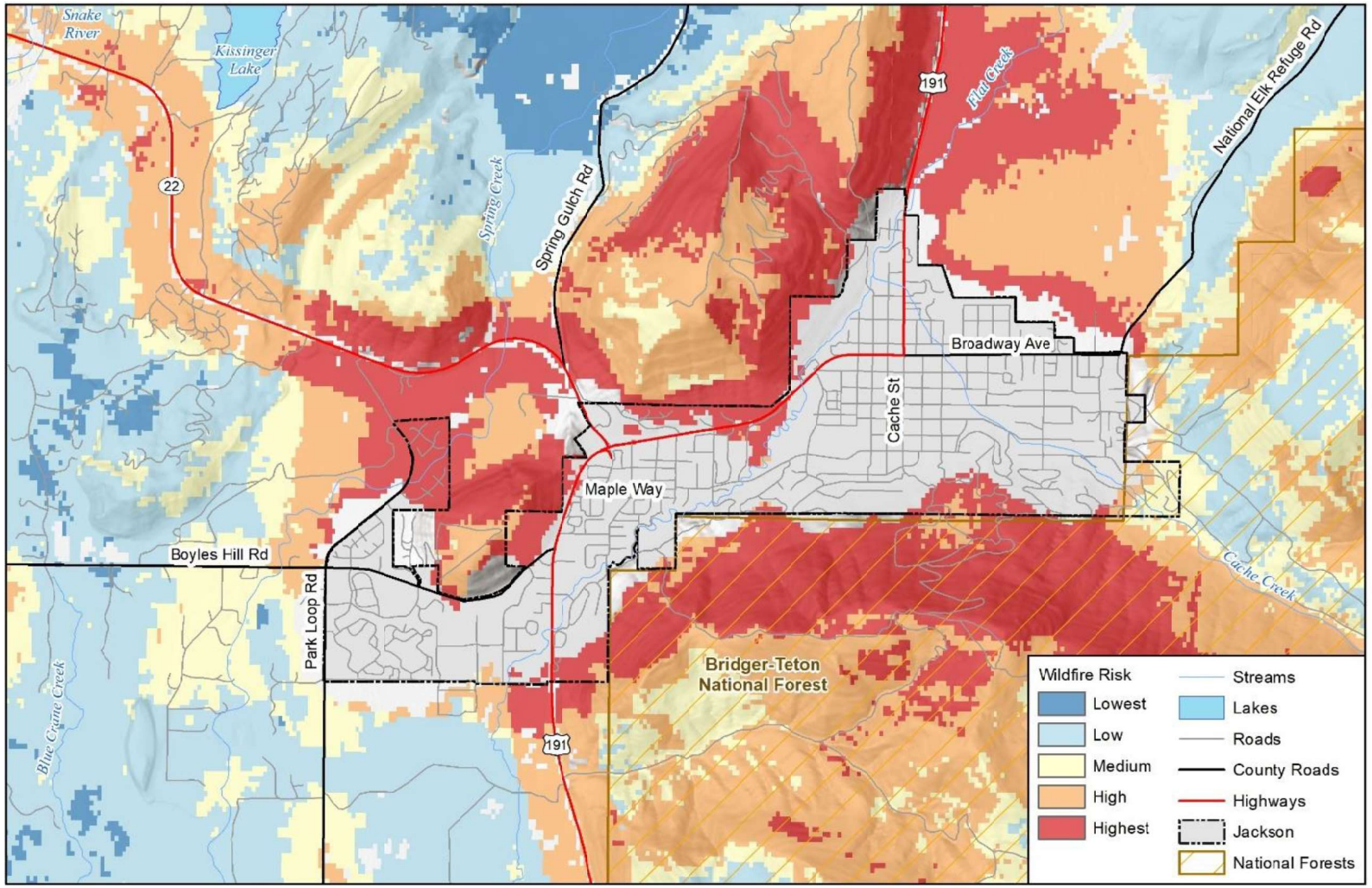
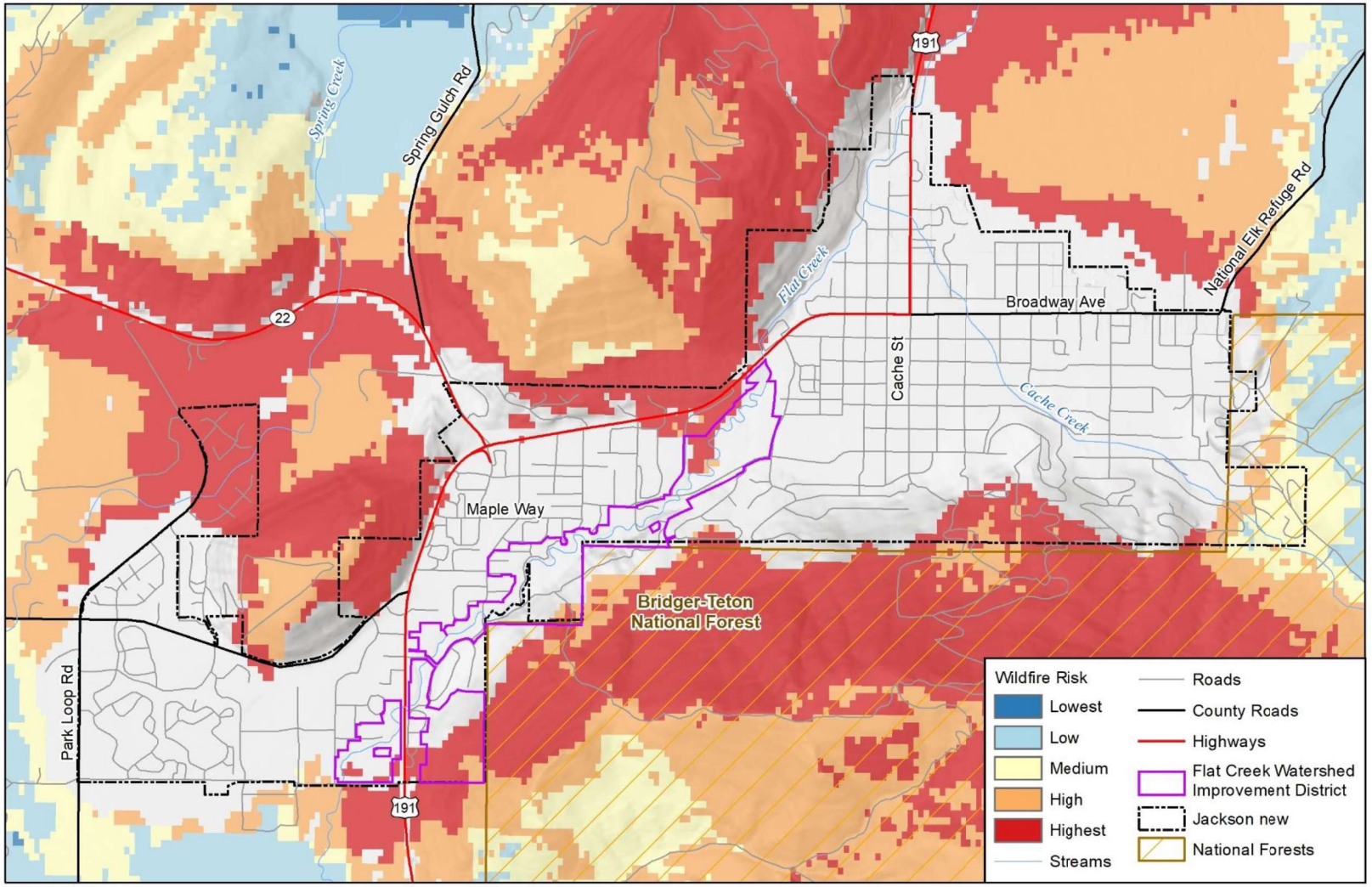


Figure 4-31 Town of Jackson Wildfire Risk



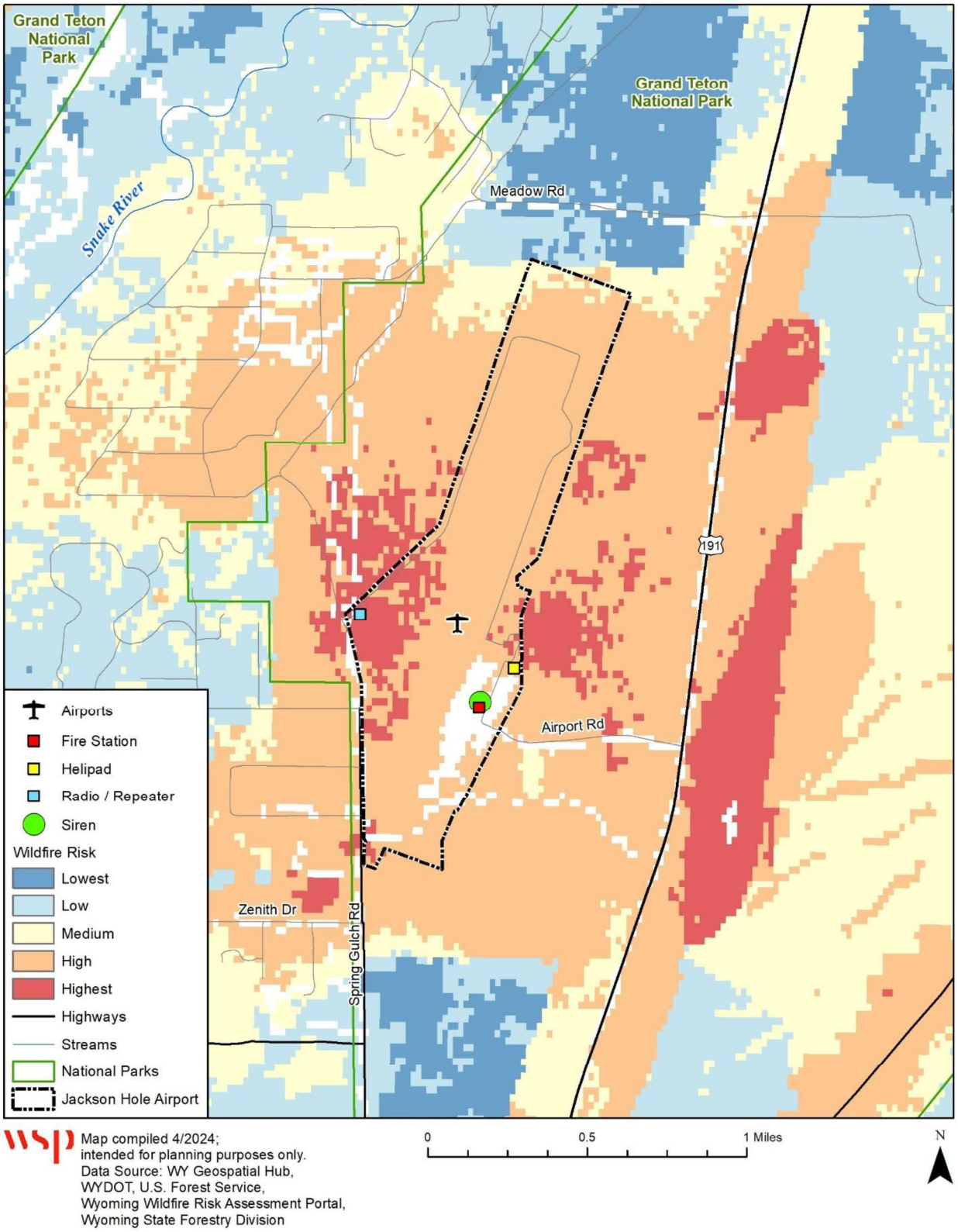
Map compiled 2/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, National Forest System,
Wyoming Wildfire Risk Assessment Portal,
Wyoming State Forestry Division

Figure 4-32 Flat Creek Watershed Improvement District Wildfire Risk



Map compiled 4/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, U.S. Forest Service, FCWID,
Wyoming Wildfire Risk Assessment Portal,
Wyoming State Forestry Division

Figure 4-33 Jackson Hole Airport District Wildfire Risk



Extent (Magnitude)

Wildfire across the county can have a significant impact to property, facilities, and services. Also, there can be an impact on the economy as wildfires can coincide with the busy tourist season in the summer and fall months. This makes the overall potential magnitude of wildfires rather **critical**. It is crucial to recognize that although wildfires may only directly impact a limited portion of built environment such as infrastructure in towns and cities, the damage to the watersheds, viewsheds and other valued assets in the region can be extensive. This damage can have cascading effect on various aspects and sectors of the regional economy as well as cause long term lung and respiratory issues for people in the area due to smoke inhalation. The US Forest Service scale shown below classifies wildfires based on the number of acres burned. This can be used as a measure of extent or magnitude; several Class H fires have burned in the county and larger class fires, such as the Fish Creek/Pack Trail Fire that burned across multiple counties, can occur due to the expansive forests and wildlands in the region. The Fish Creek/Pack Trail Fire in 2024 burned nearly 90,000 acres and can be classified as Class I as shown in the table below.

Table 4-51 Fire Size Classification

SIZE CLASS	SIZE (ACRES)
Class A	≤ 0.25
Class B	0.26 – 9
Class C	10-99
Class D	100-299
Class E	300-999
Class F	1,000-4,999
Class G	5,000 to 9,999
Class H	10,000 to 49,999
Class I	50,000 to 99,999
Class J	100,000 to 499,999
Class K	500,000 to 999,999
Class L	1,000,000 + Acres

Source: NWCG Data Standard

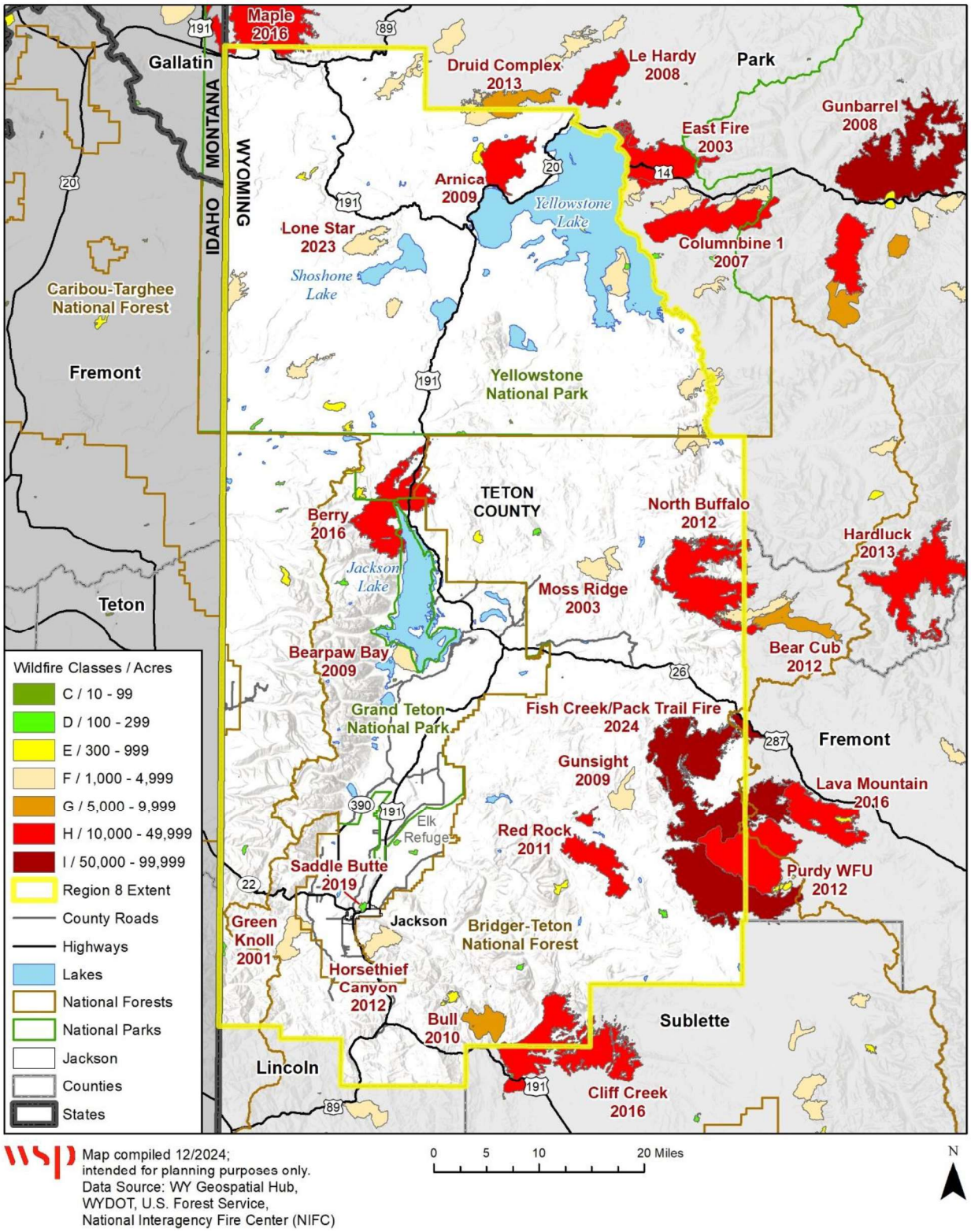
Previous Occurrences

The National Interagency Fire Center (NIFC) Database was used to analyze fire history in Teton County. The database, maintained by the USGS and other agencies, includes perimeter and point GIS layers for fires on public lands throughout the United States. The National Park Service, Bureau of Land Management, and U.S. Forest Service reports include fires of 10 acres and greater. The database is limited to fires on federal lands. Some fires may be missing altogether or have missing or incorrect attribute data. Some fire information may be lacking in the database because historical records were lost or damaged, fires were too small for the minimum cutoffs, documentation was inadequate, or fire perimeters had not yet been incorporated into the database. Also, agencies are at different stages of participation. For these reasons, the data should be used cautiously for statistical or analytical purposes.

Wildfires are highly likely to occur in Teton County. It is important to note that the risk of wildfires occurring may increase during times of drought, especially in prolonged droughts. According to Teton County, wildfire season typically occurs from June to October, with July and August having the highest occurrences of wildfires. NCEI reported 36 wildfires since 2000 throughout Teton County.

Figure 4-34 shows wildfires that have affected the area based on the National Interagency Fire Center.

Figure 4-34 Teton County Past Wildfire Occurrences, 2000-2024



Probability of Future Events

Wildfires continue to pose a threat to all jurisdictions in Teton County. Wildfires are **highly likely** to occur in Teton County each year. Teton Conservation District noted that there has been an increase in resource allocation to wildfire mitigation following fires adjacent to developed areas. It is important to note that the risk of wildfires occurring may increase during times of drought, especially in prolonged droughts. Hot, dry weather conditions, paired with low humidity and high winds, can increase the likelihood of wildfires in the county. Shifts in climatic patterns have extended the average wildfire season. Years with low snowfall and premature snowmelt, among other factors, diminish moisture levels during the summer and gal, heightening the likelihood and intensity of wildfires by fostering dry conditions conducive to ignition.

Climate Change Impacts

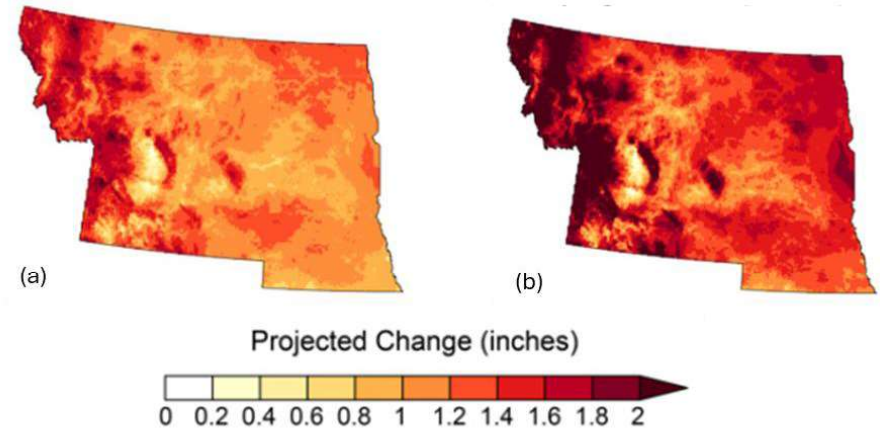
The threat of severe wildfire is expected to increase due largely to climate-change related increases in warmer air temperatures and drought. Historically, snow cover limited wildfire in Teton County. However, climate change has led to earlier spring snowmelt, which is correlated with increased fire activity.[1] In forested areas of Montana and Wyoming, wildfire numbers and fire-season length increased from the 1970s to the 2000s by 89% and 85 days, respectively. [2] The effects of climate change on evapotranspiration, a key driver of drought, is expected to increase as much or more in Teton County than anywhere in Wyoming (Figure 4-35).

The effect of severe heat and drought on wildfire in Wyoming is both intuitive and evident in environmental data. Widespread and severe drought affected the state in 2012 and 2020, which were statistically two of the worst wildfire years in state history. [3] Uncertainty remains in placing a number on the amount of increase in wildfire acreage over time, but the change may be large.

[1] Westerling, A.L., 2016, Increasing western US forest wildfire activity: Sensitivity to changes in the timing of spring. Philosophical Transactions of the Royal Society B, Biological Sciences Geophysical Research Letters, *371*(1696). https://royalsocietypublishing.org/doi/pdf/10.1098/rstb.2015.0178.
[2] National Climate Assessment 5 (2023) Chapter 25, Northern Great Plains, https://nca2023.globalchange.gov/downloads/NCA5_Ch25_Northern-Great-Plains.pdf.
[3] NOAA National Centers for Environmental Information, State Climate Summaries 2022: Wyoming. https://statesummaries.ncics.org/chapter/wy/

Figure 4-35 Projections of future evapotranspiration.

Projected change in potential evapotranspiration, 2036-2065, under intermediate emissions scenario (RCP 4.5, image a), and very high emissions scenario (RCP 8.5, image b).



Adapted from: National Climate Assessment 5 (2023) Chapter 25, Northern Great Plains, https://nca2023.globalchange.gov/downloads/NCA5_Ch25_Northern-Great-Plains.pdf.

Vulnerability Assessment

It is important to note that at the time of this HMP update the County had been in the process of developing an update to the Teton County CWPP, but the updated WUI mapping was not yet available. The wildfire vulnerability assessment in this HMP subsequently references the WUI as it was delineated in the 2014 Teton County CWPP and uses WYWRAP data for the vulnerability assessment. Readers should refer to the 2024 Teton County CWPP upon approval for the most up to date WUI mapping available. The Teton County CWPP will further inform future updates to this Regional HMP.

PEOPLE

The most vulnerable populations to wildfire reside in the wildland-urban interface (WUI) zones, where residential properties encroach directly into traditional wildland areas. Indirect impacts of wildfires on people include the pervasive smoke emitted from fires within the region. Over recent years, wildfires have significantly reduced air quality across the Western United States. Dense smoke poses risks to individuals with compromised health as well as those considered healthy.

Population at-risk estimates were developed by multiplying the average household size from the U.S. Census Bureau for the county by the number of residential structures found within each wildfire risk category based on WYWRAP data. The results are shown below.

Table 4-52 Population Risk to Wildfire Hazards

JURISDICTION	STRUCTURE COUNT HIGHEST	STRUCTURE COUNT HIGH	STRUCTURE COUNT MEDIUM	TOTAL RESIDENTIAL COUNT	POPULATION
Jackson	84	12	22	118	289
Unincorporated	657	1,951	1,553	4,161	9,695
Total	741	1,963	1,575	4,279	9,984

Source: Teton County, Wyoming CAMA 2024, Wyoming Wildfire Risk Assessment Portal, WSP GIS Analysis

However, specific populations that are vulnerable to a wildfire include those unable to evacuate as well as those with health risk that can be accelerated with smoke inhalation. This includes individuals with disabilities, the elderly, or anyone with limited access to main roads. According to the United States Census, within Teton County 18.5% of the population is over the age of 65 and 2.7% is under the age of 65 with a disability. People within these categories need extra planning for safe and timely evacuations and care once relocated.

BUILT ENVIRONMENT

The potential impacts of wildfires on the built environment includes destruction of infrastructure, residences, and other structures within wildfire-prone areas. Properties situated in high and very high hazard zones, including the Wildland-Urban Interface (WUI), as well as those within forested regions like national parks and forests, face the greatest risk. Structures made of flammable materials are particularly susceptible during wildfire events.

The vulnerability of properties typically increases with increasing proximity to wildfire-prone areas. This vulnerability is further heightened if neighboring properties lack adequate fire mitigation measures. Effective mitigation strategies entail employing flame-resistant construction materials, maintaining sufficient distance between structures and vegetation, and implementing vegetation management practices such as underbrush and tree clearing. Both the Teton Area Wildfire Protection Coalition and the Teton County Community Wildfire Protection Plan (CWPP) recognize that establishing proper defensible space is crucial for safeguarding structures and minimizing future impacts.

A wildfire risk vulnerability assessment was performed for Region 8 using Geographic Information Systems (GIS). The vulnerability assessment was performed for Teton County using the following GIS methodology. The County's parcel layer, address point data, and associated assessor's building improvement valuation data were provided by the County and were used as the basis for the inventory. GIS was used to spatially join the address point layer to the County parcel layer to obtain the number of buildings per parcel. Only parcels with improvement values greater than zero were used in the analysis. This method assumes that improved parcels have a structure of some type.

The Wyoming State Forestry's wildfire risk layer was then overlaid in GIS on the joined address point and parcel layers to identify structures that would likely be at risk from Highest to Lowest risk. Building improvement values for those points were then extracted from the parcel/assessor's data and summed for each jurisdiction in the study area. Content values were estimated for the buildings based on their occupancy type, using FEMA methodology. This includes 100% of the structure value for agricultural, commercial, and exempt structures, 50% for residential structures, and 150% for industrial structures. Building and content values were then totaled by wildfire risk type. Table 4-53, Table 4-54, and Table 4-55 summarize the estimated exposed value of improvements in each wildfire risk category.

Table 4-53 Teton County at Risk to Highest Wildfire Risk by Jurisdiction and County

Jurisdiction	Property Type	Parcel Count	Structure Count	Improved Value	Content Value	Total Value	Population
Jackson	Commercial	23	24	$67,020,092	$67,020,092	$134,040,184	
	Multi-Use	1	1	$335,379	$335,379	$670,758	2
	Res Vacant Land	3	3	$10,039,314	$5,019,657	$15,058,971	7
	Residential	80	80	$143,168,163	$71,584,082	$214,752,245	196
	Total	**107**	**108**	**$220,562,948**	**$143,959,210**	**$364,522,158**	**206**
Unincorporated	Agricultural	5	8	$5,335,475	$5,335,475	$10,670,950	
	Com Vacant Land	2	58	$341,157	$341,157	$682,314	
	Commercial	121	172	$159,711,323	$159,711,323	$319,422,646	
	Res Vacant Land	1	1	$3,321,460	$1,660,730	$4,982,190	2
	Residential	638	656	$1,005,306,157	$502,653,079	$1,507,959,236	1,528
	Total	**767**	**895**	**$1,174,015,572**	**$669,701,764**	**$1,843,717,336**	**1,531**
	Grand Total	**874**	**1,003**	**$1,394,578,520**	**$813,660,973**	**$2,208,239,493**	**1,737**

Source: Teton County, Wyoming CAMA 2024, Wyoming Wildfire Risk Assessment Portal, WSP GIS Analysis

Table 4-54 Teton County at Risk to High Wildfire Risk by Jurisdiction and County

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	POPULATION
Jackson	Commercial	34	34	$30,258,114	$30,258,114	$60,516,228	
	Residential	12	12	$7,837,117	$3,918,559	$11,755,676	29
	Total	**46**	**46**	**$38,095,231**	**$34,176,673**	**$72,271,904**	**29**
Unincorporated	Agricultural	26	28	$59,046,715	$59,046,715	$118,093,430	
	Com Vacant Land	3	35	$506,497	$506,497	$1,012,994	
	Commercial	89	111	$360,584,328	$360,584,328	$721,168,656	
	Multi-Use	1	1	$630,798	$630,798	$1,261,596	2
	Res Vacant Land	16	16	$16,997,778	$8,498,889	$25,496,667	37
	Residential	1,913	1,934	$3,875,155,152	$1,937,577,576	$5,812,732,728	4,506
	Total	**2,048**	**2,125**	**$4,312,921,268**	**$2,366,844,803**	**$6,679,766,071**	**4,546**

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	POPULATION
	Grand Total	**2,094**	**2,171**	**$4,351,016,499**	**$2,401,021,476**	**$6,752,037,975**	**4,575**

Source: Teton County, Wyoming CAMA 2024, Wyoming Wildfire Risk Assessment Portal, WSP GIS Analysis

Table 4-55 Teton County at Risk to Medium Wildfire Risk by Jurisdiction and County

JURISDICTION	PROPERTY TYPE	PARCEL COUNT	STRUCTURE COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	POPULATION
Jackson	Commercial	5	5	$5,472,246	$5,472,246	$10,944,492	
	Residential	21	22	$7,457,506	$3,728,753	$11,186,259	54
	Total	**26**	**27**	**$12,929,752**	**$9,200,999**	**$22,130,751**	**54**
Unincorporated	Agricultural	21	22	$36,346,043	$36,346,043	$72,692,086	
	Com Vacant Land	3	3	$898,920	$898,920	$1,797,840	
	Commercial	34	34	$203,271,023	$203,271,023	$406,542,046	
	Multi-Use	1	1	$2,072,542	$2,072,542	$4,145,084	2
	Res Vacant Land	8	10	$27,181,435	$13,590,718	$40,772,153	23
	Residential	1,537	1,542	$4,449,817,064	$2,224,908,532	$6,674,725,596	3,593
	Total	**1,604**	**1,612**	**$4,719,587,027**	**$2,481,087,778**	**$7,200,674,805**	**3,618**
	Grand Total	**1,630**	**1,639**	**$4,732,516,779**	**$2,490,288,777**	**$7,222,805,556**	**3,672**

Source: Teton County, Wyoming CAMA 2024, Wyoming Wildfire Risk Assessment Portal, WSP GIS Analysis

An alternative approach to gauging vulnerability involves assessing the value of structures within wildfire risks zones. It was assumed that parcels with a non-zero improves value were developed, thus only these parcels and their values were analyzed. This analysis which includes the value of structures and estimated contents, provides insight into potential wildfire losses. As shown in Table 4-56, an estimated $16,183,083,023 in total property value is potentially exposed to highest to medium wildfire hazards throughout Teton County.

Table 4-56 Wildfire Hazard Exposure

JURISDICTION	TOTAL PARCELS	STRUCTURE COUNT HIGHEST	STRUCTURE COUNT HIGH	STRUCTURE COUNT MEDIUM	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Jackson	179	108	46	27	181	$271,587,931	$187,336,881	$458,924,812	289
Unincorporated	4,419	895	2,125	1,612	4,632	$10,206,523,867	$5,517,634,344	$15,724,158,211	9,695
Total	**4,598**	**1,003**	**2,171**	**1,639**	**4,813**	**$10,478,111,798**	**$5,704,971,225**	**$16,183,083,023**	**9,984**

Source: Teton County, Wyoming CAMA 2024, Wyoming Wildfire Risk Assessment Portal, WSP GIS Analysis

ECONOMY

The economic impacts of wildfire include loss of property, direct agricultural sector job loss, secondary economic losses to business in or near wildland resources like parks, national forests, and loss of public access to recreational resources. Teton County depends on ecotourism as a primary driver of its economy. Wildfire smoke can also deter this tourism and have a negative impact on the economy. Damage to these assets or disruption of access to them can have far reaching negative impacts to the local economy. Fire suppression may also require increased cost to local and state government for water acquisition and delivery, especially during periods of drought when water resources are scarce.

CRITICAL FACILITIES AND LIFELINES

Wildfire can have significant repercussions on critical facilities, ranging from structural harm or compete destruction to endangering individuals within these facilities, disrupting transportation, shipping, and evacuation operations, and halting facility operations and essential services. The interruption of facility operations can have cascading effects disrupting essential services such as power supply, water treatment, and emergency medical care. Loss of functionality in these facilities not only jeopardizes immediate safety but also has long-term economic, environmental and public health consequences.

To assess the potential impact of wildfires on critical facilities and lifelines, a Geographic Information System (GIS) overlay was conducted using wildfire hazard layers and critical facility point data. However, due to the unavailability of replacement values within the data, a precise estimate of potential monetary loss could not be determined. Nonetheless, the consequences of damage to these facilities extend beyond mere property loss, potentially triggering cascading impacts throughout various sectors. Summary tables of these results are shown below in Table 4-57 through Table 4-59, highlighting the type and number of facilities that are located in Highest, High, and Medium Wildfire risk areas. Each table includes only the facilities located within that specific hazard classification; they are not cumulative of the classifications below them.

Table 4-57 Critical Facilities at Risk to Highest Wildfire

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	1	-	-	1	1	-	**3**
Unincorporated	7	7	2	13	5	19	18	3	5	**79**
Total	**7**	**7**	**2**	**14**	**5**	**19**	**19**	**4**	**5**	**82**

Source: Teton County, Emergency Management, WYWRAP, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-58 Critical Facilities at Risk to High Wildfire

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	-	-	1	-	-	-	**1**
Unincorporated	10	3	-	15	2	3	24	5	3	**65**
Total	**10**	**3**	**0**	**15**	**2**	**4**	**24**	**5**	**3**	**66**

Source: Teton County, Emergency Management, WYWRAP, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

Table 4-59 Critical Facilities at Risk to Medium Wildfire

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	OTHER	TOTAL COUNT
Jackson	-	-	-	-	-	1	-	-	-	**1**
Unincorporated	10	4	-	7	1	12	15	7	-	**56**
Total	**10**	**4**	**0**	**7**	**1**	**13**	**15**	**7**	**0**	**57**

Source: Teton County, Emergency Management, WYWRAP, HIFLD, National Bridge Inventory, National Inventory of Dams, WSP GIS Analysis

In regard to the special districts, GIS analysis indicates that the Jackson Hole Airport's airport facilities and infrastructure are in a highest wildfire risk category, and parts of the airport include areas of High including the repeater in the Airport Lighting Vault and the Air Traffic Control Tower. The FCWID analysis revealed that a water treatment well (Town of Jackson Well #5) was in an area of highest wildfire risk.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

A portion of the County comprises of National Forests and Grasslands, housing numerous natural and cultural treasures that are susceptible to potential risks. Wildfires can result in the contamination of drinking water sources, both surface-level and in wells. Moreover, wildfires occurring within national forests can have broader county impacts, affecting summer tourism and various economic sectors.

The detrimental effects of wildfires extend to critical habitats, such as mule deer winter ranges and sage-grouse breeding and winter habitats, particularly when significant areas of sagebrush are consumed by fire. However, it's worth noting that wildfires can also facilitate the rejuvenation of natural ecosystems, fostering healthy ecological renewal in areas previously affected by native species.

Historic and cultural resources share a vulnerability akin to general properties, with vulnerability increasing nearer to the Wildland-Urban Interface (WUI) and in landscapes with

less fire mitigation. Additionally, older buildings, particularly those exempt from internal fire mitigation measures like sprinklers and fire suppression technology, may face heightened vulnerability.

Land Use and Development Trends

The wildland/urban interface (WUI) has become a highly desirable location for residential development, as evidence by national and statewide trends. There is a growing number of homes being constructed within the interface, although Wyoming generally has less developed WUI compared to other western states. This has led to a general increase in vulnerability to wildfire for the County, Town of Jackson, and Teton Conservation District due to development over the last 5 years. Despite this, there remains potential for future home construction in undeveloped, forested private lands adjacent to fire-prone public lands throughout Wyoming.

Constructing homes in these high-risk areas poses significant threat to lives and property in the event of wildfires. Regulating growth in these areas requires a delicate balance between safeguarding private property rights and promoting public safety. In the event of WUI growth, local government may consider implementing regulations regarding subdivision entrance/exit roads and bridges to ensure the safety of property owners and fire personnel. Building consideration, particularly for land on slopes exceeding 25%, should prioritize access for fire protection of structures. Additionally, water supply requirements, including provisions for ponds, fire apparatus access, pumps, and backup generators are essential for safeguarding residents, properties, and emergency service personnel, as well as conserving government and public resources.

Teton County has implemented various strategies to safeguard life and property against the impacts of uncontrolled wildfires. Among these approaches, the establishment, adoption, and enforcement of codes and regulations play a crucial role. Jackson Hole Fire/EMS oversees compliance with codes such as the International Fire Code, the International Wildland-Urban Interface Code, and the Teton County Fire Protection Resolution for New Subdivisions. Each code is tailored to mitigation fire risks to property in distinct ways, influencing the design on infrastructure and buildings within interface areas.

These regulations address both the fire resistance of structures within the interface and their susceptibility to ignition. Structures situated or planned for construction within high-risks zones must adhere to stringent standards for both interior and exterior protection. Additionally, these codes empower the County to mandate vegetation management near structures and throughout subdivisions. The Teton County Fire Protection Resolution for New Subdivisions serves the purpose of ensuring adequate emergency access and egress routes, as well as reliable and sufficient water supply for firefighting efforts.

Risk Summary

In summary, wildfire is a high significance for Teton County. Through variability exists between jurisdiction, summarized in Table 4-60 Key issues relating to wildfire are as follows.

- Wildfire is considered to be overall **High** significance for the County.
- Socially vulnerable populations are likely to experience the worst effects of wildfire.
- The potential magnitude of wildfires throughout the county is ranked as critical.
- The geographical extent of wildfire in Teton County is ranked at Significant.
- Property, structures, and critical infrastructure is at moderate to extreme risk from wildfire throughout the county.

- Parts of the county that is surrounded by more fire-prone landscapes (e.g., forests and rangelands), generally have structures and critical infrastructure most at risk to extreme wildfire.
- As climate change increases, drought will be more likely and the detrimental impacts on human health and the built environment from wildfire will likely increase as the fire season becomes extended.
- Related Hazards: Drought, Floodings, Severe Summer Weather.

Table 4-60 Risk Summary by Jurisdiction: Wildfire

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	High	This will need to be coordinated with the new CWPP when it is published, as WUI areas are likely to increase.
Town of Jackson	High	The outskirts of the Town of Jackson are at higher risk to wildfire; there is potential for a large conflagration to spread throughout the Town if a wildfire was able to ignite this area. Smoke can cause health impacts to residents, and evacuations can create severe economic impacts.
Teton Conservation District	High	Severity of smoke events and potential to affect watersheds and increase erosion in burn scars.
Flat Creek Watershed Association	High	Wildfires lead to increase post-fire flooding, runoff, and sedimentation which negatively impact stream health.
Jackson Hole Airport	High	The airport facilities are at lower risk of wildfire but impacts of a large fire would still be felt. Disruptions to flights could occur.

4.2.10 Severe Summer Weather

Description

For this plan, severe summer weather in Teton County includes hail, lightning, extreme heat, and thunderstorms. A brief description of these weather phenomena is presented below. More information on thunderstorm winds, high winds, and tornadoes, which typically are associated with summer weather, can be found in the tornado/windstorm section of this plan.

HAIL

Hail formation begins when raindrops are carried upward by powerful updrafts into extremely cold regions of the atmosphere, where they freeze into ice. As these particles grow in size, they eventually become heavy enough to overcome the strength of the updraft and fall towards the Earth due to gravity. During their descent, hailstones may undergo a cycle of thawing, rising back into the updraft, and refreezing multiple times, gradually increasing in size. While hailstones are typically less than two inches in diameter, larger sizes have been reported, with some reaching speeds of up to 120 mph. Severe hail is classified as hailstones measuring 1 inch diameter or larger. Hailstorms are often associated with thunderstorms and tend to occur during the summer months in the County.

LIGHTNING

Lightning is an electrical discharge that results from the building of positive and negative charges within a thunderstorm and the earth's surface. When the buildup becomes strong enough, lightning appears as a "bolt". This flash of light usually occurs within the clouds or between the clouds and the ground. The electrical charge and intense heat of lightning can have devastating effects including electrocution upon contract, tree damage, fire ignition, and disruptions to electrical system.

This visible discharge can occur within or between clouds and the surrounding air, between clouds and the ground, or between the ground and clouds. Among these types of cloud-to-ground lightning is the most hazardous, although less frequent. Lightning often strikes outside the main rain area of the thunderstorm, sometimes extending 5-10 miles away from the storm itself. This can catch many who are outdoors by surprise if they do not receive sufficient warning.

THUNDERSTORMS

A thunderstorm is defined as a storm that contains lightning and thunder, which is caused by unstable atmospheric conditions. When the colder upper air sinks and warm moist air rises, storm clouds or 'thunderheads' develop, resulting in thunderstorms. This can occur singularly, in clusters, or in lines. The lifting of moist atmosphere can also occur due to terrain, such as mountain ranges, in a phenomenon known as orographic lift. Typically, this rain-bearing cloud will also produce lightning. Other hazards associated with thunderstorms and lightning include heavy rains causing flash flooding (discussed separately in section 4.2.4) and tornadoes and windstorms (discussed further in section 4.2.8).

EXTREME HEAT

According to FEMA, extreme heat is characterized by an extended period (2 to 3 days) of elevated heat and humidity, with temperatures surpassing 90 degrees Fahrenheit. Ambient air temperatures represent one aspect of heat conditions, while relative humidity constitutes the other. The interplay between these factors gives rise to what is termed the apparent temperature. The heat index is a numerical representation in degrees Fahrenheit, indicating how hot it genuinely feels when factoring in relative humidity alongside the actual air temperature. Exposure to direct sunlight can further elevate the heat index by a minimum of 15 degrees. Extreme heat poses a significant strain on both animals and humans, particularly impacting vulnerable demographics such as the elderly, individuals with health conditions, and young children.

Figure 4-36 NWS Heat Index and Potential for Health Effects

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure and/or Strenuous Activity

Caution Extreme Caution Danger Extreme Danger

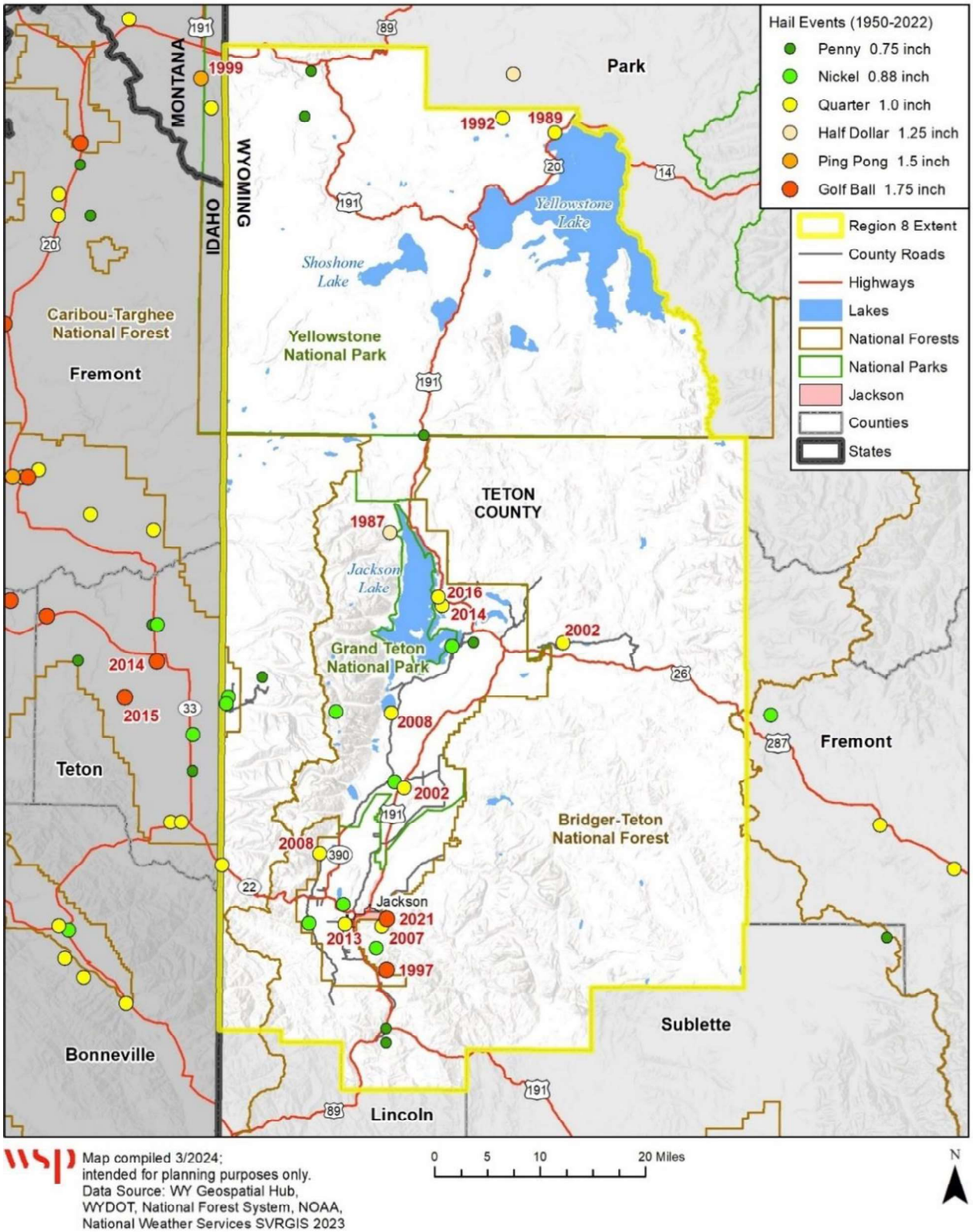
Image adapted from https://www.weather.gov/ama/heatindex

Note: Heat index values here are for shady locations. Exposure to direct sunlight can increase these values by up to 15 degrees Fahrenheit.

Location

Teton County is vulnerable to experiencing severe summer weather, but there are regional variations apparent when looking at the frequency of events. Certain hazards, like extreme heat events, have a regional scope and often affect multiple or all counties within the planning area simultaneously. In contrast, hazards such as lightning, hail, and heavy rain tend to impact more localized areas. Lightning typically strikes specific points, with occurrences of multiple strikes on people or property during a single storm event being rare. Hail and heavy rain typically manifest in isolated pockets within accompanying storms. Town of Jackson has the majority of the parks and ballfields in the County that could be at high risk of severe summer weather. Parks and Pathways have installed NWS “When Thunder Roars, Go Indoors” signs at all entrances to parks and pathways. The County faces the highest risk of large gatherings at top of Snow King Mountain, Teton Village, the Jackson Town Square, Jackson Hole Center for the Arts, and Targhee Resort, which could be affected by severe summer weather. Figure 4-37 below displays the hail history in Wyoming.

Figure 4-37 Teton County Hail Events 1950-2022



Map compiled 3/2024;
intended for planning purposes only.
Data Source: WY Geospatial Hub,
WYDOT, National Forest System, NOAA,
National Weather Services SVRGIS 2023

Extent (Magnitude)

Severe summer weather can cause damage to buildings, homes, and other property but rarely cause death, serious injury, or long-lasting health effects. However, significant economic losses from property and crop damage, as well as several reported injuries and deaths have occurred in the county; therefore, the severity of summer weather is ranked as **moderate** for Teton County. In numerical measurements, severe summer weather events are often categorized based on criteria established by organizations such as National Weather Service (NWS). The NWS reports that severe summer weather has caused $487,000 in property damage and $0 in crop damage since 1950 in Teton County. Two deaths and 54 injuries were attributed to lightning strikes. Across the country, large hail results in nearly $1 billion in damage annually to property and crops. The extent for specific severe summer weather hazards is described below.

HAIL

Hail events are often associated with thunderstorms that may also cause high winds and tornadoes. Hail causes nearly $1 billion in damage to crops and property each year in the United States. Hail is also one of the requirements which the National Weather Service uses to classify thunderstorms as 'severe.' If hailstones of more than one inch in diameter are produced in a thunderstorm, the storm qualifies as severe.

The National Weather Service (NWS) classifies hail by diameter size and corresponding everyday objects to help relay scope and severity to the population. Table 4-61 indicates the hailstone measurements utilized by the National Weather Service.

Table 4-61 Common Hailstone Measurements

AVERAGE DIAMETER (IN INCHES)	CORRESPONDING HOUSEHOLD OBJECT
.25	Pea
.5	Marble/Mothball
.75	Dime/Penny
.875	Nickel
1.0	Quarter
1.5	Ping-pong Ball
1.75	Golf Ball
2.0	Hen Egg
2.5	Tennis Ball
2.75	Baseball
3.0	Teacup
4.0	Grapefruit
4.5	Softball

Data attained from https://www.spc.noaa.gov/misc/tables/hailsize.htm

Hailstorms occur during severe storms, which are regional in nature. However, just as the amount of precipitation in the form of snow or rain may vary significantly within a single storm, so may the amount, size, and duration of hail within a severe storm. This can have a wide range of impacts.

LIGHTNING

Lightning is an electrical discharge between positive and negative regions of a thunderstorm. Intra-cloud lightning is the most common type of discharge. This occurs between oppositely charged centers within the same cloud. Usually, it takes place inside the cloud and looks from

the outside of the cloud like a diffuse brightening that flickers. However, the flash may exit the boundary of the cloud, and a bright channel can be visible for many miles.

Although not as common, cloud-to-ground lightning is the most damaging and dangerous form of lightning. Most flashes originate near the lower-negative charge center and deliver negative charge to earth. However, some flashes carry positive charge to earth. These positive flashes often occur during the dissipating stage of a thunderstorm's life. Positive flashes are also more common as a percentage of total ground strikes during the winter months. This type of lightning is particularly dangerous for several reasons. It frequently strikes away from the rain core, either ahead or behind the thunderstorm. It can strike as far as 5 or 10 miles from the storm in areas that most people do not consider to be a threat. Positive lightning also has a longer duration, so fires are more easily ignited. And, when positive lightning strikes, it usually carries a high peak electrical current, potentially resulting in greater damage.

THUNDERSTORMS

It is possible for the entire county to be affected by a large thunderstorm and lightning event, but effects are often localized. One or more severe thunderstorms occurring over a short period can lead to flooding and cause extensive damage to power systems, communication outages, and agricultural damage. In extreme or isolated circumstances, severe thunderstorms can bring straight-line winds in excess of 100 mph. Straight-line winds are responsible for most thunderstorm damage. High winds can damage trees, homes, and businesses.

EXTREME HEAT

Extreme heat is considered to have a limited magnitude and severity. Due to the high elevation of Teton County, extreme heat is a historically unusual occurrence, but unusually hot weather has been having impacts in recent years as many older buildings and residential structures do not have air conditioning. Extreme heat events typically occur with ample warning time. Weather forecasters predict heat events several days before they occur.

Previous Occurrences

The NCEI database was used to gather information on historic severe summer weather in Teton County, Wyoming. The NCEI Storm Events Database is a comprehensive list of oceanic, atmospheric and geophysical data across the United States and aggregated by county and zone. Table 4-62 summarizes the data from NCEI for lightning, hail, extreme heat, and thunderstorms from 1970-2023. It is important to note that all severe summer weather events get reported by the NCEI and losses are estimates, therefore, actual losses may be higher than those reported below. Based on this data, thunderstorms are the most frequently occurring and damaging severe summer weather event in Teton County. Only lightning has resulted in casualties. The NCEI recorded $487,000 in property losses due to severe summer weather events in Teton County from 1970-2023. However, the Storm Events Database uses data from the National Weather Service (NWS) for historical and current events, so any property loss data that was not reported to NWS will not be represented.

Table 4-62 Summary of Historic summer weather Events and Losses

	DEATHS	INJURIES	PROPERTY LOSS	DAYS WITH EVENTS	TOTAL EVENTS
Lightning	2	53	$0	8	10
Hail	0	2	$0	23	34
Extreme Heat	0	0	$0	2	3
Thunderstorms	0	1	$487,000	45	51
Total	**2**	**56**	**$487,000**	**78**	**98**

Source: NCEI

The NCEI dataset reports details on several of the severe weather events in Teton County that cause injuries or fatalities:

- July 26, 2003: Woman was struck by lightning strike while hiking in Grand Teton. She was among 13 other climbers. The lightning strike resulted in 1 death and 5 injuries among all the climbers.
- June 21, 2005: Lightning hit approximately 15 yards from a boardwalk encircling Old Faithful Geyser in Yellowstone National Park, injuring eleven bystanders who were gathered to witness the eruption of the renowned geyser. Among the victims was a 12-year-old boy who received prompt CPR and was successfully resuscitated. Subsequently, he was airlifted to a regional medical center for further treatment.
- July 21, 2010: Lightning struck in Grand Teton Mountain in Grand Teton National Park, causing 17 climbers who were part of three separate private climbing parties. Tragically, one of the injured climbers ultimately fell 2,000 feet to his death as an indirect consequence of the lightning strike. National Park Service rangers were transported by helicopters to the renowned mountain to rescue the injured climbers. Surviving climbers endured moderate to severe injuries, ranging from burns to numbness. A total of 83 individuals contributed to the rescue efforts.
- August 2, 2022: This event happened at Enos Lake in the Teton Wilderness, when a group of backpackers were camping. This event resulted in one death, while another male sustained minor injuries. It was reported that the backpackers were struck while at camp. In total, they were a part of a group of 14.

Probability of Future Events

The frequency of severe summer weather events in Teton County is ranked as **Highly Likely**. Since 1970, 98 severe summer events have been recorded in the County. As discussed above, there are variations in frequency and severity of damage from severe summer weather across Teton County. Based on the NCEI data demonstrated above, it shows that hail, lightning, extreme heat, and thunderstorms are common throughout the county.

Climate Change Impacts

The impact of climate change on hail, lightning, and extreme heat, and thunderstorm hazards in Teton County is variable. NCA5 provides a summary of recent climate research and documents unprecedented increases in hail frequency and size in the Northern Great Plains.[4] Hail is a significant hazard in Teton County (Table 4-62) and any potential increase is worth consideration. Fortunately, by far the most extreme hail hazard exists in the southeastern part of Wyoming, the opposite corner of the state.[5]

The impact of climate change on lightning has received comparatively little attention in recent research. The NOAA State Climate Summary for Wyoming (2022) and NCA5 each mention lightning only once, either acknowledging that it exists or that it is relevant to wildfire ignition.

Nationwide, extreme heat is responsible for more climate-related deaths than any other factor. The Northern Great Plains is fortunate to have not experienced an increase in this hazard to the

[4] National Climate Assessment 5 (2023) Chapter 25, Northern Great Plains, https://nca2023.globalchange.gov/downloads/NCA5_Ch25_Northern-Great-Plains.pdf.
[5] NOAA National Centers for Environmental Information, State Climate Summaries 2022: Wyoming. https://statesummaries.ncics.org/chapter/wy/

degree felt elsewhere. In fact, Teton County experiences very little extreme heat and has not recorded any financial loss to this hazard in recent years (Table 4-62). Air temperatures across the state have increased 2.5°F since 1900. However, Wyoming is not exempt from the impacts of climate changes and more mitigation strategies surrounding higher temperatures should be considered. According to researchers at the University of Wyoming, Teton County has experienced less of an increase in daytime highs than the global average, but there has been an increase in overnight lows, meaning nighttime temperatures have gotten progressively warmer. This increases the risk of wildfire ignition and the inability to slow the spread if one were to start.

Comparatively little research has evaluated the frequency and intensity of the thunderstorms. The effect of climate change on thunderstorms is not mentioned in NCA5 and the NOAA Climate Summary for Wyoming (2022) simply acknowledges that the state experiences this type of weather. Haberlie et al. (2022) evaluated the effects of climate change on thunderstorms in the eastern two-thirds of the United States, but did note a modest increase in low and medium severity thunderstorms in northwest Wyoming in both moderate and high GHG emissions scenarios.[6]

Vulnerability Assessment

In general, assets in the planning area are all vulnerable to severe summer weather including people, crops, livestock, vehicles, and built structures. The presence of buildings and people increase the potential for damage, injuries, and even death. As such, hail, lightning, extreme heat, and thunderstorm vulnerability are higher for the Town of Jackson than it is for Teton County as a whole, although areas of the county outside of public land exist that exhibit higher density of people and buildings. Hail can cause considerable damage to vehicles and buildings, but only rarely results in loss of life directly, although injuries can occur. Effects of this hazard could range from minimal, localized property damage to widespread or significant property damage affects a large portion of a jurisdiction.

PEOPLE

While the health-related impacts of severe summer weather affect all individuals, certain demographics, such as the elderly and young children, are particularly vulnerable. According to the Center for Disease Control (CDC), extreme heat is one of the leading causes of weather-related deaths in the United States. As previously mentioned, the elderly, young children, and people with weakened immune systems are often most susceptible. Aside from extreme heat, hail can cause serious injuries to unprotected people, like lightning strikes.

BUILT ENVIRONMENT

All outdoor property is equally exposed to severe summer weather events. For Teton County, it was reported that majority of the damage occurred due to thunderstorm winds. NCEI showed that thunderstorm winds were the only severe summer weather event that caused property or crop damage to the county. While there are no reported property damages for hail, lightning, and extreme heat, there is still a possibility of the hazard affecting the county.

ECONOMY

As seen from the NCEI dataset, severe summer weather can result in significant economic losses, particularly hail. NCEI recorded a total of $487,000 in property damage due to severe summer weather in Teton County from 1970-2023. However, the Storm Events Database uses data from National Weather Service (NWS) for historical and current events, so any property

[6] Haberlie, A.M., et al. (2022). Thunderstorm activity under intermediate and extreme climate change scenarios. *Geophysical Research Letters*, *49*(14), e2022GL098779.

loss data that was not reported to NWS will not be represented. Losses can be seen when severe storm events cause direct damage to property or crops, but indirect losses can be a result of the storms as well. Also, the increase in temperature throughout the county can impact tourism in the future and reduce revenue from tourism. In the event of flash flooding or extreme hail events, this can force businesses to close, and commuters will also be unable to drive to work, causing disruption in local economies.

CRITICAL FACILITIES AND LIFELINES

All infrastructure and critical facilities are equally vulnerable as severe storms impact the entire planning area without discrimination. For instance, hail can accumulate on highways, hindering the movement of commuters and emergency responders, thereby impacting travel safety and efficiency. Lightning on the other hand, can cause direct damage to buildings and infrastructure, especially if infrastructures are not protected by lightning protection systems. Any structural damage to critical facilities can compromise the functionality of the community.

ENVIRONMENTAL, NATURAL, AND CULTURAL RESOURCES

Hailstorms have been known to inflict damage to crops and plants in the planning area, as well as break branches off trees. Additionally, lightning strikes can ignite fires in trees which in turn can impact vegetation and crops. Lastly, structures in poor condition or those not constructed to meet building codes are more susceptible to damage during severe weather occurrences.

Land Use and Development Trends

No specific new growth or development within the County, Town of Jackson, or the Teton Conservation District in the past five years has significantly altered the general risk to severe summer weather. There is a growing emphasis on constructing resilient buildings and infrastructure capable of withstanding severe summer weather. For example, ensuring that new infrastructures are built with durable materials that will be able to withstand high winds, hail, and other severe summer weather events. Considerations are also being made for mitigating against increasing summer temperatures with new buildings including air conditioning, particularly in government-subsidized housing projects that are typically occupied by socially vulnerable populations. Strategic planning initiatives in the Town of Jackson and Teton County prioritize directing density and services to existing population centers and clustered developments across the planning area. This intentional approach aims to restrict new areas of density, thus mitigating susceptibility to severe summer weather events, such as hail. However, it is important to note that any new development carries the risk of lightning strikes, which increases as the population grows in Teton County.

Risk Summary

- The hazard significance of severe summer weather (hail, thunderstorm, extreme heat, and lightning) in Teton County is ranked as **Low.**
- Teton County can be impacted by severe summer weather; therefore, the geographic extent is rated as **limited**.
- The NCEI dataset recorded 98 days of severe summer weather events in Teton County since 1970. Therefore, the probability of future occurrences is ranked as **Highly Likely**.
- The NCEI reported two deaths, 56 injuries and $487,000 in property damages since 1970, therefore the potential magnitude is ranked as **moderate**.
- Most people vulnerable to severe summer weather events are children, the elderly, individuals with pre-existing medical conditions, outdoor workers/enthusiasts, and people living in dense urban areas.
- All outdoor property is vulnerable to severe summer weather events in Teton County.
- Critical infrastructure such as roadways and electrical equipment are especially vulnerable to severe summer weather.

- Economic losses typically occur from thunderstorm winds in the County. Although, there is possibility of severe hail events and associated cost of repairs from hail damage. Areas with high infrastructure, are more likely to experience economic damages from severe summer weather events because there is a greater quantity of property that can be damaged.
- Related hazards: Drought, wildfire, and tornado/windstorms.

Table 4-63 Risk Summary by Jurisdiction: Severe Summer Weather

JURISDICTION	OVERALL SIGNIFICANCE	KEY ISSUES AND JURISDICTIONAL DIFFERENCES
County	Low	Lightning strikes in wilderness areas throughout the county can often trigger wildfires.
Town of Jackson	Low	Some potential to affect limited developed areas in Town limits, particularly from impacts of hail. Lighting strikes to critical infrastructure can cause cascading effects.
Teton Conservation District	NA	No impacts
Flat Creek Watershed Association	NA	No impacts
Jackson Hole Airport	Low	Thunderstorms can sometimes cause delays and sometimes temporarily ground flights.

5 Mitigation Strategy

5.1 Mitigation Strategy: Overview

This section describes the mitigation strategy process and mitigation action plan for the Region 8 Hazard Mitigation Plan. It describes how the participating jurisdictions in the Region met the following requirements from the 10-step planning process:

- Planning Step 6: Set Goals
- Planning Step 7: Review Possible Activities
- Planning Step 8: Draft an Action Plan

The results of the planning process, the risk assessment, the goal setting, the identification of mitigation actions, and the hard work of the county's HMPC led to this mitigation strategy and action plan. Section Mitigation Goals Section 5.2 below identifies the goals of this plan, Section 5.3 describes the action identification and prioritization process, and Section 5.4 contains the updated mitigation action plan for 2025.

5.2 Mitigation Goals

Up to this point in the planning process, the county HMPC has organized resources, assessed hazards and risks, and documented mitigation capabilities. The resulting goals and mitigation actions were reviewed and updated based on these tasks. During the 2025 update of this plan, the county HMPC held a series of meetings designed to achieve a collaborative mitigation strategy as described further throughout this section.

During the mitigation strategy workshop held on June 11, 2024, the HMPC reviewed the results of the hazard identification, vulnerability assessment, capability assessment and goals from the 2020 hazard mitigation plan as well as the State of Wyoming Multi-Hazard Mitigation Plan. This analysis of the risk assessment identified areas where improvements could be made and provided the framework for the county to update planning goals and to base the development of new or updated mitigation strategies for the Region.

Goals were defined for the purpose of this mitigation plan as broad, public policy-based statements that:

- Represent basic desires of the community;
- Encompass all aspects of community, public and private;
- Are nonspecific, in that they refer to the quality (not the quantity) of the outcome;
- Are future-oriented, in that they are achievable in the future; and
- Are time-independent, in that they are not scheduled events.

During the 2025 update the goals from the 2020 plan were revisited at a series of meetings with the HMPC/LEPC. The four goals generally were still valid, but the group felt that re-ordering some of the goals was important to reflect current priorities. The goal of improving protection of the general population was moved to Goal 1 and revised to "minimize impacts of hazards…" Consideration of economic losses was added to Goal 4 to reflect the impacts that hazards have had on the local economy. The word "manage" was added to Goal 3 in regard to natural resources to reflect the emphasis on vegetative management for wildfire fuels and invasive removal. The goals as revised for the 2024 plan updated are as follows:

- **Goal 1:** Minimize impacts of hazards on the general population including residents, commuters, and visitors
- **Goal 2**: Protect existing and future critical facilities, utilities, infrastructure, and other FEMA community lifelines
- **Goal 3**: Protect, restore, and manage the environment to support community and environmental resiliency

- **Goal 4**: Continue to implement actions to mitigate the effect of hazards through education, ordinances, resolutions, and proper project analysis to enhance life safety and reduce property and economic losses

5.3 Identification and Analysis of Mitigation Actions

The next step in the mitigation strategy is to identify and analyze a comprehensive range of specific mitigation actions and projects to reduce the effects of each hazard on new and existing buildings and infrastructure. During the 2024 Regional Plan update, the HMPC analyzed viable mitigation actions by hazard that supported the identified goals. The HMPC was provided with the following list of categories of mitigation actions, which originate from FEMA's local hazard mitigation planning guidance:

- **Plan and Regulations (Prevention):** Administrative or regulatory actions or processes that influence the way land and buildings are developed and built.
- **Structural and Infrastructure Projects:** Actions that involve the construction of structures to reduce the impact of a hazard.
- **Education and Awareness:** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.
- **Natural Resource Protection:** Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems.

To identify and select mitigation actions in support of the mitigation goals, the HMPC evaluated each hazard identified and profiled in Chapter 4. A link to reference documents titled "Mitigation Ideas" and "Mitigation Action Portfolio" developed by FEMA was made available in the meeting presentation. These documents list common ideas for mitigation by hazard and best practices. The jurisdictions considered both current and future buildings in considering possible mitigation actions. A facilitated discussion took place to examine and analyze the options.

The mitigation strategy is based on existing local authorities, policies, programs, and resources, as well as the ability to expand on and improve these existing tools. As part of the HMP development, the planning team reviewed existing capabilities for reducing long-term vulnerability to hazards. Those capabilities are noted in Chapter 3 and can be assessed to identify gaps to be addressed and strengths to enhance through new mitigation actions.

Based upon the key issues identified in the risk assessment, including the capability assessment, the planning team came to consensus on proposed mitigation actions for each hazard for their jurisdictions. Certain hazards' impacts were best reduced through multi-hazard actions. A lead agency or department for each new action was identified to provide additional details on the project so they could be captured in the plan.

5.3.1 Prioritization Process

Once the mitigation actions were identified, the HMPC reviewed and evaluated each action to come up a prioritization scale for the mitigation strategy. This prioritization process was largely done for the new actions developed in 2025; however, the planning team was given the opportunity to re-prioritize any continuing actions if they wanted. In order to accomplish this, the planning team utilized the STAPLEE prioritization criteria to determine the importance, effectiveness, and implementation steps of each action. The STAPLEE criteria were developed by FEMA as a means of standardizing a consistent set of evaluation criteria for all jurisdictions to follow. STAPLEE is an acronym for the following:

- **S**ocial: Does the measure treat people fairly? (e.g., different groups, different generations)
- **T**echnical: Is the action technically feasible? Does it solve the problem?

- **A**dministrative: Is there adequate staffing, funding, and other capabilities to implement the project?
- **P**olitical: Who are the stakeholders? Will there be adequate political and public support for the project?
- **L**egal: Does the jurisdiction have the legal authority to implement the action? Is it legal?
- **E**conomic: Is the action cost-beneficial? Is there funding available? Will the action contribute to the local economy?
- **E**nvironmental: Does the action comply with environmental regulations? Will there be negative environmental consequences from the action?

Other criteria used to inform the priority of a mitigation action included:

- Does the action address multiple hazards or areas with the highest risk?
- Does the action protect lives?
- Does the action protect infrastructure, community assets or critical facilities?
- Does the action meet multiple objectives?

While STAPLEE provided a template for the planning team to evaluate a range of specific mitigation actions and projects, the results of the risk assessment were also considered (i.e., probability and severity of impacts for each hazard). During this process, a planning level cost-benefit review of each action was also considered, in accordance with the requirements of the Disaster Mitigation Act. Quantitative cost-benefit analysis will be considered in additional detail when seeking FEMA mitigation grant funding for eligible projects identified in this plan. Planning Team members also weighed the pros and cons of proposed actions based on their judgement, subject matter expertise and experience with local hazards.

Keeping the STAPLEE criteria in mind, the planning team prioritized the mitigation actions by giving an indication of relative priority, which was then translated into high, medium, and low. The results of the STAPLEE evaluation process produced prioritized mitigation actions for implementation within the planning area. During the plan update, the HMPC identified several mitigation actions that were ongoing or incomplete projects to be carried forward from the 2020 HMP. Priority levels on these actions were revisited and, in some cases, modified to reflect current priorities based on the STAPLEE principles.

5.4 Mitigation Action Plan

This section outlines the development of the mitigation action plan. The action plan consists of the specific projects, or actions, designed to meet the plan's goals. Over time the implementation of these projects will be tracked as a measure of demonstrated progress on meeting the plan's goals.

5.4.1 Progress on Previous Mitigation Actions

As part of the update process the HMPC reviewed the previously identified actions to assess progress on implementation. These reviews were completed using worksheets to capture information on each action including if the action was completed or deferred to the future. Actions that were not completed were discussed for continued relevance and were either continued in the Plan or in some cases recommended for deletion.

The jurisdictions of Region 8 have been working steadily towards meeting the plan’s goals and completing the identified mitigation actions. While several remain to be completed, many were noted as in-progress. Progress on mitigation actions previously identified in the 2020 HMP are detailed in the mitigation action strategy in Section 5.4. Reasons that some actions have not been completed include low priority, lack of funding, or lack of administrative resources.

As of December 2024, there have been 32 actions completed in Region 8, demonstrating significant progress in implementing mitigation actions and reducing community vulnerability to hazards. One action, concerning creating a more efficient creek flow for Flat Creek, was deleted as existing rock weirs in the creek were all removed., The table below summarizes progress implementing mitigation actions for Region 8, inclusive of the municipalities and special districts.

Table 5-1 Completed and Deleted Actions

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
Teton County	Levee Maintenance Stockpile Facility. Will provide a location for stockpiling of materials for levee maintenance and repair for Teton County and the Army Corps of Engineers.	Dam/Levee Incident, Flood	Completed.
Teton County	Renovate West Bank/ Wilson Fire Station #2. Enhance response and fire fighter safety	Wildfire	Completed. New roof installed.
Teton County	Teton Idaho/Wyoming Mutual Aid Agreement. Develop a mutual aid agreement between the Teton County Wyoming and Teton County Idaho Boards of County Commission for the sharing of resources during emergencies and combined training/exercises to increase disaster resiliency.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed in September of 2023
Teton County	Alta Stateline Rd Bridge. Puts a bridge where one has been missing for decades. Will now provide alternate emergency evacuation route for residents of North Alta without having to go out to Highway 33. completion Fall 2019.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed.
Teton County	WiRē Community Wildfire Risk Assessment. Work with WiRē to conduct wildfire risk assessment and analysis for various communities. Assessment includes rapid windshield survey of community, followed by research-based survey of community members. Use results to develop improved strategies for communicating risk and preparedness to the public	Wildfire	Completed. Information from assessment feeding into current CWPP update.

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
Teton County	County web camera network. Develop network of web cameras in strategic locations around Teton County to Allow the EOC, Dispatch Centers, and first responders to monitor roads, wildfires, critical infrastructure, and other incidents remotely.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed. ArcGIS web map created with publicly-accessible web cams on it for first responder use. Also installed tower-mounted webcams at EOC for views across valley and of S Highway 89.
Teton County	Hoback Outdoor Warning Siren Upgrade. Upgraded outdoor warning siren install to replace broken old siren at Hoback. New siren has higher decibel level and modern design to Allow for better coverage. Can be used for severe weather, wildfire, hazardous materials spills, and more	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed. Installed June 2019.
Teton County	Gros Ventre Bank Stabilization. Will protect the pathway along N. Hwy 89 on the Gros Ventre River, as well as the pathway bridge and highway bridge across the Gros Ventre.	Flood	Completed in Fall 2019
Teton County	Avalanche Response Equipment Deployment to first responders. TCSO Deputies and Wyoming Highway Patrol Trooper have been issues avalanche beacons, and probes and will also be receiving training on their use. Would like to consider getting same for JHFEMS BCs, ambulances, and first-outs	Avalanche	Completed.
Town of Jackson	START fuel station. Provides continuous fuel service to buses and other emergency/core services fleet vehicles, ensuring core municipal service provision in times of disaster	Avalanche, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed.
Town of Jackson	Snow King Estates water line. New installations and upgrades to water supply infrastructure to ensure service to all residents in the area and sufficient pressure for firefighting	Drought, Wildfire	Completed.
Town of Jackson	Outdoor Warning Siren - Central Jackson. Outdoor warning sirens	Avalanche, Dam/Levee Incident, Drought,	Deleted. Combined with C&T-11.

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
	can be used to alert the public to wildfire evacuations, severe weather, hazardous materials incidents, terrorist incidents, and more. Coverage is lacking in central Jackson, east Jackson, and Alta.	Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	
Town of Jackson	Outdoor Warning Siren - East Jackson. Outdoor warning sirens can be used to alert the public to wildfire evacuations, severe weather, hazardous materials incidents, terrorist incidents, and more. Coverage is lacking in central Jackson, east Jackson, and Alta.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Deleted. Combined with C&T-11.
Jackson Hole Airport	Fuel Facility and Rental Car Facility Generator. Installed Backup Generator for 100% Coverage of these facilities	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed.
Town of Jackson	Fleet maintenance facility. Ensures emergency and core public services fleets are in good state of repair so that they are able to respond in hazard or emergency situations; provides state of-the-art management of necessary hazardous materials	Avalanche, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed in 2024.
Town of Jackson	Stormwater Treatment Units on Powderhorn Lane. This unit provides protection to Flat Creek by removing dirt, sand, gravel, rocks from entering creek	Flood	Completed, Constructed 2019
Town of Jackson	Purchase of New Street Sweeper. New Sweeper will replace our old sweeper that is at the end of its life. This New sweeper will remove sand, silt, dust, rocks, and gravel from the roadway and prevent it from entering waterways, causing sedimentation and increased flooding	Flood	Completed.
Town of Jackson	Purchase of All Electric START Buses. To provide alternative fuel transportation (electric) to provide redundancy against diesel shortages	Avalanche, Earthquake, Flood, Severe Summer Weather, Severe Winter Weather, Landslide,	Completed. Electric START buses purchased; however, bankruptcy of supplier has caused

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
		Tornado/Windstorm, Wildfire	maintenance and implementation issues.
Town of Jackson	Purchase of New Loader. To replace aging front-end loader to assist in snowstorm mitigation and flood fight	Severe Winter Weather, Flood	Completed.
Town of Jackson	Town of Jackson Public Works Shop Generator. The Town of Jackson has a new Public Works Shop where vehicle maintenance takes place for town, county, non-profit, and even some federal vehicles. This includes emergency response vehicles and critical public works equipment such as graders and snowplows. This new shop is co-located with the START Bus public transit facility. Generators are being installed to power baseline emergency functions, but both of these facilities need to operate during long-term power outages in order to provide fuel and service to emergency vehicles and to transport the public during evacuations. A more robust generator system is needed to power the entire facility.	Earthquake, High winds & Downbursts, Landslides (include Rockfall/Debris Flos), severe summer weather (lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	Completed.
Town of Jackson	Tree removal. Arborists/forester to determine health of old trees in town and if one is deemed unsafe (high risk of Falling), it is removed and replaced with a young tree	Avalanche, Earthquake, Flood, Severe Summer Weather, Severe Winter Weather, Landslide, Tornado/Windstorm, Wildfire	Deleted. Action was combined with action TJ-3.
Town of Jackson	North King Street Extension. To provide alternative traffic routes to hospital in case of hazards preventing traffic around the town square	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	Completed.
Town of Jackson	Replacement of Motor Graders and Additional Front-End Loaders. To replace aging equipment used in landslide, winter storm, and flood mitigation	Flood, Landslide, Severe Winter Weather	Completed.

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
Teton County, Town of Jackson	Lightning Safety Signage. Hang Lightning Safety Awareness signs from the National Weather Service in parks and along the pathways to educate the public on how to recognize dangerous lightning situations and get to safety	Lightning	Completed. Installed at all local parks and entrances to bike pathway system.
Teton County, Town of Jackson	WUI Coordinator Position. Explore the creation of a Wildland Urban Interface coordinator position to manage WUI mitigation projects, head up education of the public for WUI issues, and assist with assessments	Wildfire	Completed. Position created in JH Fire/EMS.
Teton County, Town of Jackson	WYDEQ Continuous Fine Particulate Matter monitoring station. WYDEQ is planning on installing a continuous fine particulate matter monitoring station at the sewage transfer station east of JH High School. This would Allow for real - time monitoring of air quality, including wildfire smoke.	Wildfire	Completed. Instruments are owned and operated by WYDEQ. TCD is emergency site operator.
Teton County, Town of Jackson	Hazard tree mitigation. Staff inspects Parks and Town Core annually to identify hazard trees for removal or maintenance. Currently establishing zones throughout the County of rotating inspections for public trees. Public Safety/Power Outage/Torna do/High wind initiative.	Avalanche, Earthquake, Flood, Severe Summer Weather, Severe Winter Weather, Landslide, Tornado/Windstorm, Wildfire	Deleted. Combined with Action TJ-3
Teton Conservation District	Work with Flat Creek Water Improvement District (FCWID) to prevent flooding from frazil ice. Finalize development of WID. Develop a fund for mitigation work, obtain access, implement. Mitigate repetitive property loss and damage from ice-jam flooding.	Flood	Completed.
Teton Conservation District	Cooperate with WY Water Improvement Study for Upper Snake River drainage. Prevent flood potential. Protect lives and property.	Flood	Completed. Assuming this is the irrigation facility risk assessment. We participated but nothing identified formally because they only engage

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
			with Irrigation Districts.
Teton Conservation District	Conduct flood risk analysis for Flat Creek. Prevent flood potential. Protect lives and property.	Flood	Completed. Flat Creek flood return interval was adjusted during the Lockhart Project.
Flat Creek WID	Flat Creek Watershed Improvement District (FCWID). Formulation of Emergency Wintertime & Spring Runoff Action Plan. Emergency Wintertime & Spring Runoff Action Plan has been provided to FCWID District Members for the last four years to assist property owners on Flat Creek with preparations and ideas for mitigating flooding that may occur on their properties.	Flood	Completed.
Flat Creek WID	FCWID - Wintertime Data Collection and Oversight on Flat Creek. Engagement of Alder Environmental LLC-perform wintertime data collection on Flat Creek has assisted the FCWID in sending that data for analysis to Drs. Kempema & Ettema for studies & reports; offered professional oversight for wintertime flooding mitigation.	Flood	Completed.
Flat Creek WID	FCWID Access Agreements developed and obtained from district members. two access agreements (1-data collection; 2-emergency mitigation) developed with legal counsel to obtain legal permission from District Members. Helpful during wintertime flooding emergencies for track hoe entrance into Flat Creek to protect properties	Flood	Completed.
Flat Creek WID	FCWID Removal of Shoal in Flat Creek upstream of Smith's Market. In concert with FCWID, the Town of Jackson removed the identified constricting shoal	Flood	Completed.

JURISDICTION	ACTION NAME & DESCRIPTION	HAZARD(S) MITIGATED	STATUS
	in Flat Creek upstream of Smith's Market.		
Flat Creek WID	FCWID Bank Stabilization on Flat Creek @ S. Hwy 89 upstream of Smith's Market. WYDOT at the urging of FCWID, shored up eroding Hwy 89 embankment on Flat Creek upstream of Smith's Market; oversight and help by Town of Jackson & Alder Environmental (acting as paid agent of FCWID); installed riprap to stabilize eroding creek bank.	Flood	Completed.
Flat Creek WID	FCWID - Existing ROCK WEIRS Removal/Reconfiguration to Create More Efficient Creek Flow. FCWID "wish list". Acquire expertise to determine which, if any, ROCK WEIRS need to be removed/recon figured to create more efficient creek flow to Alleviate possible flooding.	Flood	Deleted. All in-stream rock weirs (with the exception of the diversion structure for irrigation purposes at the upstream end of Garaman Park) have been removed.
Flat Creek WID	FCWID - Studies & Reports by Dr. Edward Kempema & Dr. Robert Ettema re: Mitigation of Flooding on Flat Creek. Engagement of Drs. Kempema & Ettema to develop analysis of Flat Creek flooding challenges facilitated important mitigation suggestions for various choke areas on the creek that cause winter flooding.	Flood	Completed.

5.4.2 2025 Mitigation Actions

The action plan presents the recommendations developed by the county planning team, outlining how the Region can reduce the risk and vulnerability of people, property, infrastructure, and natural and cultural resources to future disaster losses.

Further, it should be clarified that the actions included in this mitigation strategy are subject to further review and refinement; alternatives analyses; and reprioritization due to funding availability and/or other criteria. The Region is not obligated by this document to implement any or all of these projects. Rather, this mitigation strategy represents the desires of the community to mitigate the risks and vulnerabilities from identified hazards. The Region also realizes that new needs and priorities may arise as a result of a disaster or other circumstances and reserves the right to support new actions, as necessary, as long as they conform to their overall goals, as listed in this plan.

The table below includes a summary of the numbers of actions completed, continued, and new actions developed for each of the participating jurisdictions in the 2025-2030 HMP. The

HMPC reviewed proposed mitigation actions and determined that TJ-10 should be combined with TJ-3 to address overlapping objectives. Also, the HMPC noted that TJ-15 and TJ-16 of previous mitigation actions should be combined to C&T-11 because this action should only be noted in the County and Town actions. Combining these actions helps enhance efficiency, streamline implementation, and reduce redundancy.

There are a total of 49 actions from the 2020 HMP being continued, along with 24 new actions developed, for a total of 73 actions in the 2025 Region 8 HMP mitigation strategy. For tracking purposes, it is important to note that the Flat Creek Watershed Improvement District (FCWID) and Jackson Hole Airport were not adopting participants in the 2020 HMP. The four continuing actions for FCWID were originally listed as Teton Conservation District actions, and the one continuing action for Jackson Hole Airport was originally noted as a County and Town joint action. These actions are now listed under the correct participating jurisdictions along with new actions for 2025.

Table 5-2 Summary of Actions by Jurisdiction

JURISDICTION	2020 ACTIONS	COMPLETED	DELETED	CONTINUING	NEW ACTIONS 2025	TOTAL NEW AND CONTINUING ACTIONS
County	**33**	9	0	26	0	**26**
Town of Jackson	**28**	11	3	13	7	**20**
County + Town	**7**	3	1	2	11	**13**
Teton Conservation District	**18**	7	1	3	1	**4**
FCWID	**-**	-	-	4	0	**4**
Airport	**-**	-	-	1	5	**6**
Totals	**86**	**30**	**5**	**49**	**24**	**73**

The mitigation actions developed for the plan update are detailed in Table 5-3. Many of the action items included in this plan are a collaborative effort among local, state, and federal agencies and stakeholders in the planning area. The projects are organized by jurisdiction and include notes about the department and partners necessary to implement the project, estimated cost, potential funding sources, timeline, and their relative level of priority: high, medium, and low. The lead agency responsible for each action has been bolded.

The Cost Estimate column describes the estimated project costs using the following categories:

- Little to no cost
- Low: Less than $10,000
- Moderate: $10,000-$100,000
- High: $100,000-$1,000,000
- Very High: More than $1,000,000

The Timeline column describes the estimated time of completion for each project using the following categories:

- Short Term: 1-2 years
- Medium Term: 3-5 years
- Long Term: 5+ years

- Ongoing: action is implemented every year

The tables also provide status/implementation notes that describe progress made on the actions so far, using the following categories, and, where applicable, notes if there were changes in the priority level from the previous plan:

- **Not Started**: Work has not begun.
- **In Progress**: Work has begun but not completed.
- **Continuous**: Ongoing annually with no specific end date.
- **New in 2025:** The action is new to this plan update; little to no work has been completed.

Table 5-3. Teton County Hazard Mitigation Actions

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TC-1	Teton County	Goals 1 and 2	Upgrade Hoback Fire Station #3. Enhance response and fire fighter safety	Wildfire	**JH Fire/EMS**; ESF#04-Firefighting	Long Term	Moderate; USDA Community Facilities Direct Loan & Grant Program	Low	In Progress. Still in planning phases depending on strategic direction of JH Fire/EMS. Funds have been secured through SPET and become available winter 2025. Design and build to follow.
TC-2	Teton County	Goals 1 and 2	Upgrade Fire Station #4 at Moran Junction. Enhance response and fire fighter safety	Wildfire	**JH Fire/EMS**; ESF#04-Firefighting	Long Term	Moderate; USDA Community Facilities Direct Loan & Grant Program	Low	Not Started.
TC-3	Teton County	Goal 4	Offer one CERT basic training course/year to raise awareness of hazards and increase response capability. Offer monthly ongoing training to CERT volunteers.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TCEM**, Teton County CERT	Ongoing	Moderate; Emergency Management Performance Grant Program (EMPG)	High	Annual Implementation. One basic training offered each year in the fall with monthly trainings for CERT volunteers.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TC-4	Teton County	Goals 1 and 2	Renovate Teton Pines Fire Station #6. Enhance response and fire fighter safety	Wildfire	**JH Fire/EMS**; ESF#04-Firefighting	Long Term	Moderate; USDA	Low	In Progress. In planning phases.
TC-5	Teton County	Goals 1 and 4	Outreach to encourage public sign-up with Teton_ WY Alerts powered by Everbridge, FEMA phone app and raise awareness of Emergency Alert System, Wireless Emergency Alerts, and NOAA Weather Radio. Citizens warned and better-informed during disasters	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TCEM**	Ongoing	Moderate; County General Funds	High	Annual Implementation. Have recently switched from Nixle to Everbridge. Has required additional outreach efforts and increased cost. Increasing to $5,000 to $25,000.
TC-6	Teton County	Goals 1 and 4	Develop and run general preparedness public service announcements to enable individuals better able to help themselves	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TCEM**	Ongoing	Moderate; County General Funds	High	Annual Implementation. Media campaign created that includes newspaper, online ads, and radio ads for monthly preparedness themes all year long.
TC-7	Teton County	Goals 1 and 4	Improve emergency management website to update preparedness outreach and provide emergency information to the public. Individuals better able to prepare and provide	Avalanche, Dam/Levee Incident, Drought, Earthquake,	**TCEM**	Short Term	Moderate; County General Funds	Medium	In Progress. ArcGIS Online solution for a public information website is being configured but has

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			reliable source of emergency information during incidents	Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire					not been deployed. ArcGIS Emergency Management Hub solution implemented for TCIncident.org emergency information website. Non-emergency info side of website needs a complete rewrite.
TC-8	Teton County	Goals 1 and 4	Work with rural subdivisions at risk for flood and wildland fire to develop their own plans. Reduce potential for loss of lives.	Flood, Wildfire	**TCEM, JH Fire/EMS, TC Sheriff**; TC Floodplain Administrator	Ongoing	Low; EMPG, BRIC, Community Planning Assistance for Wildfire (CPAW)	Medium	In Progress. WUI Coordinator is working with subdivisions on their wildfire preparedness plans. Draft EOP update includes a new section with guidance to the general public on creating community emergency plans.
TC-9	Teton County	Goals 1 and 2	Map critical facilities with back-up power. Obtain/ install generators for those without. Enhanced response, sheltering, and continuity of government	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather,	**TCEM**, Teton County School District, American Red Cross, **Teton County Facilities Division**, Teton County Library, ESF#12-Energy	Short Term	Moderate; EMPG, BRIC	Medium	In Progress. TCEM has started to map critical infrastructure in the community using ArcGIS Emergency Management Solution. Several facilities, including the Teton County Library – Jackson and

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
				Tornado/Windstorm, Wildfire					Teton County Library – Alta branches have been identified as needing generators to serve as disaster recovery centers, warming shelters, clean air shelters, and cooling shelters. Once completed, next step will be to identify those without emergency power that need it.
TC-10	Teton County	Goal 4	Integrate hazard information into County GIS and make available to the public through County website. Prevent future property damage by ensuring development doesn't occur in hazard areas	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	TOJ Planner; TC Planner; TC Engineer; TCEM; WOHS Coordinator, WY State Geological Survey; **TC GIS Administrator**	Short Term	Low; County General Funds, Staff Time	Medium	In Progress. County has recently hired a GIS Administrator. They are bringing various hazard information online and making available to the public.
TC-11	Teton County	Goal 2	Critical Facility Generator Hookups. Assess EOC power needs and install external hook-ups for a trailer-mounted generator to be installed on the EOC in the event the primary generator fails.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide,	TCEM; TCSO; JHFEMS; TCHD; TC Library; **Teton County Facilities**	Short Term	Low; State Homeland Security Program (EMPG/SHSP) Grant	Low	Not Started.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
				Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire					
TC-12	Teton County	Goals 1 and 4	Critical Facility Command Trailer Hookups. In the event the county EOC becomes unusable, or needs additional workspace for a long-term disaster, install hookups on the outside of the building to provide power, internet, and phone to trailer command posts that may come to assist.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TCEM**; TCSO; JHFEMS; TCHD; TC Library; **Teton County Facilities**	Short Term	Low; EMPG, SHSP	Low	Not Started.
TC-13	Teton County	Goals 1 and 4	Outdoor Warning Siren — Alta and Grand Targhee Resort. Outdoor warning sirens can be used to alert the public to wildfire evacuations, severe weather, hazardous materials incidents, terrorist incidents, and more. Coverage is lacking in central Jackson, east Jackson, Grand Targhee Resort, and Alta.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TCEM**; Community of Alta, Grand Targhee Resort	Short Term	Low; EMPG, BRIC	Low	Not Started.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TC-14	Teton County	Goals 1 and 4	Update 'quake island' mapping of county, make available on GIS. Enhance response, Ability to better plan ahead	Earthquake	**TC GIS Administrator,** TCEM, Geologists of JH	Medium Term	Moderate; County General Funds, Staff Time, Non-profit assistance	Medium	Not Started. County now has a GIS Administrator. Will be working with him to get this project started.
TC-15	Teton County	Goal 2	Rank bridges based on quake island analysis. Perform structural retrofitting of vulnerable bridges. Improve resilience of the county's transportation system	Earthquake	FEMA Mitigation Specialist; **WYDOT Engineer, FHWA Engineer**; TC Road and Levee; TOJ Public Works, Geologists of JH, WY State Geological Survey, ESF#01-Transportation	Medium Term	High; County General Funds, BRIC, Wyoming DOT Funding	Medium	Not Started.
TC-16	Teton County and Teton Conservation District	Goal 4	Use HMP and the Great ShakeOut as a platform to raise awareness and encourage individual responsibility and action. Reduced potential for property damage, business interruption. Teton Conservation District to serve as a participant and promoter of the Great ShakeOut.	Earthquake	**TCEM,** TCD staff	Ongoing	Little to no cost; Staff Time, Local General Funds	Low	Annual Implementation. TCEM participates in the Great Wyoming ShakeOut every October and conducts public outreach on earthquake preparedness.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TC-17	Teton County	Goal 1	Identify redundant transportation routes for emergency access and evacuation. Develop county-wide evacuation plan with professional traffic models, especially for limited-access subdivisions and critical trans nodes. Reduces potential for loss of life	Earthquake, Flood, Wildfire	**TCEM,** TC Road and Levee; ESF#01-Transportation; Homeowners; TAWPC	Medium Term	High cost; Staff Time, Local General Funds, PROTECT Grant	Medium	In Progress. Teton County applied for a PROTECT grant in the amount of $750,000 to hire a contractor to complete a traffic analysis and develop an evacuation plan for the entire county. Application was denied, but County will try to apply again.
TC-18	Teton County	Goal 4	Complete work to participate in the NFIP Community Rating System. Reduce effects of flood events; lower insurance rates for property owners in the floodplain	Flood	TC Engineer; TCEM; **WOHS Floodplain Coordinator; TC Floodplain Administrator; TOJ Floodplain Administrator**	Ongoing	Little to no cost; Staff Time, Local General Funds	Low	Not Started. Not much interest from participating jurisdictions. Very few flood insurance policies in place that would benefit.
TC-19	Teton County	Goal 4	Reinstitute automated dam monitoring and alert notification, Jackson Lake Dam. Provide greater response time. Reduce potential for loss of life and property damage	Dam/Levee Incident, Flood	TC Commissioners; National Park Service; **US Bureau of Reclamation**	Short Term	Moderate; County General Funds, Wyoming Safety of Dams Funding	Low	Not Started. Outside of purview of local government.
TC-20	Teton County	Goal 4	Offer 1-2 weather spotter and/or CoCoRaHS courses/year. Raised awareness, better data	Flood, Severe Summer Weather, Severe Winter Weather	**TCEM**; NWS Riverton Warning Coordination Meteorologist	Ongoing	Low; Staff time, EMPG	Medium	Annual Implementation. Continue to offer Weather Spotter and CoCoRaHS each year.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TC-21	Teton County	Goal 3	EOC Weed Control. Control weed grasses and other fine fuels surrounding the County EOC to help mitigate against wildfire, especially around generator and HVAC systems.	Wildfire	TCEM; **Teton County Parks & Recreation**	Ongoing	Low; Staff time, BRIC	Low	Annual Implementation.
TC-22	Teton County	Goal 2	County Network Redundancy. Increase resilience of data and internet network of critical County facilities through backup data services	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TC Information Technology,** TCEM; TCSO; JHFEMS; TCHD; TC Library; Teton County Facilities	Long Term	High; Wyoming SHSP	Medium	In Progress. TCIT is working on redesigning county network to allow several internet access points to serve as backups to buildings throughout the network. EOC installed a cellular backup internet router for FirstNet, and Frontline, and Starlink. EOC also has budgeted funds for FY25 to install Star Link backup internet at EOC.
TC-23	Teton County	Goal 1	Spring Gulch Rd Avalanche Mitigation. Examine possible solutions to avalanche path on Spring Gulch Rd, just north of Highway 22. Implement steps to mitigate against avalanches that could cause loss of life, property damage, or closure of road.	Avalanche	**TC Road & Levee**; TC Engineering; ESF#01-Transportation; ESF#03-Public Works	Long Term	High; BRIC	Medium	Not Started.
TC-24	Teton County	Goals 1, 2, and 3	Water supply analysis. Analyze Teton County to determine areas that are not within a safe distance from a water source for firefighting. Look at population	Drought, Wildfire	**Jackson Hole Fire/EMS**; TAWPC; Teton Conservation	Short Term	Moderate; BLM-WUI Community Fire	High	In Progress. Will need to get more info from WUI Coordinator to

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			density, vegetation, wildfire history, and water sources. Use data to determine if supplemental water systems are needed.		District; ESF#04-Firefighting; ESF#11-Agriculture & Natural Resources		Assistance Funds		understand progress on this project.
TC-25	Teton County	Goals 2 and 3	Winter sand/salt storage dome. Provides designated, covered location to store sand/salt for winter roadways maintenance, allowing for larger quantities on-hand; containment of material reduces pollution contributions to surface waters	Severe Winter Weather, Flood	ESF#03-**County Public Works**	Medium Term	High; Local General Funds	High	Not Started.
TC-26	Teton County	Goals 1 and 2	Snow storage/melting facility. Enhances road safety by providing a larger location to store and/or melt snow so that more can be removed from streets, increasing traffic safety and providing clear routes for evacuation. Strategic melting can also be used for groundwater recharge for drought resiliency.	Severe Winter Weather, Drought	**County Public Works**; ESF#01-Transportation; ESF#03-Public Works	Short Term	High; CIP, Local General Funds	Medium	Not Started.
TJ-1	Town of Jackson	Goal 4	Consider natural hazards when creating/updating community development plans. This is to include mitigation actions, data, and overall goals. Risk reduction is incorporated at the community level.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather,	TC Planner; TOJ Planner; TOJ **Town Council**; Town of Jackson Floodplain Administrator; County Commission; County Floodplain Administrator	Ongoing	Little to no cost; Staff Time, Local General Funds	High	Annual Implementation.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
				Tornado/Windstorm, Wildfire					
TJ-2	Town of Jackson	Goal 2	Rank bridges based on quake island analysis. Perform structural retrofitting of vulnerable bridges. Improve resilience of the Town's transportation system	Earthquake	**TOJ Public Works**; WYDOT; ESF#01-Transportation; FEMA Mitigation Specialist; WYDOT Engineer, FHWA Engineer; TC Road and Levee; Geologists of JH; WY State Geological Survey,		Moderate; CIP, State DOT Funds, BRIC	Low	Not Started. Will put into the Capital Planning Document
TJ-3	Town of Jackson, FCWID, Teton County	Associated goals 2 and 3	Continue the Town of Jackson's hazard tree reduction program and expand to include County and FCWID. Arborists/foresters determine health of old trees in town and if one is deemed unsafe (high risk of Falling), it is removed and replaced with a young tree. Limit the secondary effects of severe weather (wind, snow). Currently establishing zones throughout the County of rotating inspections for public trees. Public	Avalanche, Earthquake, Flood, Severe Summer Weather, Severe Winter Weather, Landslide, Tornado/Windstorm, Wildfire, Severe Winter	**TC Parks and Recreation**; TC Parks & Recreation, TOJ Public Works; ESF#11-Agriculture & Natural Resources, County Public	Ongoing	Little to no cost; Staff Time, Local General Funds	Medium	Annual Implementation. ongoing every year

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			Safety/Power Outage/Tornado/High wind initiative. FCWID to support and promote the program in areas along the pathways near Flat Creek that would require tree management by Parks/Rec.	Weather, Tornado/Windstorm	Works, FCWID Chair				
TJ-4	Town of Jackson	Goal 2	Upgrade to Public Works Communication Tower. Update equipment for All Public Works communication via truck radios and office radios. Ensure interoperability with other first response agencies	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TOJ Public Works;** Teton County Wireless Radio Coordinator; ESF#02-Communications	Short Term	High; DHS SAFECOM Emergency Communication Grant	High	Not Started. Looking to implement in FY25 or FY26
TJ-5	Town of Jackson	Goals 2, 3, and 4	Town of Jackson Stormwater Management Program. Reduce pollution contributions from stormwater runoff to improve surface water quality and prevent natural protection systems degradation; also reduce localized flooding and winter creek freeze/flooding	Drought, Flood, Severe Summer Weather, Severe Winter Weather	**TOJ Public Works**; ESF#03-Public Works	Short Term	Moderate; Funding already secured	High	In Progress. Should be completed in 2025/2026.
TJ-6	Town of Jackson	Goal 2 and 3	Snow melt spoils management. Provides space for spreading/drying and testing dirt remaining after the winter snow pile melts, to determine whether it can be beneficially reused as fill material or must be disposed; reduces pollution to protect surface water and groundwater quality	Severe Winter Weather, Drought	**TOJ Public Works**; ESF#03-Public Works; County Public Works	Short Term	Moderate; Local General Funds/Local Agreement	Medium	Not Started.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TJ-7	Town of Jackson	Goal 1	Roadway intersections and streetscapes improvements. Accommodates peak-demand traffic periods, improves traffic flow efficiency, and provides multiple transport modes throughout town to reduce potential for hazards and congestion during evacuations for any type of disaster	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TOJ Public Works**; WYDOT; ESF#03-Public Works; ESF#01-Transportation	Medium Term	Very High; CIP/Local & State General Funds	Medium	Not Started. Projects are completed annually to support alternate modes, but not specifically to address evacuation. Some other overarching plans/projects are in progress (joint Town/County).
TJ-8	Town of Jackson	Goal 4	Streetlight additions to enhance public safety through better visibility (prevents accidents with other users and wildlife) and provides safe routes during evacuation	Wildfire	**TOJ Public Works**; Lower Valley Energy; ESF#01-Transportation; ESF#03-Public Works;	Medium Term	High; CIP/Local General Funds	Medium	In Progress. Ongoing yearly
TJ-9	Town of Jackson	Goal 4	Land Development Regulation updates. Review and update land development regulations to provide public safety and reduce impacts of flood, drought, fire, avalanche, landslide, and other hazards	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**TOJ Planning**, County Planning	Ongoing	Moderate; Staff Time, FMA, BRIC	Medium	Annual Implementation.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TJ-10	Town of Jackson	Goal 3	Stormwater Treatment Unit Installation HWY 89. To reduce inflow of grit, sand, rock, gravel into Flat Creek	Flood	**TOJ Public Works;** Teton Conservation District; ESF#03- Public Works	Medium Term	Moderate; EPA Grants	Medium	Not Started. Project has a placeholder in capital plan
TJ-11	Town of Jackson	Goal 3	Future Stormwater Catchment Units. To install stormwater catchment units to further protect infiltration of sand, silt, gravel, and rock into Flat Creek.	Flood	**TOJ Public Works**; Teton Conservation District; #03- Public Works	Medium Term	Moderate; EPA Grants	Medium	In Progress. Ongoing and added with new projects as they come
TJ-12	Town of Jackson	Goal 2	Cache Creek Tube. Replaces old stormwater conveyance system through Town, additionally making it easier to maintain and move sections out from under existing buildings to public access	Flood	**TOJ Public Works**; Teton Conservation District; ESF#03- Public Works	Long Term	Moderate; BRIC	High	In Progress. Some sections have been completed, ongoing for other portions
TJ-13	Town of Jackson	Goal 2	Secure Land and Build a New Potable Water Tank. To add capacity to our potable water system that will Allow for redundancy and backup to other water zones in town. Other zones could be harmed or damaged from power outages or earthquakes. This will allow greater water capacity to feed other zones.	Earthquake, Drought, Wildfire	**TOJ Public Works**; ESF#03- Public Works	Medium Term	Very High; Wyoming Dept. of Environmental Quality Drinking Water State Revolving Fund	Medium	In Progress. ongoing - evaluating site alternatives for zone 3.
TJ-14	Town of Jackson	Goal 2	Generators for public buildings and municipal facilities. Town Public Works' Facilities Division oversees installation and regular inspections and maintenance for generators at Town owned buildings and facilities. Several buildings do not currently have backup power sources, and the Town aims to	Earthquake, Flood, High Winds & Downbursts, Severe Summer Weather (Lightning, Extreme Heat,	**Town Public Works Department**; possibly Lower Valley Energy, Energy Conservation Works	Annual Implementation	High; BRIC, Hazard Mitigation Grant Program (HMGP)	Medium	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			install generators or other similar backup supply, prioritizing those associated with critical utilities, critical services, and sheltering locations. Having backup power in place ensures continuation of services when the primary power system fails and enables effective crisis management and emergency response by having utility and building/facility resources available. The Town currently needs to add generators or other backup power sources to 3 water supply system facilities (a booster station and 2 wells), and 3 wastewater lift stations. Other locations include an Administration building, a public restroom facility that could serve as a shelter/gather location, and a multi-unit housing structure.	Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire					
TJ-15	Town of Jackson	Goals 1 and 2	Resiliency Hub Planning and Development. Resiliency Hubs provide a safe place for people to go to seek relief from extreme weather and other conditions. They differ from Emergency Shelters, which are usually open for short durations after an extreme event such as a flood, tornado, or fire. Resiliency Hubs can be designed to be longer term, and to provide relief on an ongoing basis for conditions that persist and may return season after season, such as extreme heat or wildfire smoke. They should be locations with access to air purification, heat, and air conditioning at a minimum, along with backup power sources. They could also have facilities for bathing,	Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold)	**Town of Jackson Public Works**	Medium Term	High; BRIC, HMGP; There could be federal funding available for climate resiliency planning	Medium	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			cooking, or sleeping, and double as emergency shelters when reprieve is needed for longer than a few hours. Resiliency hubs can be created out of existing facilities such as recreation centers, senior centers, libraries, and other public spaces. They may need additional infrastructure and backup power. The creation of a new space is also possible.						
TJ-16	Town of Jackson	Goal 2	Town of Jackson Town Hall Annex Generator. Jackson Town Hall at 150 E Pearl Ave has outgrown its office space. The Town has acquired the Geittmann, Larson, and Swift law office building across the street and plans on moving some offices to this building. Town hall is critical to the ongoing operation of public services ranging from police to building inspections to legal. This newly acquired building does not have any power backup to allow it to carry out critical municipal functions during a power outage. A generator is needed to power the entire facility.	Earthquake, High Winds & Downbursts, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	**Town of Jackson Public Works**	Short Term	Very High; Town of Jackson Capital Funds, BRIC, HMGP	Medium	New in 2025
TJ-17	Town of Jackson	Goal 2	Utility facilities repair and maintenance. Perform regular maintenance on structures that house water supply and wastewater treatment utility infrastructure and operations. The Town owns the following assets: Water supply: 10 wells, 5 well houses (plus 1 future addition in progress), 3 booster stations, 3 storage tanks (plus 1 future addition).	Drought, Hazardous Materials, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather, Severe Winter	**Town Public Works**, Town IT	Annual Implementation	High; Town of Jackson Capital Funds,	Medium	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			Wastewater: 1 headworks and pumping building, 10 lagoons, 1 UV disinfection building, 7 lift stations/pump houses, 3 PV solar systems, some separate structures for backup power. The Town also utilizes a SCADA system for data tracking and remote operations for both utilities. Routine maintenance like repairing and replacing building components (such as siding, entrances, and roofs) as well as system components (such as bar screens, pumps, and valves) extends the life and maintains security of these systems. It also improves resiliency in service provision. Regular, effective asset management reduces overall costs which in turn prevents larger increases in user rates.	Weather, Wildfire					
TJ-18	Town of Jackson	Goals 1, 2, and 3	Green Infrastructure projects. The Town is currently developing a Stormwater Management Program. One part of the program involves establishing or updating policies and requirements related to water quantity and quality of stormwater runoff from construction sites and from developed properties. As part of this effort, the Town will also design and implement three green infrastructure pilot projects to test different practices/technologies for effectiveness in our local environment. Once policies are established and effective practices are identified, other green infrastructure projects will be implemented throughout Town to aid in	Dam/Levee Incident, Drought, Flood, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Wildfire	**Town Public Works**; Town Planning & Buildings, Parks and Recreation, Teton Conservation District	Medium Term	Moderate; Clean Water Act section 319 funds (administered through WY DEQ); BRIC	Low	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			flood prevention and protect water quality in our creeks that serve as Snake River headwaters. In addition to provide stormwater storage and management areas, green infrastructure also helps prevent landslides by stabilizing natural slopes, helps prevent wildfire by retaining more moisture in areas distributed through town, and provides areas for snow storage and melting.						
TJ-19	Town of Jackson	Goal 2	Bury urban power lines. Several street corridors in town have overhead power lines, and both the Town and Lower Valley Energy (LVE, the power utility provider in town) desire to bury them. Burying power lines reduces risk of fire, danger to wildlife, and other electricity related hazards where overhead lines may fall, break, become entangled with trees, or reduce clearance access to buildings and construction activities. Additionally, buried power lines are less susceptible to damage and outages in windstorms, snow/ice storms, and wildfires. The Town has worked with LVE and private property developments and redevelopments to bury power lines, with an emphasis on the Town Square and downtown core as highest priorities. These projects have mostly been opportunistic due to annual limitations on capital improvement project funding.	Drought, High Winds & Downbursts, Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	Public Works; **Lower Valley Energy (LVE)**, WYDOT, Fire/EMS, Parks & Recreation	Long Term	High; BRIC, Town/LVE Patronage Funds	Low	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TJ-20	Town of Jackson	Goals 1 and 2	Enhance and construct roofs for snow mitigation at public facilities. The Town owns multiple public buildings, municipal operations facilities, and residential units/properties. Protecting public facilities and operations enables the Town to provide continuous service during periods of heavy snowfall and accumulation which is present throughout our long winters. The Town prioritizes structures that house critical utilities and services, or that can serve as a sheltering location in a crisis. Currently the Town has identified 1 public building that is overdue for full roof replacement and can serve as a crisis shelter, and one administrative building needing mitigation for snow dams and icicles that present hazards. Additionally, the Town performs roof repairs and replacements. Annual review of the capital improvement plan and assets help identify immediate and short term retrofit/replacement needs.	Severe Winter Weather (incl Extreme Cold)	**Town Public Works;** Town Administration, Town Finance	Long Term	High; BRIC	High	New in 2025
C&T-1	Teton County, Town of Jackson	Goal 2	Natural Gas Emergency Flow Valves. As of 4/17/19, All natural gas mains are required to have an Emergency Flow Valve (EFV). This is installed by Lower Valley Energy on their main, and if there is a break between the main and the meter it will stop flow. This is NOT an earthquake valve.	Avalanche, Drought, Earthquake, Flood, Landslide, Severe Summer Weather, Severe Winter Weather,	**Lower Valley Energy**; ESF#12-Energy, Teton County Public Works, TOJ Public Works	Ongoing	High; BRIC, Lower Valley Energy CIP	Medium	Annual Implementation.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
				Tornado/Windstorm, Wildfire					
C&T-2	Teton County, Town of Jackson, FCWID	Goal 4	Teton Wildfire Ambassador Program. Train and work with neighborhood ambassadors to become champions for wildfire mitigation in their neighborhood. Have them reach out to neighbors, be examples of good mitigation practices, and be a liaison with emergency services. FCWID to support in promoting program.	Wildfire	**TAWPC**; TOJ Community Engagement, ESF#04 – Firefighting, FCWID Chair	Medium Term	Little to no cost; Staff Time, Local General Funds	High	Annual Implementation. Ongoing program supported by TAWPC
C&T-3	Teton County, WYDOT, Town of Jackson	Goals 1 and 2	Transportation Emergency Alternatives Management (TEAM). When an emergency occurs, many residents and commuters may find themselves struggling to find appropriate transportation alternatives to get where they need to go. The recent landslide which closed Teton pass for nearly one month is an example where commuters were forced to travel longer distances or find temporary housing solutions. Transportation alternatives can include programs including but not limited to 1) A network of park-and-rides to facilitate transit use, thereby limiting traffic on diverted corridors (as increased traffic can	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning,	**Teton County Emergency Management,** Regional Transportation Planning Administrator; Town Ecosystem Stewardship Administrator; County Sustainability Coordinator; ESF#01 – Transportation;	Medium Term	High; CMAQ, 5311, PROTECT, other grants	Medium	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			lead to increased crashes and reduced safety overall). 2) Shared mobility options such as car-sharing, carpooling or vanpooling to facilitate pooling through restricted areas that may need to operate at lower speeds or with limited traffic. 3) Real-time customer information to facilitate better decision making about current conditions	Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	Partner w/ Local govts. And employers				
C&T-4	Teton County, Town of Jackson	Goal 2	Good Samaritan Mission Emergency Shelter Generator. Good Samaritan Mission (GSM) provides emergency and extended shelter to those experiencing personal emergencies or impacted by natural disasters. Currently, GSM has no backup power for power loss caused by weather, natural disasters, electrical grid disruptions or other means creating a closure of Teton County's only Emergency Shelter. Emergency generator power allows GSM to also be part of Teton County's Disaster-Pandemic relief response.	Earthquake, Flood, High Winds & Downbursts, Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	**Good Samaritan Mission**, Teton County Emergency Management, TOJ Public Works	Short Term	High; Internal GSM Fundraising, BRIC. Site Determination work and Building Permit: $10,000. Site Preparation: Demolition/removal of the deck at the proposed location and build cement pad. $40,000. Install electric and gas lines and their generator connection lines. $20,000. 60KW Commercial Generator: $25,000	High	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
							(Includes Shipping) Contingency: $5,000		
C&T-5	Teton County, Town of Jackson, EAS Broadcasters	Goal 2	Teton County/Jackson EAS Station Generators. Teton County and the Town of Jackson have relatively few local media outlets, and no local television stations. The Emergency Alert System (EAS), although old, is reliable and still relevant in the age of Wireless Emergency Alerts and cell phones. Since it relies on broadcast technologies, it does not have the bandwidth issues that cellular infrastructure may have. It is also accessible by anyone with an AM/FM radio, NOAA All Hazards Weather Radio, or cable television. Our local EAS broadcasters must be able to operate when a disaster strikes, and power is impacted. This includes both their broadcast locations and their transmitters. This project would provide for design and installation of backup power equipment for broadcast locations and/or transmitters, with ongoing maintenance of the generators being the responsibility of the broadcaster.	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	**EAS Broadcasters;** Teton County Emergency Management, TOJ Community Engagement and Police	Long Term	Very High; EAS Broadcaster Funds, BRIC	Low	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
C&T-6	Teton County, Town of Jackson	Goal 2	Teton County/Jackson EOC Power Resiliency. Teton County/Jackson EOC currently has a generator that powers the entire facility and the neighboring Coroner's Office and morgue, and a UPS that covers most outlets and HVAC components in the facility. However, the generator is not considered a Level 1 generator that would normally be required for a critical facility because it is missing an auxiliary generator power bypass, and its fuel tank is only 200 gallons. This project would add the necessary components to make the generator a Level 1 generator that would power not only the EOC, but also the Coroner's Office/morgue, and the Adams Canyon Fire Station which are all located at the same campus. This may include a installing a larger fuel tank, adding a larger dual-fuel generator (diesel and natural gas), installing an auxiliary generator bypass, and integrating existing solar panels on the facility for added energy resilience.	Earthquake, High Winds & Downbursts, Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	**Teton County Emergency Management**, Teton County Facilities Management, Jackson Hole Fire/EMS, Teton County Coroner, TOJ Public Works	Medium Term	Very High; Teton County and Town of Jackson Capital Funds, BRIC	Medium	New in 2025
C&T-7	Teton County, Town of Jackson, FCWID	Goals 1 and 3	Teton County/Jackson Geologic Hazard Mapping. Teton County, the Town of Jackson, and the Flat Creek Watershed Improvement District are impacted on an annual basis by various geologic hazards ranging from landslides impacting major highways like South Highway 89 in the Snake River Canyon, avalanches off of East Gros Ventre Butte that dam up Flat	Avalanche, Landslide (incl Rockfall/Debris Flow), Earthquake	**Teton County GIS Services;** Teton County Emergency Management, TOJ Public Works, FCWID Chair	Short Term	Moderate; Teton County Capital Funds, BRIC	High	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			Creek causing flooding, and of course earthquakes. This project would entail designing an RFI, retaining a contractor, and developing a thorough geologic hazard map and analysis for Teton County to include: Avalanche paths along transportation corridors and populated areas with names, risk rating, and mitigation recommendations. Landslide areas near transportation corridors and populated areas with names, risk rating, and mitigation recommendations. Fault lines of concern with risk rating, potential magnitude, and mitigation recommendations. A map showing worst-case scenarios for the highest potential magnitude earthquake in the County showing "islands", or areas of the County that may become isolated due to damaged bridges/roads, landslides, and avalanches. Where possible, identifying and mapping socially vulnerable populations within the mapped "islands"						
C&T-8	Teton County, Town of Jackson	Goal 2	Teton County/Jackson Library Generators. Teton County and the Town of Jackson have very few public buildings compared to other local governments. This is partly due to the limited space (97% of the county is Federal land) and cost. For this reason, finding adequate spaces for warming/cooling shelters, cleaner air	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Hazardous Materials, High	**Teton County Library;** Teton County Emergency Management, TOJ Community Engagement	Medium Term	Very High; Teton County Library Capital Funds, BRIC	High	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			shelters, evacuee reception centers, family assistance center, or a disaster recovery center can be difficult. Teton County Library Jackson and Alta branches have both been identified as primary locations for these functions due to their location, usable space, parking, bilingual resources, and trust they have built with the community. Unfortunately, neither facility has power backup, and in the event of a power outage (which may be a reason they are activated for one of the above functions) the facilities would be unusable. This project would be for the design and installation of adequate power backup at each of these facilities so they can operate during a power outage.	Winds & Downbursts, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire					
C&T-9	Teton County, Town of Jackson	Goal 4	Teton County/Jackson Public Education and Outreach. Teton County Emergency Management has been building its public education and outreach around the hazards highlighted in the Region 8 Hazard Mitigation Plan for several years. These efforts have included a monthly preparedness calendar, monthly preparedness themes with accompanying newspaper and radio ad spots, interviews for local newspaper articles and radio stories on hazard preparedness, participation in the Great Wyoming ShakeOut, National Preparedness Month contests, and our CERT program. This project would sustain these programs, plus build on them to	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning, Extreme Heat,	**Teton County Emergency Management.** TOJ Community Engagement	Annual Implementation	Moderate; Teton County Capital Funds, BRIC	High	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			create further outreach through social media ad spots, retaining services to overhaul the Teton County Emergency Management website, and other public outreach efforts around hazard mitigation and preparedness.	Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire					
C&T-10	Teton County, Town of Jackson	Goal 1 and 4	Teton County/Jackson Outdoor Warning Siren System Expansion. Teton County and the Town of Jackson have an outdoor warning siren system consisting of 7 sirens situated near populated areas in the town and county. These sirens are used for all hazards, meaning we only use a single 3-minute wail for alerting for hazards that could have a significant impact to people that are outdoors near the sirens. Currently there are significant outdoor warning siren system coverage gaps in the population centers of central Jackson, east Jackson, Alta, and Grand Targhee Resort. This project would include the planning, installation, and configuration of outdoor warning sirens to cover these areas.	Dam/Levee Incident, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	**Teton County Emergency Management,** TOJ Police	Medium Term	Very High; Teton County and Town of Jackson Capital Funds, BRIC	Medium	New in 2025
C&T-11	Teton County, Town of Jackson	Goal 1 and 4	Teton County/Jackson Outdoor Warning Siren System Maintenance. Teton County and the Town of Jackson have an outdoor warning siren system consisting of 7 sirens situated near populated areas in the town and county. These sirens are used for all hazards, meaning we only use a single 3-minute wail for alerting for hazards that could have a significant impact to people that are outdoors near	Dam/Levee Incident, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Severe Summer Weather	**Teton County Emergency Management,** TOJ Police	Annual Implementation	Moderate; Teton County Capital Funds	High	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			the sirens. These systems require routine annual maintenance to ensure they are functioning when needed during an emergency. This project addresses their annual upkeep and maintenance costs.	(Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire					
C&T-12	Teton County, Town of Jackson		"Go Bag" Giveaway – Work with schools, senior center, One22 Resource Center, and public at large for distribution of "Go Bags" to help with preparedness for evacuation and hazard awareness. Create canvas shopping-style bags branded with TCEM and preparedness info printed on the outside. Include in the bag branded AM/FM/Weather radio, branded 14-day pill boxes, branded waterproof document pouch with cut sheet of important documents, branded large refrigerator magnet with preparedness info, and 6 copies of family communication plan template on heavy card stock.	Dam/Levee Incident, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire	**Teton County Emergency Management,** TOJ Community Engagement	Annual Implementation	Low; Teton County budgetary funds, BRIC, HMGP	Medium	New in 2025
C&T-13	Teton County, Town of Jackson		County Watchdesk - Teton county doesn't have the staff for a dedicated watch desk to monitor weather, social media, the Web, the dark web, geologic activity, and local public safety activity 24/7, but this is needed for early detection and warning to mitigate against all hazards listed in the mitigation plan. An AI powered	Dam/Levee Incident, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts,	**Teton County Emergency Management**	Annual Implementation	Medium; Teton County budgetary funds, BRIC, HMGP, SHSP	Medium	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
			monitoring tool that can keep track of all of these sources and notify appropriate personnel is necessary.	Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire					
TCD-1	Teton Conservation District	Goal 4	Educate residents about benefits of purchasing flood insurance. Enable economic recovery from flooding.	Flood	**Teton Conservation District staff,** TC Emergency Management and Public Works	Ongoing	Low; Staff Time, Local General Funds	Low	Annual Implementation. Occurs each spring with monthly public outreach themes. TCD has not participated in this to a large extent.
TCD-2	Teton Conservation District	Goals 1 and 4	Fire fuel reduction; provide education, assessments, and resources to public for fuel reduction projects. Lowered effects of fire in the wildland urban interface.	Wildfire	**Teton Conservation District**; Teton Area Wildfire Protection Coalition; Jackson Hole Fire/EMS; ESF#04-Firefighting; ESF#11-Agriculture & Natural Resources	Ongoing	Moderate; Wyoming State Forestry Division, USDA, NRCS	High	Annual Implementation. Conducted by both TCD and WUI Coordinator on a regular basis.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
TCD-3	Teton Conservation District	Goals 1, 2, and 3	Cheatgrass mapping and mitigation. Map invasive plants, including cheatgrass, that contribute to wildfire risk. Mitigate invasive wildfire hazard plants using industry best-practices	Wildfire	**Teton County Weed & Pest District**; **Teton Conservation District Land Resource Specialist;** TAWPC; ESF#11-Agriculture & Natural Resources	Ongoing	Moderate; USDA National Invasive Species Information Center	Medium	In Progress. TCD has partnered with Teton County Weed and Pest and Jackson Hole Weed Management Association for this.
TCD-4	Teton Conservation District	Goals 1, 2, and 3	Highway 390 Living Snow Fence at "Windy Mile". Reduce impacts to road in winter, such as plowing, accidents, visibility; There are no snow fences in the County.	Drought Severe Winter Weather (incl Extreme Cold), Windstorm	**WYDOT**, WY State Forestry Division, **Teton Conservation District Land Resource Specialist**, private landowner, WY Office of State Lands and Investments	Medium Term	Moderate; WSFD - Living Snow Fence, TCD Funds	Medium	New in 2025
FCWID-1	Flat Creek WID	Goals 1 and 4	FCWID supporting district members flood mitigation via recommended long-term mitigation efforts (building berms, landscaping, assistance with permitting process if required). The FCWID is actively researching potential measures to be taken by District members to reduce impact of flooding events with intention of supporting long-term private property mitigation efforts.	Flood	**Flat Creek Water Improvement District Chair**; ESF#11-Agriculture & Natural Resources	Long Term	Low; Staff Time, Local General Funds	Medium	In Progress.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
FCWID-2	Flat Creek WID	Goals 2 and 3	FCWID Wort Ditch Diversion Engineering & Design of New Irrigation Head Gate Diversion. Annually implement the long-term protocol of removing rock weir at Wort Ditch diversion point in Garaman Park area of creek during the fall. The Rock weir obstructs creek flow and contributes to ice dams and flooding. Re-erect the diversion structure in Flat Creek each year during the spring.	Flood, Severe Winter Storm	**Flat Creek Water Improvement District Chair**; ESF#11-Agriculture & Natural Resources	Ongoing	Low; Staff Time, Local General Funds	Low	Annual Implementation. The district has chosen to terminate this project due to high projected construction costs. Instead, the district has for the last two years simply taken down the diversion dam (rock weir) in the creek in the fall and reestablished it in the spring. This is a much more cost-effective course of action. Therefore, this mitigation action could either be deleted or revised to reflect the district's current (and anticipated long-term) protocol. The funds utilized to take down and re-erect the diversion structure in Flat Creek each year is drawn from the district's own funds.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
FCWID-3	Flat Creek WID	Goals 2 and 4	FCWID Installation of additional thaw wells on Flat Creek to mitigate winter flooding. This project is a component of creating an active ice management system that minimizes ice volume in Flat Creek will minimize winter flooding as impact of severe winter weather; exploring possible installation of two more thaw wells (one at 810 West, and a second at Elk Run Townhomes). The thaw wells pump groundwater into the creek bed to help reduce the buildup of frazil ice on the river bottom. The system has potential to augment streamflows during drought to reduce impacts to aquatic life.	Flood, Drought, Severe Winter Storm	**Flat Creek Water Improvement District Chair**; TOJ Public Works; ESF#03-Public Works; ESF#11-Agriculture & Natural Resources	Short Term	High; TCD, FCWID, COVID Declaration Hazard Mitigation Grant Program	High	In Progress. the TCD is the lead agency, and the primary funding ($504,000) is being provided by a FEMA Hazard Mitigation Grant Program issued by the Wyoming Office of Homeland Security. 10% matching funding is being provided by the TCD and the FCWID (spilt equally between the two local entities).
FCWID-4	Flat Creek WID	Goal 3 and 4	Investigate the Need for and Appropriateness of Expansion of the Current FCWID District. FCWID "wish list"-Considerations for expanding the current FCWID District boundaries to include All Flat Creek properties adjacent to the creek from Elk Refuge TOJ border south to where the creek enters the Snake River.	Flood	**Flat Creek Water Improvement District Chair**; Teton Conservation District; ESF#11-Agriculture & Natural Resources	Ongoing	Low; Staff Time, Local General Funds	Medium	In Progress.
JAC-1	Jackson Hole Airport	Goal 1 and 2	Jackson Hole Airport - Stormwater Filtration System. Stormwater Filtration System has the capability of handling a 100-year event and will then release at a standard rate.	Flood	**JH Airport Operations**; ESF#03 -Public Works	Long Term	Very High; Federal Aviation Administration (FAA) Airfield Improvement Program (AIP)	High	In Progress. Although completed, Airport needs to expand capacity of project. Is looking for mitigation funding to assist.

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
JAC-2	Jackson Hole Airport	Goal 1 and 2	Total Airport Facilities - Emergency Generator. Instead of Individual Generators - Install High Voltage Generator on Incoming Circuit - Similar to Jails and other Critical Infrastructure	Dam/Levee Incident, Drought, Earthquake, Flood, Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm, Wildfire	**Jackson Hole Airport Operations**; ESF#12- Energy	Short Term	High; Federal Aviation Administration (FAA) Airfield Improvement Program (AIP), Airport CIP Funds	Medium	New in 2025
JAC-3	Jackson Hole Airport	Goal 1 and 2	Airport Perimeter Fencing - Critical Infrastructure. Perimeter Fence could be improved to provide hazard mitigation	Flood, Severe Summer Weather, Severe Winter Weather, Wildfire	**Jackson Hole Airport Operations**	Short Term	High; Federal Aviation Administration (FAA) Airfield Improvement Program (AIP), Airport CIP Funds	Medium	New in 2025
JAC-4	Jackson Hole Airport	Goal 1 and 2	Aviation Safety Facility. Aviation Safety Facility - Some facilities don't have fire suppression, lightning protection, built to previous code, etc.	Earthquake, Severe Summer Weather, Wildfire	**Jackson Hole Airport Operations**	Medium Term	Very High; Federal Aviation Administration (FAA) Airfield Improvement Program (AIP)	High	New in 2025
JAC-5	Jackson Hole Airport	Goal 1, 2 and 3	Solar parking lot canopy. Covered parking for severe weather and power support	Severe Summer Weather, Severe Winter Weather	**Jackson Hole Airport Operations**	Medium Term	Moderate; Federal Aviation Administration (FAA) Airfield Improvement Program (AIP), Airport CIP Funds	Low	New in 2025

ID	JURISDICTION	ASSOCIATED GOAL(S)	ACTION TITLE AND DESCRIPTION	HAZARD(S) MITIGATED	LEAD AGENCY AND PARTNERS	TIMELINE	COST ESTIMATE AND POTENTIAL FUNDING	PRIORITY	STATUS/IMPLEMENTATION NOTES
JAC-6	Jackson Hole Airport	Goal 1 and 2	Alert and warning system. Alert/Warn airport staff of severe weather in order to mitigate from its impacts	Severe Summer Weather, Severe Winter Weather, Tornado/Windstorm	**Jackson Hole Airport Operations**	Medium Term	Moderate; Federal Aviation Administration (FAA) Airfield Improvement Program (AIP), Airport CIP Funds	Low	New in 2025

6 Adoption, Implementation, and Maintenance

Implementation and maintenance of the plan is critical to the overall success of hazard mitigation planning. This is Planning Step 10 of the 10-step planning process. This chapter provides an overview of the overall strategy for plan implementation and maintenance and outlines the method and schedule for monitoring, updating, and evaluating the regional plan. The chapter also discusses incorporating the plan into existing planning mechanisms and how to address continued public involvement. The system for implementation and maintenance was reviewed during the 2024 update and largely stays the same as the process detailed in the 2020 plan.

6.1 Formal Plan Adoption and Responsible Parties

The purpose of formally adopting this HMP is to secure support from all participants in this Region 8 HMP. The governing board for each participating jurisdiction has adopted this local hazard mitigation plan by passing a resolution. A copy of the generic resolution and the executed copies are included in Appendix B, Plan Adoption. This plan will be updated and re-adopted every five years in concurrence with the required Disaster Mitigation Act local plan update requirements.

The Teton County Board of County Commissioners in cooperation with the Town of Jackson Council and the Teton Conservation District Board of Supervisors, Flat Creek Watershed Improvement District Board, and the Jackson Hole Airport Board are responsible for ensuring that the HMP is kept current. With adoption of the plan, the responsible officials designate the Teton County Emergency Management Coordinator, with the assistance of the LEPC, as the lead in accomplishing the on-going responsibilities. The role of the LEPC in implementation and maintenance includes:

- Acting as a forum for hazard mitigation issues;
- Disseminating hazard mitigation ideas and activities to all participants;
- Pursuing the implementation of high-priority, low/no-cost recommended actions;
- Keeping the concept of mitigation in the forefront of community decision-making by identifying plan recommendations when other community goals, plans, and activities overlap, influence, or directly affect increased community vulnerability to disasters;
- Maintaining a vigilant monitoring of multi-objective cost-share opportunities to help the community implement the plan's recommended actions for which no current funding exists;
- Monitoring and assisting in implementation and update of this plan;
- Reporting on plan progress and recommended changes to the County Commissioners; and
- Informing and soliciting input from the public.

6.2 Implementation of Mitigation Actions

Once updated and adopted, this Plan is intended to be implemented so that Teton County and the participating jurisdictions' vulnerability to natural hazards will be reduced over time. While this plan contains many worthwhile mitigation actions, the Emergency Management Coordinator and LEPC will need to decide which action(s) to undertake first. Two factors will help with making that decision:

6. The priority assigned to actions identified in the planning process, and
7. The availability of funding.

Low or no-cost projects can sometimes most easily demonstrate progress toward successful plan implementation.

Implementation will be accomplished by adhering to the schedules identified for each action and through constant, pervasive, and energetic efforts to network and highlight the multi-objective benefits of each project to the community and its stakeholders. These efforts include the routine actions of monitoring agendas, attending meetings, and promoting a safe and sustainable community.

Simultaneous to these efforts, the Emergency Management Coordinator and LEPC will constantly monitor funding opportunities that could be leveraged to implement some of the more costly actions. This will include creating and maintaining a bank of ideas on how to meet local match or participation requirements. When funding does become available, the County and participating jurisdictions will then be in a position to capitalize on the opportunity. Funding opportunities to be monitored include special pre- and post-disaster funds, special district budgeted funds, state and federal earmarked funds, and other grant programs, including those that can serve or support multi-objective projects.

6.3 Integration into Existing Plans and Procedures

Another important implementation mechanism that is highly effective and low-cost is incorporating the hazard mitigation plan recommendations and their underlying principles into other jurisdictional plans and mechanisms. Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development. Implementation through existing plans and/or programs is recommended, wherever possible.

Based on this plan's updated capability assessment, the participating jurisdictions have and continue to implement policies and programs to reduce losses to life and property from natural hazards. This plan builds upon the momentum developed through previous, related planning efforts and mitigation programs, and recommends implementing projects, where possible, through these other program mechanisms. The 2020 Region 8 Hazard Mitigation Plan is already referenced in the county/town All Hazards Recovery Plan and Emergency Operations Plan. The 2020 Region 8 HMP is also referenced in the 2024 Community Wildfire Protection Plan (CWPP), that includes the County, Town of Jackson and Teton Conservation District. TCEM has leveraged the HMP in outreach efforts as a reference for the general public to better understand potential hazards and relative risk to help them in their preparedness planning. TCEM has used the mitigation plan in capital improvement plan requests. Additional existing planning mechanisms include the following that cover all the participating jurisdictions:

- 2020 Jackson/Teton County Comprehensive Plan
- 2025 Jackson/Teton County Capital Improvement Plan
- Jackson/Teton County All Hazards Recovery Plan
- Jackson/Teton County Emergency Operations Plan
- 2024 Community Wildfire Protection Plan (CWPP) – County, Jackson, Teton Conservation District
- 2022 Jackson/Teton County Hazardous Materials Emergency Response Plan
- 2022 Jackson/Teton County All Hazards Recovery Plan
- 2019 Flat Creek Water Improvement District Wintertime and Spring Runoff Action Plan
- 2024 Town of Jackson Sustainability Plan
- Town of Jackson and Teton County Land Development Regulations
- Teton Conservation District Wildfire Risk Reduction Program
- Jackson Hole Airport Capital Improvements Plan annual updates
- Local Emergency Planning Committee (LEPC)

LEPC members involved in the updates to these mechanisms will be responsible for integrating the findings and recommendations of this plan with these other plans, as appropriate. The plan will be considered a core document that links to other related planning mechanisms, which will build from the information and recommendations contained herein. In addition to the plan, web-based platforms have been created for use and dissemination of hazard data and risk assessment results and for tracking of mitigation actions that LEPC, other jurisdictional staff, and the public can use to implement the Mitigation Strategy. In order to ensure the concepts and actions identified in this plan integrate into the plans listed above as well as other local planning efforts, LEPC members will take the following steps and bring forward at all LEPC meetings any strategic actions necessary to implement these steps:

1. Monitor all planning efforts underway at the jurisdictional, regional, and state level, including those originating from or involving the Teton County or Town of Jackson Planning & Building departments and other local agencies;
2. Determine the necessary links between those efforts and the content of this plan, including but not limited to Mitigation Strategy goals, risk assessment results, hazards, assets, and potential funding sources;
3. Participate in ongoing and future planning efforts, contribute content from the mitigation plan, and ensure proper reference is made to the mitigation plan; and
4. Promote awareness of the mitigation plan to increase opportunities for collaboration and integration of plan content.

The Emergency Management Coordinator is responsible for updating a number of emergency management related plans. He has been directly involved in this update and will coordinate development of those plans consistent with this NHMP.

6.4 Plan Maintenance and Evaluation Process

Plan maintenance is an ongoing effort to monitor and evaluate plan implementation, its effectiveness, and to update the plan as required or as progress, roadblocks, or changing circumstances are recognized.

This plan will be updated, approved and adopted within a five-year cycle as per Requirement §201.6(c)(4)(i) of the Disaster Mitigation Act of 2000. The County will inquire with the Wyoming Office of Homeland Security (WOHS) and FEMA for funds or technical assistance to assist with the update. Funding sources may include the Emergency Management Performance Grants, Building Resilient Infrastructure and Communities, Hazard Mitigation Grant Program (if a presidential disaster has been declared), or other grant funds. The Teton County Emergency Management Coordinator is responsible for initiating and facilitating the plan update process.

In order to track progress and update the mitigation strategies identified in the action plan, the LEPC will revisit this plan annually or after a significant hazard event or disaster declaration has occurred. The Teton County Emergency Management Coordinator is responsible for initiating this review and working with the LEPC Chair to convene members of the LEPC on a once yearly basis, or more frequently as needed. The LEPC meeting in July will be used to review the HMP. The LEPC will discuss the following questions pertaining to the effectiveness and implementation status of the plan:

- Have any potential hazards developed that were not addressed in the plan?
- Have any natural disasters occurred that were not addressed in the plan?
- Has any unanticipated development occurred that is vulnerable to hazards?
- Are there any additional mitigation ideas that need to be incorporated?
- Have projects been initiated and/or completed?
- What are the barriers to completing projects identified in the plan?

A representative from the responsible office identified in each mitigation action will be responsible for tracking and reporting on an annual basis to the department lead on action status and provide input on whether the action, as implemented, meets the defined objectives and is likely to be successful in reducing vulnerabilities.

Evaluation is used not only to measure progress, but to evaluate the effectiveness of the plan itself and if goals are being achieved. Changes will be made to the plan to accommodate for actions that were not successful or were not considered feasible after a review of their consistency with established criteria, time frame, community priorities, and/or funding resources. Actions that were not ranked high but were identified as potential mitigation activities will be reviewed as well during the monitoring and update of this plan to determine feasibility of future implementation.

6.5 Continuing Public Participation

Continued public involvement is imperative to the overall success of the plan's implementation. The update process provides an opportunity to publicize success stories from the plan's implementation and seek additional public comment. A public hearing(s) to receive public comment on plan maintenance and updating will be held during the update period. When the LEPC reconvenes for the update, they will coordinate with all stakeholders participating in the planning process, including those that joined the committee since the planning process began, to update and revise the plan. The plan maintenance and update process will include continued public and stakeholder involvement and input through participation in designated committee meetings, LEPC meetings, social media postings, government website postings, other notification systems, and press releases to local media.

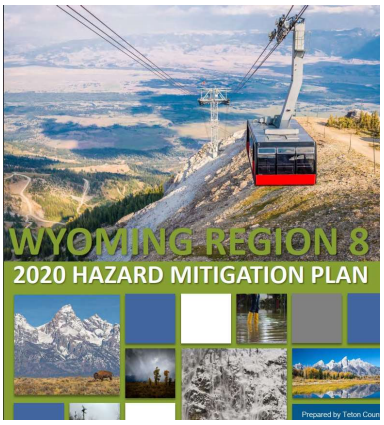
In addition to the procedures for including the public in the five-year updates described above, to ensure the public will have the opportunity to remain involved in the implementation and annual updates of the plan, the following will take place:

- The Teton County Emergency Management Coordinator will provide a brief annual summary report to the governing bodies on what has been accomplished during the previous year and to receive guidance from the elected officials on their priorities for the coming year.
- Each year following the July LEPC meeting called for the purpose of reviewing the status of the plan, Emergency Management will make information available to the public on the accomplishments of the previous year and allow comment for any revisions.

Teton County is home to an active and engaged citizenry. Many of these individuals have professional credentials in fields related to hazard mitigation planning. The Geologists of Jackson Hole are an example of a group with tremendous local expertise. During subsequent updates, the county may choose to more deeply investigate certain hazards as new information becomes available.

APPENDIX A: PLANNING PROCESS DOCUMENTATION

Note: This appendix provides documentation of the plan update process during the 2024-2025 update timeframe.



Project Backgrounder
Regional Hazard Mitigation Plan Update

Wyoming all-hazards emergency management Region 8 consists of Teton County, Town of Jackson and Teton Conservation District. The Region is updating the 2020 Regional Hazard Mitigation Plan in collaboration with local municipalities, special districts, and other stakeholders. This plan develops community mitigation strategies, to work towards reducing the risks posed by hazards. The plan must be updated and approved by FEMA every five years to keep it current and to maintain eligibility for mitigation grant assistance.

What is hazard mitigation?

The term "Hazard Mitigation" describes actions that can help reduce or eliminate long-term risks caused by hazards, such as floods, wildfires, tornadoes, and earthquakes. Hazard mitigation is best accomplished when based on a comprehensive, long-term plan developed before a disaster strikes.

As the costs of disaster impacts continue to rise, governments and citizens must find ways to reduce hazard risks to our communities. Oftentimes after disasters, repairs and reconstruction are often completed in such a way as to simply restore damaged property to pre-disaster conditions. These efforts may "get things back to normal," but the replication of pre-disaster conditions often results in a repetitive cycle of damage, reconstruction, and repeated damage.

Hazard mitigation breaks this repetitive cycle by producing less vulnerable conditions through pre- and post-disaster actions and projects. The implementation of such hazard mitigation actions by state and local governments will lead to more resilient communities and reducedinjuries and damages in the future.

Project Benefits

Mitigation is an investment in a community's future safety and sustainability. Recent cost-benefit studies have proven mitigation to be cost effective for communities, with mitigation projects returning on average $6 for every $1 spent. Mitigation planning helps communities identify and prioritize actions that can be taken before a disaster or hazard event, to reduce impacts when they occur.

Hazard mitigation planning helps local governments and other stakeholders think through how to plan, design, build, and establish partnerships for risk reduction. Public, private and non-profit stakeholders are important partners. Consider the critical importance of mitigation to:

- Protect public safety and prevent loss of life and injury.
- Reduce harm to existing and future development.
- Maintain community continuity and strengthen the social connections that are essential for recovery.
- Prevent damage to your community's unique economic, cultural, and environmental assets.
- Minimize operational downtime and accelerate recovery of government and business after disasters.
- Reduce the costs of disaster response and recovery and the exposure to risk for first responders.
- Help accomplish other community objectives, such as capital improvements, infrastructure protection, open space preservation, and economic resiliency.





Additionally, participating local government jurisdictions that adopt the plan will benefit from this project by:

- **Ensuring eligibility for all sources of hazard mitigation funds made available through FEMA.**
- **Increasing public awareness and understanding of vulnerabilities as well as support for specific actions to reduce losses from future disasters.**
- **Ensuring community policies, programs, and goals are compatible with reducing vulnerability to all hazards and identifying those that are incompatible.**
- **Building partnerships with diverse stakeholders, increasing opportunities to leverage data and resources in reducing workloads, as well as achieving shared community objectives.**
- **Expanding the understanding of potential risk reduction measures to include: local plans and regulations; structure and infrastructure projects; natural systems protection; education and awareness programs; and other tools.**
- **Informing the development, prioritization, and implementation of mitigation projects. Benefits accrue over the life of these projects as losses are avoided from each subsequent hazard event.**

How to Get Involved:

The plan update process is an opportunity for new stakeholders and local governments to participate in the process. Local governments can include certain special districts. Teton County, with assistance from a Wyoming Office of Homeland Security-procured consultant, will be organizing the effort in early 2024. Residents, organizations, and businesses are also encouraged to contribute to the planning process. Over the next few months, the County and participating jurisdictions will reach out to the public for input on hazards and their mitigation through a short, online survey. Public input is important to developing an actionable plan that reflects community priorities, and there will be additional opportunity for public input before the updated plan is finalized in late 2024/early 2025.



For more information please contactyour county's Homeland Security Coordinator:
https://hls.wyo.gov/contacts/county-contacts

From:	Rich Ochs
Cc:	Brislawn, Jeff P; christopher.johnson@wsp.com; Brian Coe; Shannon Burns
Bcc:	Alton George; Amy Ramage - Teton County (aramage@tetoncountywy.gov); Anna Day; April Norton - Teton County (ahnorton@tetoncountywy.gov); Billy Nunn (bnunn@tetoncountywy.gov); Brent Blue; Brian Carr - Jackson Hole Fire/EMS (bcarr@tetoncountywy.gov); Brian Coe - Jackson Hole Fire/EMS (bcoe@tetoncountywy.gov); briant@lvenergy.com; Britton Gray (britton_gray@nps.gov); Caitlin Schauer (caitlin_schauer@nps.gov); Cara; Carey Stanley; Carlin Girard; Charlotte Frei (cfrei@tetoncountywy.gov); Charlotte Reynolds; Chris Flesch; Chris Neubecker (cneubecker@tetoncountywy.gov); Colby Stevens (cstevens@tcsd.org); Conway, Craig; Craig Coles; Das, Bob; Dave Gustafson - Teton County Road & Levee (dgustafson@tetoncountywy.gov); davea@tetonvillagewy.org; Dee Buckstaff; Doyle, Michael - FS; Dustin Havel; Dustin Richards (drichards@tetonsheriff.org); Emily Mieure; Erika Jostad; FPoliseo@jacksonwy.gov; Fred Whissel; Gohlke, Valerie A; Greg Adams; Gus Friendsmith; Hailey Morton Levinson - Town of Jackson (hmortonlevinson@jacksonwy.gov); Heather Overholser (hoverholser@tetoncountywy.gov); heather_mcdonald@nps.gov; Henry, Amy Robyn LTC USARMY NG WYARNG (USA); James Silva (jsilva@tclib.org); jason.wilmot@usda.gov; Jeff McDonald K7EDA (jeffrey.p.mcdonald@gmail.com); Jim Warren (jim_warren@nps.gov); jligori@gmail.com; Jodie Pond (jodie.pond@wyo.gov); Johanna Love (jlove@jhnewsandguide.com); Johnny Ziem - Town of Jackson Public Works (jziem@jacksonwy.gov); Jon Bishop; Joseph Sebastian (joseph.sebastian@dhs.gov); Josiah Nash; Karen Walker; Keith Murley (kmurley@tetoncountywy.gov); Kelly Sluder (KSluder@jacksonwy.gov); Kenneth Longfritz; Kevin S; Kip Roberson (kroberson@tclib.org); Kristen Waters (kwaters@tetoncountywy.gov); Levi Yardley; Luther Propst (lpropst@tetoncountywy.gov); Martin; Matt Carr (mcarr@tetonsheriff.org); Matt Redwine (mredwine@tetoncountywy.gov); Matt Wilber (matthew_wilber@nps.gov); matthew.brackin@wyo.gov; McKinnley Cox (mcox@tetoncountywy.gov); Melissa Turley (mturley@tetonvillagewy.org); Michael Estes; michael.jerup@wyo.gov; Michelle Weber; Mike Moyer - Jackson Hole Fire/EMS (mmoyer@tetoncountywy.gov); Nicole Clancy; Paul Anthony (panthony@jacksonwy.gov); pcameron@energyconservationworks.org; Perry Kas; Phillip Fox; Phillip Ramsey - TOPS; Purchase, Peter A; purplesyl@live.com; Quentin Johnston (qjohnston@tetoncountywy.gov); rachael.wheeler@wyo.gov; Raumaker, Sylvia; rcarlentine@co.teton.id.us; Rev. David Bott; Rich Ochs; rick@jacksonholechamber.com; rick@lvenergy.com; Riclyn Betsinger (rbetsinger@tetonsheriff.org); Robb Sgroi (robb@tetonconservation.org); rturgeon@suburbanpropane.com; Russ Ruschill; Russell Nelson; Ryan, Sean; Sarah Mann (smann@tetoncountywy.gov); Scott Anderson (sba@scottanderson.biz); Seth Lewis; Shannon Burns - Jackson Hole Fire/EMS (sburns@tetoncountywy.gov); Shawn Stephens; sread@cfjacksonhole.org; Stephanie Munoz; Stephen Jellie; Steve Jeppson (steve.jeppson@jhairport.org); Susan Scarlata; Tanya Anderson; Teton County Historic Preservation Board; Todd Stiles; Tom Ninnemann; Tracey Trefren; Trevor Aitken (taitken@tetonsheriff.org); TVA Facilities; Tyler Sinclair; "Wilkins, David A -FS"; Win Furber (WFurber@jacksonwy.gov); wschwartz@cfjacksonhole.org; Zolo
Subject:	Teton Region 8 Hazard Mitigation Plan Kickoff Meeting slides and minutes
Date:	Tuesday, February 13, 2024 9:51:00 AM
Attachments:	Teton Region 8 HMP Kickoff Meeting_Slides_1_18-24.pdf image001.png Teton HMP Kickoff Summary_1_18_24.pdf

---

Hello Teton LEPC,

For those that wanted a copy of the slides or couldn't make it to our last LEPC meeting which also served as our kickoff meeting for our regional hazard mitigation planning process, attached are the slides and minutes taken by our planning contractors with WSP. Please let me know if you have any questions.

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management
Chairman, Teton Local Emergency Planning Committee (LEPC)
Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
Wyoming All-Hazards Liaison Officer (LNO-AH)
PO Box 4458
Jackson, WY 83001
o: (307) 732-8594
c: (307) 413-5040
f: (307) 732-5799
rochs@tetoncountywy.gov

From:	Rich Ochs
Cc:	Brislawn, Jeff P; christopher.johnson@wsp.com; Hager, Carlie
Bcc:	Alta Solid Waste Disposal Special District; Aspen Pines Water and Sewer District; Fish Creek Improvement Special District; Five County Joint Powers Board; Flat Creek Watershed Improvement District; Hi-Country Water District; Indian Paintbrush Water District; Melody Ranch Improvement Service District; O Bar B Improvement and Service District; Porcupine Creek Ranch Improvement Service District; Rafter J ISD; Skyline Ranch Improvement Service District; Snake River Sporting Club Improvement Service District; Spring Creek Improvement Service District; Targhee Towne Water District; Teton Conservation District; Teton County School District #1; Teton County Weed and Pest District; Teton Village Association Improvement Service District; Teton Village Improvement Service District; Village Road Improvement Service District; West Gros Ventre Butte Water District; Wilson Sewer District
Subject:	Invitation to Special Districts to participate in hazard mitigation plan update
Date:	Friday, February 23, 2024 1:52:00 PM
Attachments:	image001.png Teton Region 8 HMP Kickoff Meeting_Slides_1_18-24.pdf

Hello Teton County Special Districts,

My name is Rich Ochs and I am the Emergency Management Coordinator for Teton County, WY. Your email address was on the County's list of special districts, and I'm writing today to invite you to participate in the update of our regional Hazard Mitigation Plan. This update occurs every five years, and the result is the Region 8 Hazard Mitigation Plan. You can see our latest version (rewritten in 2020, with a 2024 update) here. This plan is essentially an analysis of natural hazards that our community may face, plus a list of mitigation efforts we can undertake to help prevent or lessen those hazards.

I am reaching out to special districts because if you actively participate in the plan update process, your district can pass a resolution and adopt the 2025 Region 8 Hazard Mitigation Plan. Why would your district want to adopt the plan? Well, adoption can make your district eligible to apply for FEMA hazard mitigation assistance grants that can support projects that reduces or eliminates long-term risk to people and property from future disasters. Sometimes public works projects that a district may already be pursuing can fall into a hazard mitigation category.

But, as we all know, there is no such thing as free money. So what is the catch? Here are a few:

- In order for your district to adopt the plan and be a signatory, you must be an active participant in the update. This will require assigning personnel to attend meetings, fill out paperwork, and provide meaningful feedback over the next several months.
- Your district, after participating in the update, will need to adopt the plan via resolution.
- Hazard Mitigation Assistance Grants from FEMA can be a significant paperwork burden, usually only fund up to 75% of a project, generally require a long lead time before funding is awarded, and many times are competitive on a national scale.

If this sounds like it might be of interest to your district, please reach out to me via email or give me a call at 307-732-8594 and we can discuss what that would look like. Examples of districts and boards that have adopted and signed our plan in the past are Teton County Commissioners, Town of Jackson Council, Teton Conservation District, and the Jackson Hole Airport Board. Flat Creek Watershed Improvement District is also working to adopt the plan in

2025. Attached is a slideshow overview of the mitigation planning process. Please let me know if you have questions, and thanks for your time.

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management
Chairman, Teton Local Emergency Planning Committee (LEPC)
Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
Wyoming All-Hazards Liaison Officer (LNO-AH)
PO Box 4458
Jackson, WY 83001
o: (307) 732-8594
c: (307) 413-5040
f: (307) 732-5799
rochs@tetoncountywy.gov
www.tetoncountywy.gov/em

From:	kleewalker@silverstar.com
To:	Karen Walker
Subject:	IMPORTANT INFORMATION from VOAD meeting - HELP NEEDED from VOAD Members - Update on Mitigation Report Teton County - Notes and Slides
Date:	Tuesday, February 27, 2024 10:29:57 AM
Attachments:	image001.png image004.emz image006.png VOAD Meeting Summary 2-21-24.docx Teton - Region 8 HMP Meeting Slides-VOAD_2-21-24.pdf

---

[**NOTICE:** This message originated outside of the Teton County's mail system -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Rich asked me to pass along the above information to all VOAD Members, so you can be aware of the
5-year update to the Teton County Mitigation Plan.
Please note the Discussion Questions (last slide) below, once you have looked over the Slide Presentation

Discussion Questions

- What groups of people in Teton County may be more vulnerable to hazards or disasters, particularly underserved or socially vulnerable populations?
- What existing non-profits/other orgs. in Teton County work with these populations? How could we involve them in the planning process?
- Would you be willing to share information on the HMP planning effort through your networks?
- Are there any upcoming opportunities for outreach at scheduled public meetings or events?

Please reach out to Rich Ochs with any help or questions.
Thank you,
Karen Walker
VOAD Secretary

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management

Chairman, Teton Local Emergency Planning Committee (LEPC)
Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
Wyoming All-Hazards Liaison Officer (LNO-AH)
PO Box 4458
Jackson, WY 83001
o: (307) 732-8594
c: (307) 413-5040
f: (307) 732-5799
rochs@tetoncountywy.gov
www.tetoncountywy.gov/em



Correspondence, including e-mail, to and from employees of Teton County, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

Thursday January 18, 2024
Teton LEPC Meeting
Time: 0830
Location: Teton EOC 3240 S Adams Canyon Dr, Jackson *or* Microsoft Teams

Microsoft Teams Meeting (Click Here)
Meeting ID: 250 569 259 655
Passcode: o7LiJv
Toll number: +1 307-314-3198
Conference ID: 214 565 995#

Agenda:

I. Call to Order
II. Approval of November meeting minutes (R. Ochs - 5 minutes)
III. Around the room introductions (All – 5 minutes)
IV. Region 8 Hazard Mitigation Plan kickoff meeting (J. Brislawn – 60 minutes)
V. Regional Emergency Response Team (RERT) 8 Update (B. Coe – 5 minutes)
VI. Training/Exercise updates (All – 5 minutes)
VII. Public safety radio system updates (Q. Johnston – 5 minutes)
VIII. Around the Room (All – 15 minutes)
IX. Adjourn

Next Meeting – March 21, 2023, 8:30am Teton EOC and Microsoft Teams

Wyoming Region 8 Hazard Mitigation Plan Update
Kick-Off Meeting Summary
January 18, 2024, 8:30-10 am MST
Hybrid in-person and virtual meeting via Teams
Teton EOC 3240 S Adams Canyon Dr, Jackson
Subset of Teton County Quarterly LEPC

Introductions and Opening Remarks

Wyoming Region 8, which includes Teton County and participating local government jurisdictions, will be updating its Regional Hazard Mitigation Plan in 2024. A kickoff meeting for this planning process was held on January 18, 2024, facilitated by WSP (formerly Wood Environment & Infrastructure Solutions, Inc.) the consulting firm hired by the Wyoming Office of Homeland Security (WOHS) to facilitate the planning process and develop the updated Region 8 plan. The meeting was held as part of the quarterly Local Emergency Planning Committee meeting. A total of 24 people attended (see Sign In sheet and chat log attachments), primarily representing county and Town of Jackson, Teton Conservation District, Flat Creek Watershed Improvement District, as well as various stakeholders including representatives local business and industry as well as the Wyoming Office of Homeland Security (WOHS). Rich Ochs Teton County Emergency Management Coordinator had everyone in the meeting introduce themselves. Jeff Brislawn, Project Manager, (WSP) began the meeting by going over the meeting agenda.

The key discussion is summarized below; additional details can be found in the PowerPoint presentation.

The meeting was recorded and can be referenced at Teton County Emergency Management and for a limited time at this link: LEPC Meeting-20240118_083050-Meeting Recording.mp4

Mitigation, Mitigation Planning, and Disaster Mitigation Act Requirements Overview

Mitigation is any sustained action taken to reduce or eliminate long-term risk to human life and property from natural or human-caused hazards. Mitigation Planning guides mitigation activities in a coordinated and economic manner to make communities more disaster resilient. The U.S. Disaster Mitigation Act of 2000 requires state and local governments to adopt a hazard mitigation plan, updated every five years, to maintain eligibility for FEMA mitigation assistance grants.

Jeff (WSP) explained the Disaster Mitigation Act of 2000 which requires having an updated plan in place to ensure each local jurisdiction in Region 8 is eligible for pre- and post-disaster hazard mitigation grant funds. There are trends nationally resulting in increased costs for disaster response and recovery. Jeff explained we need these plans for several reasons because they reduce future recovery costs, we can plan around predictive events, and they guide mitigation activities in a coordinated manner.

Jeff explained Federal Emergency Management Agency (FEMA) guidance breaks down the planning process into 4 key phases with 9 total tasks (at the time of the meeting, Wyoming Region 8 is in the first phase of the planning process and will soon be entering the second phase of the process):

- Phase 1: Organize Resources
    - Task 1 Determine the Planning Area and Resources
    - Task 2 Building the Planning Team
    - Task 3 Create an Outreach Strategy
    - Task 4 Review Community Capabilities
- Phase 2: Assess Risk
    - Task 5 Conduct a Risk Assessment
- Phase 3: Develop a Mitigation Strategy
    - Task 6 Develop a Mitigation Strategy
- Phase 4: Plan Adoption, Monitoring, and Evaluation
    - Task 7 Keep the Plan Current
    - Task 8 Review and Adopt the Plan
    - Task 9 Create a Safe and Resilient Community

Task 2: Build the Planning Team

The Region 8 Hazard Mitigation Planning Committee consists of the LEPC represented by Teton County Emergency Managers. The County Planning Teams are composed of county and municipal staff as well as stakeholders within each county. Jeff noted that every update cycle is an opportunity to include additional local government participating jurisdictions, which are defined by FEMA as any entity with a governing board. This includes special service districts. Some special districts have gotten on board with the plan update, including the Teton Conservation District, Flat Creek Water Conservation District and potentially the Jackson Hole Airport. Jeff recommended any other special service district interested in participating should let their county coordinator know soon so they can be folded formally into the plan update effort. The county noted additional entities that could participate as adopting jurisdictions or stakeholders as the following:

- Teton Village Association
- Teton Village Fire District
- Aspens Water and Sewer District
- Alta Solid Waste District
- Teton County School District #1
- Hoback Water and Sewer District

Stakeholders included other governmental or non-governmental agencies that may have an interest in mitigation or be potential partners in mitigation efforts. Per updates to FEMA's Local Mitigation Planning Handbook (Link) this must include providing representatives of nonprofit organizations, including community-based organizations, that work directly with and/or provide support to underserved communities and socially vulnerable populations, an opportunity to be involved in the planning process. Other organizations that have purview over lifelines should also be given an opportunity to participate. Organizations noted include:

- Voluntary Organizations Active in Disasters (VOAD)
- Lower Valley Energy
- Teton County Joint Housing Authority
- Natural Resources Conservation Service (NRCS)
- The National Parks (Yellowstone and Grand Teton)
- Neighboring counties

Currently the Hazard Mitigation Planning Committee is working through Tasks 3-5 of the 9-Task planning process with the next steps of developing an outreach strategy, reviewing Region 8 capabilities, and conducting the Risk Assessment. Task 6 involves developing a mitigation strategy. Tasks 7 and 8 involve final plan adoption and implementation and ensuring the adopted plan builds a safer and more resilient community.

Task 3: Public Outreach Strategy

FEMA requires two opportunities for public involvement during the planning process: during the draft stage and prior to plan approval. Public involvement will include an online survey during the planning effort and will look to the participating jurisdictions to assist with advertising these opportunities. In addition, the County will be asked to post the draft plan online and solicit comments prior to the submission to the State and FEMA. The WSP team will be responsible for documenting this process; this may involve documenting specific meetings with stakeholders or other organizations.

Task 4: Capabilities Assessment

Jeff explained that the team will examine existing policies and programs and evaluate the effectiveness of the mitigation gaps and shortfalls to see where there are areas for improvement. He stated the WSP team will also look at each jurisdiction's fiscal abilities to understand where there could be funding options for mitigation not limited to grants. The capability assessment is being aligned with current FEMA planning guidance and will be an area of focus during the update.

Task 5: Risk Assessment

Jeff discussed the three components of the risk assessment. He covered the aspects of natural hazards included in the assessment and how those hazards overlap with community assets. He discussed where there is overlap between the hazards and assets is where we have risk (e.g., potential for losses).

The vulnerability assessment looks at a range of assets in the Region: residential/commercial structures and critical facilities and infrastructure. The WSP team will align this update with the more recent FEMA Community Lifeline framework. Understanding risks to lifeline facilities and identifying ways to minimize those risks with mitigation actions, will better position the plan for grant funding. He also stated we will look at development trends and natural resource areas in terms of assets that may warrant protection from hazard impacts.

Task 6: Mitigation Strategy

The Mitigation Strategy begins with reviewing the plan's existing goals, which are broad overarching statements of what we want to achieve. Goals are supported by mitigation actions, which are specific and measurable. Jeff discussed a slide showing the goals from the 2020 plan and noted these will be looked at more closely in future meetings for potential updates. The LEPC will need to review progress on mitigation actions and select potential new actions as part of the plan update process. Each jurisdiction will need at least one new action, and actions will need to be prioritized. This will be done by applying selection and prioritization criteria, such as whether it will work, is it cost-beneficial, affordable, legal, and fair etc. This process will occur at a future planning meeting/workshop.

Tasks 7 & 8: Plan Maintenance and Adoption

Jeff explained there will be three drafts of the plan: (1) Internal LEPC Review; (2) Public Review (3) State and FEMA Review. As part of the first review, the LEPC will review and agree upon plan maintenance procedures. The county and municipality within Region 8 will need to readopt the plan to secure the buy-in for the process.

Objectives and Schedule for Regional Plan Update 2024

Jeff reviewed the key elements of the plan update process which include updating the risk assessment to reflect current hazards, past events and risk and vulnerability. The 2020 mitigation actions will be assessed, including developing new actions and documenting progress that has been made in terms of mitigation in the Region, as well as noting changes in priorities.

The plan expires on May 29, 2025, and the update will be developed over the next 9-12 months. The next meeting will focus on the Risk Assessment and Goals update, which will require the WSP team to conduct the assessment itself and complete the analysis. Other forthcoming deliverables include the public survey. The next 2 planning meetings will be in the spring and summer with exact dates to be determined.

Rich noted that the plan has several benefits, notably the Hazard Identification and Risk Assessment (HIRA) which is useful in education and outreach to the public. Leveraging the HMP for grant funding has been difficult without a grant writer on staff. Rich noted progress on an outdoor warning siren system - getting capital funds for that. Jeff noted that the HIRA will need additional detail to meet current planning requirements, as well as the mitigation projects.

Roles and Responsibilities

In this update, the Planning Team is led by the Teton County Local Emergency Planning Committee (LEPC). The LEPC comprises members from diverse sectors of the community, such as healthcare, public works, emergency services, elected representatives, media personnel, various governmental levels, and educational institutions. The LEPC is responsible for participating in the planning process, assisting in the updating of the plan's content and reviewing the draft plan to ensure it meets specific needs and local issues. Finally, the County and participating local government jurisdictions will need to formally re-adopt the plan. By

doing so the plan will maintain eligibility for FEMA mitigation funds. WSP will be facilitating the planning process and developing the risk assessment and plan update over the course of the next year.

Requirements for Participating Jurisdictions (adopting local governments and special districts):

- Attend and participate in planning meetings/workshops
- Provide available data requested of the County coordinator and WSP including a Plan Update Guide
- Provide input on progress on local mitigation strategy (actions/projects) and identify new actions/projects (where applicable)
- Advertise and assist with public input process
- Review and comment on draft plan
- Coordinate formal adoption

Stakeholders, which include representatives from the state or federal government, private, non-profit entities or other interested organizations have various options for their level of participation:

- Attending planning meetings or staying in the loop via email list
- Providing data and information
- Partner on mitigation efforts
- Review the draft plan

Chris Johnson, WSP Hazard Mitigation Planner, noted that the LEPC should identify other stakeholders and interested special districts or jurisdictions and invite them to attend the planning process. The LEPC noted several other potential stakeholders that are listed above under Task 2.

Review of Identified Hazards

Jeff led a brief discussion on the past hazard rankings, noting that there are some differences across jurisdictions for the significance rankings since that question was asked by a participant. The 2020 Region 8 plan addressed the following natural hazards:

- Dam Failure
- Drought
- Earthquake
- Flood
- Hail
- Landslide
- Lightning
- Severe Winter Storm
- Tornado
- Wildfire
- Hazardous Materials

Question: Do you agree with the current list and ratings of hazards? What other hazards should be considered?

The group generally agreed with the current potential hazards and preliminary rating, but some possible adjustments to them to include:

- Tornado – ensure that wind events are addressed
- Dam failure - expand to "dam incident and levee incident." Rich noted the 2 high hazard dams are federally owned and wouldn't be eligible for FEMA High Hazard Potential Dam grant.
- Hail and Lightning – combine into a summer storm profile; also note heat in this hazard profile as a potential emerging threat due to recent incidents (northwestern heat dome event); air conditioning used to not be needed in buildings.
- Volcano – has been discussed in past but dropped. State plan added it back in 2020 update. They get lots of questions on it from Yellowstone being nearby.
- Discussed potentially adding terrorism, hazardous materials incidents, cyber-attack, as human caused hazards, though requirement is natural hazards.

Jeff asked the group if the most damaging winds are involved in winter storms or if this a year-round occurrence. Rich noted that it's more year-round and additionally this area of the state takes much less severe winds to cause damages than the other areas of the state, there are more delicate trees in this part of the state. Rich also noted that in general wildfire and drought could potentially be ranked higher.

Question: Do you have specifics on any hazard impacts in past 4 years (damage assessments, people and property impacts, repair costs, etc.?)

The LEPC mentioned the 911/telephone outage last night. Power outages seem to be a reoccurring issue in the area. Last January, there was an outage that impacted a large portion of East Jackson. Other issues include lack of transportation route redundancy, and access being cut off during wildland fires, and concern with bridges. Subdivisions within the county are still permitted with only one point of egress/ingress.

Question: Have there been any growth and development trends in the past 4 years that may increase or decrease vulnerability to hazards (i.e. more homes in wildland urban interface floodplain development pressure, etc.)

The LEPC noted that there is a lot of residential growth. Federal lands limit the available land for development. This is in part increasing housing density and redevelopment within the Town of Jackson. Housing, traffic during the tourist seasons, and ability to evacuate people with limited roads are big concerns. Rich noted we will bring the Teton County Joint Housing Authority into this process, but affordability is a huge factor for the community, especially when discussing recovery. The County and Town of Jackson have adopted a Wildland Urban Interface (WUI) code.

Question: What other existing or recent plans, reports, or studies should be reviewed for this planning process?

Rich notes that he wants the planning team to be aware of the freezing/flooding of the flat creek in the community. Rich really wants to have the Flat Creek Watershed Improvement District as a signatory on the plan. Also, it was noted to focus on frazil ice, which is when the river forms ice crystals below the surface, creating a unique flooding situation for the county. Several studies on have been done on this issue and the District should have copies. The group noted just yesterday that the Town water well #5 was

impacted by flooding and a condo development (Creekside Condos) was potentially affected, along with other public and private infrastructure. The District typically gets involved in mitigation and response efforts with the frazil ice. The District's "thaw wells" were also noted.

Coordination with Other Agencies, Related Planning Efforts, and Recent Studies

A discussion was held on how to coordinate this planning process with other agencies, related planning efforts and recent studies in order to meet one of the DMA planning requirements. This is also an opportunity to develop a holistic plan and integrate related mitigation efforts where possible.

Question: Has the 2020 HMP been cross referenced or integrated with other planning mechanisms? If not, what opportunities exist to do so? Are there related planning efforts underway?

The following ongoing or upcoming studies were noted:

- Community Wildfire Protection Plan (CWPP) which is currently being updated.
- Flat Creek Watershed Improvement District Capital Improvement Plan
- Moving forward is the Airport's plans for flood mitigation
- Town of Jackson stormwater master planning effort – it was noted that the WSP Laramie office is also involved in this study.

Question: Are there any upcoming opportunities for outreach at scheduled public meetings or events?

The LEPC noted upcoming opportunities for outreach could be providing the flyer on the plan at booths or events such as:

- Eco-Fair
- People's Market
- County lunch and learn program
- Potential of getting on the agenda for commissioners
- Business Over Breakfast
- Rotary Breakfast

It was suggested to piggyback on existing meetings where possible. WSP will provide information and be developing a short survey using MS Forms. The County has another existing public input tool that was suggested as a possible resource.

Initial Information Needs/Next Steps

A Plan Update Guide will be developed by WSP to gather data and updated information from the Planning Teams. Each county and municipality will be asked to complete the data based on various department inputs. The Guide will capture recent hazard impacts in the last five years as well as input on capability assessment updates.

GIS data collection is already in process.

Stakeholders are asked to provide additional information on hazards, related planning, and project efforts as applicable. As well as stay in the loop of the planning process via emails from the county coordinator.

Attachments: Attendance and Chat Log

Attendees based on Chat Log input:

Online:

- Jeff Brislawn, WSP Project Manager
- Christopher Johnson, WSP Deputy Project Manager
- Carlie Hager, Hazard Mitigation Planner
- Tyler Sinclair, Town of Jackson, Town Manager
- Andrea Ladd, Fremont County Emergency Management
- Levi Yardley, Emergency Services Coordinator, National Park Service – Grand Teton
- Dustin Havel, Jackson Hole Airport, Assistant Airport Director
- Ashley Paulsrud, Wyoming Office of Homeland Security, Grants/Finance Section Chief
- Josiah Nash, Teton County, Facilities Maintenance Manager
- Phil Ramsey, Administrator – Teton Outpatient Services
- Robb Sgroi, Land Resources Specialist, Teton Conservation District
- Mike Estes, TCSAR, Search and Rescue Coordinator
- Scott Anderson, Jackson Hole Radio, Manager
- Milan Vinich, Fremont County Emergency Management
- David Lee, Water Resources Specialist, Teton Conservation District
- Brian Lenz, Town of Jackson, Town Engineer
- Floren Poliseo, Town of Jackson, Public Works Director
- Sandy Buckstaff, Flat Creek Watershed Improvement District, Chairman of the Board
- Kristen Waters, Teton County, Public Information Officer

In Person:

- Brian Coe, Jackson Hole Fire/EMS, Battalion Chief
- Russell Nelson, Teton County, Chief Deputy Coroner,
- Quinton Johnston, Teton County, Radio Coordinator
- Rich Ochs, Teton County Emergency Management, Coordinator
- Anna Dade, Teton County Emergency Management, Program Specialist
- B. Clauson, Jackson Hole Fire/EMS, WPS
- Riclyn Betsinger, Teton County Sheriff's Office, Dispatch Manager
- Tanya Anderson, Town of Jackson, Ecosystem Stewardship Administrator

Chat Log capture:

[8:25 AM] Brislawn, Jeff

Jeff Brislawn, WSP Project Manager

[8:26 AM] Johnson, Christopher

Christopher Johnson, WSP Hazard Mitigation Planner

[8:27 AM] Hager, Carlie

Carlie Hager, WSP Hazard Mitigation Planner

[8:28 AM] Tyler Sinclair
Tyler Sinclair
Town of Jackson
Manager
[8:28 AM] Andrea Ladd (FCEMA) (Guest)

Andrea Ladd, Fremont County Emergency Management

[8:29 AM] Yardley, Levi S

Levi Yardley, Emergency Services Coordinator

[8:30 AM] Dustin Havel

Dustin Havel, Assistant Airport Director - Operations at the Jackson Hole Airport

[8:30 AM] Ashley Paulsrud - WOHS (Guest)

Ashley Paulsrud - Grants/Finance Section Chief, Wyoming Office of Homeland Security

[8:32 AM] Josiah Nash

Josiah Nash - Facilities Maintenance Manager, Teton County WY

[8:32 AM] Yardley, Levi S

Levi Yardley, Emergency Services Coordinator, National Park Service-Grand Teton

[8:32 AM] Ramsey, Phillip

Phil Ramsey, Administrator - Teton Outpatient Services

[8:32 AM] Robb Sgroi (Guest)

Robb Sgroi. Land Resources Specialist. Teton Conservation District.

[8:32 AM] Mike Estes (Guest)

Mike Estes, TCSAR, SAR Coordinator

[8:32 AM] Scott Anderson JH Radio (Guest)

Scott Anderson, Jackson Hole Radio, Manager

[8:32 AM] Milan Vinich - Fremont Co. EM (Guest)

Milan Vinich - Fremont County Emergency Management

[8:36 AM] David Lee

David Lee - Water Resources Specialist, Teton Conservation District

[8:36 AM] Brian Lenz (Guest)

Brian Lenz, Town Engineer, Town of Jackson

[8:38 AM] Floren Poliseo (Guest)

Floren Poliseo, Public Works Director, Town of Jackson

[8:39 AM] Sinclair Buckstaff, Jr. (Guest)

Sandy Buckstaff, Chairman of the Board, Flat Creek Watershed Improvement District

[8:40 AM] Kristen Waters
Kristen Waters, Teton County Public Information Officer and ESF#15 in the Town/County emergency operations plan

[8:52 AM] Robb Sgroi (Guest)

Thank you for the correction on our entity name, Rich, which is Teton Conservation District. We changed our district boundary and now our district boundary mirrors that of Teton County. Thanks again.

like 2
[8:56 AM] Kristen Waters

yes, Teton Village is special district

[8:56 AM] Kristen Waters

fire is

[8:56 AM] Kristen Waters

TVFD is a special district

[8:56 AM] Floren Poliseo (Guest)

maybe WYDOT as a stakeholder? Since they are State, makes sense they aren't a signatory since they would have their own statewide program but could be stakeholder.

like 1
[8:57 AM] David Lee

Hoback Water and Sewer District is newly formed.

[8:58 AM] Kristen Waters

Rachael has a sick child

[8:58 AM] Robb Sgroi (Guest)

Suggest we involve Natural Resources Conservation District. NRCS offers technical and financial support for post disaster mitigation, such as for wildfire on private land.

[8:58 AM] Floren Poliseo (Guest)

Similar to WYDOT, but Fed: Forest Service and NPS. Just since they are here.

[9:31 AM] Yardley, Levi S

I have to step away. I'll review notes and if I need to follow up, Rich Ochs we'll touch base.

like 1
[9:33 AM] Kristen Waters

def both

laugh 1
[9:37 AM] Kristen Waters

extreme heat always happens during fair week too

like 1
[9:40 AM] Ashley Paulsrud - WOHS (Guest)

I have to attend another meeting. Thank you for including me! Look forward to working with everyone during this update process.

[9:41 AM] Kristen Waters

yes, more homes everywhere

[9:43 AM] Scott Anderson JH Radio (Guest)

I have too sign off for now. Thanks for all this great work.

[9:43 AM] Robb Sgroi (Guest)

addressing how increased populations (local, tourists) then affect traffic levels

[9:45 AM] Kristen Waters

you should look at some of the comments on the Teton County Instagram page on the Transportation Expo post - looks of wild ideas

like 1
[9:45 AM] Kristen Waters

lots of wild ideas*

[9:46 AM] Kristen Waters

https://www.instagram.com/p/C2Nj-56Orc3/

[9:54 AM] Dustin Havel

I'd be happy to go over our CIP and other plans to WSP.

[9:55 AM] Kristen Waters

Does WSP provide the survey platform

[9:57 AM] Kristen Waters

rotary/chamber

[9:57 AM] Kristen Waters

business over breakfast

[9:57 AM] Kristen Waters

rotary breakfast/lunch

[9:58 AM] Brian Lenz (Guest)

I need to move to another meeting. Thanks

like 1
[9:58 AM] Brislawn, Jeff

WSP can build the survey in MS forms unless the county has something they prefer.

[9:58 AM] Kristen Waters

Public Input

[9:59 AM] Kristen Waters

we have a public engagement platform we should use.

[9:59 AM] Kristen Waters

thanks!!

[9:59 AM] Kristen Waters

sounds good, let's chat at our next 1-1

[10:02 AM]
Milan Vinich - Fremont Co. EM (Guest) left the chat.
[10:03 AM]

Mike Moyer was invited to the meeting.
[10:06 AM]
Andrea Ladd (FCEMA) (Guest) left the chat.
[10:06 AM]
Johnson, Christopher left the chat.
[10:12 AM] Zolo (Guest)

Here, here. Riclyn and dispatch are awesome.

[10:14 AM] Floren Poliseo (Guest)

Rich Ochs Anna Day I never received the Nixle last night. Anything I can do to troubleshoot? Or should I just sign up again?

[10:15 AM] Rich Ochs

Definitely sign up for Everbridge at this point. Anna will send you the info and the card.

like 1

[10:16 AM] Anna Day

Use this link to sign up for TETON_WY Alerts via the everbridge member portal:
http://tinyurl.com/m3swbnvj

member portal

[10:21 AM] Floren Poliseo (Guest)

clarifying - WSP is working on the Town's Stormwater Management Program, not the County's Water Quality Master Plan. Confusing as there is a lot of work being done locally on water related issues!

like 1

[10:28 AM] Robb Sgroi (Guest)

Great work JHFEMS and civilian on that save!

like 2

SIGN-IN SHEET
WYOMING REGION 8 (TETON COUNTY)
HAZARD MITIGATION PLAN UPDATE KICKOFF MEETING
January 18, 2024, 8:30am-10:00am MST

Name	Email Address	Phone	Department/Organization/Affiliation	Title
RichOchs	rochs@tetoncountywy.gov	3077328594	Teton EMA	Coordinator
B CLAWSON	BCLAWSON@TETONCOUNTYWY.GOV	690-0794	JHF/EMS	WPS
Ricky Betsinger	rbetsinger@tetonsheriff.org	690-7010	TCSO Dispatch	Dispatch Manager
Tanya Anderson	tanderson@jacksonwy.gov	734-4419	Town of Jackson	Ecosystem Stewardship Administration
Anna Day	aday@tetoncountywy.gov	307-732-8990	Teton EMA	Program Specialist
QUENTIN JOHNSTON	QJOHNSTON@TETONCOUNTYWY.GOV	307-732-5792	TETON COUNTY	RADIO COORDINATOR
A. Russell Nelson	rnelson@tetoncountywy.gov	307.231.3246	Teton County	Chief Deputy Coroner
Brian Coe	bcoe@tetoncountywy.gov	307-690-4016	JH Fire/EMS - RERT#8Admin	Battalion Chief

1. Summary

Meeting title	LEPC Meeting
Attended participants	26
Start time	1/18/24, 8:08:08 AM
End time	1/18/24, 10:35:52 AM
Meeting duration	2h 27m 43s
Average attendance time	1h 42m 35s

2. Participants

Name	First Join	Last Leave	In-Meeting Duration	Email	Participant ID (UPN)	Role
Rich Ochs	1/18/24, 8:15:57 AM	1/18/24, 10:35:05 AM	2h 19m 7s	rochs@tetoncountywy.gov	rochs@tetoncountywy.gov	Organizer
EOC Downstairs Conference Room	1/18/24, 8:08:10 AM	1/18/24, 10:34:44 AM	2h 26m 34s	EOCDownstairsroom@tetoncountywy.gov	EOCDownstairsroom@tetoncountywy.gov	Presenter
Brislawn, Jeff	1/18/24, 8:12:03 AM	1/18/24, 10:34:47 AM	2h 22m 44s	jeff.brislawn@wsp.com	jeff.brislawn@wsp.com	Presenter
Johnson, Christopher	1/18/24, 8:17:18 AM	1/18/24, 10:06:54 AM	1h 49m 35s	christopher.johnson@wsp.com	christopher.johnson@wsp.com	Attendee
Hager, Carlie	1/18/24, 8:17:50 AM	1/18/24, 10:31:54 AM	2h 14m 3s	carlie.hager2@wsp.com	carlie.hager2@wsp.com	Attendee
Scott Anderson JH Radio	1/18/24, 8:18:09 AM	1/18/24, 9:43:29 AM	1h 25m 20s			Attendee
Sinclair Buckstaff, Jr.	1/18/24, 8:20:21 AM	1/18/24, 10:34:45 AM	2h 14m 23s			Attendee
Dustin Havel	1/18/24, 8:25:17 AM	1/18/24, 10:34:49 AM	2h 9m 32s	Dustin.Havel@jhairport.org	dhavel@jhairport.org	Attendee
Tyler Sinclair	1/18/24, 8:25:52 AM	1/18/24, 9:05:21 AM	39m 28s			Attendee
Ramsey, Phillip	1/18/24, 8:26:02 AM	1/18/24, 9:57:06 AM	1h 26m 37s	pramsey@uspi.com	phil.ramsey@tenethealth.net	Attendee
Milan Vinich - Fremont Co. EM	1/18/24, 8:27:00 AM	1/18/24, 10:02:48 AM	1h 35m 47s			Attendee
teamsvisitor:a366d084b6104eee84fd51e6846883e6	1/18/24, 8:27:49 AM	1/18/24, 9:31:53 AM	1h 4m 3s			Attendee
Andrea Ladd (FCEMA)	1/18/24, 8:28:01 AM	1/18/24, 10:06:14 AM	1h 38m 13s			Attendee
Yardley, Levi S	1/18/24, 8:28:45 AM	1/18/24, 9:31:33 AM	1h 2m 47s	levi_yardley@nps.gov	LYardley@nps.gov	Attendee
Ashley Paulsrud - WOHS	1/18/24, 8:29:41 AM	1/18/24, 9:40:35 AM	1h 10m 54s			Attendee
Josiah Nash	1/18/24, 8:29:59 AM	1/18/24, 10:34:46 AM	2h 4m 46s	jnash@tetoncountywy.gov	jnash@tetoncountywy.gov	Attendee
Mike Estes	1/18/24, 8:30:45 AM	1/18/24, 10:35:22 AM	2h 4m 37s			Attendee
Robb Sgroi	1/18/24, 8:31:37 AM	1/18/24, 10:34:44 AM	2h 3m 6s	robb@tetonconservation.org	robb_tetonconservation.org#EXT#@TetonCountyWY.onmicrosoft.com	Attendee
Floren Poliseo	1/18/24, 8:32:09 AM	1/18/24, 10:34:41 AM	2h 2m 31s	fpoliseo_jacksonwy.gov#EXT#@TetonCountyWY.onmicrosoft.com	fpoliseo_jacksonwy.gov#EXT#@TetonCountyWY.onmicrosoft.com	Attendee
David Lee	1/18/24, 8:32:55 AM	1/18/24, 10:34:42 AM	2h 1m 47s	david@tetonconservation.org	david@tetonconservation.org	Attendee
Kristen Waters	1/18/24, 8:34:24 AM	1/18/24, 10:34:45 AM	2h 21s	kwaters@tetoncountywy.gov	kwaters@tetoncountywy.gov	Attendee
Brian Lenz	1/18/24, 8:35:20 AM	1/18/24, 9:59:01 AM	1h 23m 40s	btlenz_jacksonwy.gov#EXT#@TetonCountyWY.onmicrosoft.com	btlenz_jacksonwy.gov#EXT#@TetonCountyWY.onmicrosoft.com	Attendee
Anna Day	1/18/24, 8:37:20 AM	1/18/24, 10:35:24 AM	1h 58m 4s	aday@tetoncountywy.gov	aday@tetoncountywy.gov	Attendee
Tyler Sinclair	1/18/24, 9:05:17 AM	1/18/24, 10:35:52 AM	1h 30m 34s	tsinclair_jacksonwy.gov#EXT#@tetoncountywy.gov	tsinclair_jacksonwy.gov#EXT#@tetoncountywy.gov	Attendee
Zolo	1/18/24, 9:26:54 AM	1/18/24, 10:34:43 AM	1h 7m 49s	zolo_jacksonwy.gov#EXT#@tetoncountywy.gov	zolo_jacksonwy.gov#EXT#@tetoncountywy.gov	Attendee
Mike Moyer	1/18/24, 10:03:54 AM	1/18/24, 10:34:47 AM	30m 52s	mmoyer@tetoncountywy.gov	mmoyer@tetoncountywy.gov	Attendee

3. In-Meeting Activities

Name	Join Time	Leave Time	Duration	Email	Role
Rich Ochs	1/18/24, 8:15:57 AM	1/18/24, 10:35:05 AM	2h 19m 7s	rochs@tetoncountywy.gov	Organizer
EOC Downstairs Conference Room	1/18/24, 8:08:10 AM	1/18/24, 10:34:44 AM	2h 26m 34s	EOCDownstairsroom@tetoncountywy.gov	Presenter
Brislawn, Jeff	1/18/24, 8:12:03 AM	1/18/24, 10:34:47 AM	2h 22m 44s	jeff.brislawn@wsp.com	Presenter
Johnson, Christopher	1/18/24, 8:17:18 AM	1/18/24, 10:06:54 AM	1h 49m 35s	christopher.johnson@wsp.com	Attendee
Hager, Carlie	1/18/24, 8:17:50 AM	1/18/24, 10:31:54 AM	2h 14m 3s	carlie.hager2@wsp.com	Attendee
Scott Anderson JH Radio	1/18/24, 8:18:09 AM	1/18/24, 9:43:29 AM	1h 25m 20s		Attendee
Sinclair Buckstaff, Jr.	1/18/24, 8:20:21 AM	1/18/24, 10:34:45 AM	2h 14m 23s		Attendee
Dustin Havel	1/18/24, 8:25:17 AM	1/18/24, 10:34:49 AM	2h 9m 32s	Dustin.Havel@jhairport.org	Attendee
Tyler Sinclair	1/18/24, 8:25:52 AM	1/18/24, 9:05:21 AM	39m 28s		Attendee
Ramsey, Phillip	1/18/24, 8:26:02 AM	1/18/24, 8:26:10 AM	8s	pramsey@uspi.com	Attendee
Ramsey, Phillip	1/18/24, 8:30:36 AM	1/18/24, 9:57:06 AM	1h 26m 29s	pramsey@uspi.com	Attendee
Milan Vinich - Fremont Co. EM	1/18/24, 8:27:00 AM	1/18/24, 10:02:48 AM	1h 35m 47s		Attendee
teamsvisitor:a366d084b6104eee84fd51e6846883e6	1/18/24, 8:27:49 AM	1/18/24, 9:31:53 AM	1h 4m 3s		Attendee
Andrea Ladd (FCEMA)	1/18/24, 8:28:01 AM	1/18/24, 10:06:14 AM	1h 38m 13s		Attendee
Yardley, Levi S	1/18/24, 8:28:45 AM	1/18/24, 9:31:33 AM	1h 2m 47s	levi_yardley@nps.gov	Attendee
Ashley Paulsrud - WOHS	1/18/24, 8:29:41 AM	1/18/24, 9:40:35 AM	1h 10m 54s		Attendee
Josiah Nash	1/18/24, 8:29:59 AM	1/18/24, 10:34:46 AM	2h 4m 46s	jnash@tetoncountywy.gov	Attendee
Mike Estes	1/18/24, 8:30:45 AM	1/18/24, 10:35:22 AM	2h 4m 37s		Attendee
Robb Sgroi	1/18/24, 8:31:37 AM	1/18/24, 10:34:44 AM	2h 3m 6s	robb@tetonconservation.org	Attendee
Floren Poliseo	1/18/24, 8:32:09 AM	1/18/24, 10:34:41 AM	2h 2m 31s	fpoliseo_jacksonwy.gov#EXT#@TetonCountyWY.onmicrosoft.com	Attendee
David Lee	1/18/24, 8:32:55 AM	1/18/24, 10:34:42 AM	2h 1m 47s	david@tetonconservation.org	Attendee
Kristen Waters	1/18/24, 8:34:24 AM	1/18/24, 10:34:45 AM	2h 21s	kwaters@tetoncountywy.gov	Attendee
Brian Lenz	1/18/24, 8:35:20 AM	1/18/24, 9:59:01 AM	1h 23m 40s	btlenz_jacksonwy.gov#EXT#@TetonCountyWY.onmicrosoft.com	Attendee
Anna Day	1/18/24, 8:37:20 AM	1/18/24, 10:35:24 AM	1h 58m 4s	aday@tetoncountywy.gov	Attendee
Tyler Sinclair	1/18/24, 9:05:17 AM	1/18/24, 10:35:52 AM	1h 30m 34s	tsinclair_jacksonwy.gov#EXT#@tetoncountywy.gov	Attendee
Zolo	1/18/24, 9:26:54 AM	1/18/24, 10:34:43 AM	1h 7m 49s	zolo_jacksonwy.gov#EXT#@tetoncountywy.gov	Attendee
Mike Moyer	1/18/24, 10:03:54 AM	1/18/24, 10:34:47 AM	30m 52s	mmoyer@tetoncountywy.gov	Attendee

SIGN-IN SHEET
WYOMING REGION 8 (TETON COUNTY)
HAZARD MITIGATION PLAN UPDATE KICKOFF MEETING
January 18, 2024, 8:30am-10:00am MST

Name	Email Address	Phone	Department/Organization/Affiliation	Title
Rich Ochs	rochs@tetoncountywy.gov	3077328594	Teton EMA	Coordinator
B CLAWSON	BCLAWSON@TETONCOUNTYWY.GOV	690-0794	JH F/EMS	WPS
Ridyn Betsinger	rbetsinger@tetonsheriff.org	690-7010	TCSO Dispatch	Dispatch Manager
Tanya Anderson	tanderson@jacksonwy.gov	734-4419	Town of Jackson	Ecosystem Stewardship Administrator
Anna Day	aday@tetoncountywy.gov	307-732-8590	Teton EMA	Program Specialist
Quentin Johnston	QJOHNSTON@TETONCOUNTYWY.GOV	307-732-5792	TETON COUNTY	RADIO COORDINATOR
A. Russell Nelson	rnelson@tetoncountywy.gov	307-231-3274	Teton County	Chief Deputy Coroner
Brian Coe	bcoe@tetoncountywy.gov	307-690-4216	JH Fire/EMS - RERT#8 Admin.	Battalion Chief

From: Wayne Richardson <wayne@gsmjh.org>
Sent: Tuesday, June 4, 2024 4:56 PM
To: Rich Ochs; Aaron Feuerstein
Cc: April Norton; anne@housingtrustjh.org; Wayne Richardson (Wayne1gsm@gmail.com); Brislawn, Jeffrey; Johnson, Christopher; Anna Day; Wayne Richardson
Subject: Re: Input requested for County Hazard Mitigation Plan - Invitation to June 11th meeting

Rich,

Answers to questions:

What natural hazards (flood, wildfire, earthquake, etc.) are of most concern from a housing perspective? All because all have the potential to reduce housing inventory in Teton County. If I were to be specific, I would have to defer to the data regarding these natural hazards and which has caused the most Teton County housing losses over several decades.
How do disaster-resilient building codes impact your programs? Again, disaster-resilient building codes give Teton County another means of saving housing inventory. A strong housing inventory with a plan to always increase housing units reduces the sheltering burden for the local rescue mission.
What mitigation actions or initiatives would you like to see in the updated hazard mitigation plan that may reduce housing-related vulnerabilities? Annual WY, FEMA, or HUD funding for Teton County shelters (and all WY shelters) for beds, feeding, and clothing victims and expansion in these areas as a proactive initiative within the plan. (I am assuming that First Responders are well-funded in the Plan.)

Sincerely - Wayne

Wayne G. Richardson, CFRE
Chief Executive Officer
Good Samaritan Mission
307-733-3165 (W)
209-405-9737 (C)
GSMJH.org
EIN: 74-2518929

On Tue, Jun 4, 2024 at 11:12 AM Rich Ochs <rochs@tetoncountywy.gov> wrote:

> Hi April, Anne, and Wayne,
>
> We are in the midst of updating our county Hazard Mitigation Plan, which is done every 5 years. This plan is adopted by the County Commission, Town Council, and has several other signatories. It is also reviewed and approved by the Wyoming Office of Homeland Security and FEMA. The plan outlines natural hazards that can impact our community, analyzes their relative risk, and outlines projects that can be taken on to mitigate those hazards to make our community safer. Sometimes these projects can be eligible for FEMA mitigation grant funding.
>
> FEMA is placing more emphasis on engagement with housing agencies and housing advocacy groups with these planning efforts for the following purposes:
>
> 1. Coordinate housing issues to identify risk and vulnerabilities to this sector.
> 2. Ensure the hazard mitigation strategy directs new and redeveloped housing away from hazard areas and uses the latest building codes to maintain safe housing.
>
> We would welcome your thoughts and input related to the above. For example:
>
> What natural hazards (flood, wildfire, earthquake, etc.) are of most concern from a housing perspective?
> How do disaster resilient building codes impact your programs?
> What mitigation actions or initiatives would you like to see in the updated hazard mitigation plan that may reduce housing-related vulnerabilities?
>
> I'd also welcome your participation at a planning workshop scheduled for **Tuesday, June 11th, 2024 from 1:00pm to 4:00pm at the Teton County Library** (invite attached). In-person attendance is highly encouraged, and please feel free to send a representative or bring others along. There is a Teams option to join online if in-person attendance isn't possible. The focus will be coming up with new hazard mitigation strategies to include in the updated plan.
>
> ---
>
> **Microsoft Teams** Need help?
>
> **Join the meeting now**
> Meeting ID: 213 688 958 200
> Passcode: Bm495R
>
> ---
>
> **Dial in by phone**
> +1 307-314-3198,,201952545# United States, Laramie
> Find a local number
> Phone conference ID: 201 952 545#
> For organizers: Meeting options | Reset dial-in PIN
>
> ---
>
> If you can't attend the meeting or send a representative, you can send any feedback on the questions above or hazard mitigation in general to me by June 27th. Thanks for helping to make Teton County a more disaster-resilient community!
>
> Rich Ochs, CEM®, MEP, WEM
> Coordinator, Teton County Emergency Management
> Chairman, Teton Local Emergency Planning Committee (LEPC)
> Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
> Wyoming All-Hazards Liaison Officer (LNO-AH)
> PO Box 4458
> Jackson, WY 83001
> o: (307) 732-8594
> c: (307) 413-5040
> f: (307) 732-5799
> rochs@tetoncountywy.gov
> www.tetoncountywy.gov/em
>
> 
>

From: Rich Ochs <rochs@tetoncountywy.gov>
Sent: Tuesday, February 27, 2024 11:51 AM
To: Wayne Richardson; Karen Walker
Cc: Brislawn, Jeffrey; Johnson, Christopher
Subject: RE: IMPORTANT INFORMATION from VOAD meeting - HELP NEEDED from VOAD Members - Update on Mitigation Report Teton County - Notes and Slides

Thanks so much, Wayne. We really appreciate the feedback!

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management
Chairman, Teton Local Emergency Planning Committee (LEPC)
www.tetoncountywy.gov/em

From: Wayne Richardson <wayne1gsm@gmail.com>
Sent: Tuesday, February 27, 2024 11:37 AM
To: Karen Walker <kleewalker@silverstar.com>
Cc: Rich Ochs <rochs@tetoncountywy.gov>
Subject: Re: IMPORTANT INFORMATION from VOAD meeting - HELP NEEDED from VOAD Members - Update on Mitigation Report Teton County - Notes and Slides

You don't often get email from wayne1gsm@gmail.com. Learn why this is important

[**NOTICE:** This message originated outside of the Teton County's mail system -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Dear Karen,

My input regarding your questions is in blue font after each.

Discussion Questions
• What groups of people in Teton County may be more vulnerable to hazards or disasters, particularly underserved or socially vulnerable populations?
1. Undocumented foreigners are the group that Good Samaritan Mission (GSM) works with a lot. They are vulnerable because their housing and work/income situations are very unstable.
2. Summer seasonal workers. Those that do not stay at GSM Shelter might be in a tent in the woods.
• What existing non-profits/other orgs. in Teton County work with these populations? How could we involve them in the planning process?
1. Regarding Undocumented Foreigners, One22, First Baptist, and GSM are already involved but not sure if Immigration Hope based out of Idaho Falls but with an office co-located in First Baptist Church is a member of this group. I believe ICE should be part of this discussion too.
2. Regarding seasonal campers, I believe the National Park Service is already a part of this group.
• Would you be willing to share information on the HMP planning effort through your networks?
We are a 100% new staff since 11/1/23 so not sure how strong our networks are right now.
• Are there any upcoming opportunities for outreach at scheduled public meetings or events?
I am not aware of any that are in addition to those known or hosted by current members.

Blessings - Wayne

Wayne G. Richardson, CFRE
Chief Executive Officer
Good Samaritan Mission
307-733-3165 (W)

On Tue, Feb 27, 2024 at 10:29 AM <kleewalker@silverstar.com> wrote:



Rich asked me to pass along the above information to all VOAD Members, so you can be aware of the
5-year update to the Teton County Mitigation Plan.
Please note the Discussion Questions (last slide) below, once you have looked over the Slide Presentation
Discussion Questions
• What groups of people in Teton County may be more vulnerable to hazards or disasters, particularly underserved or socially vulnerable populations?
• What existing non-profits/other orgs. in Teton County work with these populations? How could we involve them in the planning process?
• Would you be willing to share information on the HMP planning effort through your networks?
• Are there any upcoming opportunities for outreach at scheduled public meetings or events?

Please reach out to Rich Ochs with any help or questions.
Thank you,
Karen Walker
VOAD Secretary

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management
Chairman, Teton Local Emergency Planning Committee (LEPC)
Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
Wyoming All-Hazards Liaison Officer (LNO-AH)
PO Box 4458

Teton County VOAD Meeting Summary
2/21/2024 – 8-9:30 am MT

Attendance: 7 in person (see sign in sheet), 3 online, 2 WSP online (Jeff Brislawn and Chris Johnson)

VOAD agenda Items (see below attached) – Included discussion from the new CEO of the Good Samaritan Mission who noted how they are expanding disaster relief support by plans to expand kitchen and laundry facilities in their shelter/ community center. They are also interested in obtaining funding for a generator for the facility.

Agenda item on VOAD bi-monthly meeting:

Rich Ochs and Anna Day - Needing Input on 5 year Update for the Region 8 Hazard Mitigation Plan

Jeff Brislawn – WSP Project Manager with Presentation

Jeff gave brief into of our team and the overview of the planning process, Rich noted the importance of engaging this group and reaching out to vulnerable populations for FEMA approval

Overview of Key Elements:

- Re-convene Hazard Mitigation Planning Committee
- Update the plan per latest FEMA/DMA requirements
- *Update the risk assessment to reflect current hazards, risk and vulnerability, social vulnerability*
- Obtain progress on mitigation actions and update with new ones
- Note changes in capabilities and include more specifics on land use planning and floodplain management regulations
- Document progress and note changes in priorities
- Improve document where possible

FEMA's 9-Step Planning Process → Currently working on creating/implementing an outreach strategy

Gave some further explanation and context to the group about the focus of this plan, ie. The VOAD is more focused on response activities and this plan is focused on mitigation. Also discussed the potential for funding opportunities through FEMA grants by participating in this plan including the FEMA BRIC and HMGP funds. Rich described how HMGP has more flexibility for non-profit organizations but is limited to when federal disaster declarations occur anywhere in the state.

Discussion Questions:

- What groups of people in Teton County may be more vulnerable to hazards or disasters, particularly underserved or socially vulnerable populations?
    - Health Department representative noted that they are doing 6-7 different focus groups as part of the update of some of their plans and their Community Health Needs Assessment. Focus groups noted include:
        - Non English speakers
        - Immigrant populations
        - "20-somethings"

    - Senior Center
    - Youth
- What existing non-profits/other orgs. in Teton County work with these populations? How could we involve them in the planning process?
    - Rich noted that one of the Goals in the 2020 HMP could be adjusted to be more inclusive of vulnerable populations; this might be an area the VOADs could provide suggestions for appropriate and current terminology.
- Would you be willing to share information on the HMP planning effort through your networks?
    - Generally yes, though they found that QR codes to a digital survey may not be as effective as getting a hardcopy one filled out at meetings. Folks are 'surveyed out.'
- Are there any upcoming opportunities for outreach at scheduled public meetings or events?
    - Working with Rich and Anna to ask some of the non-profits working with vulnerable pops. and see if we can engage some focus groups to ask questions (some examples are youth, non-English speakers, seniors)
    - Question about doing an in-person event of some kind at the library
    - Rich suggested WSP email options with outreach for further followup

The group discussed further touch points and suggested the next VOAD meeting on April 17th and 8:00 am could be used for another update on the HMP.

Chat Log – Online representatives:

Carey Stanley
8:38 AM
Carey Stanley-Director of Operations, One22 Resource Center
Claudia Schrotz
8:39 AM
Attending meeting: Michael Schrotz. Representing Presbyterian Church of Jackson Hole...and ...Jackson Hole Lions Club
Carey Stanley
8:56 AM
Thank you for joining us, Wayne and Jeff. I need to sign off for One22's Board meeting! See you next meeting.
Shell Hills – Hole Food Rescue

Name	Agency	Title	Email
Rich Ochs	Teton EMA	Coordinator	rochs@tetoncountywy.gov
Mary Lou Klerre	Red Cross	Volunteer	klelenaml@aol.com
Rachael Wheeler	TCHD	PHRC	rachael.wheeler@wyo.gov
Karon Walker	Secretary	Secretary	kleewalker@silversta
Wayne Richardson	Good Samaritan Mission	CEO	Wayne2gsm@gmail.com
Rev. David Bott	Redeemer Lutheran Church	Pastor	redeemer@wyoming.com
Anna Day	Teton EMA	Program Assistant	aday@tetoncountywy.gov

Teton County VOAD BOARD MEETING AGENDA 2-21-24

Online

Michael Schrotz
Jeff Brislawn
Christopher Johnson
Carey Stanley

February 21, 2024 **VOAD BOARD MEETING AGENDA**

8:00 AM **IN PERSON – and ELECTRONIC Meeting**

Presiding: Rev. David Bott - Redeemer Lutheran Church – Chairman

BOARD Sam– Paws
Isabel Zumel or Carey Stanley - One22
Mary Lou Klene – Red Cross
Michael Schrotz – Presbyterian Church / JH Lions Club

Members Wayne Richardson - New CEO Good Samaritan Mission WELCOME

Support Rich Ochs - TCEM Coordinator
Anna Day – TCEM EM Specialist
McKinnley Cox or Rachael Wheeler– Teton County Public Health
Karen Walker- Secretary FWT
Tricia Angelovich - WY2.1.1

Guest

QUORUM: Quorum of 51% needed – MEMBERS 5 Quorum Needed

Mission of Teton County VOAD

The purpose and objective of the Teton County VOAD shall be to foster more effective service to the people of Teton County affected by disaster through **communication, coordination, cooperation, and collaboration** between local organizations and with Teton County Emergency Management.

Call the Meeting to Order

Minutes of Last Meeting

- October 18, 2023 Any corrections or discussion? Motion to Accept _____
  Second_____

OLD BUSINESS

- Change in Relationship with First Western Trust
- Any Old Business for Follow Up

NEW BUSINESS:

- New CEO of Good Samaritan Mission - Wayne Richardson
- Rich Ochs and Anna Day - Needing Input on 5 year Update for the Region 8 Hazard Mitigation Plan
  Jeff Brislawn – WSP Project Manager with Presentation

Next Meeting:

- April 17, 2024, Next Bi-Monthly VOAD Meeting
- ADJOURN MEETING – Motion _____ Seconded _____

Regional Multi-Hazard Mitigation Planning

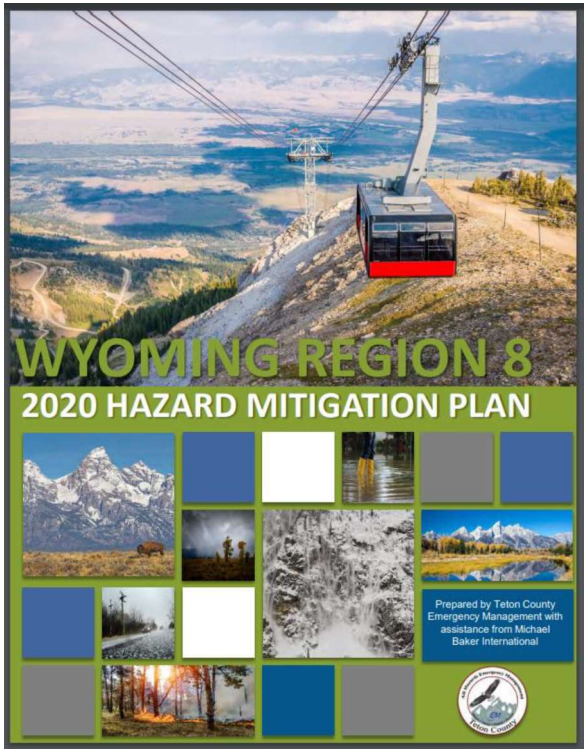
Wyoming Region 8 – 2024 Update

Teton County

Jeff Brislawn, CFM – Project Manager
Chris Johnson, Deputy Project Manager

Presentation for Teton County VOAD

February 21, 2024



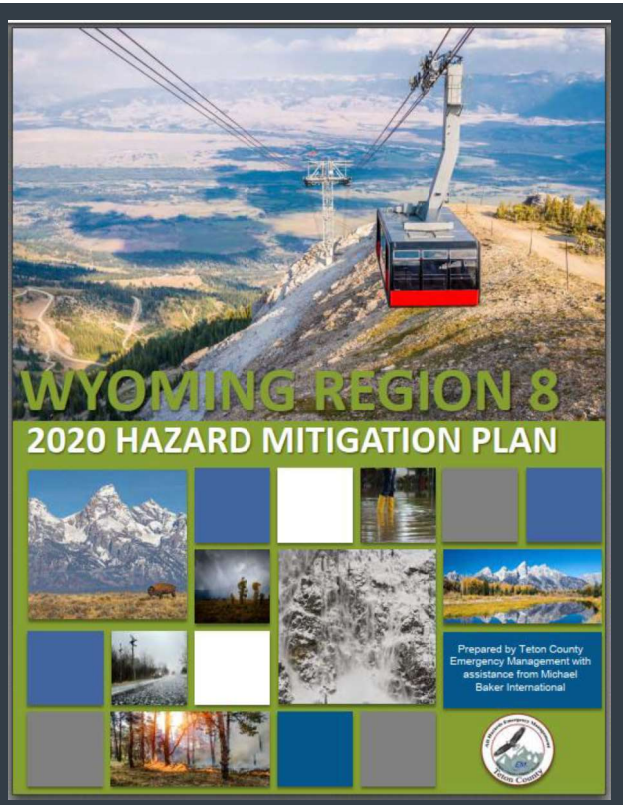
Introductions and Agenda

- WSP Project Team
  - Jeff Brislawn – Project Manager
  - Chris Johnson – Deputy PM/Hazard Mitigation Planner
- Teton County Emergency Management

- Agenda
  - Introduce purpose and overview of HMP update
  - Discuss how VOAD can engage in the update process and contribute to building resilience pre-disaster

Please type name, title, and affiliation in chat box or sign in sheet

Objectives and Schedule for the Hazard Mitigation Plan Update



Regional Hazard Mitigation Plan Update 2023

Overview of Key Elements

- Re-convene Hazard Mitigation Planning Committee
- Update the plan per latest FEMA/DMA requirements
- Update the risk assessment to reflect current hazards, risk and vulnerability, social vulnerability
- Obtain progress on mitigation actions and update with new ones
- Note changes in capabilities and include more specifics on land use planning and floodplain management regulations
- Document progress and note changes in priorities
- Improve document where possible

FEMA's 4-Step/Nine-Task Planning Process



Hazards Addressed in 2024 Update

- Avalanche
- Dam/Levee Incident
- Drought
- Earthquake
- Flood
- Landslide
- Severe Summer Weather (Hail/Lightning/Thunderstorms/Extreme Heat)
- Severe Winter Weather (including Extreme Cold)
- Tornado/Windstorm
- Wildfire

Mitigation Goals from 2020 Plan

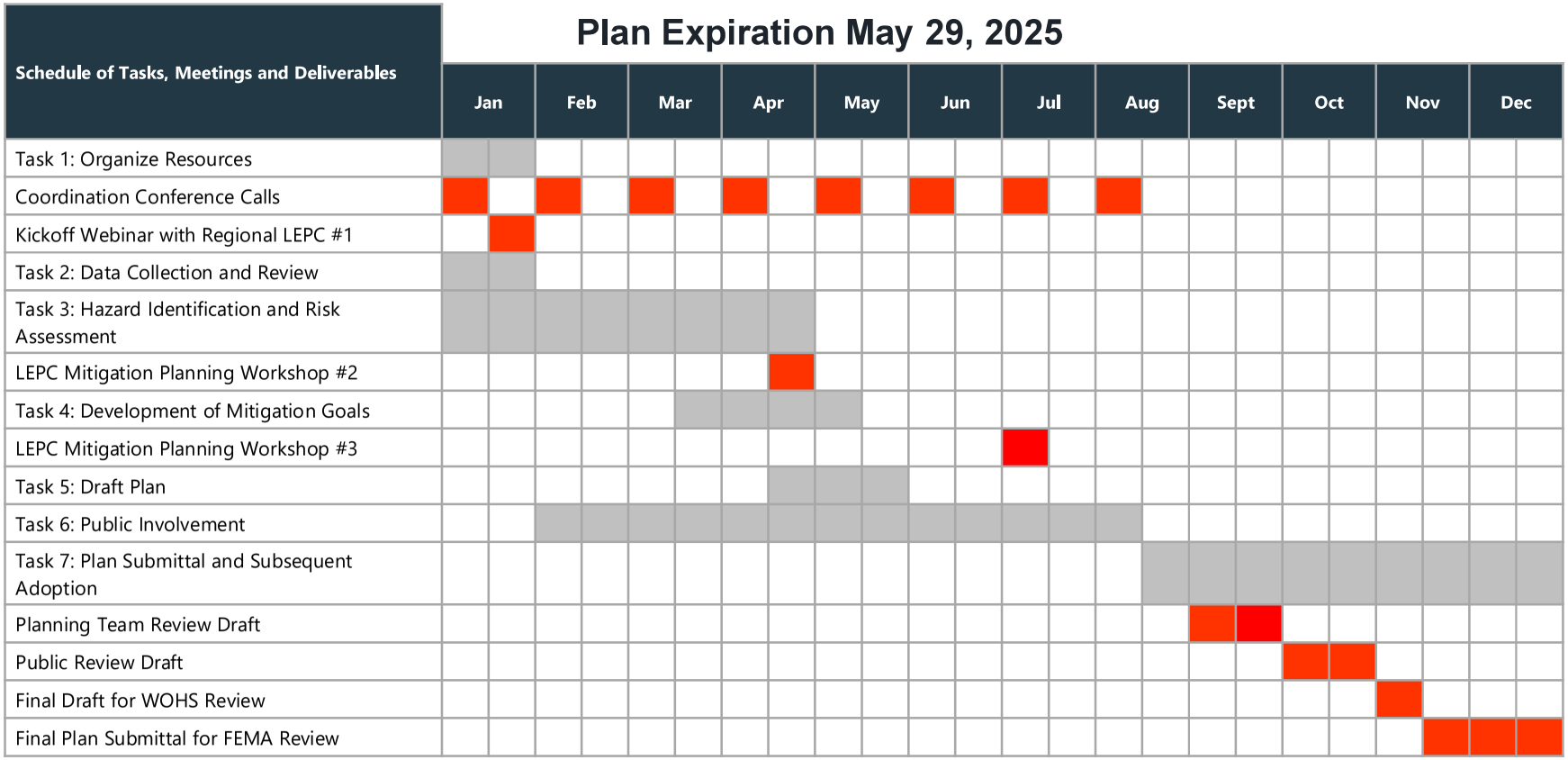
Goal 1: Protect Critical Facilities, utilities and infrastructure.

Goal 2: Protect and restore the natural environment to support community resiliency.

Goal 3: Improve protection of the general population including residents, commuters, and visitors.

Goal 4: Continue to implement actions to mitigate the effect of hazards through education, ordinances and resolutions, and proper project analysis, to enhance life safety and reduce property losses.

Project Tasks and Schedule



Planning for Stakeholder and Public Involvement

Participation Specifics – Other Stakeholders

If you are Stakeholder (state, federal government, other private, non-profit entity, other interested organizations)

- Various options/level of participation
  - Attend LEPC meetings or stay in loop via email list
  - Provide data/information
  - Partner on mitigation efforts
  - Review draft plan

Requirement: Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as businesses, academia, and other private and non-profit interests to be involved in the planning process? (Requirement 44 CFR § 201.6(b)(2))

Planning for Public and Stakeholder Involvement

- Proposed activities –
  - Online survey will be developed
  - Plan backgrounder developed
  - Outreach at other public forums
  - Posting the draft plan online and soliciting comments prior to submittal to WOHS/FEMA.



Project Backgrounder
Regional Hazard Mitigation Plan Update

Wyoming all-hazards emergency management Region 8 consists of Teton County, Town of Jackson and Teton Conservation District. The Region is updating the 2020 Regional Hazard Mitigation Plan in collaboration with local municipalities, special districts, and other stakeholders. This plan develops community mitigation strategies, to work towards reducing the risks posed by hazards. The plan must be updated and approved by FEMA every five years to keep it current and to maintain eligibility for mitigation grant assistance.

What is hazard mitigation?

The term "Hazard Mitigation" describes actions that can help reduce or eliminate long-term risks caused by hazards, such as floods, wildfires, tornadoes, and earthquakes. Hazard mitigation is best accomplished when based on a comprehensive, long-term plan developed before a disaster strikes.

As the costs of disaster impacts continue to rise, governments and citizens must find ways to reduce hazard risks to our communities. Oftentimes after disasters, repairs and reconstruction are often completed in such a way as to simply restore damaged property to pre-disaster conditions. These efforts may "get things back to normal," but the replication of pre-disaster conditions often results in a repetitive cycle of damage, reconstruction, and repeated damage.

Hazard mitigation breaks this repetitive cycle by producing less vulnerable conditions through pre- and post-disaster actions and projects. The implementation of such hazard mitigation actions by state and local governments will lead to more resilient communities and reduced injuries and damages in the future.

Project Benefits

Mitigation is an investment in a community's future safety and sustainability. Recent cost-benefit studies have proven mitigation to be cost effective for communities, with mitigation projects returning on average $6 for every $1 spent. Mitigation planning helps communities identify and prioritize actions that can be taken before a disaster or hazard event, to reduce impacts when they occur.

Hazard mitigation planning helps local governments and other stakeholders think through how to plan, design, build, and establish partnerships for risk reduction. Public, private and non-profit stakeholders are important partners. Consider the critical importance of mitigation to:

- Protect public safety and prevent loss of life and injury.
- Reduce harm to existing and future development.
- Maintain community continuity and strengthen the social connections that are essential for recovery.
- Prevent damage to your community's unique economic, cultural, and environmental assets.
- Minimize operational downtime and accelerate recovery of government and business after disasters.
- Reduce the costs of disaster response and recovery and the exposure to risk for first responders.
- Help accomplish other community objectives, such as capital improvements, infrastructure protection, open space preservation, and economic resiliency.

Discussion Questions

- What groups of people in Teton County may be more vulnerable to hazards or disasters, particularly underserved or socially vulnerable populations?
- What existing non-profits/other orgs. in Teton County work with these populations? How could we involve them in the planning process?
- Would you be willing to share information on the HMP planning effort through your networks?
- Are there any upcoming opportunities for outreach at scheduled public meetings or events?

Questions? Thank you!

Project Consultant/Project Manager, WSP
Jeff Brislawn, CFM
jeff.brislawn@wsp.com
(303) 704-5506

Deputy Project Manager, WSP
Chris Johnson
Chris.johnson@wsp.com

Teton County EM Coordinator
Rich Ochs
rochs@tetoncountywy.gov

April 17, 2024

VOAD BOARD ANNUAL MEETING

Draft of Minutes for Approval

Jackson, WY

8:00 AM **IN PERSON or Electronic**

Presiding: Rev. Bott – Redeemer Lutheran Church

BOARD Carey Stanley - One22
Michael Schrotz – Presbyterian Church / JH Lions Club
Sam Diaz – Paws Program Manager

Members Christie Laughery – St John's Episcopal Church
Wayne Richardson - Good Samaritan Mission

Support Rich Ochs - TCEM Coordinator
Anna Day – TCEM EM Specialist
Karen Walker - VOAD Secretary
Rachael Wheeler Teton County Public Health

Guests

Absent Red Cross - Kimberly Brandt

QUORUM: Quorum of 51% needed 5 – Board Members 4

Mission of Teton County VOAD

The purpose and objective of the Teton County VOAD shall be to foster more effective service to the people of Teton County affected by disaster through **communication, coordination, cooperation, and collaboration** between local organizations and with Teton County Emergency Management.

Call the Meeting to Order: Rev Bott called the meeting to order and asked for the highlights of the minutes. from February 21, 2024 meeting. Karen gave a brief overview of the minutes. Rev Bott asked for a motion to accept the minutes of both meetings with the correction. Michael Schrotz made the motion and Carey Stanley seconded. Motion passed.

Old Business:

Rich Ochs updated the group for Jeff Bristawn on the WSP Region 8 Hazard Mitigation Plan. Will be reaching out next to VOAD for more information as part of outreach to community…a requirement of FEMA. All projects are very paperwork heavy with up-front costs, but there are a few applications for funds that are easier. (like application for generator). Check with Rich if you would like to apply for some of the funds.

Cary Stanley brought up a changeover from Nixel to EverBridge for alerts. How is it going? Is there anything VOAD can do to help make this changeover more successful. Only 1/5th of Nixel has changed over. Anna printed up cards to hand out with directions of the switch. Rich gave us a demonstration of how much better the new system works for sending out alerts.

Cary is going to reach out to Seader Davis, of the Rotary Lunch group, to find a representative for Rotary.

New Business:

Rev. Bott – Review of By-Laws to remove reference to FWT and change Title of Executive Director to Secretary. Discussed wording on Article V and decided to review all the articles and make sure they are updated to handle zoom meetings and electronic voting. Rev. Bott will bring in more suggestions on updates for the next meeting.

Wayne gave us an update on the remodel of the Mission. Introduced his COO, Aaron Feuerstein. They are now approved to have children in select rooms in the mission, and a new stove was delivered today. Setting up to feed over 100 first responders with a 3-hour notice or less. burritos – water – chips – dessert bar. Great discussion on setting quick meals for first responders (volunteers) quickly during an emergency. Also, fundraising for a 30-day period - 3 meals a day feeding and the equipment to make this happen.
May 8th they are holding training for Fund Raising for Board Members and senior non-profit leaders at the Presbyterian Church. $50 fee *(can get a scholarship to cover the fee)*
He invited Board Members to have the June board meeting at the Good Samaritan Mission for breakfast and a tour of the building. Best in person attendance.

Michael Schrotz – Lion's Club doing lunch for Kids in the Woods, May 15 & 16th, for 4th and 5th Graders from Wind River Reservation and June 1st free Kids Fishing day lunch.

NEXT MEETING: Changed to **June 12, 2024** (3rd Wed is Holiday) 8am **Breakfast & Tour of Good Samaritan Mission**

ADJOURN MEETING: Meeting Adjourned Motion by Michael Schrotz and seconded by Wayne Richardson.

Johnson, Christopher

From: Brislawn, Jeff
Sent: Tuesday, January 2, 2024 3:51 PM
To: Joseph.Ruess@wyo.gov; Jack.Morey@wyo.gov
Cc: Ashley Paulsrud; Mike Garner; Johnson, Christopher
Subject: Coordination with SEO on regional hazard mitigation plans and Region 1 Hazard Mitigation Plan update draft for comment

Jack and Joe,
WSP is WOHS's planning consultant for development and update of regional hazard mitigation plans. With the addition of the High Hazard Potential Dam requirements for local HMPs we want to make sure we have coordination with State Dam Safety. Ashly Paulsrud provided me your contact info. Wyoming Region 1's HMP (Campbell, Crook, Johnson, Sheridan and Weston Counties) is out for public review and comment before it is finalized for FEMA submittal. We would like to provide an opportunity for your review and comment from a dam safety perspective. Also know that we did have SEO involvement (David Schroeder and Danielle Roth) in some of the planning meetings.

The Region 1 plan can be accessed here, with a comment form, but feel free to email any comments or questions you have. You will likely be most interested in the Dam Failure section in Chapter 4, and the mitigation strategies in the county annexes. Would like any feedback by January 9th if possible.
https://hls.wyo.gov/

In addition, we will be kicking off the regional plan updates for Region 8 (Teton) this month and Region 3 (Carbon and Albany) in February. Is it ok to use your contact as an interested stakeholder? We would appreciate any information you might have to support those efforts. We have a GIS layer of privately owned High Hazard Dams that was provided for the state and regional plan updates but it may be a few years old now.
Regards
Jeff

Jeff Brislawn, CFM
Vice President
Hazard Mitigation and Emergency Management

T+ 1 303-704-5506

From: Joseph Ruess <joseph.ruess@wyo.gov>
Sent: Tuesday, February 13, 2024 1:20 PM
To: Jack Morey
Cc: Chambers Iv, Mack; Baley Lenhart; Jack.Morey@wyo.gov; Brislawn, Jeffrey; Johnson, Christopher
Subject: Re: Teton County Dam Inundation

Good Afternoon,

Unfortunately, we cannot release any data regarding these federal dams. In addition, non-federal dam inundation mapping should only be placed in a document labeled for official use only, not for public consumption.

Have a great day,

Joe

On Mon, Feb 12, 2024 at 4:20 PM Jack Morey <jack.morey2@wyo.gov> wrote:

> Mack:
>
> I am going to defer this to Joseph Ruess, one of our safety of dams engineers. He will be able to give you more information.
>
> Jack
>
> On Mon, Feb 12, 2024 at 10:03 AM Chambers Iv, Mack <mack.chambers@wsp.com> wrote:
>
> > Hello Jack,
> > We are working on the 2024 Wyoming Region 8 / Teton County Hazard Mitigation Plan and wanted to reach out to you about dam inundation data within the County. We have completed other Regional Hazard Mitigation Plans within Wyoming and have a Statewide Dam Inundation layer provided in 2020 as part of the State HMP update. We understand it was limited to privately owned High Hazard Dams which is why it likely does not include any inundation for the Grassy Lake or Jackson Lake since they are federal. We would still like an update of this layer if it is available. We also understand the federal agencies may be restricted in sharing their data or displaying it in a public document..
> >
> > We would also like to know if there are any updates on the conditions of these dams or if we should just refer to the NID.
> >
> > Thank you,
> >
> > **Mack Chambers**
> > GIS Analyst
> >
> > M+ 1 720-839-1516
> >
> > WSP USA
> > 2000 S. Colorado Blvd., Ste. 2-1000
> > Denver, CO 80222
> >
> > wsp.com
> >
> > NOTICE: This communication and any attachments ("this message") may contain information which is privileged, confidential, proprietary or otherwise subject to restricted disclosure under applicable law. This message is for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on, this message is strictly prohibited. If you have received this message in error, or you are not an authorized or intended recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and destroy any printed copies.
> >
> > -LAEmHhHzdJzBiTWa4Hgs/pbKI
>
> E-Mail to and from me, in connection with the transaction
> of public business, is subject to the Wyoming Public Records
> Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction
of public business, is subject to the Wyoming Public Records
Act and may be disclosed to third parties.

WYOMING REGION 8 HAZARD MITIGATION PLAN UPDATE

TETON COUNTY

HIRA MEETING

Thursday, March 21, 2024, 8:30am MST

Hybrid online/in person subset of LEPC Meeting

1. Review of the hazard mitigation planning process
2. Review and highlights of update of Hazard Identification and Risk Assessment
3. Next steps
4. Questions and answers

Summary of the Wyoming Region 8 Multi-Hazard Mitigation Plan Update

Teton County

Risk Assessment and Goals Meetings

March 2024

Overview

A series of virtual/hybrid meetings was held to discuss the update of the risk assessment and mitigation goals aspects of the Wyoming Region 8 Hazard Mitigation Plan. Emergency Management Coordinator from Teton County, as well as the Local Emergency Planning Committee (LEPC) members including participating jurisdictions and stakeholders. The primary focus of the meetings was to review the various hazards that can impact the various counties and get input from participating jurisdictions on the hazard ranking significance and note highlights in analysis with the plan update.

Teton County: Thursday, March 21st at 8:30 am MST.

Introductions and Opening Remarks

Chris Johnson, Project Manager with the consulting firm hired to facilitate the plan update process, WSP (formally Wood Environment & Infrastructure Solutions Inc.), began the meeting reviewing the meeting agenda and the progress so far.

Consultants/State Hazard Mitigation Officer (attended all meetings)			
Name	**Jurisdiction**	**County**	**Title**
Jeff Brislawn	WSP	N/A – Consultant	Project Manager
Christopher Johnson	WSP	N/A – Consultant	Deputy Project Manager
Carlie Hager	WSP	N/A – Consultant	Hazard Mitigation Planner
Teton County Meeting (3/21/2024)			
Name	**Jurisdiction**	**Department/ Affiliation**	**Title**
Rich Ochs	Teton County	Teton County EMA	Teton County Emergency Management Coordinator
Anna Day	Teton County	Teton County EMA	Teton County Emergency Management Program Specialist

Robb Sgroi	Teton Conservation District	Teton Conservation District	Land Resources Specialist
Shannon Bruns	Teton County	Jackson Hole Fire/EMS	Administrative Assistant
David Lee	Teton Conservation District	Teton Conservation District	Water Resources Specialist
Carlin Girard	Teton Conservation District	Teton Conservation District	Executive Director
Tanya Anderson	Town of Jackson	Administration	Ecosystems Stewardship Administrator
Brian Coe	Teton County	Jackson Hole Fire/EMS	Interim Assistant Chief
Russell Nelson	Teton County	Coroner's Office	Chief Deputy Coroner
Mike Moyer	Teton County	Jackson Hole Fire/EMS	Interim Chief
Johnny Ziem	Town of Jackson	Public Works	Assistant Director

Review of the Hazard Mitigation Planning Process

A PowerPoint presentation was presented by Chris Johnson. Chris started the meeting by discussing the online public survey results. This was successful in engaging the community and has received a total of 604 response across the County.

Review of Vulnerability Assessment Update

Chris reviewed the statewide hazard identification from the 2020 Region 8 Hazard Mitigation Plan and also the 2020 Wyoming Statewide HMP.

Chris outlined the general risk assessment requirements before beginning a detailed discussion of each hazard. Chris presented details on each hazard that will be included in the draft updated risk assessment chapter. Refer to the PowerPoint presentation and draft update of the Hazard Identification and Risk Assessment (HIRA - forthcoming) chapter for specific details on each hazard.

Several valuable details were learned during the risk assessment conversation among participants. Highlights of the discussions are noted by hazard in the tables below.

Review of Identified Hazards

Hazard or Topic	Meeting Discussion
Avalanches	• Mentioned the excessive number of resources that help the mitigation process of avalanches. • LEPC noted the human impact that causes avalanches such as back country skiers

Dam Failure	• LEPC noted that log bridge damn on Jackson Lake was made earthquake proof in 1980. May be valuable to note in the plan.
Drought	• Wanted to ensure we will USDA events in the plan.
Earthquake	• Rich mentioned that he would like the USGS national Seismic Hazard map in the plan.
Flood	• LEPC mentioned the governor in 2011 claimed disasters statewide. • Potentially other damages to flooding that have not been recorded. • LEPC wants to make Black Creek a subsection and to note that cattleman's bridge has to be replace in 2018 • Discuss pathway flooding on North 89
Landslides	• Teton County asked if we could use a higher resolution map
Tornado/High winds	• County did not mention any changes for this hazard
Severe Winter Weather	• County did not mention any changes for this hazard
Severe Summer Weather	• LEPC would like a discussion on lightning strike rescue that focuses on outdoor advocates to ensure the importance of lightning. • Noted that Old Faithful had some lightning incidents in the past
Wildfire	• LEPC noted that wildfires can increase the possibility of landslide and risk (cascading hazards post wildfire) • Can also impact surface and ground water • Ensure that the plan discusses human health impacts and air quality throughout the County
Overall Hazard Significance Table	• Teton County agreed with the current ratings of the hazards, but noted they will provide us with any additional information discussed in the meeting that can further our research and data on past occurrences.

Review and Update of Hazard Mitigation Goals

The LEPC reviewed a list of typical goal statements for hazard mitigation plans, drawn from their existing plan, and the Wyoming State Hazard Mitigation Plan. Teton County was asked to review their specific goals and consider changes.

Teton County Goals

1. Protect critical facilities, utilities, and infrastructure.
2. Protect and restore natural environment to support community resiliency.
3. Improve protection of the general population including residents, commuters, and visitors
4. Continue to implement actions to mitigate the effect of hazards through education, ordinances, and resolutions, and proper project analysis, to enhance life safety and reduce property losses.

Suggested changes: The group felt that they were still valid and did not suggest any changes.

Plan Timeline/Next steps

- Chris noted that each jurisdiction will need to create a minimum of one new mitigation action for the plan update and ensure that all hazards are covered with mitigation actions.

- Chris summarized the next steps in the process.

    - CPT homework:

        - Review the HIRA (when available) and provide feedback.

        - Review the mitigation actions in the plan and provide status (completed, completed-continuing, continue-not completed, deleted) on a worksheet/form that will be provided to the County EM Coordinators for distribution to the municipalities.

        - Start formulating ideas for new mitigation projects, based on HIRA results and community needs.

Teton County
The meeting wrapped up by showing the group the regions draft goals and went over information needs and next steps.

SIGN-IN SHEET Teton LEPC
WYOMING REGION 8 (TETON COUNTY)
HAZARD MITIGATION PLAN UPDATE HIRA MEETING
March 21, 2024, 8:30am-10:00am MST

Name	Email Address	Phone	Department/Organization/Affiliation	Title
Rich Ochs	rochs@tetoncountywy.gov	3077738594	Teton EMA	Coordinator
Anna Day	aday@tetoncountywy.gov	307 732 8590	Teton EMA	Program Specialist
Robb Sgrol	robb@tetonconservation.org	307 733 2110	Teton Conservation District	Land Resources Specialist
Shannon Burns	sburns@tetoncountywy.gov	3077328500	Fire/EMS	Admin Coord
David Lee	david@tetonconservation.org	(307) 733-2110	Teton Conservation District	Water Resources Specialist
Carlin Girard	carlin@tetonconservation.org	307-774-5264	Teton CD	Executive Director
Tanya Anderson	tanderson@jacksonwy.org	307-734-4419	Town of Jackson	Ecosystem Stewardship Administrato
Brian Coe	bcoe@tetoncountywy.gov	307-690-4246	Fire/EMS RERT#8	LEPC Vice Chair Assistant Chief
Russell Nelson	rnelson@tetoncountywy.gov	307-231-3296	Chief Deputy Coroner Teton County	Teton Co. Coroner's office
Mike Moyer	mmoyer@tetoncountywy.gov	307-413-4455	JH Fire/EMS	Interim Chief
Johnny Ziem	jziem@jacksonwy.gov	413-0591	TOJ PW	Ass. PW Director

Wyoming Region 8 Hazard Mitigation Plan
Teton County – 2024 Update
Mitigation Strategy Meeting Agenda

Date: Tuesday June 11, 2024
1:00-4:00 p.m. MT

Project: Wyoming Region 8 Regional Hazard Mitigation Plan Update

Subject/Purpose

This is the third and final planning meeting for the Wyoming Region 8 Hazard Mitigation Plan Update. The purpose of this meeting is the update of the Plan's mitigation strategy, including review on action implementation so far, then modify, add, and/or delete mitigation actions and projects applicable to the participating jurisdictions (County, Town of Jackson, Conservation District, Airport District, and Flat Creek Watershed Improvement District) based on Hazard Mitigation Planning Committee input.

Attendees: Wyoming Region 8 Hazard Mitigation Planning Committee and interested stakeholders

---

1. Introductions
2. Review of the Planning Process and draft updated goals
3. Review of possible mitigation activities and alternatives
4. Discuss criteria for mitigation action selection and prioritization
5. Review of progress on existing actions in the plan
6. Brainstorming Session: Development of new mitigation actions (group process)
7. Prioritize mitigation actions (group process)
8. Discuss plan implementation and maintenance
9. Discuss next steps
10. Questions and Answers/Adjourn

SIGN-IN SHEET
WYOMING REGION 8 (TETON COUNTY)
HAZARD MITIGATION PLAN UPDATE MITIGATION STRATEGY MEETING
June 11, 2024, 1-4:00pm MST

Name	Email Address	Phone	Department/Organization/Affiliation	Title
Sandy Buckstaff	~~sbuc~~ sandy@tcwid.org	(208) 399-2590	Flat Creek Watershed Improvement District	Board Chair
mckinley cox	mckinney.cox1@wyo.gov	(828) 273 9027	TCHD, COMMUNITY HEALTH	COORDINATOR
Anna Day	aday@tetoncountywy.gov	307-732-8590	TC Emergency Management	Program Specialist
Rich Ochs	rochs@tetoncountywy.gov	307-732-8594	" " "	Coordinator
Chris Moran	cmoran@tclib.org		Teton County Library	Facilities Tech
Floren Poliseo	fpoliseo@jacksonwy.gov	307-734-3568 (or Town ext. 1401)	Town of Jackson Public Works	Director
AMY RAMAGE	2ramage@tetoncountywy.gov	307-732-8574	TETON COUNTY ENGINEERING	COUNTY ENGINEER
ROBB SGROI	robb@tetonconservation.org	307 733 2110	TETON CONSERVATION DISTRICT	LAND RESOURCES SPECIALIST
Dustin Havel	dustin.havel@jhairport.org	307-413-1532	Jackson Hole Airport	Assistant Airport Director - Operations
CLINTON JOHNSTON	CJOHNSTONE@TETONCOUNTYWY.GOV	307-732-5792	TETON CO GENERAL SERVICES	RADIO COORDINATOR.
Jeff Brislawn	Jeff.brislawn@wsp.com	303-704-5506	WSP / PLANNING CONSULTANT.	PROJECT MANAGER
ERIK KIMBALL	ekimball@tetoncountywy.gov	307-732-8442	TETON COUNTY	SUSTAINABILITY COORDINATOR

Name	Email Address	Phone	Department/Organization/Affiliation	Title
Tanya Anderson	tanderson@jacksonwy.gov	307-734-4419	~~Ecosystem~~ Town of Jackson	Ecosystem Stewardship Administrator
Kristin Waters	KWaters@tetoncountywy.gov	402-960-6078	Public Information	PIO

Wyoming Region 8 Hazard Mitigation Plan

Teton County

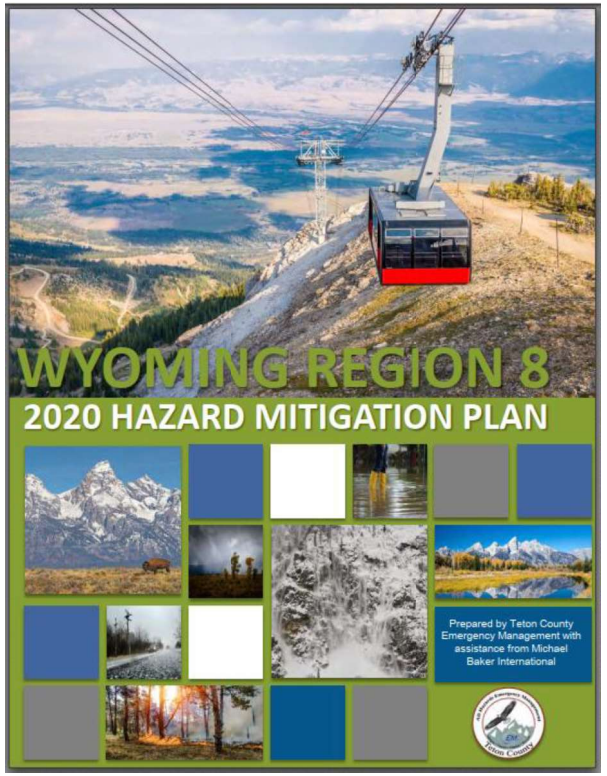
Hazard Mitigation Planning Team

Meeting #3 – Mitigation Strategy

June 11th, 2024

Teton County Library 1-4pm

Slides 11, 14 and 16 revised to reflect meeting input



Agenda

1. Introductions
2. Planning process update
3. Review of possible mitigation activities and alternatives
4. Discuss criteria for mitigation action selection and prioritization
5. Review of progress on existing mitigation actions (group process)
6. Brainstorming Session: Development of new mitigation actions
7. Prioritize mitigation actions (group process)
8. Discuss plan implementation and maintenance
9. Discuss next steps
10. Questions and answers/adjourn



Introductions



Introductions

- **WSP Project Team**
  - Jeff Brislawn – Project Manger
  - Christopher Johnson – Hazard Mitigation Planner
- **Teton County Emergency Management**
- **WOHS**
- **Adopting Jurisdictions**
- **LEPC**

Please sign the sign-in sheet; if online type name, title, and affiliation in chat box

Planning Process Update

FEMA's Nine-Step Planning Process

Step 1 **Determine the Planning Area and Resources**

Step 2 **Build the Planning Team**

Step 3 **Create an Outreach Strategy**

Step 4 **Review Community Capabilities**

Step 5 **Conduct a Risk Assessment**

Step 6 **Develop a Mitigation Strategy**

Step 7 Keep the Plan Current

Step 8 Review and Adopt the Plan

Step 9 Create a Safe and Resilient Community

Progress So Far

- Kickoff meeting held January 18th, 2024, 8:30am MST
- Discussed plan update with VOAD meeting on February 21
- Risk Assessment Meeting held March 21st, 2024
- GIS analysis & mapping completed; Draft HIRA completed and undergoing internal review and QC, to be sent to HMPC for review in June
- Online public survey closed April 12, 2024 - 622 total responses received
- LEPC Meeting on May 16 to discuss Mitigation Goals and Action Status
- Mitigation action tracker circulated for input

Mitigation Strategy Elements

Goals

General guidelines that explain what you want to achieve

Usually broad policy/vision statements

Objectives (optional)

Define strategies or implementation steps to attain goals

Specific and measurable

Actions

Specific projects/activities to achieve goals & objectives



Wyoming Region 8 Mitigation Goals- Original

Goal 1: Protect critical facilities, utilities, and infrastructure

Goal 2: Protect and restore natural environment to support community resiliency

Goal 3: Improve protection of the general population including residents, commuters, and visitors

Goal 4: Continue to implement actions to mitigate the effect of hazards through education, ordinances, and resolutions, and proper project analysis, to enhance life safety and reduce property losses

Wyoming Region 8 Mitigation Goals- UPDATED

Goal 1: Improve protection of the general population including residents, commuters, ~~and~~ visitors, and their property.

Goal 2: Protect existing and future critical facilities, utilities, infrastructure, and other FEMA community lifelines

Goal 3: Protect, restore, and manage the environment to support community and environmental resiliency

Goal 4: Continue to implement actions to mitigate the effect of hazards through education, ordinances, and resolutions, and proper project analysis, to enhance life safety and reduce property losses

Goal 4 Alternate: Proactively implement education and outreach, ordinances, resolutions and mitigation projects to meet Goals 1-3

Wyoming Region 8 Mitigation Goals- UPDATED with 6/11 meeting input

Goal 1: Minimize impacts of hazards on the general population including residents, commuters, and visitors

Goal 2: Protect existing and future critical facilities, utilities, infrastructure, and other FEMA community lifelines

Goal 3: Protect, restore, and manage the environment to support community and environmental resiliency

Goal 4: Continue to implement actions to mitigate the effect of hazards through education, ordinances, ~~and~~ resolutions, and proper project analysis to enhance life safety and reduce property and economic losses

Review of Hazard Significance Summaries

Teton County Hazards – DRAFT Significance Rankings -

Hazard	Geographic Extent	Frequency of Occurrence	Potential Magnitude/ Severity	Teton County Overall Significance
Avalanche	Limited	Highly Likely	Limited	**Medium**
Dam/Levee Incident	Significant	Unlikely	Critical	**Medium**
Drought	Extensive	Occasional	Negligible	**Medium**
Earthquake	Significant	Occasional	Critical	**High**
Flood	Limited	Occasional	Limited	**Medium**
Landslide	Limited	Likely	Limited	**Low**
Severe Summer Weather (Hail/ Extreme Heat/ Lightning/ Thunderstorms)	Limited	Highly Likely	Limited	**Low**
Severe Winter Weather (including Extreme Cold)	Extensive	Highly Likely	Limited	**Medium**
Tornado/ Windstorm	Significant	Likely	Limited	**Low**
Wildfire	Significant	Highly Likely	Critical	**High**

Teton County Hazards – DRAFT Significance Rankings

UPDATED with 6/11 meeting input

Hazard	Geographic Extent	Frequency of Occurrence	Potential Magnitude/ Severity	Teton County Overall Significance
Avalanche	Limited	Highly Likely	Limited	**Medium**
Dam/Levee Incident	Significant	Unlikely	Critical	**Medium**
Drought	Extensive	Occasional	Negligible	**Medium**
Earthquake	Significant	Occasional	~~Critical~~ Catastrophic	**High**
Flood	Limited	~~Occasional~~ Likely	Limited	~~**Medium**~~ **High**
Landslide	Limited	Likely	~~Limited~~ Critical	~~**Low**~~ **Medium**
Severe Summer Weather (Hail/ Extreme Heat/ Lightning/ Thunderstorms)	Limited	Highly Likely	Limited	**Low**
Severe Winter Weather (including Extreme Cold)	Extensive	Highly Likely	Limited	**Medium**
~~**Tornado/ Windstorm**~~ **High Winds (including Tornado)**	Significant	Likely	Limited	~~**Low**~~ **Medium**
Wildfire	Significant	Highly Likely	Critical	**High**

DRAFT Hazard Significance Rankings by Jurisdiction

Hazard	Teton County	Jackson	Teton Conservation District	Flat Creek WID	Jackson Hole Airport Board
Avalanche	Medium	Medium	NA	Medium	NA
Dam/Levee Incident	Medium	NA	Low	NA	Medium
Drought	Medium	Medium	Medium	Medium	Medium
Earthquake	High	High	High	High	High
Flood	Medium	Medium	Medium	Medium	Medium
Landslide	Low	Low	Low	Low	NA
Severe Summer Weather (Hail/Extreme Heat/Lightning/ Thunderstorms)	Low	Low	Low	Low	Low
Severe Winter Weather (Including Extreme Cold)	Medium	Medium	Medium	Medium	Medium
Tornado/Windstorm	Low	Low	Low	Low	Low
Wildfire	High	High	High	High	High

DRAFT Hazard Significance Rankings by Jurisdiction - UPDATED with 6/11 meeting input

Hazard	Teton County	Jackson	Teton Conservation District	Flat Creek WID	Jackson Hole Airport Board
Avalanche	Medium	Medium	NA	~~Medium~~ Low	NA
Dam/Levee Incident	Medium	NA	Low	NA	~~Medium~~ NA
Drought	Medium	Medium	Medium	Medium	Medium
Earthquake	High	High	High	High	High
Flood	Medium	Medium	Medium	~~Medium~~ High	Medium
Landslide	~~Low~~ Medium	~~Low~~ Medium	Low	Low	NA
Severe Summer Weather (Hail/Extreme Heat/Lightning/ Thunderstorms)	Low	Low	Low	Low	Low
Severe Winter Weather (Including Extreme Cold)	Medium	Medium	Medium	~~Medium~~ High	Medium
High Wind (including Tornado)	Low	Low	Low	Low	~~Low~~ High
Wildfire	High	High	High	High	High

Review of Possible Mitigation Activities and Alternatives

Hazard Mitigation Examples

Reduce the future demand for, and rising costs of, disaster response and recovery.

Retrofit a critical facility, enforce building codes, land use planning, remove a structure from a hazard area.



MITIGATION: Elevated Home by the River



MITIGATION: Defensible Space, Fuels Reduction



MITIGATION: Home Removed from Landslide Area



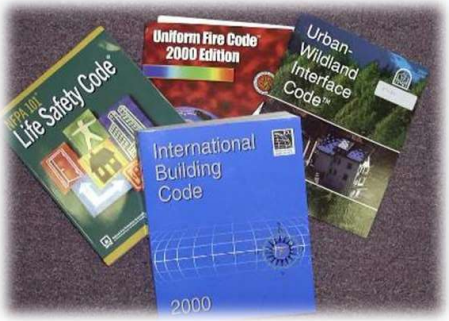
RESPONSE: Purchase of Police Command Vehicle

Review Mitigation Alternatives

- Alter
- Avert
- Adapt
- Avoid









Review Mitigation Alternatives

- **Alter** the Hazard
  - Prescribed burns or fuels management to reduce wildfire intensity and severity
  - Draining lakes behind weakened dams
  - Snow fences





Review Mitigation Alternatives

- **Avert** the Hazard
  - Floodwalls and gates
  - Debris Nets and Basins
  - Drainage improvements
  - Channels and culverts
  - Firebreaks





Review Mitigation Alternatives

- **Avoid** the Hazard
  - Acquisition
  - Relocation
  - Open space
  - Land use designation
  - Natural system protection

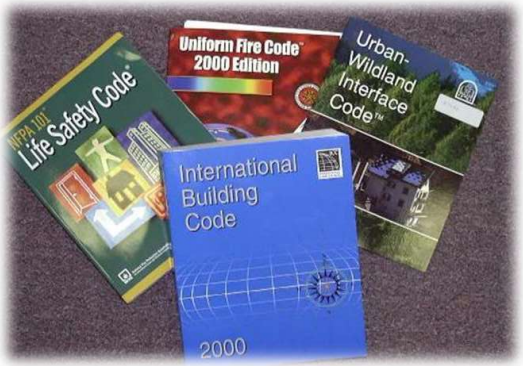




Review Mitigation Alternatives

Adapt to the Hazard

- Building codes
- Construction standards
- Land use and development regulations
- Design standards
- Monitoring and warning systems
- Safe rooms and shelters





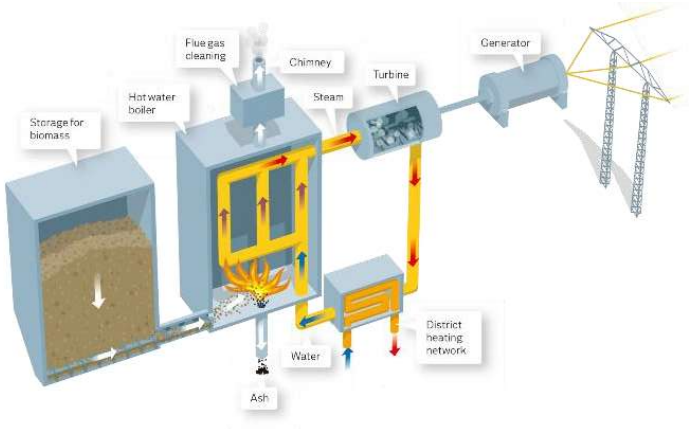
FEMA Mitigation Action Categories

- Plans and Regulations
- Structure and Infrastructure Projects
- Education and Awareness
- Natural Systems Protection

Projects Eligible for FEMA Funding - Wildfire

- Defensible space
- Structural protection through ignition-resistant construction activities
- Hazardous fuels reduction activities
  - Community level vegetation management
  - Vegetation removal
  - Vegetation clearing and/or thinning
  - Slash removal
  - Vertical clearance of tree branches
- Biomass Plant





Projects Eligible for FEMA Funding - Flood Mitigation

- Acquisition
- Dry and wet flood-proofing
- Elevation
- Minor localized flood reduction projects
  - Detention ponds
  - Channel stabilization
- Policy change: levee projects if no duplication of programs with Army Corps
- Infrastructure retrofit
  - Culverts, bridges, etc.



Projects Eligible for FEMA Funding – Winter Storm

- Ensure development and enforcement of building codes for snow loads
- Burying/hardening overhead power lines
- Informing the public about severe winter weather impacts
- Organizing outreach to vulnerable populations including establishing and promoting accessible heating centers
- Retrofitting public buildings to withstand snow loads and prevent roof collapse



Projects Eligible for FEMA Funding (Other Hazards)

- Landslides/geologic hazards
  - Channel or slope stabilization - protection of critical facilities
  - Property acquisition
- Utility protection/ infrastructure retrofit
- Safe rooms
- Generators
- Microgrids/smart grids
- Seismic building/infrastructure retrofit
- Climate resilient mitigation activities
  - Groundwater recharge
  - Green infrastructure





Discuss Criteria for Mitigation Action Selection and Prioritization



Mitigation Action Selection and Prioritization

STAPLEE

- **S**ocial
- **T**echnical
- **A**dministrative
- **P**olitical
- **L**egal
- **E**conomic
- **E**nvironmental

Other Things to Consider

- Life Safety
- Vulnerable Populations
- Addressing High Risk Hazards
- Protect Critical Facilities/Assets
- Multiple Goals/Hazards

Review of Progress on Existing Mitigation Actions



Prior Mitigation Actions – Action Status Tracker

- **Not Started:** Work has not begun
- **In Progress:** Work has begun but is not completed
- **Completed:** The action has been finished
- **Annual Implementation:** Ongoing with no specific end date
- **Deleted:** The action is no longer relevant or cancelled due to changing priorities, lack of funds, etc.

There is no requirement or expectation to have completed any/all previous actions.

Prior Mitigation Actions – Progress So Far

Jurisdiction	Completed	Deleted	Continuing	New Actions 2024	Total New and Continuing Actions	Status Blank	Hazard notes
County	9	0	39	0	39	3	
Town of Jackson	9	0	7	0	7	1	Continuing are only flood
Teton Cons. District	2	0	5	1	6	0	Flood and wildfire only
FCWID	7	1	3	1	4	1	all flood
Airport	0	0	1	3	4	0	flood, weather hazards, earthquake
Totals	**27**	**1**	**55**	**5**	**60**	**5**	

Development of New Mitigation Actions



Disaster Mitigation Act Requirements

- Adopting jurisdictions must have at least one action for **each applicable hazard**
- Must be “true” mitigation to meet FEMA requirements
  - Preparedness & response actions may also be included, but won’t “count”
- Actions **must have lead entity denoted**, and **be prioritized**
- Actions must have detail on what the project is, **timeframe**, who will do what etc.
- Actions must have a basic review of benefit vs. cost and **potential cost sources identified**
- Must include actions that address **existing and future** development

New Mitigation Actions Are Not “Binding”

The mitigation strategy is a “wish list”

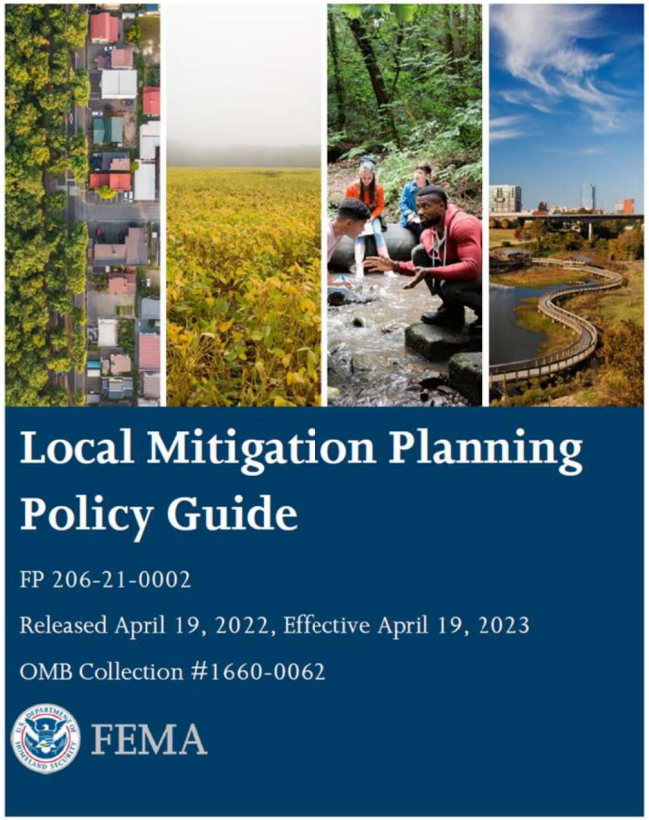
not a commitment of resources.

DRAFT Hazard Significance Rankings by Jurisdiction

Hazard	Teton County	Jackson	Teton Conservation District	Flat Creek WID	Jackson Hole Airport Board
Avalanche	Medium	Medium	NA	Medium	NA
Dam/Levee Incident	Medium	NA	Low	NA	Medium
Drought	Medium	Medium	Medium	Medium	Medium
Earthquake	High	High	High	High	High
Flood	Medium	Medium	Medium	Medium	Medium
Landslide	Low	Low	Low	Low	NA
Severe Summer Weather (Hail/Extreme Heat/Lightning/ Thunderstorms)	Low	Low	Low	Low	Low
Severe Winter Weather (Including Extreme Cold)	Medium	Medium	Medium	Medium	Medium
Tornado/Windstorm	Low	Low	Low	Low	Low
Wildfire	High	High	High	High	High

Sources of Ideas for Mitigation Actions

- Draft Hazard Identification & Risk Assessment
- Handout on action alternatives by hazard & category
- Public survey input
- Water protection & usage plans, watershed plans, drainage plans, etc.
- Capital Improvement Plans
- Community Wildfire Protection Plan
- FEMA 'Mitigation Action Portfolio' publication
  https://www.fema.gov/sites/default/files/2020-08/fema_mitigation-action-portfolio-support-document_08-01-2020_0.pdf



FEMA Community Lifelines

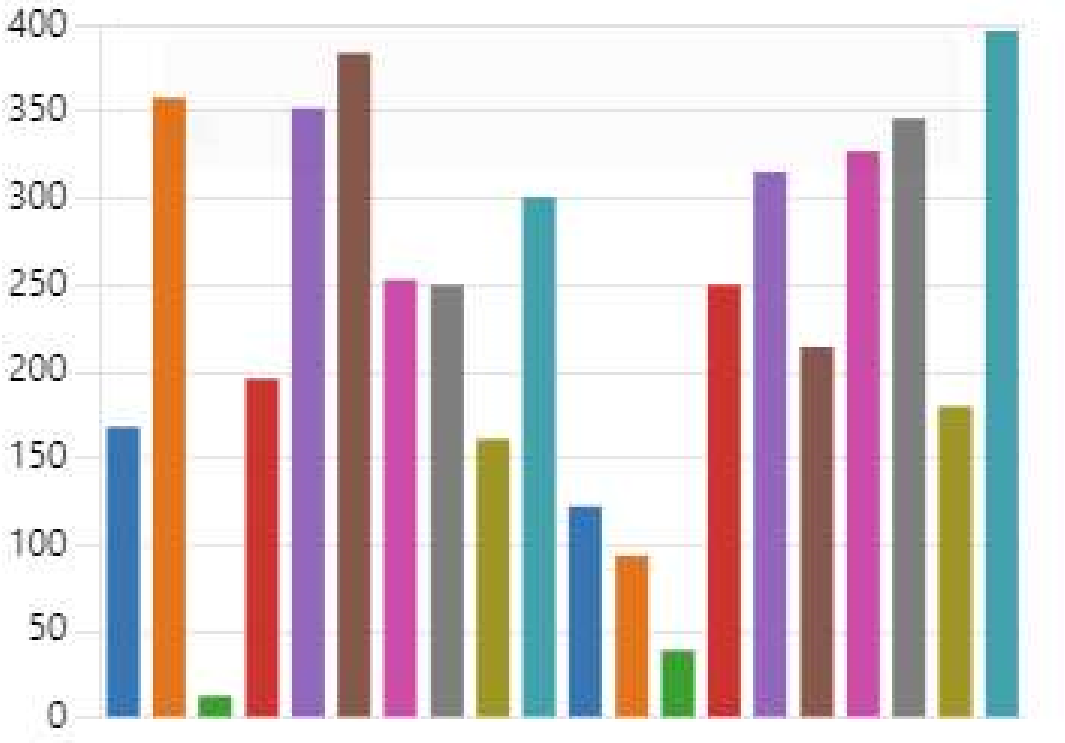


Lifeline Mitigation Examples

- Flood Mitigation, Evacuation Structure, Wildfire protection
- Relocation or protection water supply system, Pumping Station
- Mitigation of risks to Hospitals
- Microgrid, Electrical or Gas utilities relocation or protection
- Upgrades to Emergency communications infrastructure due to risks from natural hazards
- Bridge improvements, Road elevation and/or protection, Transit authorities
- Waste transfer station, Wastewater treatment plant

Public Survey Results

Please indicate the types of mitigation actions that you think should have the highest priority in the Wyoming Region 8 HMP



Expanded indoor/outdoor warni...	168	
Wildfire/Grass fire fuels treatme...	358	3
Tornado safe rooms	13	
Continued participation in the N...	196	
Critical facilities protection (wat...	352	4
Generators for critical facilities	384	2
Planning/Zoning to avoid impac...	253	
Public Education/Awareness on ...	250	
Stormwater drainage improvem...	161	
Forest health/watershed protect...	301	
Flood mitigation for residential ...	122	
Education and discounts on Flo...	94	
Floodprone property buyout	39	
Water conservation	250	
Evacuation route development	315	5
Dam safety	214	
Transportation lifeline resiliency ...	327	
Utility lifeline resiliency (includin...	346	
Landslide hazard mitigation	180	
Wildfire defensible space promo...	397	1

Public Survey Results – Mitigation Actions – Common Themes

Q6: *Please comment on any other pre-disaster strategies that the planning committee should consider for reducing future losses caused by natural disasters:*

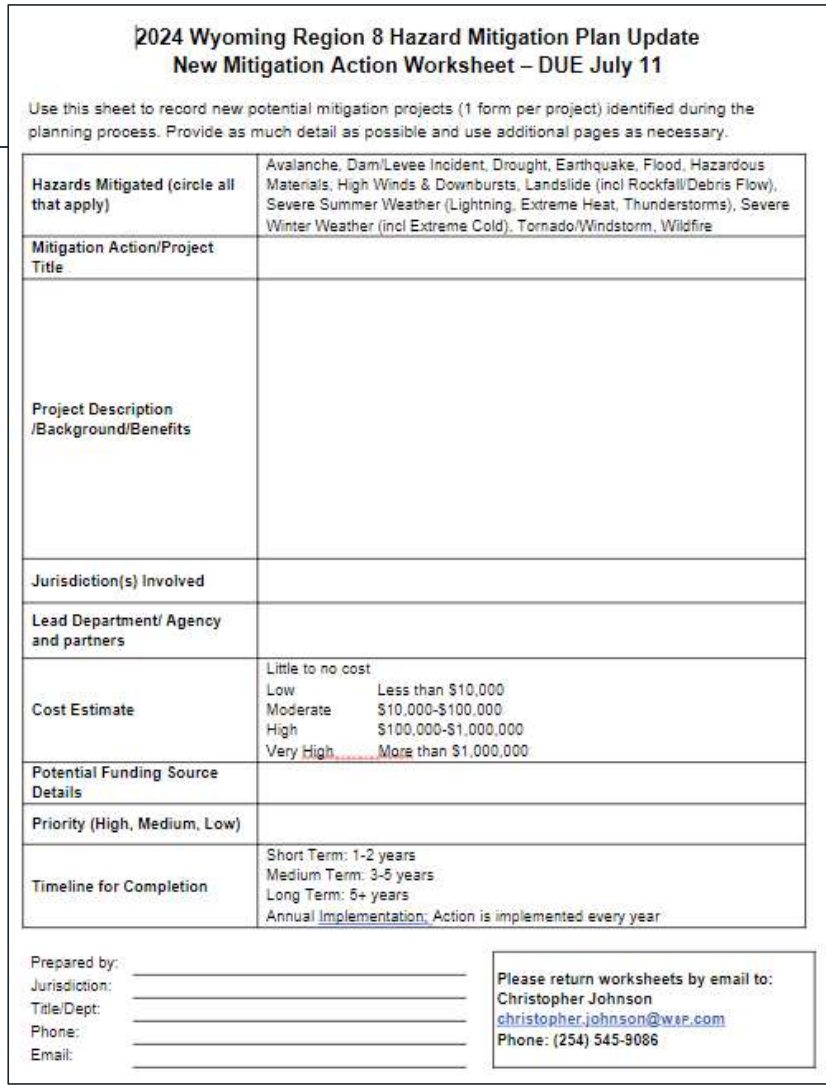
- "Because we have so many newcomers to the valley, education on risks and mitigation is vital."
- "Encourage new development to be resilient (designed for future conditions, efficient, built away from flood zones and WUI, landscaped for resilience)"
- "Cannot emphasize the wildfire hazard reduction enough here- needs to be MUCH more particularly in more rural areas of the county and in Wilson"
- "Expanding ALL roadways in and out of Jackson to 4 lanes, including 22, Teton Pass, & the Village Road. Our current infrastructure cannot safely or efficiently accommodate the population."
- Plan for if the Snake River Bridge is compromised; tunnel under Teton Pass; traffic safety; lack of egress;
- "Planning for evacuation transportation for residents who will not be able to leave if this is not provided. Some accommodation for pets should be included or people will not go."
- "The lives you save through this planning process may be all of ours. Thank you."

Suggested Ideas for New Mitigation Actions

- Further evaluate avalanche and debris flow risk on county roads to determine mitigation options
- Levee certification efforts and flood evacuation planning
- Flat Creek detailed floodplain mapping using LIDAR
- Moulton Loop Road Reconstruction/Flood mitigation - County gravel road by airport to the west with flood issues with residences related to snowmelt or irrigation ditches.
- Airport catchment basin project - sheet flow and sedimentation.
- Park Service equipment yard - sheet flooding across the sagebrush when ground is frozen. Has damaged park vehicles.
- Create a water conservation public awareness and educational campaign, including educational materials on water conservation measures to implement during drought periods.
- Implement the high priority projects identified in the updated CWPP
- Ensure critical communication infrastructure is grounded to mitigate lightning strikes.
- Power line reinforcement against windstorms, avalanche, wildfire mitigation

Activity: Develop New Mitigation Actions

- What new mitigation actions should be added to the Plan?
- Write one idea for each new action on a blank worksheet
- You are encouraged to collaborate with other agencies or jurisdictions
- Include details where you can, but it's okay if you don't know or can elaborate later.
- Include the Jurisdiction and Lead Agency
- Feel free to submit more than one
- Review each other's suggestions



2024 Wyoming Region 8 Hazard Mitigation Plan Update
New Mitigation Action Worksheet – DUE July 11

Use this sheet to record new potential mitigation projects (1 form per project) identified during the planning process. Provide as much detail as possible and use additional pages as necessary.

Hazards Mitigated (circle all that apply)	Avalanche, Dam/Levee Incident, Drought, Earthquake, Flood, Hazardous Materials, High Winds & Downbursts, Landslide (incl Rockfall/Debris Flow), Severe Summer Weather (Lightning, Extreme Heat, Thunderstorms), Severe Winter Weather (incl Extreme Cold), Tornado/Windstorm, Wildfire
Mitigation Action/Project Title	
Project Description /Background/Benefits	
Jurisdiction(s) Involved	
Lead Department/ Agency and partners	
Cost Estimate	Little to no cost Low Less than $10,000 Moderate $10,000-$100,000 High $100,000-$1,000,000 Very High More than $1,000,000
Potential Funding Source Details	
Priority (High, Medium, Low)	
Timeline for Completion	Short Term: 1-2 years Medium Term: 3-5 years Long Term: 5+ years Annual Implementation: Action is implemented every year

Prepared by: _____
Jurisdiction: _____
Title/Dept: _____
Phone: _____
Email: _____

Please return worksheets by email to:
Christopher Johnson
christopher.johnson@wsp.com
Phone: (254) 545-9086

Prioritization of Mitigation Actions



Mitigation Action Selection and Prioritization

STAPLEE

- Social
- Technical
- Administrative
- Political
- Legal
- Economic
- Environmental

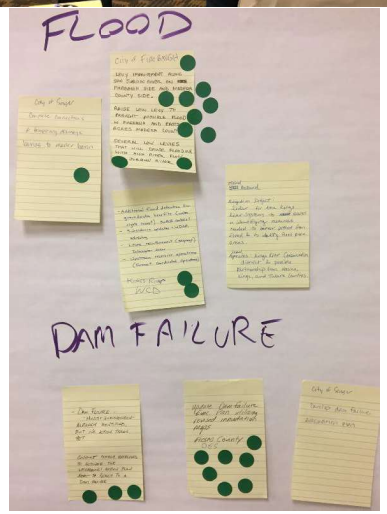
Other Factors to Consider

- Life safety
- Addressing high risk hazards
- Protect critical facilities
- Multiple goals/hazards
- Vulnerable populations and equity

Activity: New Mitigation Action Prioritization

- Connect the Dots!
- 4 Dots per Person
- Indicate which should be priority mitigation actions with a dot, keeping STAPLEE Criteria in mind
- Dots will later be converted into a High, Medium, Low initial prioritization





Plan Implementation and Maintenance



Plan Implementation & Maintenance

The plan must describe how, when, and by whom the plan will be:

- Monitored:
  - Tracking implementation of mitigation actions
  - Identifying new actions as needed
  - Losses avoided due to mitigation activities
- Evaluated
  - Effectiveness at achieving goals and objectives
  - What hindered implementation?
  - What factors contributed to success?
- Updated
  - Reviewed & revised at least once every five years.
- Continued Public Involvement
  - Engaged and given opportunity to provide input

Plan Implementation & Maintenance

The following tasks should be conducted “regularly”, at least annually

- HIRA review – changes to hazards or vulnerabilities
- Review of recent hazard incidents
- Updates on mitigation actions
- Assess effectiveness of completed mitigation actions

Annual face to face meeting of Hazard Mitigation Planning Team to discuss updates on mitigation actions and/or significant impactors/events

- Target is first quarter of each year?

Job aids:

- Sample agenda for annual meeting in appendix

Incorporation into Other Planning Mechanisms

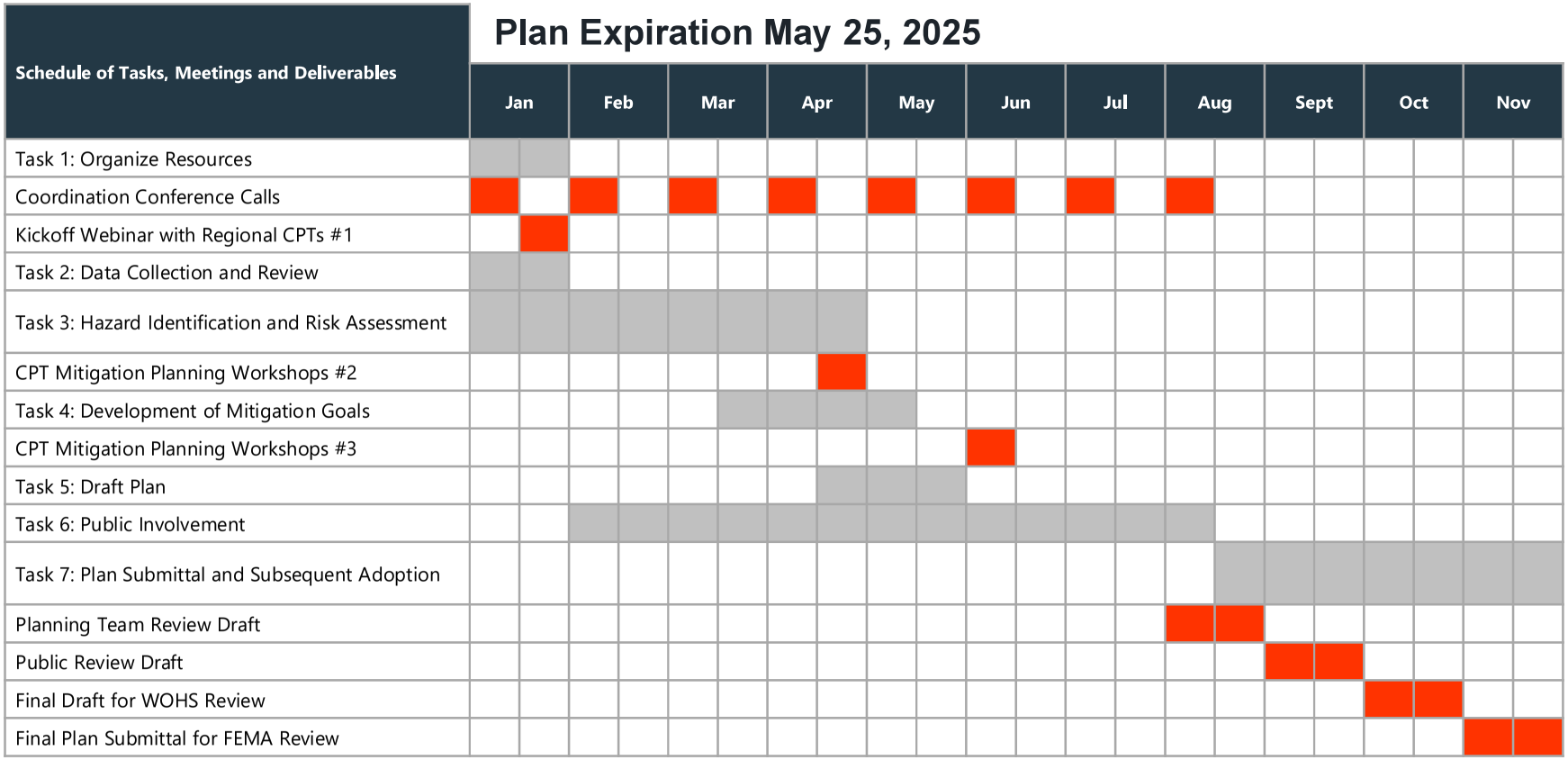
- Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development.
- Implementation through existing plans and/or programs is recommended wherever possible:
  - Comprehensive Plan
  - Zoning/Subdivision Ordinances
  - Floodplain Ordinance
  - Capital Improvements Plan
  - Emergency Operations Plan
  - Stormwater management plan
- Discussion: Provide at least one opportunity to incorporate or cross reference the HMP into other planning mechanisms

FEMA Requirement – Element C6
a. Does the plan identify the local planning mechanisms where hazard mitigation information and/or actions may be incorporated?
b. Does the plan describe each community's process to integrate the data, information, and hazard mitigation goals and actions into other planning mechanisms?
c. The updated plan must explain how the jurisdiction(s) incorporated the mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts.

Next Steps



Project Tasks and Schedule



Next Steps

- Submit additional new mitigation actions by July 11
- Review and comment on HIRA and hazard significance levels by jurisdiction when available
- Review and comment on draft Regional Plan when available

Questions? Thank you!

Project Manager
Jeff Brislawn
WSP
Jeff.Brislawn@wsp.com
303-704-5506

Hazard Mitigation Planner
Christopher Johnson
WSP
Christopher.johnson@wsp.com

wsp.com

Subject: Teton WY LEPC - Mitigation Planning Update and Project Worksheet Request
Sent: 6/25/2024, 10:17:04 AM
From: Rich Ochs<rochs@tetoncountywy.gov>
Cc: Johnson, Christopher; Brislawn, Jeffrey; Brian Coe; Shannon Burns
Attachments: WY R8 Mitigation Strategy Meeting 6-11-24 - PPT - Revised w Meeting Input.pdf
Wyoming R8 Master Mitigation Action Tracker 6-11-24.xlsx
NewMitigationsStickyNotes 6-11-24_Scan.pdf
New Mitigation Action Worksheet R8.docx

Hello Teton WY LEPC Members,

Thanks to all of you that joined us on June 11th for our mitigation planning workshop at the Teton County Library. Attached are the presentation, the Mitigation Action Tracker spreadsheet, some of the new mitigation actions suggested at the meeting on sticky notes, and a Word form to suggest new mitigation projects. For those that filled out sticky notes, please do complete the Word New Mitigation Action Worksheet form and return to christopher.johnson@wsp.com for consideration for inclusion in the plan.

For everyone else: if you have a hazard mitigation project idea, **now is the time to let us know!** This plan goes through a major update with new projects added every 5 years, with small annual updates. It is very hard to get new projects put into the plan in the middle of the 5 year cycle, so speak now or forever hold your peace (at least hold your peace for 5 years). Project ideas do not have to be ones for FEMA funding consideration; we want to show off to the community everything your organizations are doing day in and day out to make our County more disaster resilient. Even if your project already has funding, or you know it won't qualify for FEMA but could qualify for some other source of funding, fill out a New Mitigation Action Worksheet! If you already have a project listed from the previous plan in the Wyoming R8 Master Mitigation Action Tracker and have updates for it, update it in the attached spreadsheet and send to christopher.johnson@wsp.com with your changes highlighted.

Some project ideas include:

- Backup power for critical infrastructure and emergency response
- Flood mitigation efforts including stormwater management, enlarging culverts, and elevating infrastructure
- Steps for adopting, updating, or modifying hazard mitigation building codes, zoning, or ordinances
- Public outreach efforts around hazard mitigation
- Wildfire mitigation projects including treatments, education, etc.

The deadline for getting this info in is July 11th, 2024, so get your worksheets completed and sent to christopher.johnson@wsp.com as soon as possible. Thanks!

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management
Chairman, Teton Local Emergency Planning Committee (LEPC)
Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
Wyoming All-Hazards Liaison Officer (LNO-AH)
PO Box 4458
Jackson, WY 83001
o: (307) 732-8594
c: (307) 413-5040
f: (307) 732-5799
rochs@tetoncountywy.gov
www.tetoncountywy.gov/em

Thursday, July 18, 2024
Teton LEPC Meeting
Time: 0830
Location: Teton EOC 3240 Adams Canyon Dr, Jackson, or Microsoft Teams

Attendees in person: Rich Ochs,
Virtual Attendees: Shannon Burns, Jansen Lyons, Brian Coe, Riclyn Betsinger, Sinclair Buckstaff, Jr., Dustin Havel, Quinten Johnston, Tanya Anderson, Rafe, Floren Poliseo, Charlotte, Mike Moyer, Carlin Girard, Tanya Anderson, Wayne Richardson.

I. Call to Order - The meeting was called to order at 8:30

II. Approval of May Meeting Minutes - May meeting minutes were approved.

III. Update on Hazard Mitigation Plan – Rich - working towards completion. EM is doing monthly meetings to discuss.

IV. Around the Room Updates –

Chief Coe – RERT and JHFEMS are both status quo. It's been a busy summer season and JHFEMS has been responding to many calls. There was one small wildfire about a week ago that was human caused on West Gros Ventre Butte. Fire/EMS is continuing to work with the Forest Service. If fire danger is set to very high, that will prompt Snow King to fire up their snow making machines. It will help to reduce some fire danger and even create a fire break. LE and Fire/EMS are bracing for impact of last show which is Cypress Hill. At the last concert, lightning caused the gondola to be shut down.

Rich added that Snow King is a beautiful venue but presents many challenges as far as public safety.

Dustin – Jackson Hole Airport – summer season, things going well.

Floren - TOJ public works – actively working to bury pipes for section through park. Will complete work in late summer/early fall. Short staffed. Things are taking longer to work through with less people. Johnny Ryan retired as water system manager. Currently, Tom Mason is filling in. External Candidate has taken the permanent position. Fleet Maintenance Crew is in

the new building. Wastewater treatment plant – draft went out for public comment. Haven't seen the final permit yet.

Jansen Lyons – GIS – working with Fire/EMS on their projects. If anyone needs anything, please reach out.

Chief Moyer – JHFEMS - one person retired recently – Scott Courser – losing another person to school – hiring a couple new candidates.

Couple people finishing up paramedic ride-alongs. Continuing to staff concert at Snow King. Standing up a wildland engine on Monday – will be picked up fast most likely.

Quinten – radios – finally able to access the top of Grand Targhee. Looking at possibly early to mid-august for Hoback 800 site. Need to do horizontal boring. JHMR – about to finalize a required insurance policy – will go before BCC. Have all the equipment so hopefully that goes fast. Wyolink – 30% price increase when contract ends in 3 months. If anyone has any needs let him know right away.

Rafe – TV Association – Busy summer so far. New executive director.

Sandy – Flat Creek Water Shed Improvement District – thaw wells 5 and 6 projects. TCD is the official applicant. Won't be completed by this winter most likely.

Tanya – July 1 council ok'd sustainability plan. Can be found online.

https://www.jacksonwy.gov/DocumentCenter/View/8136/Town-Of-Jackson-Sustainability-Plan---Digital-Version?bidId=

Charlotte – TC School District – Principals return August 5th and everything else gears up from there. Teachers return August 26, and school starts September 3rd. They are focusing on messaging about back-to-school safety. The School District is also discussing septic issues and how to connect to TOJ's septic. They have100 million in capital construction projects. Building 24-unit housing unit by the middle school. New transportation facility.

Carlin – TCD – Fish Creek showing high concentrations of e coli. Encourage people to not put their heads in the water. Flat Creek has been in good shape. Air quality – trying to get the system back up and running. Website for air quality data:

https://www.airnow.gov/

EPA app for iPhone and Android users is called Smoke Sense

Wayne Richardson – Good Samaritan Mission – looking to be more relevant in the community. Many program improvements. Commitment to support EM. Within 3-hour notice, they can have 100 meals ready for any emergency. Have food every day of the year, no questions asked. Also have clothing available. The Mission now takes women children and families. Can really help in a disaster or emergency.

First on the list for feeding first responders and disaster victims. First call if a structure fire happens and a family needs shelter.

Rich – EM update – Anna is shadowing on the Horse Creek Fire. EOC – down to stage 3 – monitoring – will remain in stage 3 until commissioners rescind the two emergency declarations that were made. July 29th. Flipping in and out of stage 3 because of red flag warnings. Don't have to activate but will because it's in the plan.

Utility companies' insurance companies are pushing for more detailed planning. Possibility of increased power outages with red flags. Some may be intentional.

V. Meeting adjourned at 9:40

Next LEPC meeting will be September 19th.

From:	Rich Ochs
Cc:	Brislawn, Jeff P; christopher.johnson@wsp.com; Hager, Carlie; Stroeve, Mercedes; Anna Day
Bcc:	All County Employees
Subject:	Emergency Management needs your input!
Date:	Friday, March 8, 2024 3:59:00 PM
Attachments:	image001.png image002.png

Hello Teton County Employees,

Teton County, also known as Wyoming Region 8 in Homeland Security circles, is in the process of updating the County's Regional Hazard Mitigation Plan. The Regional Hazard Mitigation Plan analyzes the county's vulnerabilities to natural and manmade hazards and identifies mitigation actions the jurisdictions in the county can take to minimize property damage, reduce injuries and loss of life, and lessen the overall impacts of disasters.

If you live, work, or play in Teton County, please help us incorporate your experience and opinions into the plan by taking this short online survey. This will help the planning team better understand the vulnerabilities across Teton County and its communities, as well as solicit input on ways to best mitigate, or reduce, the impacts of hazards before they occur.

The survey consists of about 10 questions and should take less than 10 minutes to complete. Please complete this survey by April 12, 2024.

You can take the survey here or by scanning the QR code below. Thanks for helping to make Teton County a more disaster-resilient community!

Rich Ochs, CEM®, MEP, WEM
Coordinator, Teton County Emergency Management
Chairman, Teton Local Emergency Planning Committee (LEPC)
Wyoming Type 3 All-Hazards Planning Section Chief (PSC3-AH)
Wyoming All-Hazards Liaison Officer (LNO-AH)
PO Box 4458
Jackson, WY 83001
o: (307) 732-8594
c: (307) 413-5040

From: Rich Ochs
To: Roxanne DeVries Robinson
Subject: Emergency Management needs your input!
Date: Friday, March 8, 2024 4:03:00 PM
Attachments: image001.png
image002.png

Hi Roxanne,

If you deem it appropriate, would you mind forwarding the below email to Town of Jackson employees? We'd like to provide them the chance to give input on our Town/County Hazard Mitigation Plan update. Thanks!

Rich

From: Rich Ochs
Sent: Friday, March 8, 2024 4:00 PM
Subject: Emergency Management needs your input!

Hello Town of Jackson Employees,

Teton County, also known as Wyoming Region 8 in Homeland Security circles, is in the process of updating the County's Regional Hazard Mitigation Plan. The Regional Hazard Mitigation Plan analyzes the county's vulnerabilities to natural and manmade hazards and identifies mitigation actions the jurisdictions in the county can take to minimize property damage, reduce injuries and loss of life, and lessen the overall impacts of disasters.

If you live, work, or play in Teton County, please help us incorporate your experience and opinions into the plan by taking this short online survey. This will help the planning team better understand the vulnerabilities across Teton County and its communities, as well as solicit input on ways to best mitigate, or reduce, the impacts of hazards before they occur.

The survey consists of about 10 questions and should take less than 10 minutes to complete. Please complete this survey by April 12, 2024.

You can take the survey here or by scanning the QR code below. Thanks for helping to make Teton County a more disaster-resilient community!

From: Rich Ochs
Cc: Brislawn, Jeff P; christopher.johnson@wsp.com; Hager, Carlie; Stroeve, Mercedes; Brian Coe; Shannon Burns
Bcc: Alton George; Amy Ramage - Teton County (aramage@tetoncountywy.gov); Anna Day; April Norton - Teton County (ahnorton@tetoncountywy.gov); Billy Nunn (bnunn@tetoncountywy.gov); Brent Blue; Brian Carr - Jackson Hole Fire/EMS (bcarr@tetoncountywy.gov); Brian Coe - Jackson Hole Fire/EMS (bcoe@tetoncountywy.gov); briant@lvenergy.com; Britton Gray (britton_gray@nps.gov); Caitlin Schauer (caitlin_schauer@nps.gov); Cara; Carey Stanley; Carlin Girard; Charlotte Frei (cfrei@tetoncountywy.gov); Charlotte Reynolds; Chris Flesch; Chris Neubecker (cneubecker@tetoncountywy.gov); Colby Stevens (cstevens@tcsd.org); Conway, Craig; Craig Coles; Das, Bob; Dave Gustafson - Teton County Road & Levee (dgustafson@tetoncountywy.gov); davea@tetonvillagewy.org; Dee Buckstaff; Doyle, Michael - FS; Dustin Havel; Dustin Richards (drichards@tetonsheriff.org); Emily Mieure; Erika Jostad; FPoliseo@jacksonwy.gov; Fred Whissel; Gohlke, Valerie A; Greg Adams; Gus Friendsmith; Hailey Morton Levinson - Town of Jackson (hmortonlevinson@jacksonwy.gov); Heather Overholser (hoverholser@tetoncountywy.gov); heather_mcdonald@nps.gov; Henry, Amy Robyn LTC USARMY NG WYARNG (USA); James Silva (jsilva@tclib.org); jason.wilmot@usda.gov; Jeff McDonald K7EDA (jeffrey.p.mcdonald@gmail.com); Jim Warren (jim_warren@nps.gov); jligori@gmail.com; Jodie Pond (jodie.pond@wyo.gov); Johanna Love (jlove@jhnewsandguide.com); Johnny Ziem - Town of Jackson Public Works (jziem@jacksonwy.gov); Jon Bishop; Joseph Sebastian (joseph.sebastian@dhs.gov); Josiah Nash; Karen Walker; Keith Murley (kmurley@tetoncountywy.gov); Kelly Sluder (KSluder@jacksonwy.gov); Kenneth Longfritz; Kevin S; Kip Roberson (kroberson@tclib.org); Kristen Waters (kwaters@tetoncountywy.gov); Levi Yardley; Luther Propst (lpropst@tetoncountywy.gov); Martin; Matt Carr (mcarr@tetonsheriff.org); Matt Redwine (mredwine@tetoncountywy.gov); Matt Wilber (matthew_wilber@nps.gov); matthew.brackin@wyo.gov; McKinnley Cox (mcox@tetoncountywy.gov); Melissa Turley (mturley@tetonvillagewy.org); Michael Estes; michael.jerup@wyo.gov; Michelle Weber; Mike Moyer - Jackson Hole Fire/EMS (mmoyer@tetoncountywy.gov); Nicole Clancy; Paul Anthony (panthony@jacksonwy.gov); pcameron@energyconservationworks.org; Perry Kas; Phillip Fox; Phillip Ramsey - TOPS; Purchase, Peter A; purplesyl@live.com; Quentin Johnston (qjohnston@tetoncountywy.gov); rachael.wheeler@wyo.gov; Raumaker, Sylvia; rcarlentine@co.teton.id.us; Rev. David Bott; Rich Ochs; rick@jacksonholechamber.com; rick@lvenergy.com; Riclyn Betsinger (rbetsinger@tetonsheriff.org); Robb Sgroi (robb@tetonconservation.org); rturgeon@suburbanpropane.com; Russ Ruschill; Russell Nelson; Ryan, Sean; Sarah Mann (smann@tetoncountywy.gov); Scott Anderson (sba@scottanderson.biz); Seth Lewis; Shannon Burns - Jackson Hole Fire/EMS (sburns@tetoncountywy.gov); Shawn Stephens; sread@cfjacksonhole.org; Stephanie Munoz; Stephen Jellie; Steve Jeppson (steve.jeppson@jhairport.org); Susan Scarlata; Tanya Anderson; Teton County Historic Preservation Board; Todd Stiles; Tom Ninnemann; Tracey Trefren; Trevor Aitken (taitken@tetonsheriff.org); TVA Facilities; Tyler Sinclair; Wayne Richardson (Wayne1gsm@gmail.com); "Wilkins, David A -FS"; Win Furber (WFurber@jacksonwy.gov); wschwartz@cfjacksonhole.org; Zolo; rpwarburton5667@icloud.com
Subject: March 21, 2024 Teton WY LEPC Reminder and survey request
Date: Friday, March 8, 2024 3:51:00 PM
Attachments: image001.png
LEPC Agenda 03-21-2024.pdf
Teton WY LEPC Meeting.ics

Hello Teton WY LEPC,

This is a reminder that our next LEPC meeting will be on **Thursday March 21st, 2024 at 8:30 a.m.** at the Teton EOC and on Microsoft Teams. Teams link is on the attached agenda, in the attached calendar invite, and at the bottom of this email. As a reminder, this will also be our Wyoming Region 8 Hazard Mitigation Planning Meeting. We'll get an update from Christopher Johnson with WSP on the progress of the plan. Please **complete this public input survey** for the plan before the meeting https://bit.ly/49AFJbX. I will also be presenting on the 2023 Tier II facility reports we have received to date. Let me know if you have questions.

Microsoft Teams meeting

Join on your computer, mobile app or room device
Click here to join the meeting
Meeting ID: 281 684 524 680
Passcode: NHFwvN
Download Teams | Join on the web
Or call in (audio only)
+1 307-314-3198,,634013533# United States, Laramie

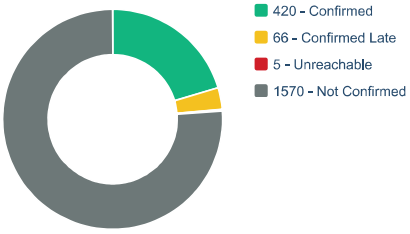
Emergency Management needs your help - survey r...

Auto Refresh

● Sent Notification ID: 1538630694735823

Rebroadcast | Send Follow Up

Status | Method



Details

Notification Mode:	Live
Notification Type:	Standard
Imminent Threat to Life:	No
Priority Greeting:	No
Customized Email:	View
SMS Message:	View
Recurring:	No
Sent From:	Web Manager Portal
Start:	Mar 8, 2024 16:54:36 MST
End:	Mar 8, 2024 20:54:36 MST
Sent by:	Rich Ochs
Sent to:	2061_contacts
Voice Recording:	None
Message Format:	Text
Type:	Everbridge Network Effect , Nixle Community Subscribers , Social Media , Audio Bulletin Board , Member Portal , Everbridge Web Widget
Escalation:	No
Incident Zone:	No

Message

Emergency Management needs your help - survey request

This is a Community level message from Teton_WY Alerts.

Teton County Emergency Management needs your help with the update of our regional hazard mitigation plan. Please take a few moments to fill out our public input survey at https://bit.ly/49AFJbX

Delivery Details | Publishing Delivery | Settings

Everbridge Web Widget

Active until - Mar 08, 2025 16:54:36 MST

Name: Widget with map

Duration Type: Custom

Deactivate

Member Portal

Web Page: Active Deactivate

Include selected map shapes (if any): Yes

Social Media

Message was published to:

Twitter: @tetonwyo_em

Message was successfully published!

Facebook: Richard Ochs

Nixle Channels

Total Attempts: SMS: 423 | Email: 7280

Publishing Status : Published

Nixle Alert Type: Community

Message Category:

Event Name:

Urgency:

Severity:

Certainty:

Expires in: 24 hour(s)

SMS Message:	Help us with our hazard mitigation plan update by completing our survey at https://bit.ly/49AFJbX
Instructions:	
Attachments:	

Community Subscribers:

City/Town Name, County Name or ZIP Code:	Entire jurisdiction
Name:	Rich Ochs
Title/Department	Teton County Emergency Management
Phone number:	
Email address:	em@tetoncountywy.gov

Audio Bulletin Board (Premium)

Published Status:	EXPIRED
Expiration Time:	Mar 09, 2024 16:54:58 MST
Bulletin Board:	Premium Audio Bulletin Board

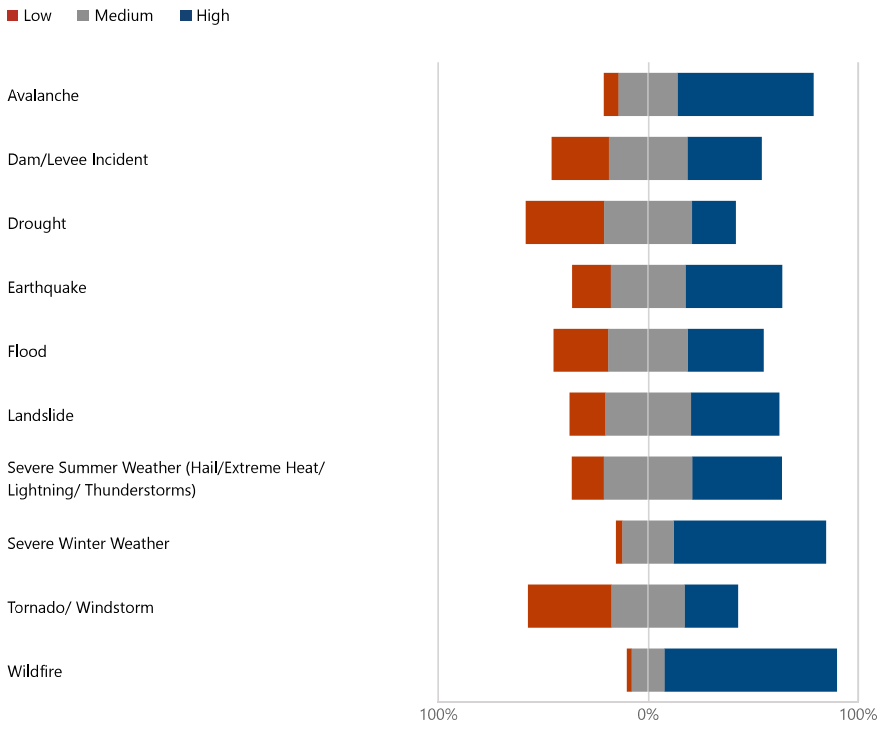
Print

everbridge
Privacy Policy | Terms of Use | © 2024 Everbridge, Inc.
24.0.0.22-2024-02-26-08:30 FE-VERSION ebs-manager-portal-c9b99d8f6-7rz2v

Wyoming Region 8 - Teton County Hazard Planning Public Input Survey

622	09:13	Closed
Responses	Average time to complete	Status

1. The hazards addressed in the Wyoming Region 8 Hazard Mitigation plan update are listed below. Please indicate the level of significance in Teton County that you perceive for each hazard.



2. Are there any other hazards not listed above which you feel should be examined in this planning process?

169	Latest Responses
Responses	

18 respondents (**11**%) answered **traffic** for this question.



3. How many times has a natural hazard disrupted your daily life in the last five years?

0	99
1-2	253
3-5	163
More than 5 times	100

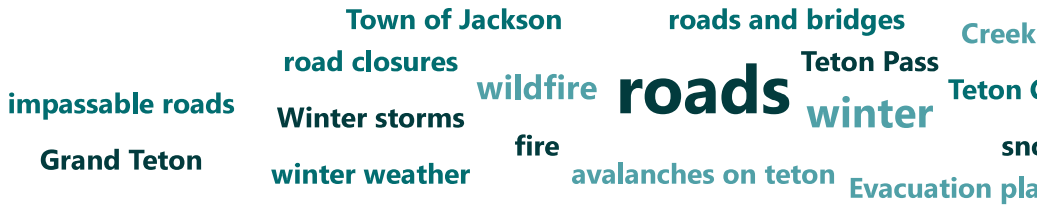


4. Do you have information on specific hazard issues/problem areas that you would like the planning committee to consider? Note the jurisdiction to which it applies:

187
Responses

Latest Responses
"Winter snow and wildfires smoke "

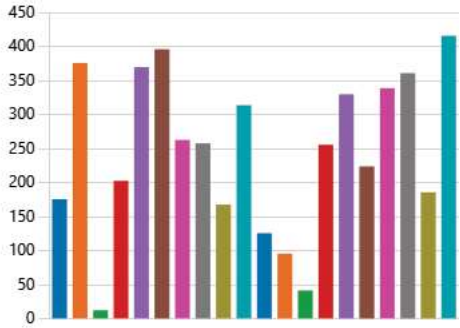
36 respondents (**19**%) answered **roads** for this question.



5. Mitigation is actions that can be taken to reduce or eliminate the long-term risk to hazards.

The following types of mitigation actions may be considered in Teton County. Please indicate the types of mitigation actions that you think should have the highest priority in Wyoming Region 8 Hazard Mitigation Plan.

Expanded indoor/outdoor warni...	176
Wildfire/Grass fire fuels treatme...	376
Tornado safe rooms	13
Continued participation in the N...	203
Critical facilities protection (wat...	370
Generators for critical facilities	396
Planning/Zoning to avoid impac...	263
Public Education/Awareness on ...	258
Stormwater drainage improvem...	168
Forest health/watershed protect...	314
Flood mitigation for residential ...	126
Education and discounts on Flo...	96
Floodprone property buyout	42
Water conservation	256
Evacuation route development	330
Dam safety	224
Transportation lifeline resiliency ...	339
Utility lifeline resiliency (includin...	361
Landslide hazard mitigation	186
Wildfire defensible space promo...	416

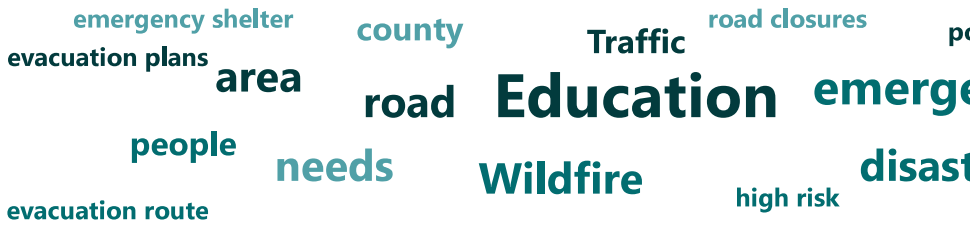


6. Please comment on any other pre-disaster strategies that the planning committee should consider for reducing future losses caused by natural disasters:

119
Responses

Latest Responses

11 respondents (**9**%) answered **Education** for this question.



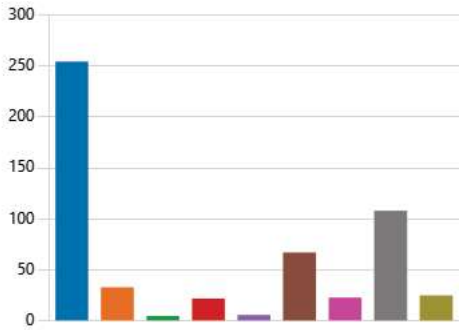
7. Do you live in Teton County or work in/commute to Teton County from elsewhere?

Resident of Teton County	545
Work in Teton County and com...	61



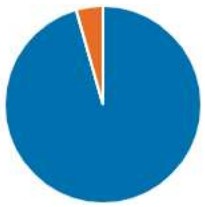
8. Please indicate the closest community to where you live

Town of Jackson	254
Moose	33
Moran	5
Teton Village	22
Alta	6
South Park (Including Rafter J a...	67
Hoback	23
Wilson	108
Other	25



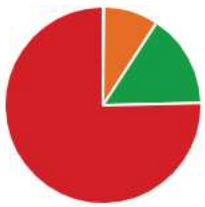
9. Do you live in Teton County for greater than 6 months out of the year?

Greater than 6 months out of th...	521
Less than 6 months out of the y...	24



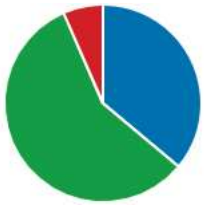
10. How long have you lived in this community?

Less than 1 year	1
1-5 years	49
5-10 years	84
Over 10 years	410



11. If you commute to work in Teton County from elsewhere, what is your primary commuting corridor?

Teton Pass	22
Togwotee Pass	0
Snake River Canyon	35
Hoback Canyon	4
Other	0



12. Optional: Provide your name and email address if you would like to be added to a distribution list for upcoming activities related to the planning process:

166
Responses

Latest Responses

"Charles.gulotta@gmail.com"

"Andy Weenig, andyweenig@yahoo.com"

3 respondents (**2**%) answered **John** for this question.





REGIONAL HAZARD MITIGATION PLAN

FOR PUBLIC COMMENT AND REVIEW

Are you interested in learning more about the most significant natural hazards in our area and what is being done to reduce losses from incidents like floods, wildfires, and winter storms? A draft of the Regional Hazard Mitigation Plan is available for public review and comment through January 31, 2025.

What: Wyoming Region 8 (Teton County) Hazard Mitigation Plan

Why: To assesses risks posed by natural hazards, identify ways to reduce those risks, and allow each participating municipality and special district to be eligible for mitigation grant funding.

How: Access the draft plan and online comment form here: https://hls.wyo.gov/

When: Submit comments by January 31, 2025.

Questions? Contact Teton County Emergency Management at em@tetoncountywy.gov

433137

Contact: Rich Ochs
Coordinator, Teton County Emergency Management
Email: rochs@tetoncountywy.gov
Phone: 307-732-8594

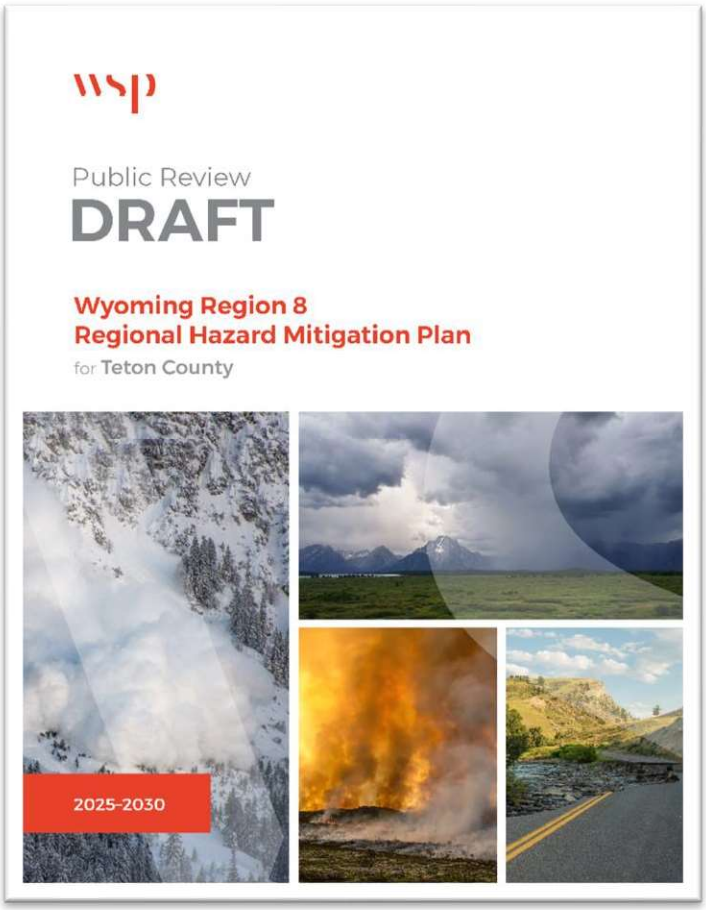
For Immediate Release

Regional Hazard Mitigation Plan Available for Public Review and Comment

January 17, 2025, Jackson, Wyo. – Would you like to learn more about the most significant natural hazards in our area and what Teton County is doing to mitigate them? A draft of the Wyoming Region 8 Regional Hazard Mitigation Plan is now available for public review and comment through January 31, 2025.

The draft can be viewed by visiting the Wyoming Office of Homeland Security website at https://hls.wyo.gov/, which is also where those interested in providing public comment on the plan can access an online feedback form. Wyoming has eight Regional Emergency Response Teams (RERT), with Region 8 representing Teton County.

The Regional Hazard Mitigation Plan assesses the risks posed by floods, wildfires, winter storms, hazardous materials incidents, and more. It also identifies ways to reduce those risks, identifies hazard mitigation goals and mitigation projects for the County, and allows each participating municipality and special district to be eligible for mitigation grant funding from the Federal Emergency Management Agency (FEMA).



County planning teams, including representatives from all municipalities and districts, developed the plan over the past 12 months with assistance from a consultant. In addition, a public survey was used to solicit input on hazards and ideas for mitigation projects.

Region 8 is now soliciting public comment on the plan before it is finalized and submitted for review and approval by FEMA. The final plan will be adopted by each participating entity in Teton County before it goes into effect. For more information or questions, please e-mail Teton County Emergency Management at: em@tetoncountywy.gov.

###

January 2025 Emergency Preparedness Radio Ad

(Also broadcast in Spanish)

This is Anna from Teton County Emergency Management. Until the end of January, the Regional Hazard Mitigation Plan for our county is available for public comment and review.

If you've ever been curious about the natural hazards that threaten our area or what entities in the county are doing to reduce the effects of those hazards, this plan is for you!

The Hazard Mitigation Plan assesses the risks posed by floods, wildfires, winter storms, hazardous materials incidents, and more. It also identifies ways to reduce those risks and allows each participating municipality and special district to be eligible for mitigation grant funding.

View the plan and access the comment form on the Wyoming Office of Homeland Security's website at hls.wyo.gov. That's hls.wyo.gov. You have until January 31, 2025 to make your voice heard!

https://www.jhnewsandguide.com/news/town_county/local/new-hazard-plan-has-more-stakeholders-weighing-in/article_16c95a84-d72d-11ef-b40b-6b5a31af7d71.html

New hazard plan has more stakeholders weighing in

By Jeannette Boner / Public Safety Reporter
Jan 21, 2025



Fire, storms, earthquakes, landslides and a Jackson Lake Dam failure.

Those are just a handful of risks that the new Regional Hazard Mitigation Plan for Teton County addresses. The plan takes a specific look at those risks facing the County and the Town of Jackson.

We Promise to Never Sell Your Data.
Accept And Close
This website uses cookies to enhance user experience and to analyze performance and traffic on our website. We also share information about your use of our site with our social media, advertising and analytics partners. Privacy
Privacy - Terms

“These are natural hazards,” stressed Rich Ochs, emergency management coordinator for the county. “In this plan, we are not looking at terrorism or an active shooter. This is very much focused on natural hazards.

This plan sounds boring — and it is — but if I was going to move to a new community, the first thing I would look for before purchasing a new home,” he said. “I’m going to look for the county’s mitigation plan.”

The plan allows each participating municipality and special district to be eligible for mitigation grant funding from the Federal Emergency Management Agency.

The Hazard Mitigation Plan emphasizes forward-thinking planning efforts to minimize disaster impacts, reduce costs and protect critical infrastructure. A public survey was used to solicit input on hazards and ideas for mitigation projects.

Over the last year, key participants, that included local government entities and the Teton Conservation District, developed the plan with assistance from a consultant. The Flat Creek Watershed Improvement District and the Jackson Airport Board were new to the planning process this year, Ochs said.

A draft of the Wyoming Region 8 Regional Hazard Mitigation Plan is available for public review and comment through January 31.

The draft can be viewed by visiting the Wyoming Office of Homeland Security website at HLS.wyo.gov, which is also where those interested in providing public comment can access an online feedback form.

The final plan will be adopted by each participating entity in Teton County before it goes into effect. For information or questions, email Teton County Emergency Management at em@tetoncountywy.gov.

Contact Jeannette Boner at 307-732-5901 or courts@jhnewsandguide.com.

We promise to never sell your data.

This website uses cookies to enhance user experience and to analyze performance and traffic on our website. We also share information about your use of our site with our social media, advertising and analytics partners. **Privacy**

Jeannette Boner

Jeannette has worked as an editor and journalist in the Greater Yellowstone Region for more than 20 years. She finds excitement and joy in watching her children explore wild places with her husband, Brad, and their red heeler, Rosie.

Public Review Draft Comments Received

Please provide your comments on the draft 2024 Wyoming Region 8 Hazard Mitigation Plan here:	Select your affiliation (choose all that apply):	organization/agency do you represent?	What jurisdiction (city, county, tribe) do you live in?	Please provide your contact information (name and email address or phone number) in case we have any further questions. Thank you for your time!
Maybe I missed it in this lengthy report but 2 issues that stand out fo rme from the LA wildfires of 2025 are: 1) road egress from areas under mandatory evacuation were inadequate for the number of vehicles trying to leave on short notice. Teton County basically as three roads out: Teton Pass, Snake River Canyon and north to Togwotee. What is our evacuation plan in case of a fire? Are there areas within Teton County considered safe refuge zones for residents? 2) The water infrastructure was inadequate to meet the needs of fire fighters fighting multiple blazes. Can our water supply system support an all hands on deck fire figher response to a large wildfire or will we have the same catastrophic problems with water supply adn water pressure?	Member of the Public;Government-Local;	Teton County Planning Commission	Teton County	Alexander Muromcew PO Box 11897 Jackson, WY 83002 307-690-0968
It is a long document so very likely could have missed these things but did my best to review. Would like to see something on extreme cold weather (not just storm) Would like to see more on air quality. Wonder if identification of vulnerable populations could be a 'registry' for Teton County - to identify those who may need power, heat, assistance with evacuation or escape from home ahead of emergency - working with SJH does not seem as though various large entities were engage (eg. SJH, JHMR, both of whom have risk managers). Would like to see alternative energy plans for emergency energy - redundancy for the grid Wondering how the input of the various stakeholders were received/engaged (ie Health Dept)	Member of the Public;	n/a	Teton	Andi; abg899@mail.harvard.edu
Please disclose within the plan the "effective population" for the area which would need to be accommodated for during a disaster - How will the County/Town handle a population pushing 70,000 people (2020 Indicator Report Effective Population) if a major wildfire were to sweep the area - where will these people shelter in place? Will there be evacuations and how will those occur? With recent scenes of CA fires with cars being abandoned in the road and people fleeing on foot - this could very well happen here and we don't seem to have a handle of how many people to prepare for in our area during a busy summer time with incoming employees and tourists on top of people already living here. I dont foresee people being able to evacuate via car with the very limited roads in the area.	Member of the Public;	resident/ employee	Teton County ID, work in Jackson	ryan@slonexus.com
Hi Rich. You and WSP put together an excellent product. My only comment is to consider incorporating the wildfire risk and new WUI maps from the updated CWPP. I realized when your HMP draft came out that the CWPP was not signed and approved at Cheyenne yet, and it still might not be. I think that the risk data from the WY Risk Portal is too coarse and not the best representation. I am sure Jensen Hughes did a good job of modeling for our area.	Member of the Public;	Teton Wildfire Mitigation Team LLC	Jackson	Steve Markason, 307-690-5185, smarkason@gmail.com

APPENDIX B: PLAN ADOPTION AND APPROVAL

Note: The records of adoption will be incorporated as an electronic appendix. When the plan is adopted in 2025, the adoption date will be noted here, but a scanned version of the adoption resolution will be kept on file with the Emergency Manager of each participating jurisdiction in Wyoming Region 8. A sample adoption resolution is provided here. The final FEMA approval packed will be included for future reference regarding the five-year expiration date and suggestions for improvement in the next update.

Mitigation Plan Adoption Sample Resolution

Resolution # _____

Adopting the 2025 Wyoming Region 8
Hazard Mitigation Plan

Whereas, *(name of county, municipality or district) recognizes the threat that natural hazards pose to people and property within our community; and*

Whereas, *undertaking hazard mitigation actions will reduce the potential for harm to people and property from future hazard occurrences; and*

Whereas, *an adopted Hazard Mitigation Plan is required as a condition of future funding for mitigation projects under multiple Federal Emergency Management Agency (FEMA) pre- and post-disaster mitigation grant programs; and*

Whereas, *(name of county, municipality or district) resides within the Planning Area, and fully participated in the mitigation planning process to prepare this Hazard Mitigation Plan; and*

Now, therefore, be it resolved, *that the (name of board or council), hereby adopts the Wyoming Region 8 Hazard Mitigation Plan, as an official plan; and*

Be it further resolved, *the (name of county, municipality or district) will submit this Adoption Resolution to the Wyoming Office of Homeland Security and FEMA Region VIII to enable the Plan's final approval. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions at or before the end of the next five year update cycle.*

Passed: (date)

_____

Certifying Official

APPENDIX C: Acronyms, Definitions, and References

ACRONYMS

AIP	Airfield Improvement Program
ACS	American Community Survey
AWN	Alert, Warning, and Notification System Coordination
BLM	Bureau of Land Management
BRIC	Building Resilient Infrastructure and Communities
CAMA	Computer Assisted Mass Appraisal
CD	Climate Divisions
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CIP	Capital Improvement Plan
CMAQ	Community Multiscale Air Quality Modeling
COVID-19	Coronavirus Disease 2019
CPAW	Community Planning Assistance for Wildfire
CPT	Community Planning Team
CRS	Community Rating System
CWPP	Community Wildfire Protection Plan
DEWS	Drought Earling Warning System
DFIRM	Digital Flood Insurance Rate Maps
DMA	Disaster Mitigation Act
EF	Enhanced Fujita
EAS	Emergency Alert System
EMC	Emergency Management Coordinator
EMPG	Emergency Management Performance Grant
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESF	Emergency Support Functions

FAA	Federal Aviation Administration
FCWID	Flat Creek Watershed Improvement District
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FMA	Flooding Mitigation Assistance
FMAGP	Fire Management Assistance Grant Program
GIS	Geographic Information System
GMP	Growth Management Program
GSM	Good Samaritan Mission
Hazus-MH	Hazards, United States-Multi Hazard
HIFLD	Homeland Infrastructure Foundation-Level
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
HMPC	Hazard Mitigation Planning Committee
HIRA	Hazard Identification and Risk Assessment
HVRI	Hazards and Vulnerability Research Institute
IDA	Idaho Falls Regional Airport
LDR	Land Development Regulations
JAC	Jackson Hole Airport
JHFEMS	Jackson Hole Fire Emergency Management and Services
JHMR	Jackson Hole Mountain Resort
LDR	Land Development Regulations
LEPC	Local Emergency Planning Committee
MMI	Modified Mercalli Intensity
NCDC	National Climate Data Center
NCEI	National Centers for Environmental Information
NDMC	National Drought Mitigation Center
NFHL	National Flood Hazard Layer

NFIP	National Flood Insurance Program
NEPA	National Environmental Policy Act
NID	National Inventory of Dams
NIDIS	National Integrated Drought Information System
NIFC	National Interagency Fire Center
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NRI	National Risk Index
NWA	National Weather Administration
NWS	National Weather Service
OHS	Occupational Health and Safety
OSHA	Occupational Safety and Health Administration
PGA	Peak Ground Acceleration
PUG	Plan Update Guide
SBA	Small Business Administration
SFHA	Special Flood Hazard Area
SHELDUS	Spatial Hazard Events and Losses Database
SLC	Salt Lake City (International Airport)
SNAP	Supplemental Nutrition Assistance Program
SPET	Specific Purpose Excise Tax
STAPLEE	Social, Technical, Administrative, Political, Legal, Economic, Environmental
SVI	Social Vulnerability Index
TAWPC	Teton Area Wildfire Protection Coalition
TCD	Teton's Conservation District
TCEM	Teton County Emergency Management
TCHD	Teton County Health Department
TCSO	Teton County Sherrif's Office
TEAM	Transportation Emergency Alternatives Management
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGS	U.S. Geological Survey

VOAD	Voluntary Organizations Active in Disasters
VOC	Volatile Organic Compounds
WICMAA	Wyoming Inter-County Mutual Aid Agreement
WDA	Wyoming Department of Agriculture
WDDO	Wyoming Water Development Office
WOHS	Wyoming Office of Homeland Security
WSGS	Wyoming State Geologic Survey
WSFD	Wyoming State Forestry Division
WYDEQ	Wyoming Department of Environmental Quality
WYDOT	Wyoming Department of Transportation
WYWRAP	Wyoming Wildfire Risk Assessment Portal
WSEO	Wyoming State Engineers Office
WUI	Wildland-Urban Interface
WY	Wyoming

Definitions

100-Year Flood: The term "100-year flood" can be misleading. The 100-year flood does not necessarily occur once every 100 years. Rather, it is the flood that has a 1% chance of being equaled or exceeded in any given year. Thus, the 100-year flood could occur more than once in a relatively short period of time. The Federal Emergency Management Agency (FEMA) defines it as the 1% annual chance flood, which is now the standard definition used by most federal and state agencies and by the National Flood Insurance Program (NFIP).

Acre-Foot: An acre-foot is the amount of water it takes to cover 1 acre to a depth of 1 foot. This measure is used to describe the quantity of storage in a water reservoir. An acre-foot is a unit of volume. One acre foot equals 7,758 barrels; 325,829 gallons; or 43,560 cubic feet. An average household of four will use approximately 1 acre-foot of water per year.

Asset: An asset is any man-made or natural feature that has value, including, but not limited to, people; buildings; infrastructure, such as bridges, roads, sewers, and water systems; lifelines, such as electricity and communication resources; and environmental, cultural, or recreational features such as parks, wetlands, and landmarks.

Base Flood: The flood having a 1% chance of being equaled or exceeded in any given year, also known as the "100-year" or "1% chance" flood. The base flood is a statistical concept used to ensure that all properties subject to the NFIP are protected to the same degree against flooding.

Basin: A basin is the area within which all surface water—whether from rainfall, snowmelt, springs, or other sources—flows to a single water body or watercourse. The boundary of a river basin is defined by natural topography, such as hills, mountains, and ridges. Basins are also referred to as "watersheds" and "drainage basins."

Benefit: A benefit is a net project outcome and is usually defined in monetary terms. Benefits may include direct and indirect effects. For the purposes of benefit/cost analysis of proposed mitigation measures, benefits are limited to specific, measurable risk reduction factors, including reduction in expected property losses (buildings, contents, and functions) and protection of human life.

Benefit/Cost Analysis: A benefit/cost analysis is a systematic, quantitative method of comparing projected benefits to projected costs of a project or policy. It is used as a measure of cost effectiveness.

Building: A building is defined as a structure that is walled and roofed, principally aboveground, and permanently fixed to a site. The term includes manufactured homes on permanent foundations on which the wheels and axles carry no weight.

Capability Assessment: A capability assessment provides a description and analysis of a community's current capacity to address threats associated with hazards. The assessment includes two components: an inventory of an agency's mission, programs, and policies, and an analysis of its capacity to carry them out. A capability assessment is an integral part of the planning process in which a community's actions to reduce losses are identified, reviewed, and analyzed, and the framework for implementation is identified. The following capabilities were reviewed under this assessment:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability

Community Rating System (CRS): The CRS is a voluntary program under the NFIP that rewards participating communities (provides incentives) for exceeding the minimum requirements of the NFIP and completing activities that reduce flood hazard risk by providing flood insurance premium discounts.

Conflagration: A fire that grows beyond its original source area to engulf adjoining regions. Wind, extremely dry or hazardous weather conditions, excessive fuel buildup, and explosions are usually the elements behind a wildfire conflagration.

Critical Facility: Facilities and infrastructure that are critical to the health and welfare of the population. These become especially important after any hazard event occurs. For the purposes of this plan, critical facilities include:

- Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic or water reactive materials.
- Hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a hazard event.
- Police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for disaster response before, during, and after hazard events.
- Public and private utilities, facilities and infrastructure that are vital to maintaining or restoring normal services to areas damaged by hazard events.
- Government facilities.

Dam: A man-made barrier, together with appurtenant structures, constructed above the natural surface of the ground for the purpose of impounding water.

Dam Failure: Dam failure refers to a partial or complete breach in a dam (or levee) that impacts its integrity. Dam failures occur for a number of reasons, such as flash flooding, inadequate spillway size, mechanical failure of valves or other equipment, freezing and thawing cycles, earthquakes, and intentional destruction.

Dam Incident: Situations at dams that require an immediate response by dam safety engineers. These are episodes that without intervention will likely result in a dam failure.

High Hazard Dam: Dams where failure or operational error will probably cause loss of human life.

Significant Hazard Dam: Dams where failure or operational error will result in no probable loss of human life but can cause economic loss, environmental damage, or disruption of lifeline facilities, or can impact other concerns. Significant hazard dams are often located in rural or agricultural areas but could be located in areas with population and significant infrastructure.

Low-Hazard Dam: No probable loss of human life and low economic or environmental losses; losses are principally limited to the owner's property.

Low Head Dam: Engineered structures built into and across stream and river channels for a variety of purposes. Water flows over the dams continuously, as they span from one riverbank to the other. Low head dams generally range in height from 1-15 feet.

Debris Flow: Dense mixtures of water-saturated debris that move down-valley; looking and behaving much like flowing concrete. They form when loose masses of unconsolidated material are saturated, become unstable, and move down slope. The source of water varies but includes rainfall, melting snow or ice, and glacial outburst floods.

Debris Slide: Debris slides consist of unconsolidated rock or soil that has moved rapidly down slope. They occur on slopes greater than 65%.

Disaster Mitigation Act of 2000 (DMA): The DMA is Public Law 106-390 and is the latest federal legislation enacted to encourage and promote proactive, pre-disaster planning as a condition of receiving financial assistance under the Robert T. Stafford Act. The DMA emphasizes planning for disasters before

they occur. Under the DMA, a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP) were established.

Drought: Drought is a period of time without substantial rainfall or snowfall from one year to the next. Drought can also be defined as the cumulative impacts of several dry years or a deficiency of precipitation over an extended period of time, which in turn results in water shortages for some activity, group, or environmental function. A hydrological drought is caused by deficiencies in surface and subsurface water supplies. A socioeconomic drought impacts the health, well-being, and quality of life or starts to have an adverse impact on a region. Drought is a normal, recurrent feature of climate and occurs almost everywhere.

Earthquake: A sudden slip on a fault, volcanic or magmatic activity, and sudden stress changes in the earth that result in ground shaking and radiated seismic energy.

Epicenter: The point on the earth's surface directly above the hypocenter of an earthquake. The location of an earthquake is commonly described by the geographic position of its epicenter and by its focal depth.

Fault: A fracture in the earth's crust along which two blocks of the crust have slipped with respect to each other.

Focal Depth: The depth from the earth's surface to the hypocenter.

Hypocenter: The region underground where an earthquake's energy originates.

Liquefaction: Loosely packed, water-logged sediments losing their strength in response to strong shaking, causing major damage during earthquakes.

Emergency Action Plan: A document that identifies potential emergency conditions at a dam and specifies actions to be followed to minimize property damage and loss of life. The plan specifies actions the dam owner should take to alleviate problems at a dam. It contains procedures and information to assist the dam owner in issuing early warning and notification messages to responsible downstream emergency management authorities. It also contains inundation maps to show emergency management authorities the critical areas for action in case of an emergency.

Erosion: The removal and simultaneous transportation of soil or other earth materials from one location to another by water, wind, waves, or moving ice. Deposition is the placing of eroded material in a new location.

Exposure: Exposure is defined as the number and dollar value of assets considered to be at risk during the occurrence of a specific hazard.

Extent: The extent is the size of an area affected by a hazard.

Extreme Heat: Summertime weather that is substantially hotter or more humid than average for a location at that time of year.

Flood: The inundation of normally dry land resulting from the rising and overflowing of a body of water.

Flash Flood: A flash flood occurs with little or no warning when water levels rise at an extremely fast rate

Flood Insurance Rate Map (FIRM): FIRMs are the official maps on which the Federal Emergency Management Agency (FEMA) has delineated the Special Flood Hazard Area (SFHA).

Flood Insurance Study: A report published by the Federal Insurance and Mitigation Administration for a community in conjunction with the community's FIRM. The study contains such background data

as the base flood discharges and water surface elevations that were used to prepare the FIRM. In most cases, a community FIRM with detailed mapping will have a corresponding flood insurance study.

Floodplain: Any land area susceptible to being inundated by flood waters from any source. A FIRM identifies most, but not necessarily all, of a community's floodplain as the SFHA.

1% Annual Chance Floodplain or 100-Year Floodplain: The area flooded by a flood that has a 1% chance of being equaled or exceeded each year. This is a statistical average only; a 100-year flood can occur more than once in a short period of time. The 1% annual chance flood is the standard used by most federal and state agencies.

0.1% Annual Chance Floodplain or 500-Year Floodplain: The area flooded by a flood that has a 0.1% chance of being equaled or exceeded each year. This is a statistical average only; a 500-year flood can occur more than once in a short period of time.

Floodway: Floodways are areas within a floodplain that are reserved for the purpose of conveying flood discharge without increasing the base flood elevation more than 1 foot. Generally speaking, no development is allowed in floodways, as any structures located there would block the flow of floodwaters.

Floodway Fringe: Floodway fringe areas are located in the floodplain but outside of the floodway. Some development is generally allowed in these areas, with a variety of restrictions. On maps that have identified and delineated a floodway, this would be the area beyond the floodway boundary that can be subject to different regulations.

Freeboard: Freeboard is the margin of safety added to the base flood elevation.

Freezing Rain: The result of rain occurring when the temperature is below the freezing point. The rain freezes on impact, resulting in a layer of glaze ice up to an inch thick. In a severe ice storm, an evergreen tree 60 feet high and 30 feet wide can be burdened with up to 6 tons of ice, creating a threat to power and telephone lines and transportation routes.

Frequency: For the purposes of this plan, frequency refers to how often a hazard of specific magnitude, duration, or extent is expected to occur on average. Statistically, a hazard with a 100-year frequency is expected to occur about once every 100 years on average and has a 1% chance of occurring any given year. Frequency reliability varies depending on the type of hazard considered.

Goal: A goal is a general guideline that explains what is to be achieved. Goals are usually broad-based, long-term, policy-type statements and represent global visions. Goals help define the benefits that a plan is trying to achieve. The success of a hazard mitigation plan is measured by the degree to which its goals have been met (that is, by the actual benefits in terms of actual hazard mitigation).

Geographic Information System (GIS): GIS is a computer software application that relates data regarding physical and other features on the earth to a database for mapping and analysis.

Hazard: A hazard is a source of potential danger or adverse condition that could harm people or cause property damage.

Hazard Mitigation Grant Program (HMGP): Authorized under Section 202 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the HMGP is administered by FEMA and provides grants to states, tribes, and local governments to implement hazard mitigation actions after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to disasters and to enable mitigation activities to be implemented as a community recovers from a disaster

Hazards U.S. Multi-Hazard (Hazus-MH) Loss Estimation Program: Hazus-MH is a GIS-based program used to support the development of risk assessments as required under the DMA. The Hazus-MH software program assesses risk in a quantitative manner to estimate damages and losses associated with natural hazards. Hazus-MH is FEMA's nationally applicable, standardized methodology and software program and contains modules for estimating potential losses from earthquakes, floods, and wind hazards. Hazus-MH has also been used to assess vulnerability (exposure) for other hazards.

Hydrology: Hydrology is the analysis of waters of the earth. For example, a flood discharge estimate is developed by conducting a hydrologic study.

Intensity: For the purposes of this plan, intensity refers to the measure of the effects of a hazard.

Inventory: The assets identified in a study region comprise an inventory. Inventories include assets that could be lost when a disaster occurs and community resources are at risk. Assets include people, buildings, transportation, and other valued community resources.

Landslide: Landslides can be described as the sliding movement of masses of loosened rock and soil down a hillside or slope. Fundamentally, slope failures occur when the strength of the soils forming the slope exceeds the pressure, such as weight or saturation, acting upon them.

Lightning: Lightning is an electrical discharge resulting from the buildup of positive and negative charges within a thunderstorm. When the buildup becomes strong enough, lightning appears as a "bolt," usually within or between clouds and the ground. A bolt of lightning instantaneously reaches temperatures approaching 50,000ºF. The rapid heating and cooling of air near lightning causes thunder. Lightning is a major threat during thunderstorms. In the United States, 75 to 100 Americans are struck and killed by lightning each year (see http://www.fema.gov/hazard/thunderstorms/thunder.shtm).

Local Government: Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.

Magnitude: Magnitude is the measure of the strength of an earthquake, and is typically measured by the Richter scale. As an estimate of energy, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value.

Mass Movement: A collective term for landslides, debris flows, falls and sinkholes.

Mitigation: A preventive action that can be taken in advance of an event that will reduce or eliminate the risk to life or property.

Mitigation Initiatives (or Mitigation Actions): Mitigation initiatives are specific actions to achieve goals and objectives that minimize the effects from a disaster and reduce the loss of life and property.

Mudslide, Mudflow, or Debris Flow: A river of rock, earth, organic matter, and other materials saturated with water.

Objective: For the purposes of this plan, an objective is defined as a short-term aim that, when combined with other objectives, forms a strategy or course of action to meet a goal.

Pandemic: An epidemic that has spread across multiple continents or worldwide, affecting a substantial number of individuals.

Peak Ground Acceleration: Peak Ground Acceleration (PGA) is a measure of the highest amplitude of ground shaking that accompanies an earthquake, based on a percentage of the force of gravity.

Preparedness: Preparedness refers to actions that strengthen the capability of government, citizens, and communities to respond to disasters.

Presidential Disaster Declaration: These declarations are typically made for events that cause more damage than state and local governments and resources can handle without federal government assistance. Generally, no specific dollar loss threshold has been established for such declarations. A Presidential Disaster Declaration puts into motion long-term federal recovery programs, some of which are matched by state programs, designed to help disaster victims, businesses, and public entities.

Probability of Occurrence: The probability of occurrence is a statistical measure or estimate of the likelihood that a hazard will occur. This probability is generally based on past hazard events in the area and a forecast of events that could occur in the future. A probability factor based on yearly values of occurrence is used to estimate probability of occurrence.

Repetitive Loss Property: Any NFIP-insured property that, since 1978 and regardless of any changes of ownership during that period, has experienced:

- Four or more paid flood losses in excess of $1000.00; or
- Two paid flood losses in excess of $1000.00 within any 10-year period since 1978 or
- Three or more paid losses that equal or exceed the current value of the insured property.

Return Period (or Mean Return Period): This term refers to the average period of time in years between occurrences of a particular hazard (equal to the inverse of the annual frequency of occurrence).

Riparian Zone: The area along the banks of a natural watercourse.

Riverine: Of or produced by a river. Riverine floodplains have readily identifiable channels. Floodway maps can only be prepared for riverine floodplains.

Risk: Risk is the estimated impact that a hazard would have on people, services, facilities, and structures in a community. Risk measures the likelihood of a hazard occurring and resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to occurrence of a specific type of hazard. Risk also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.

Risk Assessment: Risk assessment is the process of measuring potential loss of life, personal injury, economic injury, and property damage resulting from hazards. This process assesses the vulnerability of people, buildings, and infrastructure to hazards and focuses on (1) hazard identification; (2) impacts of hazards on physical, social, and economic assets; (3) vulnerability identification; and (4) estimates of the cost of damage or costs that could be avoided through mitigation.

Robert T. Stafford Act: The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 100-107, was signed into law on November 23, 1988. This law amended the Disaster Relief Act of 1974, Public Law 93-288. The Stafford Act is the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and its programs.

Severe Local Storm: Small-scale atmospheric systems, including tornadoes, thunderstorms, windstorms, ice storms, and snowstorms. These storms may cause a great deal of destruction and even death, but their impact is generally confined to a small area. Typical impacts are on transportation infrastructure and utilities.

Special Flood Hazard Area: The base floodplain delineated on a FIRM. The SFHA is mapped as a Zone A in riverine situations. The SFHA may or may not encompass all of a community's flood problems

Stakeholder: Business leaders, civic groups, academia, non-profit organizations, major employers, managers of critical facilities, farmers, developers, special purpose districts, and others whose actions could impact hazard mitigation.

Steep Slope: Different communities and agencies define it differently, depending on what it is being applied to, but generally a steep slope is a slope in which the percent slope equals or exceeds 25%. For this study, steep slope is defined as slopes greater than 33%.

Subsidence: The sinking of the ground over human-caused or natural underground voids, or the settlement of native low-density soils.

Thunderstorm: A thunderstorm is a storm with lightning and thunder produced by cumulonimbus clouds. Thunderstorms usually produce gusty winds, heavy rains, and sometimes hail. Thunderstorms are usually short in duration (seldom more than 2 hours). Heavy rains associated with thunderstorms can lead to flash flooding during the wet or dry seasons.

Tornado: A tornado is a violently rotating column of air extending between and in contact with a cloud and the surface of the earth. Tornadoes are often (but not always) visible as funnel clouds. On a local scale, tornadoes are the most intense of all atmospheric circulations, and winds can reach destructive speeds of more than 300 mph. A tornado's vortex is typically a few hundred meters in diameter, and damage paths can be up to 1 mile wide and 50 miles long.

Vulnerability: Vulnerability describes how exposed or susceptible an asset is to damage. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. Like indirect damages, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power. Flooding of an electric substation would affect not only the substation itself but businesses as well. Often, indirect effects can be much more widespread and damaging than direct effects.

Watershed: A watershed is an area that drains downgradient from areas of higher land to areas of lower land to the lowest point, a common drainage basin.

Wildfire: Wildfire refers to any uncontrolled fire occurring on undeveloped land that requires fire suppression. The potential for wildfire is influenced by three factors: the presence of fuel, topography, and air mass. Fuel can include living and dead vegetation on the ground, along the surface as brush and small trees, and in the air such as tree canopies. Topography includes both slope and elevation. Air mass includes temperature, relative humidity, wind speed and direction, cloud cover, precipitation amount, duration, and the stability of the atmosphere at the time of the fire. Wildfires can be ignited by lightning and, most frequently, by human activity including smoking, campfires, equipment use, and arson.

Wildland Urban Interface (WUI) Area: An area susceptible to wildfires and where wildland vegetation and urban or suburban development occur together. An example would be smaller urban areas and dispersed rural housing in forested areas.

Windstorm: Windstorms are generally short-duration events involving straight-line winds or gusts exceeding 50 mph. These gusts can produce winds of sufficient strength to cause property damage. Windstorms are especially dangerous in areas with significant tree stands, exposed property, poorly constructed buildings, mobile homes (manufactured housing units), major infrastructure, and aboveground utility lines. A windstorm can topple trees and power lines; cause damage to residential, commercial, critical facilities; and leave tons of debris in its wake.

Winter Storm: A storm having significant snowfall, ice, or freezing rain; the quantity of precipitation varies by elevation.

Zoning Ordinance: The zoning ordinance designates allowable land use and intensities for a local jurisdiction. Zoning ordinances consist of two components: a zoning text and a zoning map.

References

Emergency Planning and Community Right-to-Know Act of 1986, Pub. L. No. 116 § 10904. (1986).

Federal Emergency Management Agency, Public Law 106-390. 2000. "Disaster Mitigation Act of 2000." https://www.fema.gov/media-library/assets/documents/4596.

Federal Emergency Management Agency. "Flood Mitigation Assistance Grant Program." https://www.fema.gov/flood-mitigation- assistance-grant-program.

Federal Emergency Management Agency. "Hazard Mitigation Assistance." https://www.fema.gov/hazard-mitigation-assistance.

Federal Emergency Management Agency. "Hazard Mitigation Grant Program." https://www.fema.gov/hazard-mitigation-grant- program.

Federal Emergency Management Agency. "Pre-Disaster Mitigation Grant Program." https://www.fema.gov/pre-disaster-mitigation- grant-program.

Federal Emergency Management Agency. 2013. "Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards." https://www.fema.gov/media-library- data/20130726-1904-25045-0186/fema_mitigation_ideas_final508.pdf.

Federal Emergency Management Agency. 2014. "How to Prepare for a Tornado." https://www.fema.gov/media-library-data/1409003506195-52740fd2983079a211d041f7aea6b85d/how_to_prepare_tornado_033014_508.pdf.

Federal Emergency Management Agency. 2022. "Local Mitigation Plan Review Guide." https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-policy-guide_042022.pdf

Federal Emergency Management Agency. 2023. "Hazardous Materials Incidents." https://www.ready.gov/hazardous-materials-incidents.

Federal Emergency Management Agency. 2023. "Local Mitigation Planning Handbook." https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-handbook_052023.pdf.

Federal Emergency Management Agency. 2024. "Disaster Declarations." https://www.fema.gov/disasters.

Federal Emergency Management Agency. 2024. "Earthquake." https://www.fema.gov/earthquake.

Federal Emergency Management Agency. 2024. "FEMA Flood Map Service Center." http://msc.fema.gov/portal/advanceSearch.

Federal Emergency Management Agency. July 2015. "Plan Integration: Linking Local Planning Efforts." https://www.fema.gov/media-library- data/1440522008134-ddb097cc285bf741986b48fdcef31c6e/R3_Plan_Integration_0812_508.pdf.

Federal Emergency Management Agency. June 2007. "Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, and Related Authorities." Federal Emergency Management Agency 592: 22. Sec. 322. Mitigation Planning (42 U.S.C. 5165). https://www.fema.gov/pdf/about/stafford_act.pdf.

Federal Emergency Management Agency. June 2009. "BCA Reference Guide." https://www.fema.gov/sites/default/files/2020-04/fema_bca_reference-guide.pdf

Federal Emergency Management Agency. May 2017. "National Flood Insurance Program Community Rating System: Coordinator's Manual FIA-15/2017." https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_coordinators-manual_2017.pdf.

Federal Emergency Management Agency: Federal Register. 2002 “44 CFR Parts 201 and 206: Hazard Mitigation Planning and Hazard Mitigation Grant Programs; Interim Final Rule.” https://www.fema.gov/pdf/help/fr02-4321.pdf.

Federal Emergency Management Agency: Federal Register. 2002. “Section 104 of Disaster Mitigation Act 2000: 44 CFR Parts 201 and 206: Hazard Mitigation

Lee NR, King A, Vigil D, Mullaney D, Sanderson PR, Ametepee T, Hammitt LL. Infectious diseases in Indigenous populations in North America: learning from the past to create a more equitable future. Lancet Infect Dis. 2023 Oct;23(10):e431-e444. doi: 10.1016/S1473-3099(23)00190-1. Epub 2023 May 3. PMID: 37148904; PMCID: PMC10156139.

Mauricio Barreto, Maria Teixeria, Eduardo Hage Carmo. 2006. “Infectious Disease Epidemiology,” Journal of Epidemiology and Community Health 60,(3):192- 195.

Messina, J.P., Brady, O.J., Golding, N. et al. The current and future global distribution and population at risk of dengue. Nat Microbiol 4, 1508–1515 (2019). https://doi.org/10.1038/s41564-019-0476-8

Multi-Resolution Land Characteristics (MRLC) Consortium. 2024. “Viewer.” https://www.mrlc.gov/viewer/

National Centers for Environmental Information. 2023. “Storm Events Database.” https://www.ncdc.noaa.gov/stormevents/

National Integrated Drought Information System. 2024. “Wyoming”. https://www.drought.gov/states/wyoming.

National Drought Mitigation Center. 2017. “Drought Basics.” https://drought.unl.edu/Education/DroughtBasics.aspx

National Drought Mitigation Center. 2024. “U.S. Drought Impact Reporter.” http://droughtreporter.unl.edu/map/.

National Oceanic and Atmospheric Administration, National Weather Service. 2024. “Heat Index.” https://www.weather.gov/ama/heatindex.

National Park Service. 2010. “Yosemite Nature Notes 9: Frazil Ice” https://www.nps.gov/media/video/view.htm?id=02C7187C-1DD8-B71B-0BEC396B2D997904.

National Park Service. 2023. “National Register of Historic Places: Teton.” Accessed January 2023. https://npgallery.nps.gov/NRHP/AdvancedSearch/.

National Park Service. 2022. “Grand Teton National Park”. https://www.nationalparked.com/grand-teton/visitation-statistics.

National Pipeline Mapping System. 2023. “Public Map Viewer.” https://www.npms.phmsa.dot.gov/

National Weather Service. 2017. “Flood Safety.” https://www.weather.gov/safety/flood.

National Weather Service. 2017. “Thunderstorms Basics.” https://www.nssl.noaa.gov/education/svrwx101/thunderstorms/.

National Weather Service. 2024. “Climate Prediction Center.” https://www.cpc.ncep.noaa.gov/.

National Weather Service. 2024. “Hail Scale.” https://www.weather.gov/boi/hailsize.

National Weather Service. 2024. “Understanding Wind Chill.” Accessed June 2017. https://www.weather.gov/safety/cold-wind-chill-chart.

NBC News. 2019. “Native Americans, the census’s most undercounted racial group, fight for an accurate 2020 tally.” https://www.nbcnews.com/news/us-news/native-americans-census-most-undercounted-racial-group-fight-accurate-2020-n1105096

NDIS. 2024. “Drought.gov.” https://www.drought.gov/

NOAA National Centers for Environmental Information (NCEI). 2024. U.S. Billion-Dollar Weather and Climate Disasters https://www.ncdc.noaa.gov/billions/

NPS. 2023. “Understanding Fire Danger.” https://www.nps.gov/articles/understanding-fire-danger.htm

Pipeline and Hazardous Materials Safety Administration. 2024. “Office of Hazardous Materials Safety: Incident Reports Database Search.” https://www.phmsa.dot.gov/hazmat/library/data-stats/incidents.

SPIA-Index. 2024. “Sperry-Piltz Ice Accumulation Index.” http://www.spia-index.com/index.php.

Standards Applicable to Transporters of Hazardous Waste. 40 CFR §263. 1980.

Stanford University. 2023. “National Performance of Dams Program Dam Incident Database.” http://npdp.stanford.edu/dam_incidents.

Storm Prediction Center: National Oceanic and Atmospheric Administration. 2024. “Beaufort Wind Scale.” http://www.spc.noaa.gov/faq/tornado/beaufort.html.

Teton Conservation District. 2024. “How do we know we’re in a drought.” https://www.tetonconservation.org/blog/2022/7/29/how-do-we-know-were-in-a-drought.

Teton County. 2024. “Avalanche”. https://www.tetoncountywy.gov/405/Avalanche#:~:text=Impeded%20travel%3A%20Avalanches%20can%20shut,Highway%20191%20(Hoback%20Canyon).

Teton County. 2024. “Past Flash Floods in Teton County.” https://www.tetoncountywy.gov/413/Past-Flash-Floods-in-Teton-County.

Teton County Comprehensive Plan. 2012. “Jackson, Teton County Comprehensive Plan”. https://jacksontetonplan.com/DocumentCenter/View/425/Jackson-Teton-County-Comprehensive-Plan-Adopted-May-8-2012.

The Social, Political and Economic Event Database Project (SPEED). 2024. Event Data File [Data file]. Retrieved from https://clinecenter.illinois.edu/project/human-loop-event-data-projects/SPEED.

Trust for America's Health. 2023. "State Profile - Wyoming." https://www.tfah.org/state-details/Wyoming/.

World Population Review. 2024. “Teton County, Wyoming Population 2024”. https://worldpopulationreview.com/us-counties/wy/teton-county-population.

U.S. Census Bureau. 2024. “American Community Survey (ACS) 5-year estimates.” https://data.census.gov/table.

U.S. Department of Agriculture, National Agricultural Statistics Server. 2022. “2022 Census of Agriculture.” https://www.nass.usda.gov/AgCensus/

U.S. Dept of Agriculture Economic Research Service. “Drought in the Western United States”. https://www.ers.usda.gov/newsroom/trending-topics/drought-in-the-western-united-states/#:~:text=Conditions%20were%20most%20severe%20in,20%20percent%20classified%20as%20severe

US Dept, of Health and Human Services (HHS). 2024. “HHS emPOWER Map.” https://empowerprogram.hhs.gov/empowermap

US DOE, Office of Energy Efficiency and Renewable Energy. 2010. “Wind Zones in the US.” https://basc.pnnl.gov/images/wind-zones-us.

US Forest Service. 2024. “Wyoming Fatalities by Date List”. https://bridgertetonavalanchecenter.org/wyoming-fatalities-by-date-list/.

United States Geological Survey. 2019. “Short-term Induced Seismicity Models: 2018 One-Year Model.” https://www.usgs.gov/programs/earthquake-hazards/science/short-term-induced-seismicity-models.

United States Geological Survey. 2024. “Land fire Data Distribution Site.” https://www.landfire.gov/viewer/.

United States Geological Survey. 1999. “Modified Mercalli Intensity and peak ground acceleration (PGA)”. http://earthquake.usgs.gov/learn/topics/mercalli.php.

US Global Change Research Program (USGRP). 2023. “Fifth National Climate Assessment.” https://nca2023.globalchange.gov/.

Wyoming State Geological Survey. 2024. “Teton County”. https://main.wsgs.wyo.gov/.

Resolution # 25-11

Adopting the 2025 Wyoming Region 8 Hazard Mitigation Plan

WHEREAS, the Town of Jackson recognizes the threat that natural hazards pose to people and property within our community; and

WHEREAS, undertaking hazard mitigation actions reduces the potential for harm to people and property from future hazard occurrences; and

WHEREAS, the Town of Jackson resides within Wyoming Region 8 and fully participated in the collaborative mitigation planning process; and

WHEREAS, the current Region 8 Hazard Mitigation Plan expires on May 29, 2025, and a five-year update has been completed;

WHEREAS, The Town Council, by adoption of this resolution adopts the 2025 Wyoming Region 8 Hazard Mitigation Plan, attached hereto as Appendix A, and rescinds all previous Hazard Mitigation Plans; and

NOW, THEREFORE, BE IT RESOLVED, by the Town Council of the Town of Jackson, Wyoming having duly met on June 2, 2025, at a Regular Town Council Meeting, which was properly noticed and open to the public, and having fully considered the matter at hand, that the 2025–2030 Wyoming Region 8 Hazard Mitigation Plan is hereby adopted as follows:

> **The Jackson Town Council adopts this Resolution 25-11, replacing the previous Town of Jackson Hazard Mitigation Plan, with the 2025 Wyoming Region 8 Hazard Mitigation Plan attached hereto as Appendix A.**

BE IT FURTHER RESOLVED, the Town of Jackson will submit this Adoption Resolution to the Wyoming Office of Homeland Security and FEMA Region VIII to enable the Plan's final approval. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions at or before the end of the next five-year update cycle.

PASSED, APPROVED, AND ADOPTED this 2nd day of June 2025.

TOWN OF JACKSON

_____

Arne O. Jorgensen, Mayor

ATTEST: _____

Riley Hovorka, Town Clerk

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Town Council Regular
Submitting Department:	Legal	**Presenter:**	Lea Colasuonno
Agenda Item:	Extension of CenturyLink Franchise Agreement	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for Council to review and consider another extension of the current franchise agreement between the Town and CenturyLink.

Requested Action.
Staff requests Council review and consider the ordinance extending the franchise agreement between the Town and CenturyLink until July 31.

Recommendations.
Staff recommends Council approve the ordinance extending the franchise.

Background.
The Town and CenturyLink last entered into a franchise, pursuant to which CenturyLink provides telecommunications services to residents and businesses within the Town, in 2019. The term of the franchise was four years, or until December 31, 2023, after which time the franchise became a "holdover" franchise on a month-to-month basis through June 30, 2024. If a new franchise was not entered by June 30, 2024, or an extension granted, then general principles of law control with respect to termination of the franchise.

In accordance with the provisions of the existing franchise, the Town Attorney contacted CenturyLink in May of 2023 to enter "good faith negotiations regarding renewal of the franchise." The parties are still in negotiations at this time over the details of the fee (the sole remaining issue for numerous months).

This extension is set to expire July 31, 2025. The exhibit to the contract remains the sole outstanding item to finalize.

Analysis & Key Policy Questions.
Is Council willing to extend the CenturyLink franchise for 120 days?

- **Policy Considerations**. Important policy issues associated with this item include that 1) Telecommunications services are a critical service to residents and businesses within the Town of Jackson and the service will be able to continue during the extension; and 2) CenturyLink will continue to pay the franchise fee during the extension.
- **Staff Recommendation.** Staff recommend Council approve the ordinance granting another four-month extension, during which time the Town Attorney will finalize all terms and conditions and, specifically, negotiate an appropriate fee for CenturyLink to operate within the rights-of-way of the Town. The Town Attorney will ultimately provide a contract (via ordinance) for the Council to consider.

Possible Alternatives.
Council may elect to reject the extension, thus terminating the franchise, and direct the Town Attorney to provide options for next steps with respect to CenturyLink.

Comprehensive Plan & Priority Alignment.

This item aligns with Section 8, quality service delivery to the public, as reliable and quality communications infrastructure is critical to, not only economic health, but general health, safety, and welfare of residents and visitors alike.

Fiscal Impact.
The fiscal impact of continuing the franchise in its current state is neutral, CenturyLink will continue to pay the agreed-upon franchise fee in the 2019 Agreement during the extension period. The fee is $25,000 per year, paid in quarterly installments.

It should be noted that telecommunications franchise negotiations do involve professional services, as the Legal Department, usually and in this case is doing so, works with a telecommunications law firm with expertise in this area when renegotiating these contracts.

Staff Impact.
The staff impact of this item has been focused in the Legal Department, estimated at 60 hours, and Public Works and Administration, estimated at a combined 12 hours.

Attachments or Links.
Ordinance V

Suggested Motion.
I move to approve Ordinance V, an ordinance granting an extension of the current CenturyLink Franchise to July 31, 2025, on third reading and designate it ordinance _____.

ORDINANCE V_____

AN ORDINANCE AMENDING ORDINANCE 1243 EXTENDING THE TERM OF THE FRANCHISE GRANTED TO QWEST CORPORATION D/B/A CENTURYLINK QC ON BEHALF OF ITSELF TO OPERATE AND MAINTAIN A TELECOMMUNICATIONS SYSTEM FOR THE PURPOSE OF SUPPLYING SERVICE TO THE TOWN OF JACKSON AND GRANTED ON DECEMBER 18, 2019.

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JACKSON, WYOMING, IN REGULAR SESSION DULY ASSEMBLED, THAT:

SECTION I.

WHEREAS, the Franchise previously granted to Qwest Corporation dba CenturyLink QC ("Grantee") for the purpose of providing Telecommunication Services to the Town of Jackson, Wyoming ("Franchising Authority"), will expire on May 31, 2025. This Amendment extends the current Franchise Agreement for an additional two (2) months, extending the Franchise by its terms through July 31, 2025. The Parties are willing to be bound by the terms and conditions of this Amendment.

WHEREAS, the extension will not constitute a waiver or compromise of any right or claim either party may have under the current Franchise or applicable law as of the effective date of this Amendment, and during the remaining Franchise term.

SECTION II.

All ordinances and parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION III.

If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions of the ordinance.

SECTION IV.

This ordinance shall become effective after its passage, approval, and publication.

PASSED 1ST READING THE _____ DAY OF _____ 2025.
PASSED 2ND READING THE _____DAY OF _____, 2025
PASSED AND APPROVED THE _____ DAY OF _____, 2025.

TOWN OF JACKSON

BY: _____
Arne Jorgensen, Mayor

ATTESTATION OF TOWN CLERK

STATE OF WYOMING)
) ss.
COUNTY OF TETON)

I hereby certify that the foregoing Ordinance _____ was duly published in the Jackson Hole News and Guide, a newspaper of general circulation published in the Town of Jackson, Wyoming, on the ____ day of ____, 2025. I further certify that the foregoing Ordinance was duly recorded on page ____ of Book ___ of Ordinances of the Town of Jackson, Wyoming.

_____
Riley Hovorka, Town Clerk

IN WITNESS WHEREOF, the parties hereto have entered into this Franchise Extension Agreement on _____, _____.

Town of Jackson, WY

By:_____

Title:_____

Quest Corporation, d/b/a CenturyLink QC, Grantee

By:_____

Title:_____

ATTEST:

_____

Riley Hovorka, Town Clerk

STAFF REPORT

Meeting Date:	June 2, 2025	**Meeting Title:**	Town Council Regular Meeting
Submitting Department:	Internal Services	**Presenter:**	Lynsey Lenamond
Agenda Item:	Special Malt Beverage Permit Ordinance	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for the Town Council to consider an ordinance establishing a Special Malt Beverage Permit.

Requested Action.
Staff requests that the Town Council consider an ordinance establishing a Special Malt Beverage Permit.

Recommendations.
Staff recommends the Town Council approve the ordinance establishing a Special Malt Beverage Permit for public auditoriums, civic centers, or event centers.

Background.
On May 19, 2025 staff discussed with Council why a Special Malt Beverage permit should be established, recommendations for the duration of the permit, the fee of the permit and which current applicants/events this license type would immediately affect. At that meeting, Council directed staff to present the draft ordinance at the next available Town Council meeting.

Analysis & Key Policy Questions.
During the May 19th presentation, staff presented Council with key policy questions related to the establishment of the permit, as well as the fee and duration of the permit. Council did not request any changes to staff recommendations at that time.

Possible Alternatives.
Council could choose to add additional rules for eligibility for a Special Malt Beverage Permit, set a different fee for the permit, and/or set a different duration for the permit.

Comprehensive Plan & Priority Alignment.
Facilitating ways for organizations to more effectively utilize the alcohol permits available to them at event centers and supporting a variety of events in the Town offering entertainment, comradery, and community gatherings support Section 4 – the Town as the Heart of the Region, regarding enhanced civic spaces and social functions.

Fiscal Impact.
If Council approves staff's recommendations and the fee set forth in the upcoming fee schedule, the fee for a new permit will be $1,000. Special Malt Beverage Permits are permits, not annual licenses under the statutes, and therefore there will not be a renewal fee. There would be an additional fiscal impact of approximately $300 - $400 related to advertising of an adopted ordinance. The two entities currently utilizing catering permits or individual malt beverage permits will see a slight reduction in costs and a slight revenue decrease to the Town of approximately $800-$900 annually.

Staff Impact.
The staff impact of research and preparation of this staff report has been approximately 2 hours. The staff impact leading up to this staff report, researching this item, and presenting it for Council action was approximately 25 hours. Town staff will gain some efficiency in processing one permit vs. processing a set of catering permits or individual malt beverage permits.

Attachments or Links.
Ordinance W.

Suggested Motion. *Council always has the option to adopt, approve with conditions, continue, or deny items*.

I move to approve Ordinance W on first reading.

ORDINANCE W

AN ORDINANCE AMENDING CHAPTER 6.20, APPLICATION FOR LICENSES AND PERMITS, AND CHAPTER 6.50, SPECIAL 24-HOUR PERMITS, OF TITLE 6, LIQUOR LICENSES AND PERMITS, OF THE MUNICIPAL CODE OF THE TOWN OF JACKSON, WYOMING.

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JACKSON, WYOMING:

SECTION I.

Section 6.20.006of the Jackson Municipal Code of the Town of Jackson Municipal Code is hereby amended as follows:

6.20.006 - Application form and fees.

A. A person desiring any liquor license or permit under this title shall apply to the Town Clerk on forms prepared by the Attorney General of the State of Wyoming, as and in accordance with the statute of the State of Wyoming.

B. The Town, upon application, state certification, and public hearing, may issue a liquor license or permit pursuant to this title and Title 12 of the Wyoming State Statutes.

C. The fee paid annually for each license and permit shall be in an amount established by resolution; however, in no case shall the sum be greater than the amount authorized by applicable Wyoming Statutes. No application will be processed, nor any licenses or permits issued, until payment in full has been made.

D. The fee to be paid for each license and permit shall be in an amount established by resolution, which fees may be amended from time to time by the Town Council; however, in no case shall the sum be greater than the amounts authorized by applicable Wyoming Statutes.

(Ord. _____§ 1, 2025; Ord. 1280 § 4, 2021; Ord. 1245 § 1, 2020; Ord. 1185 § 1, 2017; Ord. 969 § 1, 2010; Ord. 853 § 4, 2007).

SECTION II.

Sections 6.50.010 and 6.50.020 of the Jackson Municipal Code of the Town of Jackson Municipal Code are hereby amended as follows:

Chapter 6.50 – SPECIAL PERMITS

6.50.010 – 24-Hour Catering permits.

It is the duty and obligation of the resort or retail liquor licensee under which the catering permittee is acting to ensure compliance with all State and Town alcohol laws and regulations. Any violations thereof shall be attributed to the resort or retail liquor licensee.

(Ord. _____§ 1, 2025; Ord. 1245 § 1, 2020; Ord. 1185 § 1, 2017; Ord. 853 § 7, 2007; Ord. 823 § 1, 2006; Ord. 714 § 1, 2002).

6.50.020 –24-Hour Malt beverage permits.

Applicants for malt beverage permits must have successfully completed an alcohol server education course approved by the Wyoming Liquor Division or the Jackson Police Department prior to permit application. Proof of current alcohol server training certification will be required as part of the malt beverage permit application.

(Ord. ____§ 1, 2025; Ord. 1245 § 1, 2020; Ord. 1185 § 1, 2017; Ord. 969 § 2, 2010; Ord. 853 § 7, 2007; Ord. 697 § 1, 2002; Ord. 90 § 4, 1965).

SECTION III.

Section 6.50.030 of the Jackson Municipal Code of the Town of Jackson Municipal Code is hereby amended as follows:

6.50.030 – Special malt beverage permits for public auditoriums, civic centers or events centers.

A. Applicants for special malt beverage permits must have successfully completed an alcohol server education course approved by the Wyoming Liquor Division or the Jackson Police Department prior

to application. Proof of current alcohol server training certification will be required as part of the special malt beverage permit application.

B. Special malt beverage permits may be issued in accordance to 6.20.006 of this Title, without a public hearing or Council approval.

C. An application for a permit under this section 6.50.030 shall include a description of the type of event.

D. Special malt beverage permits are valid for 180 days' from, and including, the date of issuance.

E. Under a special malt beverage permit, malt beverages may only be sold and consumed i) inside the building for which the permit is issued or inside the property boundaries of a defined outdoor space set in the permit, ii) only during events that are open to the public and, iii) that are related to rodeos, non-youth spectator sporting events, performances, conferences, ceremonies, or similar types of events where tickets are sold or provided.

(Ord. _____§ 1, 2025).

SECTION VI.

All ordinances and parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION III.

If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of the ordinance.

SECTION V.

This Ordinance shall become effective July 1, 2025 after its passage, approval, and publication.

PASSED 1ST READING THE _____DAY OF _____2025.
PASSED 2ND READING THE _____DAY OF _____2025.
PASSED AND APPROVED THE _____DAY OF _____2025.

TOWN OF JACKSON

BY: _____
Arne Jorgensen, Mayor

ATTEST:

BY: _____
Riley Hovorka, Town Clerk

ATTESTATION OF TOWN CLERK

STATE OF WYOMING)
) ss.
COUNTY OF TETON)

I hereby certify that the foregoing Ordinance No. XXX was duly published in the Jackson Hole News and Guide, a newspaper of general circulation published in the Town of Jackson, Wyoming, on the _____day of _____, 2025.

I further certify that the foregoing Ordinance was duly recorded on page _____of Book _____of Ordinances of the Town of Jackson, Wyoming.

_____
Riley Hovorka, Town Clerk

STAFF REPORT

Meeting Date:	2 June 2025	**Meeting Title:**	Town Council Regular – Ordinance
Submitting Department:	County Public Works	**Presenter:**	Charlotte Frei
Agenda Item:	Parking Garage Ordinance X– First Reading	**Public Comment:**	Yes

Purpose & Policy Considerations.
The purpose of this item is for Council to review ordinances related to payment at the parking garage and violations of new rules at the garage.

Requested Action.
Staff requests that Council review and consider Ordinance X to amend Municipal Code § 10.04.225 to match the policy for operating/managing the public parking structure located at West Simpson Avenue and South Milward Street.

Recommendations.
Staff recommends approval of Ordinance X as presented in the attachment to this staff report.

Background.
Several changes are proposed to ensure the Municipal Code section addressing the public parking structure is consistent with the new management of the parking structure, including:

1. Removal of the 48-hour time limit for parking in the structure
2. Adding language requirement the payment of the parking fee as posted at the structure
3. Prohibiting parking for more than 30 consecutive days
4. Requiring compliance with posted rules and regulations (rules will be posted on new signs at the garage).
5. Adding a prohibition on tampering, damaging, breaking into the payment equipment
6. Added ordinance requiring payment of fees.

Analysis & Key Policy Questions.
Several policy questions have been discussed in March 2024 and December 2024 (Staff Report: https://jacksonwy.portal.civicclerk.com/event/2214/files/attachment/6170). The ordinances reflects discussions and direction from Council.

Concurrent with this staff report (June 2, 2025), the contract for the payment processor is being presented.

Possible Alternatives.

- Council could direct staff to provide other or additional regulatory options.

Comprehensive Plan & Priority Alignment.
The guiding vision and chapter goal for Multimodal Transportation (Chapter 7) of the Comprehensive Plan is:

Travel by walk, bike, carpool, or transit will be more convenient than travel by single-occupancy vehicle.

Several strategies support improving enforcement at the garage; specifically, managing levels of service by evaluating parking occupancy and coordinating service levels across Town and County departments are identified by the plan in two strategies:

"Strategy 7.2.S.4: Reevaluate parking standards and other regulations that currently promote travel by single-occupancy motor vehicles." Introducing technology to support enforcement will also provide data on turnover and occupancy that staff can use to re-evaluate existing standards and regulations.

"Strategy 8.1.S.1: Define desired service levels from government service providers that address all policies of Principle 8.1 [Maintain Current, Coordinated Service Delivery]." The parking access technology is anticipated to reduce the burden on staff in Town Facilities and Jackson Police Department, allowing staff to redirect their time to higher and better uses that technology cannot perform.

Staff Impact.
The Regional Transportation Planning Administrator and staff from Town Police, Public Works, and Planning Departments have contributed approximately **80** hours in total to this project since Council's direction to pursue procurement of the Parking Access Revenue Control System (PARCS). The staff resources needed to operate and maintain the system (after installation) include:

- Town Public Works, Facilities and Street Divisions – 50 hours per year to repair or troubleshoot maintenance issues and to ensure entrance and parking information signs and pavement markings are maintained. Currently Town Public Works staff spends 100-150 hours per year for cleaning after routine incidents.
- Town Police Department – 325 hours per year to address violations, issue refunds, and check the garage for stays over 30 days. Currently CSOs spend approximately 600 hours per year in the garage (this does not include patrol officers' time in the garage).
- Town Hall and Dispatch – 30 hours per year to help customers experiencing issues; customers can press a button for support; this number will call Town Hall during business hours and dispatch after hours. Clear instructions at entry and exit can reduce the customer calls.
- Transportation Planning Functions – 40 hours per year to review reports, evaluate data and make recommendations for parking management.
- Director of External Affairs – 12 hours to develop communications around the program change initially, and regular communications about parking locations in future years. Seeing the armbar may deter people from parking, so staff anticipates the need to pre-emptively educate the public that the garage is still free from 4 am – 10 pm but paid overnight.

Additionally, the equipment is expected to reduce staff time monitoring, enforcing, and cleaning the garage. The ability to pay on exit is expected to reduce the number of tickets in municipal court and thus reduce the workload among PD and legal staff related to violations. The time CSOs previously spent monitoring and enforcing the 48-hour limit in the garage can be spent on other activities.

Fiscal Impact.
N/A for the municipal code. Fiscal impact associated with the payment processor is $55 per month (see related staff report from June 2, 2025 fo rpayment processor). The cost of the SKIDATA contract (approved February 18, 2024) is $179,000 for year one, $9,760 in year two, and $20,873 for year 3 and subsequent years. Years 3 and beyond have a higher annual fee due to the warranty for equipment and services; the warranty includes quarterly inspections by SKIDATA technicians.

Attachments or Links.
Ordinance X

Suggested Motion.
I move to approve Ordinance X on first reading.

ORDINANCE X

AN ORDINANCE AMENDING TITLE 10, VEHICLES AND TRAFFIC, CHAPTER 10.04, TRAFFIC REGULATIONS—ADOPTION OF UNIFORM ACT, OF THE MUNICIPAL CODE OF THE TOWN OF JACKSON,

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JACKSON, WYOMING:

SECTION I.

Chapter 10.04, Traffic Regulations—Adoption Of Uniform Act, of the Municipal Code of the Town of Jackson is hereby amended as follows:

10.04.225- Public parking structure at West Simpson Avenue and South Milward Street.

A. *Fees.* Vehicles entering or using the public parking structure shall pay fees in accordance with the posted rates displayed at the entrance to the parking structure.

B. *Prohibitions*. It is unlawful for any person to do any of the following in the public parking structure:
   1. Fail to obey the posted rules and regulations of the public parking structure.
   2. Sleep or camp or car camp within or about any vehicle within the public parking structure.
   3. Deface, destroy, tamper with, open or willfully break, or impair the usefulness of the parking payment equipment, including the boom gate.
   4. Intentionally evade the required payment.
   5. Park a vehicle in the public parking structure for more than 30 consecutive days.

C. *Commercial Vehicles*. No commercial vehicle, freight carrying vehicle, or trailer shall be parked in the public parking structure. For the purposes of this chapter, a "commercial vehicle" means any self-propelled or towed vehicle capable of carrying ten or more persons exclusive of the driver, whether a van, truck, bus, or otherwise; or any self-propelled or towed vehicle used to transport persons and property in the furtherance of any commercial or business purposes; or any self-propelled or towed vehicle used in commerce to transport passengers or cargo.

(Ord. § 1, 2025; Ord. 1311 § 1, 2022; Ord. 1114 § 1, 2016; Ord. 1079 § 1, 2015; Ord. 1052 § 1, 2014).

SECTION II.

All ordinances and parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION III.

If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed as a separate,

distinct and independent provision and such holding shall not affect the validity of the remaining portions of the ordinance.

SECTION IV.

This Ordinance shall become effective after its passage, approval, and publication.

PASSED 1ST READING THE _____DAY OF _____ , 2025.

PASSED 2ND READING THE _____DAY OF _____ , 2025.

PASSED AND APPROVED THE _____DAY OF _____, 2025.

TOWN OF JACKSON

BY: _____
Arne O. Jorgensen, Mayor

ATTEST:

_____
Riley Hovorka, Clerk

ATTESTATION OF TOWN CLERK

STATE OF WYOMING)
) ss
COUNTY OF TETON)

I hereby certify that the foregoing Ordinance No. was duly published in the Jackson Hole News and Guide, a newspaper of general circulation published in the Town of Jackson, Wyoming, on the _____day of _____, 2025.

I further certify that the foregoing Ordinance was duly recorded on page _____ of Book of Ordinances of the Town of Jackson, Wyoming.

_____

Riley Hovorka, Town Clerk

MEMORANDUM

TO: Mayor and Town Council

FR: Tyler Sinclair, Town Manager

DT: June 2, 2025

RE: Town Manager's Report

Temporary Sign Permits

The Temporary Sign Permits for Council consideration at this meeting are:

- ✓ Jackson Hole Farmer's Market requests to hang one temporary banner for three occurrences at 105 Buffalo Way (Albertson's) from June 22-29, August 3-10, and September 21-28, 2025 to advertise their Summer Market (P25-087).

- ✓ The Art Association of Jackson Hole requests to hang two temporary banners, one at 105 Buffalo Way (Albertson's) from July 21 – July 27 & one at Center for the Arts from July 25 – July 27, 2025 to advertise the July Art Fair (P25-093).

- ✓ Center for the Arts requests to hang one temporary banner at 105 Buffalo Way (Albertson's) from June 14-28, 2025 to advertise the Center Benefit Concert (P25-094).

Staff recommends approval of these requests and with the approval of the Town Manager's report, staff will issue the Temporary Sign Permits as requested.

Letter of Support for Friends of Pathways

Friends of Pathways is applying to the Travel & Tourism Board for a new Pathways Ambassador program to improve pathway safety. Attached, please find a letter of support for this request. With the approval of the Town Manager's Report, staff will have the letter executed by the Mayor and provided to the Travel & Tourism Board.

Travel & Tourism Board Summer Visitor Management Campaign

Building on momentum started last summer as part of its visitor management campaign, the Travel & Tourism Board (TTB) will be placing temporary street decals downtown at key visitor hot spots with responsible behavior messaging on them. Similar decals were a hit last summer and the TTB updated the copy, got new decals, and will be placing them around Town in the coming weeks. The decals are not permanent and were removed at the end of the summer last year. With the approval of the Town Manager's Report, the Travel & Tourism Board will be notified that they have permission to do this again this year. See the attached picture.



<u>Pre-Application to Land & Water Conservation Fund for Development of Karns Meadow</u>

Parks & Rec staff has worked with the Town's grant contractor, Sustainable Strategies, to submit a pre-application to the Land and Water Conservation Fund (LWCF) with the state. LWCF is a grant program administered by the National Park Service under the U.S. Department of the Interior that provides federal funding to support the acquisition, development, and enhancement of public outdoor recreation areas and facilities. The Pre-Application is an intent to apply with Teton County as the lead applying for a maximum grant amount of $450,000 for the development of Karns Meadow. Previously, the Town and County have developed six sites with the support of LWCF matching grants, including ADA enhancements to Miller Park in 2024. This said, under the current administration, this funding is tentative. States are moving forward with their application processes before they are sure that the federal funding will be awarded. If the first steps in the application process are not started, there will not be an ability to apply if everything proceeds as it has in past years. With the approval of the Town Manager's Report, staff will proceed with the pre-application as described.

<u>Open House for FY26 Budget</u>

Town Council and staff will be available on Tuesday, June 3 from 4:30-6:30 at the Town Hall for the first open house on the recommended budget. The flyer for the event is listed below.



Open House: FY2026 Budget
Tuesday, June 3 from 4:30-6:30pm at Town Hall

Learn about the budget process and share your perspective with the Mayor and Council.

Stop by to listen, discuss, and ask questions related to:

- The FY2026 Recommended Budget
- How the Town is funded
- What the Budget provides and supports

Town Council Members and staff will be available to answer questions, gather input, and share information. The Town's fiscal year runs from July 1 to June 30, so the budgeting process is nearing its end and will be finalized through a Council vote by the end of June. This is an opportunity to take part in collective decision making before the vote. Everyone is welcome.

June 2, 2025

Jackson Hole Travel & Tourism Board
PO Box 550
Jackson WY 83001

RE: The Town of Jackson Supports the Pathways Ambassador Program

Dear Jackson Hole Travel and Tourism Board,

I am writing to express the Town of Jackson's support for the Pathways Ambassador Grant application. Pathways safety has been a main endeavor and joint effort by the Town, Teton County, and Friends of Pathways in support of both locals and visitors. The Pathways Task Force group convened by Brian Schilling in the Spring 2024, the 2025 E-bike Community Survey, and the Friends of Pathways Stakeholder Meeting on April 16, 2025, all identified that the primary solution for pathways safety is the **Pathways Ambassador Program.**

The Pathways Ambassador Program is a proactive, educational, "boots on the ground" grant program led by Friends of Pathways in close partnership with the Town of Jackson and Teton County, local bike shops and bike tour companies. A lead Pathways Ambassador (who will be compensated by the grant) will recruit and train ten volunteer ambassadors to be physically present on pathways. Ambassadors will focus on "trouble spots" during high use times and help pathways users with any travel and safety needs such as basic bike repair, route finding, and rules of the road.

The goal of this program is to help educate riders, promote safe practices, avoid future violations, and enhance the non-vehicle transportation experience in Jackson Hole. Non-vehicle transportation (walking-biking-busing) and support of the pathways system aligns with our Comprehensive Plan Policy 7.1.c: Interconnect all modes of transportation, as well as the Travel and Tourism Board's Sustainable Destination Management Plan (SDMP) and is critical to the Town's environmental and sustainability goals.

Friends of Pathways has been a trusted partner of the Town of Jackson, with over 30 years of proven effectiveness. The Town hopes you give the Pathways Ambassador Program application the highest consideration in support of pathways safety in Jackson and Teton County.

Sincerely,

Mayor Arne Jorgensen