

# Jackson Town Council Regular Meeting

October 5, 2020

6:00 PM

Town Council Chambers

**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

- A. To join, click the link or copy to your browser:  
<https://us02web.zoom.us/j/86465472539?pwd=bVJpTnJiS2grRE9CQktsaVRIWG0rQT09>  
If the link does not work, join at [zoom.com](https://zoom.us) with Webinar ID **864 6547 2539** Password: **toj**  
or dial **1 346 248 7799**

## II. OPENING

- A. Call to Order and Roll Call
- B. Pledge of Allegiance
- C. Announcements/Proclamations
  - 1. Proclamation Recognizing October as Domestic Violence Awareness Month
  - 2. Proclamation for Fall Clean-Up, Burn Week, and Pumpkin Smash

## III. PUBLIC COMMENT

This section is reserved for questions and comments from the public on items that are not otherwise included in this agenda. Public comment is limited to 3 minutes. As a general practice, the Council will not hold discussion or debate these items. Nor will they make any decisions on items presented during this time but rather refer items to staff for follow-up. If you would like to communicate with the Council during the meeting, please address them during open public comment, when public comment is called for on a specific item, or send an email to [Council@jacksonwy.gov](mailto:Council@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. September 21, 2020 workshop
  - 2. September 21, 2020 regular meeting
- B. Disbursements
- C. Special Event: JHHS Homecoming Parade
- D. Temporary Sign Permit: Search and Rescue Snow & Avalanche Workshop P20-170
- E. Town Attorney Contract
- F. Town Manager Contract
- G. Memorandum of Understanding for School Resource Officer
- H. Encroachment Agreement at Aspen Drive P20-155

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

- A. Planning

*Please note that at any point during the meeting, the Mayor and Council 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.*

1. Item P20-056: Development Plan for Core Services Vehicle Maintenance Facility at 55 Karns meadow Drive (Tyler Valentine)
2. Item P20-142: Teton Village Master Plan Amendment (Paul Anthony)

**VI. RESOLUTIONS**

**VII. ORDINANCES**

**VIII. MATTERS FROM MAYOR AND COUNCIL**

- A. Appointment of an Alternate Municipal Judge
- B. 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 and Council 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.*



**TOWN COUNCIL PROCEEDINGS - UNAPPROVED**

**SEPTEMBER 21, 2020**

**JACKSON, WYOMING**

The Jackson Town Council met in regular workshop session in the Council Chambers of the Town Hall at 150 East Pearl at 3:02 P.M. Upon roll call the following were found to be present:

TOWN COUNCIL: *In-person*: none. *via Webex*: Mayor Pete Muldoon, Vice-Mayor Hailey Morton Levinson, Arne Jorgensen, Jim Stanford, and Jonathan Schechter.

STAFF: Larry Pardee, Roxanne Robinson, Tyler Sinclair, Darren Brugmann, Jason Wright, Michelle Weber, Kelly Thompson, and Sandy Birdyshaw.

**Budget Update.** Larry Pardee discussed the Fiscal Year 2020 budget, the ending fund balance versus the projected fund balance, an ending fund balance of \$12,075,701, Fiscal Year 2021 revenue and expenditure assumptions, revenue collections to date, analysis of sales tax generation industries. Kelly Thompson discussed an unusual use tax collection including vehicle sales. Larry Pardee discussed trends and analysis, not needing to pull funding out of reserves to finish out FY20, total expenditure reduction percentage for FY21 over FY20 of approximately 10%. Council discussion followed. Larry Pardee discussed waiting to make adjustments, being careful, looking forward to FY22 and FY23 to start discussions, changes to fund balance, and presenting changes to council before implementation, Federal CARES funding, tourist numbers impacting revenue, the facility across the street, and metrics for the priority based budget.

**Adjourn.** A motion was made by Hailey Morton Levinson and seconded by Arne Jorgensen to adjourn to executive session to discuss personnel matters in accordance with Wyoming Statute 16-4-405(a)(x). The vote showed all in favor and the motion carried. The meeting adjourned at 4:11 P.M. minutes:rdr/spb

TOWN OF JACKSON

ATTEST:

\_\_\_\_\_  
Pete Muldoon, Mayor

\_\_\_\_\_  
Sandra P. Birdyshaw, Town Clerk

Published JHNAG: September 30, 2020

## TOWN COUNCIL PROCEEDINGS - UNAPPROVED

SEPTEMBER 21, 2020

JACKSON, WYOMING

The Jackson Town Council met in regular session in the Council Chambers of the Town Hall located at 150 East Pearl at 6:02 P.M. Upon roll call the following were found to be present:

TOWN COUNCIL: *In-person*: None. *via Webex*: Mayor Pete Muldoon, Vice-Mayor Hailey Morton Levinson, Jim Stanford, Arne Jorgensen, and Jonathan Schechter.

STAFF: Larry Pardee, Roxanne Robinson, Jason Wright, Tyler Sinclair, Michelle Weber, Floren Poliseo, April Norton, Johnny Ziem, and Sandy Birdyshaw.

**Public Comment.** Church Lewis made comment on the kids bike loop. Laurie Andrews made comments of appreciation to the Council regarding Old Bill's.

**Consent Calendar.** A motion was made by Arne Jorgensen and seconded by Jim Stanford to approve the consent calendar including items A-I as presented with the following motions:

- A. **Meeting Minutes.** To approve the meeting minutes as presented for the September 8, 2020 regular meeting.
- B. **Disbursements.** To approve the disbursements as presented. Ace Hardware \$195.25; Advanced Industrial Supply Inc \$207.63; Amazon Capital Services \$895.00; American Shooters Las Vegas \$2,804.00; B-Cycle LLC \$613.18; Big R Ranch & Home \$156.96; Bliss Cargo \$41.21; Bristol, James \$55.00; C & A Professional Cleaning Serv LLC \$1,923.05; Callas, Nancy \$45.50; Carquest Auto Parts Inc. \$8.21; Caselle Inc. \$1,868.00; CenturyLink \$1,935.41; City Of Driggs \$1,673.68; Commercial Tire-ID Falls \$848.96; David Stubbs \$250.00; Delta Dental Plan Of Wyoming \$6,237.03; E.R. Office Express \$82.84; Elite Parts \$312.43; Energy Laboratories Inc. \$317.50; Fire Services Of Idaho \$1,250.00; FleetPride \$55.20; Freedom Mailing Service Inc. \$1,859.53; Friends Of Pathways \$7,816.00; Geittmann Larson Swift LLP \$845.00; Gillig LLC \$2,499.37; Gm Sheet Metal LLC \$194.50; Greenway Painting LLC \$400.00; HD Fowler Company \$884.50; High Country Linen \$840.08; Hirst Applegate, LLP \$6,037.05; Jackson Curbside Inc. \$550.00; Jackson Hole News & Guide \$461.70; Jackson Lumber Inc \$67.68; Joseph E Giovanini \$8,000.00; Julie Holding \$5,000.00; Kellerstrass Enterprises, Inc \$19,713.81; Lower Valley Energy Inc \$36,866.31; Miller Sanitation \$7,770.00; Napa Auto Parts Inc. \$177.44; Nelson Engineering \$1,000.00; NTS Consolidation, LLC \$3,324.00; One Call Of Wyoming \$269.25; PartsMaster \$58.08; Perform Printing Inc \$140.90; Phillips, James \$266.23; Premier Truck- Salt Lake City \$9,355.39; Raftelis \$15,871.90; Red's Auto Glass, Inc. \$110.00; Rui Inc. Dba Village Gardner \$321.60; Sign It Now Inc \$4,118.60; Singh, John \$100.00; Snake River MEP Complete, Inc \$135.00; Snake River Roasting \$146.85; Stinky Prints, Inc \$1,084.40; Summit Consulting Group LLC \$6,000.00; Teton County Clerk \$148,275.08; Teton County District Court \$441.75; Teton County Integrated Solid Waste/Recy \$301.92; Teton County Sheriff's-Jail \$576.00; Teton County Transfer Station \$37.00; Teton County-Fund 13 \$107,600.21; Teton Motors Inc \$293.10; Teton Tools LLC \$490.95; Teton Trash Removal, Inc. \$47.00; Thomson West \$893.85; TMSC LLC \$3,238.00; West Fork Construction \$3,492.00; Westbank Sanitation \$49.38; Westwood Curtis \$91,600.27; White Glove Cleaning, Inc. \$4,803.13; Wy Child Support Enforcement \$146.76; Wyoming Financial Insurance, Inc \$72.00; Wyoming Garage Door, LLC \$2,060.00; Wy-Test \$115.00; Yellow Iron Excavation, LLC \$3,949.00; Zoom Video Communications, Inc \$4,799.00.
- C. **Municipal Court Report for August 2020.** To place the August 2020 Municipal Court Report into the record.
- D. **Epstein Settlement and Easement Agreement.** To approve the settlement and easement agreements with the Epsteins as presented and authorize the Mayor to execute any and all documents on behalf of the Town and direct the Town Clerk to record the appropriate documents with the County Clerk.
- E. **Office of State Lands and Investments Agreement for Coronavirus Relief Grant.** To approve the Reimbursement Agreement between the Office of State Lands and Investments and the Town of Jackson for COVID-19 expenditure reimbursement and authorize the Mayor to execute all necessary documents.
- F. **Loader Equipment Purchase for Wastewater Treatment Plant.** To approve the purchase of a 926M Wheel Loader for the Sewer Division's Wastewater Treatment Plant and award the contract to Western States Caterpillar for \$234,689.52.

- G. **Vac-Tron Trailer Equipment Purchase for Water Division.** To approve the purchase of a Vac-Tron trailer for the Public Works Water Division and award the contract to E.H. Wachs of Lincolnshire, Illinois for the purchase price of \$67,815.80.
- H. **Appointments to Board of Examiners.** To appoint Kasey Mateosky, Tyson Slater, and Katie Wilson to the Board of Examiners for 2-year terms expiring in July 2022.
- I. **Memorandum of Understanding with JH Historical Society for Structures located on Town Property.** To approve the Memorandum of Understanding between Jackson Hole Historical Society and Museum, Inc. and the Town of Jackson.

There was not any public comment on the Consent Calendar. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried.

**National League of Cities (NLC) Service Line Warranty Agreement.** Jim Stanford made comment. Larry Pardee and Floren Poliseo made staff comment. No action was taken on this item.

**Low Income Housing Tax Credit Housing Project at 400 W Snow King.** April Norton made staff comment on the letter of support to the Wyoming Community Development Authority for the Low-Income Housing Tax Credit allocation to build a twenty-four-apartment complex called Millward Crossing at 400 W. Snow King Avenue.

A motion was made by Hailey Morton Levinson and seconded by Arne Jorgensen to approve the letter of support for the Millward Crossing low-income housing tax credit application being submitted by Summit Housing Group. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried.

**Item P20-140: Subdivision Plat at 115 Nelson Drive.** A motion was made by Hailey Morton Levinson and seconded by Jim Stanford to continue this item to the Town Council meeting scheduled for October 19, 2020. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried.

**Item P19-242: Snow King Mountain and Town of Jackson Gondola Lease Agreement.** Tyler Sinclair made staff comment. Jeff Golightly and Ryan Stanley made comment on behalf of the application.

A motion was made by Hailey Morton Levinson and seconded by Arne Jorgensen to approve an amendment to the current lease agreement between the Town of Jackson and Snow King Mountain to amend the monthly base rent to \$1,000 for 12 months for the remainder of the lease term and authorize the Mayor to execute the lease amendment upon final review and approval by the Town Attorney. The lease shall be amended to include an annual facility usage report including all users, period of the rental and rate charged as part of the Snow King Resort District Master Plan. The lease shall be amended to include a requirement that Snow King provide an online rental calendar and the associated rental rates prior to execution of the lease to be maintained through the duration of the lease. The Town of Jackson shall be exempt from all rental fees for Town-sponsored events. Mayor Muldoon called for the vote. The vote showed 4-1 in favor with Stanford opposed. The motion carried.

A motion was made by Hailey Morton Levinson and seconded by Arne Jorgensen to approve a Facility Use Agreement between the Town of Jackson and Snow King Mountain as presented and authorize the Mayor to execute the lease agreement upon final review and approval by the Town Attorney. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried.

A motion was made by Hailey Morton Levinson and seconded by Arne Jorgensen to approve a Gondola and Cougar Lease Agreement between the Town of Jackson and Snow King Mountain as presented and authorize the Mayor to execute the lease agreement upon final review and approval by the Town Attorney subject to the following amendments:

1. The readjustment at the end of the primary term (19 years) shall be up to 20% at the sole discretion of the Town.
2. The lease shall be revised to include a requirement that Snow King provide product flexibility in regard to lift ticket availability, including but not limited to, consideration of a flexible half-day and/or a 1- or 2-hour lift ticket.

Mayor Muldoon called for the vote. The vote showed 4-1 in favor with Stanford opposed. The motion carried.

**Matters from Mayor and Council.** Jim Stanford made comment on the spelling of Milward / Millward Street. A motion was made by Jim Stanford and seconded by Hailey Morton Levinson to direct staff to change out the street signs with the correct spelling based on cost and staff time. Further discussion was held on staff impact and costs. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried.

Arne Jorgensen made comment on the kids bike pump track and the general penny.

A motion was made by Hailey Morton Levinson and seconded by Arne Jorgensen to direct staff to look at possible locations for a bike pump track. Mayor Muldoon called for the vote. The vote showed 4-1 in favor with Stanford opposed. The motion carried.

Jim Stanford made comment on the Town’s funding and partnership with the County on the Northern South Park Neighborhood Plan and the County’s action the following day.

**Town Manager’s Report.** A motion was made by Hailey Morton Levinson and seconded by Jonathan Schechter to accept the Town Manager’s Report into the record. The Town Manager’s Report contained an update on the General Penny education efforts and the September Sales and Lodging Tax. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried.

**Adjourn.** A motion was made by Hailey Morton Levinson and seconded by Jonathan Schechter to adjourn the meeting. Mayor Muldoon called for the vote. The vote showed all in favor and the motion carried. The meeting adjourned at 8:41 p.m. minutes:spb

TOWN OF JACKSON

ATTEST:

\_\_\_\_\_  
Pete Muldoon, Mayor

\_\_\_\_\_  
Sandra P. Birdyshaw, Town Clerk  
Publish JH News & Guide: September 30, 2020

## 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              | 710146         | 2 cycle oil                           | 08/20/2020   | 19.96              | .00         |            |
| 51          | ACE HARDWARE              | 710147         | gas can                               | 08/20/2020   | 44.99              | .00         |            |
| 51          | ACE HARDWARE              | 710227         | spray paint                           | 08/21/2020   | 4.99               | .00         |            |
| 51          | ACE HARDWARE              | 710229         | graffiti supplies                     | 08/21/2020   | 23.06              | .00         |            |
| 51          | ACE HARDWARE              | 710280         | TH egress stairwell lighting          | 08/21/2020   | 24.95              | .00         |            |
| 51          | ACE HARDWARE              | 710287         | gate supplies                         | 08/21/2020   | 12.96              | .00         |            |
| 51          | ACE HARDWARE              | 710696         | START bollards                        | 08/25/2020   | 24.63              | .00         |            |
| 51          | ACE HARDWARE              | 710849         | rental house kit light repair         | 08/26/2020   | 16.99              | .00         |            |
| 51          | ACE HARDWARE              | 711123         | 685 Hanson Rental repairs             | 08/28/2020   | 19.46              | .00         |            |
| 51          | ACE HARDWARE              | 711311         | brass supplies for PRV vaults         | 08/31/2020   | 447.96             | .00         |            |
| 51          | ACE HARDWARE              | 711349         | rental house soffit repair            | 08/31/2020   | 4.99               | .00         |            |
| 51          | ACE HARDWARE              | 711477         | rental house smoke detector           | 09/01/2020   | 24.98              | .00         |            |
| 51          | ACE HARDWARE              | 711578         | wheel barrow                          | 09/02/2020   | 99.99              | .00         |            |
| 51          | ACE HARDWARE              | 711888         | supplies for truck build              | 09/04/2020   | 16.60              | .00         |            |
| 51          | ACE HARDWARE              | 713075         | Public Works - Facility Dept. tools   | 09/15/2020   | 283.93             | .00         |            |
| 51          | ACE HARDWARE              | 713104         | chainsaw repair                       | 09/16/2020   | 60.48              | .00         |            |
| 51          | ACE HARDWARE              | 713163         | Deloney Bathroom - flush valve b      | 09/16/2020   | 8.99               | .00         |            |
| 51          | ACE HARDWARE              | 713164         | Parking Garage - Keys for AT&T c      | 09/16/2020   | 14.95              | .00         |            |
| 51          | ACE HARDWARE              | 713234         | SK Ice Rink - funnel for glycol       | 09/17/2020   | 5.49               | .00         |            |
| 51          | ACE HARDWARE              | 713844         | keykrafter #91 brass                  | 09/23/2020   | 3.49               | .00         |            |
| 51          | ACE HARDWARE              | 713845         | split ring and trigger snap wiring    | 09/23/2020   | 6.08               | .00         |            |
| Total 51:   |                           |                |                                       |              | 1,169.92           | .00         |            |
| 3596        | ADVANCED GLASS TRIM, LLC  | 20326          | windshiled for sheriff tahoe          | 08/27/2020   | 300.00             | .00         |            |
| 3596        | ADVANCED GLASS TRIM, LLC  | 20419          | windshield for truck                  | 09/03/2020   | 260.00             | .00         |            |
| Total 3596: |                           |                |                                       |              | 560.00             | .00         |            |
| 4730        | ADVANCED PUMP & EQUIPME   | 10478          | annual matintenance for all lift stat | 08/24/2020   | 8,400.00           | .00         |            |
| 4730        | ADVANCED PUMP & EQUIPME   | 10557          | wire and thermal relay for Cottonw    | 09/17/2020   | 917.55             | .00         |            |
| Total 4730: |                           |                |                                       |              | 9,317.55           | .00         |            |
| 2269        | AFLAC                     | 604237         | ACCOUNT #y9599                        | 09/23/2020   | 2,584.63           | 2,584.63    | 09/23/2020 |
| Total 2269: |                           |                |                                       |              | 2,584.63           | 2,584.63    |            |
| 5726        | AMAZON                    | 1CRL-69PT-6T   | XL Twin Waterproof Mattress Pad       | 09/16/2020   | 548.90             | .00         |            |
| Total 5726: |                           |                |                                       |              | 548.90             | .00         |            |
| 6575        | APEX SAGE INC             | 0914           | WWTP lab mouse remediation            | 09/14/2020   | 8,564.94           | .00         |            |
| 6575        | APEX SAGE INC             | 0915           | Ely Springs Well House - Roof         | 09/16/2020   | 9,000.00           | .00         |            |
| Total 6575: |                           |                |                                       |              | 17,564.94          | .00         |            |
| 3487        | ARCHITECTURAL BUILDING SU | 71144873       | Parking Garage - AT&T door lock       | 09/08/2020   | 469.10             | .00         |            |
| Total 3487: |                           |                |                                       |              | 469.10             | .00         |            |
| 5994        | B-CYCLE LLC               | 2645481        | BCycle August SW Licensing Fee        | 09/15/2020   | 599.85             | .00         |            |

| Vendor      | Vendor Name               | Invoice Number | Description                           | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|-------------|---------------------------|----------------|---------------------------------------|--------------|--------------------|-------------|-----------|
| Total 5994: |                           |                |                                       |              | 599.85             | .00         |           |
| 4774        | BIG R RANCH & HOME        | 1420693        | Tools                                 | 12/23/2019   | 28.75              | .00         |           |
| 4774        | BIG R RANCH & HOME        | 1461126        | Blower Parts                          | 08/25/2020   | 49.99              | .00         |           |
| 4774        | BIG R RANCH & HOME        | 1464813        | cottonwood flats lift station pump r  | 09/14/2020   | 16.62              | .00         |           |
| Total 4774: |                           |                |                                       |              | 95.36              | .00         |           |
| 3500        | BISON LUMBER              | 2009-738405    | Bunk House - Water line freeze pr     | 09/16/2020   | 129.98             | .00         |           |
| Total 3500: |                           |                |                                       |              | 129.98             | .00         |           |
| 1560        | BLUE SPRUCE CLEANERS,INC  | 090120         | officer uniforms - altering - dry cle | 09/01/2020   | 216.95             | .00         |           |
| Total 1560: |                           |                |                                       |              | 216.95             | .00         |           |
| 2850        | BMV LLC                   | 4319           | ship water samples                    | 09/14/2020   | 59.47              | .00         |           |
| Total 2850: |                           |                |                                       |              | 59.47              | .00         |           |
| 6727        | BRIGGS, ERIC L            | 09172020       | headlamps                             | 09/17/2020   | 197.70             | .00         |           |
| Total 6727: |                           |                |                                       |              | 197.70             | .00         |           |
| 6467        | BRIMEYER, ASHLEY          | 091120         | Boot reimbursement                    | 09/11/2020   | 100.00             | .00         |           |
| Total 6467: |                           |                |                                       |              | 100.00             | .00         |           |
| 3303        | BRISTOL, JAMES            | 6440           | Susan business cards                  | 07/08/2020   | 35.00              | .00         |           |
| Total 3303: |                           |                |                                       |              | 35.00              | .00         |           |
| 4614        | C & A PROFESSIONAL CLEANI | 09172020       | Parking Garage - Oct. Cleaning        | 09/17/2020   | 306.84             | .00         |           |
| 4614        | C & A PROFESSIONAL CLEANI | 09172020GYM    | Town Hall Gym - Oct. Cleaning         | 09/17/2020   | 723.81             | .00         |           |
| 4614        | C & A PROFESSIONAL CLEANI | 09172020PW     | Pubic Works - Oct. Cleaning           | 09/17/2020   | 2,216.11           | .00         |           |
| 4614        | C & A PROFESSIONAL CLEANI | 09172020TH     | Town Hall - Oct. Cleaning             | 09/17/2020   | 4,967.22           | .00         |           |
| 4614        | C & A PROFESSIONAL CLEANI | 092020BH       | Bunk House cleaning                   | 09/20/2020   | 77.25              | .00         |           |
| Total 4614: |                           |                |                                       |              | 8,291.23           | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-491946    | cleaning supply hose connectors       | 08/20/2020   | 47.79              | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-492152    | cleaning supply hose connectors       | 08/21/2020   | 97.46              | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-494320    | CREDIT                                | 09/04/2020   | 5.00-              | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-494395    | tire valve                            | 09/05/2020   | 4.57               | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-494446    | brakes                                | 09/05/2020   | 164.71             | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-494733    | speedometer repair                    | 09/08/2020   | 375.00             | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-495308    | air filter                            | 09/12/2020   | 14.99              | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-495322    | a/c compressor                        | 09/12/2020   | 569.35             | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-495390    | CREDIT                                | 09/12/2020   | 24.95-             | .00         |           |
| 5           | CARQUEST AUTO PARTS INC.  | 6090-495590    | hose                                  | 09/14/2020   | 4.56               | .00         |           |
| Total 5:    |                           |                |                                       |              | 1,248.48           | .00         |           |
| 4292        | Commercial Tire-ID Falls  | 127279         | TIRES                                 | 08/14/2020   | 105.15             | .00         |           |
| 4292        | Commercial Tire-ID Falls  | 127822         | tire for van                          | 09/04/2020   | 105.15             | .00         |           |
| 4292        | Commercial Tire-ID Falls  | 127823         | trailer tires                         | 09/04/2020   | 343.96             | .00         |           |

| Vendor      | Vendor Name              | Invoice Number | Description                            | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|-------------|--------------------------|----------------|----------------------------------------|--------------|--------------------|-------------|-----------|
| Total 4292: |                          |                |                                        |              | 554.26             | .00         |           |
| 4887        | CONTROL SYSTEM TECHNOLO  | 9762           | install power to new flow meters       | 09/01/2020   | 3,673.00           | .00         |           |
| 4887        | CONTROL SYSTEM TECHNOLO  | 9766           | fixed Win911 callout problems wit      | 09/08/2020   | 500.00             | .00         |           |
| 4887        | CONTROL SYSTEM TECHNOLO  | 9767           | hook up controls for new flow met      | 09/08/2020   | 1,895.00           | .00         |           |
| 4887        | CONTROL SYSTEM TECHNOLO  | 9771           | monitoring relays for PTB, IPS, an     | 09/14/2020   | 1,915.50           | .00         |           |
| Total 4887: |                          |                |                                        |              | 7,983.50           | .00         |           |
| 1691        | CORE & MAIN LP           | N036049        | CREDIT                                 | 09/18/2020   | 112.00-            | .00         |           |
| Total 1691: |                          |                |                                        |              | 112.00-            | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 39-8036        | heater for generator                   | 04/29/2020   | 484.23             | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 59-1001        | def filters for bus 277                | 07/29/2020   | 3,221.91           | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 59-10501       | ECM for Bus 272                        | 06/23/2020   | 2,328.76           | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 59-10955       | def filters for bus 208                | 07/24/2020   | 2,285.29           | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-51790       | Rangeview general maintenance          | 09/26/2019   | 311.58             | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-69058       | Town Hall - generator latch repair     | 01/16/2020   | 77.00              | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-77652       | WWTP IPS gen maintenance               | 03/11/2020   | 169.65             | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-8381        | spring gulch gen maintenance           | 09/25/2020   | 667.50             | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-8384        | WWTP Main annual gen set maint         | 09/25/2020   | 320.50             | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-8385        | IPS gen maintenance                    | 09/25/2020   | 320.50             | .00         |           |
| 611         | CUMMINS ROCKY MOUNTAIN L | 60-8386        | UV gen set maintenance annual          | 09/25/2020   | 320.50             | .00         |           |
| Total 611:  |                          |                |                                        |              | 10,507.42          | .00         |           |
| 4918        | DEAN'S PEST CONTROL LLC  | 54596          | PW                                     | 08/26/2020   | 45.00              | .00         |           |
| 4918        | DEAN'S PEST CONTROL LLC  | 55057          | WWTP lab mouse remediation             | 08/19/2020   | 100.00             | .00         |           |
| Total 4918: |                          |                |                                        |              | 145.00             | .00         |           |
| 65          | DELCON INC               | 22556          | START - Covid UV Lights in air ha      | 08/31/2020   | 1,977.24           | .00         |           |
| 65          | DELCON INC               | 22624          | street light repair on new lift statio | 09/18/2020   | 1,075.45           | .00         |           |
| Total 65:   |                          |                |                                        |              | 3,052.69           | .00         |           |
| 3408        | E.R. OFFICE EXPRESS      | 16259          | Pens, pencils, erasers, scissors, h    | 09/21/2020   | 39.29              | .00         |           |
| 3408        | E.R. OFFICE EXPRESS      | 16269          | Office Supplies: blue pens/pop(up      | 09/21/2020   | 12.39              | .00         |           |
| 3408        | E.R. OFFICE EXPRESS      | 16305          | Copy Paper - 2 Boxes                   | 09/25/2020   | 179.78             | .00         |           |
| 3408        | E.R. OFFICE EXPRESS      | 16305          | Office Supplies - ink pads, white o    | 09/25/2020   | 40.50              | .00         |           |
| Total 3408: |                          |                |                                        |              | 271.96             | .00         |           |
| 1134        | ENERGY LABORATORIES INC. | 338985         | WWTP weekly testing                    | 08/31/2020   | 129.50             | .00         |           |
| 1134        | ENERGY LABORATORIES INC. | 343321         | weekly testing for WWTP                | 09/17/2020   | 114.00             | .00         |           |
| 1134        | ENERGY LABORATORIES INC. | 344292         | weekly WWTP testing                    | 08/21/2020   | 302.00             | .00         |           |
| 1134        | ENERGY LABORATORIES INC. | 344884         | water quality reports for new well     | 09/23/2020   | 509.00             | .00         |           |
| Total 1134: |                          |                |                                        |              | 1,054.50           | .00         |           |
| 81          | EVANS CONSTRUCTION INC   | 208526         | concrete readymix                      | 09/02/2020   | 888.88             | .00         |           |
| 81          | EVANS CONSTRUCTION INC   | 208773         | topsoil for sidewalk removal           | 09/10/2020   | 71.18              | .00         |           |
| Total 81:   |                          |                |                                        |              | 960.06             | .00         |           |
| 6544        | FENNERN, ROBERT          | 091620         | DOT Physical Reimbursement - R         | 09/16/2020   | 155.00             | .00         |           |

| Vendor      | Vendor Name             | Invoice Number | Description                       | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|-------------|-------------------------|----------------|-----------------------------------|--------------|--------------------|-------------|-----------|
| Total 6544: |                         |                |                                   |              | 155.00             | .00         |           |
| 3810        | FIREWISE LANDSCAPES INC | 9456           | GARDENING SERVICE PLANTE          | 08/01/2020   | 1,356.97           | .00         |           |
| 3810        | FIREWISE LANDSCAPES INC | 9549           | PLANTER BOXES                     | 09/01/2020   | 130.00             | .00         |           |
| Total 3810: |                         |                |                                   |              | 1,486.97           | .00         |           |
| 4212        | GILLIG LLC              | 40727387       | steering components               | 09/27/2020   | 2,232.69           | .00         |           |
| 4212        | GILLIG LLC              | 40729671       | windshields                       | 09/04/2020   | 2,799.12           | .00         |           |
| 4212        | GILLIG LLC              | 40730416       | seat belts                        | 09/09/2020   | 399.74             | .00         |           |
| 4212        | GILLIG LLC              | 40730873       | ADA ramp motor                    | 09/10/2020   | 756.96             | .00         |           |
| 4212        | GILLIG LLC              | 40731380       | wheel studs                       | 09/11/2020   | 619.60             | .00         |           |
| Total 4212: |                         |                |                                   |              | 6,808.11           | .00         |           |
| 6728        | GONZALES, RICHARD       | 092020         | DOT Physical Reimbursement        | 09/20/2020   | 155.00             | .00         |           |
| Total 6728: |                         |                |                                   |              | 155.00             | .00         |           |
| 1609        | GRAINGER                | 9639506220     | computer arm for collections SCA  | 09/01/2020   | 41.25              | .00         |           |
| Total 1609: |                         |                |                                   |              | 41.25              | .00         |           |
| 4988        | HD FOWLER COMPANY       | I5569699       | thrust tube for tapping tool      | 08/27/2020   | 155.25             | .00         |           |
| 4988        | HD FOWLER COMPANY       | I5575533       | 8" uni flange for flow meter      | 09/02/2020   | 119.11             | .00         |           |
| 4988        | HD FOWLER COMPANY       | I5585051       | inventory replacement             | 09/14/2020   | 4,953.66           | .00         |           |
| Total 4988: |                         |                |                                   |              | 5,228.02           | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0204349        | home ranch operating supplies     | 07/27/2020   | 25.31              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0205798        | home ranch odor control           | 08/03/2020   | 7.50               | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0207210        | home ranch odor control and blue  | 08/10/2020   | 25.31              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0209940        | home ranch odor control and blue  | 08/24/2020   | 25.31              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | mats, bar mops, enviro. surcharge | 08/27/2020   | 61.83              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | uniform cleaning - collections    | 08/27/2020   | 19.40              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | uniform cleaning                  | 08/27/2020   | 31.53              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | uniform cleaning - plant          | 08/27/2020   | 19.40              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | uniform cleaning                  | 08/27/2020   | 4.85               | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | uniform cleaning                  | 08/27/2020   | 91.12              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0210622        | uniform cleaning                  | 08/27/2020   | 16.97              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211292        | home ranch odoro control service  | 08/31/2020   | 7.50               | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211298        | TH floor mats aug 31              | 08/31/2020   | 290.40             | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | uniform cleaning                  | 09/03/2020   | 4.85               | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | uniform cleaning                  | 09/03/2020   | 16.97              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | uniform cleaning                  | 09/03/2020   | 38.80              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | uniform cleaning - collections    | 09/03/2020   | 19.40              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | laundry bag, enviro. surcharge    | 09/03/2020   | 3.20               | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | uniform cleaning - plant          | 09/03/2020   | 19.40              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0211989        | uniform cleaning                  | 09/03/2020   | 31.53              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0214462        | mats, odor control                | 09/16/2020   | 133.30             | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0214462        | laundry bag, towels               | 09/16/2020   | 87.20              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | 0215252        | home ranch operating supplies. c  | 09/21/2020   | 25.31              | .00         |           |
| 96          | HIGH COUNTRY LINEN      | C0205575       | CREDIT                            | 07/31/2020   | 38.00-             | .00         |           |
| 96          | HIGH COUNTRY LINEN      | S0205313       | home ranch tp and soap 7/30       | 07/31/2020   | 219.50             | .00         |           |
| 96          | HIGH COUNTRY LINEN      | S0206907       | TH cleaning supplies              | 08/10/2020   | 110.39             | .00         |           |
| 96          | HIGH COUNTRY LINEN      | S0209683       | home ranch TP and soap            | 08/21/2020   | 248.00             | .00         |           |
| 96          | HIGH COUNTRY LINEN      | S0209684       | deloney bathroom TP and soap      | 08/21/2020   | 124.00             | .00         |           |



| Vendor      | Vendor Name               | Invoice Number | Description                           | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid  |
|-------------|---------------------------|----------------|---------------------------------------|--------------|--------------------|-------------|------------|
| 96          | HIGH COUNTRY LINEN        | S0211042       | deloney bathroom toilet paper         | 08/28/2020   | 87.75              | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0211043       | Home Ranch TP and supplies            | 08/28/2020   | 226.50             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0211390       | TH hand soap                          | 09/01/2020   | 159.30             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0212187       | Parking Garage restroom supplies      | 09/03/2020   | 29.25              | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0212901       | Town hall operating supplies. ma      | 09/08/2020   | 179.08             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0213694       | home ranch operating supplies. c      | 09/11/2020   | 190.25             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0214060       | Deloeny operating supplies. Crea      | 09/14/2020   | 313.50             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0214062       | Deloeny operating supplies. Crea      | 09/14/2020   | 182.50             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0215325       | home ranch operating supplies. c      | 09/21/2020   | 213.00             | .00         |            |
| 96          | HIGH COUNTRY LINEN        | S0215326       | Deloeny operating supplies. Crea      | 09/21/2020   | 153.25             | .00         |            |
| Total 96:   |                           |                |                                       |              | 3,404.66           | .00         |            |
| 36          | IDAHO STATE TAX COMMISSIO | 09282020       | SEPTEMBER WITHHOLDINGS                | 09/28/2020   | 3,335.00           | 3,335.00    | 09/28/2020 |
| Total 36:   |                           |                |                                       |              | 3,335.00           | 3,335.00    |            |
| 106         | INTERSTATE BATTERY        | 22248460       | batteries for inventory               | 08/31/2020   | 211.90             | .00         |            |
| 106         | INTERSTATE BATTERY        | 22248591       | batteries                             | 09/14/2020   | 533.75             | .00         |            |
| 106         | INTERSTATE BATTERY        | 22248591       | batteries                             | 09/14/2020   | 75.95              | .00         |            |
| 106         | INTERSTATE BATTERY        | 71006404       | batteries for inventory               | 08/24/2020   | 383.85             | .00         |            |
| Total 106:  |                           |                |                                       |              | 1,205.45           | .00         |            |
| 5098        | JACKSON ANIMAL HOSPITAL   | 35202          | Spay & neuter 4 kittens               | 07/31/2020   | 392.58             | .00         |            |
| 5098        | JACKSON ANIMAL HOSPITAL   | 36267          | K9 Rabies, Vet visit                  | 09/04/2020   | 184.15             | .00         |            |
| 5098        | JACKSON ANIMAL HOSPITAL   | 36517          | Vinny feline vet visit, neuter, vacci | 09/11/2020   | 31.00              | .00         |            |
| Total 5098: |                           |                |                                       |              | 607.73             | .00         |            |
| 2           | JACKSON CURBSIDE INC.     | 00028287       | downtown loop august recycling c      | 09/10/2020   | 1,375.00           | .00         |            |
| Total 2:    |                           |                |                                       |              | 1,375.00           | .00         |            |
| 6474        | JACKSON HOLE LAW, PC      | 1247           | Municipal Prosecution Services fo     | 09/30/2020   | 1,500.00           | .00         |            |
| Total 6474: |                           |                |                                       |              | 1,500.00           | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 315636         | P19-095 Notice                        | 08/26/2020   | 76.95              | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316108         | General Penny Advertisement           | 09/02/2020   | 143.60             | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316194         | Public Notice P20-088                 | 09/02/2020   | 34.20              | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316354         | General Penny                         | 09/09/2020   | 143.60             | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316457         | Public Notice P20-089                 | 09/09/2020   | 21.38              | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316457         | Public Notice P20-089                 | 09/09/2020   | 21.38              | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316458         | P19-129                               | 09/09/2020   | 72.68              | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316649         | 9/8/20 Town Council Regular Mee       | 09/16/2020   | 684.00             | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316650         | General Penny                         | 09/16/2020   | 143.60             | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316790         | Advertising for START Operator w      | 09/23/2020   | 376.20             | .00         |            |
| 131         | JACKSON HOLE NEWS & GUID  | 316890         | grease ad in newspaper                | 09/23/2020   | 454.40             | .00         |            |
| Total 131:  |                           |                |                                       |              | 2,171.99           | .00         |            |
| 114         | JACKSON LUMBER INC        | 0000595151-0   | bosch chisel                          | 09/10/2020   | 19.61              | .00         |            |
| Total 114:  |                           |                |                                       |              | 19.61              | .00         |            |
| 239         | JH20 WATER CONDITIONING & | I200924300     | Water for lab testing                 | 09/24/2020   | 43.00              | .00         |            |

| Vendor      | Vendor Name              | Invoice Number | Description                         | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid  |
|-------------|--------------------------|----------------|-------------------------------------|--------------|--------------------|-------------|------------|
| Total 239:  |                          |                |                                     |              | 43.00              | .00         |            |
| 139         | JORGENSEN ASSOCIATES, PC | 44713          | 40% design review                   | 07/03/2020   | 2,403.75           | .00         |            |
| 139         | JORGENSEN ASSOCIATES, PC | 44880          | 60% design                          | 08/11/2020   | 4,190.00           | .00         |            |
| 139         | JORGENSEN ASSOCIATES, PC | 45083          | storm and utility survey at 5 way   | 09/17/2020   | 1,950.50           | .00         |            |
| 139         | JORGENSEN ASSOCIATES, PC | 45084          | north king streetscaped 75% & int   | 09/17/2020   | 7,951.25           | .00         |            |
| Total 139:  |                          |                |                                     |              | 16,495.50          | .00         |            |
| 5473        | KELLERSTRASS ENTERPRISES | 1220835        | def fluid, grease                   | 09/04/2020   | 927.93             | .00         |            |
| 5473        | KELLERSTRASS ENTERPRISES | 1222393        | w/w fluid                           | 09/10/2020   | 181.02             | .00         |            |
| Total 5473: |                          |                |                                     |              | 1,108.95           | .00         |            |
| 2485        | KENWORTH SALES COMPANY   | IDFIN4170081   | light bar for street truck          | 08/31/2020   | 1,029.83           | .00         |            |
| Total 2485: |                          |                |                                     |              | 1,029.83           | .00         |            |
| 3332        | KILMER'S BG DISTRIBUTING | 17568          | fuel additive                       | 09/14/2020   | 3,800.00           | .00         |            |
| Total 3332: |                          |                |                                     |              | 3,800.00           | .00         |            |
| 4902        | KOIS BROTHERS EQUIPMENT  | 118966         | snow blower rebuild parts           | 02/05/2020   | 2,240.81           | .00         |            |
| Total 4902: |                          |                |                                     |              | 2,240.81           | .00         |            |
| 671         | LINCOLN NATIONAL LIFE    | 107747 102020  | 107747 OCTOBER PREMIUM              | 09/22/2020   | 5,723.18           | 5,723.18    | 09/22/2020 |
| 671         | LINCOLN NATIONAL LIFE    | 4143980235     | OCTOBER PREMIUM 107391              | 09/22/2020   | 1,225.59           | 1,225.59    | 09/22/2020 |
| Total 671:  |                          |                |                                     |              | 6,948.77           | 6,948.77    |            |
| 5182        | METADOME, LLC            | 7585           | ADA Tiles                           | 07/15/2020   | 3,750.00           | .00         |            |
| Total 5182: |                          |                |                                     |              | 3,750.00           | .00         |            |
| 5833        | MEYER, KARL              | 09162020       | DOT Physical Reimbursement - K      | 09/16/2020   | 155.00             | .00         |            |
| Total 5833: |                          |                |                                     |              | 155.00             | .00         |            |
| 3932        | MILLER SANITATION        | 16066          | 74 city trash cans for 15 days in J | 07/02/2020   | 3,885.00           | .00         |            |
| 3932        | MILLER SANITATION        | 16610          | extra downtown trash cleaning C     | 09/04/2020   | 1,365.00           | .00         |            |
| 3932        | MILLER SANITATION        | 16622          | Town Square and Home Ranch tr       | 08/07/2020   | 1,410.50           | .00         |            |
| 3932        | MILLER SANITATION        | 16647          | 74 city trash cans for month of Oct | 09/30/2020   | 8,029.00           | .00         |            |
| Total 3932: |                          |                |                                     |              | 14,689.50          | .00         |            |
| 3373        | MINOR, JEREMY            | 09162020       | DOT Physical Reimbursement - J      | 09/16/2020   | 155.00             | .00         |            |
| Total 3373: |                          |                |                                     |              | 155.00             | .00         |            |
| 4623        | MSC INDUSTRIAL SUPPLY CO | 3993204001     | supplies for shop                   | 08/11/2020   | 113.62             | .00         |            |
| 4623        | MSC INDUSTRIAL SUPPLY CO | 3993217001     | supplies for shop                   | 08/12/2020   | 85.06              | .00         |            |
| Total 4623: |                          |                |                                     |              | 198.68             | .00         |            |
| 257         | NAPA AUTO PARTS INC.     | 936283         | LIFT SUPPORT                        | 08/11/2020   | 50.98              | .00         |            |
| 257         | NAPA AUTO PARTS INC.     | 938483         | toggle switch                       | 08/20/2020   | 9.88               | .00         |            |

| Vendor      | Vendor Name                    | Invoice Number | Description                        | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|-------------|--------------------------------|----------------|------------------------------------|--------------|--------------------|-------------|-----------|
| 257         | NAPA AUTO PARTS INC.           | 941448         | cREDIT                             | 09/03/2020   | 50.98-             | .00         |           |
| 257         | NAPA AUTO PARTS INC.           | 942136         | oil filters                        | 09/08/2020   | 21.96              | .00         |           |
| 257         | NAPA AUTO PARTS INC.           | 942158         | filters                            | 09/08/2020   | 136.98             | .00         |           |
| 257         | NAPA AUTO PARTS INC.           | 942941         | bus shifter                        | 09/10/2020   | 69.37              | .00         |           |
| 257         | NAPA AUTO PARTS INC.           | 943127         | clock batteries                    | 09/11/2020   | 12.22              | .00         |           |
| 257         | NAPA AUTO PARTS INC.           | 943375         | fan belt                           | 09/12/2020   | 45.78              | .00         |           |
| 257         | NAPA AUTO PARTS INC.           | 943828         | air compressor filters             | 09/15/2020   | 49.66              | .00         |           |
| Total 257:  |                                |                |                                    |              | 345.85             | .00         |           |
| 187         | NELSON ENGINEERING             | 52232          | Bencor Addition - Replat           | 05/21/2020   | 1,148.00           | .00         |           |
| 187         | NELSON ENGINEERING             | 52845          | zone 3 water tank investigation/st | 07/31/2020   | 3,503.25           | .00         |           |
| 187         | NELSON ENGINEERING             | 52846          | well 7                             | 07/31/2020   | 65.00              | .00         |           |
| 187         | NELSON ENGINEERING             | 53193          | zone 3 water tank investigation/st | 08/31/2020   | 1,675.00           | .00         |           |
| 187         | NELSON ENGINEERING             | 53194          | well 9 feasibility prof svcs       | 08/31/2020   | 3,086.25           | .00         |           |
| 187         | NELSON ENGINEERING             | 53197          | P20-161                            | 09/09/2020   | 420.00             | .00         |           |
| Total 187:  |                                |                |                                    |              | 9,897.50           | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | 775207766      | particulate filter                 | 07/27/2020   | 1,721.47           | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | 775216996      | bus turbo vgt                      | 08/27/2020   | 1,051.43           | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775161509    | CREDIT                             | 08/03/2020   | 152.95-            | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775174293    | CREDIT                             | 07/13/2020   | 1,070.65-          | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775207766    | CREDIT                             | 08/03/2020   | 726.51-            | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775210202    | CREDIT                             | 08/21/2020   | 665.00-            | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775210202    | CREDIT                             | 08/21/2020   | 997.70-            | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775210899    | CREDIT                             | 08/21/2020   | 76.48-             | .00         |           |
| 6483        | PREMIER TRUCK- SALT LAKE C     | CM775212173    | CREDIT                             | 08/21/2020   | 2,064.84-          | .00         |           |
| Total 6483: |                                |                |                                    |              | 2,981.23-          | .00         |           |
| 6613        | QUADIENT, INC DEPT 3689        | N8494966       | 12 months of postage               | 09/22/2020   | 468.69             | .00         |           |
| Total 6613: |                                |                |                                    |              | 468.69             | .00         |           |
| 6732        | R & D Sweeping and Asphalt mai | 13700          | 2020 sealcoating - TOJ share       | 08/30/2020   | 21,235.82          | .00         |           |
| Total 6732: |                                |                |                                    |              | 21,235.82          | .00         |           |
| 3501        | RIEDEL, CYNTHIA                | 071620         | REturn security deposit            | 07/16/2020   | 1,400.00           | .00         |           |
| Total 3501: |                                |                |                                    |              | 1,400.00           | .00         |           |
| 4723        | RON'S TOWING                   | 20-9052        | tow 1700 from alpine               | 09/04/2020   | 5,000.00           | .00         |           |
| Total 4723: |                                |                |                                    |              | 5,000.00           | .00         |           |
| 5812        | RUI INC. DBA VILLAGE GARDN     | 1319970        | 685 Hansen irrigation work         | 08/31/2020   | 90.10              | .00         |           |
| 5812        | RUI INC. DBA VILLAGE GARDN     | 1319978        | 145 W Hansen aug lawn care         | 08/31/2020   | 91.50              | .00         |           |
| 5812        | RUI INC. DBA VILLAGE GARDN     | 1320031        | 455 vine st apts - aug lawn care   | 08/31/2020   | 81.25              | .00         |           |
| 5812        | RUI INC. DBA VILLAGE GARDN     | 1320069        | 155 e pearl - aug lawn care        | 08/31/2020   | 145.60             | .00         |           |
| Total 5812: |                                |                |                                    |              | 408.45             | .00         |           |
| 13          | SAFETY SUPPLY & SIGN CO., I    | 173953         | deloney restroom sign              | 08/17/2020   | 82.91              | .00         |           |
| 13          | SAFETY SUPPLY & SIGN CO., I    | 174100         | signs, posts, rivets and frieght   | 08/26/2020   | 3,423.08           | .00         |           |

| Vendor      | Vendor Name               | Invoice Number | Description                         | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|-------------|---------------------------|----------------|-------------------------------------|--------------|--------------------|-------------|-----------|
| Total 13:   |                           |                |                                     |              | 3,505.99           | .00         |           |
| 4831        | SCHAEFFER MFG. CO         | PXG3665-INV1   | 55 gallon oil drum                  | 08/31/2020   | 1,318.90           | .00         |           |
| Total 4831: |                           |                |                                     |              | 1,318.90           | .00         |           |
| 5111        | SCHMILLEN, SCOTT          | 02033          | Home Ranch - service call drain cl  | 07/31/2020   | 120.00             | .00         |           |
| 5111        | SCHMILLEN, SCOTT          | 02034          | Parking Garage - Drain Cleaning     | 08/03/2020   | 237.50             | .00         |           |
| 5111        | SCHMILLEN, SCOTT          | 02035          | Deloney Bathroom - Drain Cleanin    | 08/04/2020   | 237.50             | .00         |           |
| 5111        | SCHMILLEN, SCOTT          | 02036          | Home Ranch - Drain Cleaning         | 08/04/2020   | 522.50             | .00         |           |
| 5111        | SCHMILLEN, SCOTT          | 02037          | Miller Park Public Rest Rooms - D   | 08/04/2020   | 190.00             | .00         |           |
| 5111        | SCHMILLEN, SCOTT          | 02046          | Snow King Event Ctr - Drain Clea    | 08/24/2020   | 997.50             | .00         |           |
| Total 5111: |                           |                |                                     |              | 2,305.00           | .00         |           |
| 4691        | SCHOW'S TRUCK CENTER      | C005046476     | brake drums                         | 07/06/2020   | 513.32             | .00         |           |
| 4691        | SCHOW'S TRUCK CENTER      | C005047174     | brakes                              | 08/31/2020   | 1,302.32           | .00         |           |
| Total 4691: |                           |                |                                     |              | 1,815.64           | .00         |           |
| 4359        | SHERWIN-WILLIAMS CO.      | 1013-06538     | CREDIT                              | 09/18/2020   | 52.99-             | .00         |           |
| 4359        | SHERWIN-WILLIAMS CO.      | 3195-3         | STFS 5126 CE ZM WH                  | 06/19/2020   | 240.75             | .00         |           |
| 4359        | SHERWIN-WILLIAMS CO.      | 6578-7         | fogging disinfectant hose           | 08/27/2020   | 44.60              | .00         |           |
| 4359        | SHERWIN-WILLIAMS CO.      | 6579-5         | fogging disinfectant                | 08/27/2020   | 100.00             | .00         |           |
| Total 4359: |                           |                |                                     |              | 332.36             | .00         |           |
| 4548        | SILVER CREEK SUPPLY       | 3809990-001    | Snow King Ice Rink - in-floor glyco | 09/16/2020   | 393.12             | .00         |           |
| Total 4548: |                           |                |                                     |              | 393.12             | .00         |           |
| 6657        | SIMON ASSOCIATES LLC      | I-730          | Hillside Regs                       | 05/15/2020   | 5,785.00           | .00         |           |
| 6657        | SIMON ASSOCIATES LLC      | I-735          | Hillside Regs                       | 05/15/2020   | 2,340.00           | .00         |           |
| 6657        | SIMON ASSOCIATES LLC      | I-747          | Hillside Regs                       | 07/31/2020   | 1,970.00           | .00         |           |
| Total 6657: |                           |                |                                     |              | 10,095.00          | .00         |           |
| 5632        | SNAKE RIVER MEP COMPLETE, | 4874           | SK Ice Rink - Dom Hot Water Tan     | 09/11/2020   | 351.50             | .00         |           |
| 5632        | SNAKE RIVER MEP COMPLETE, | 4898           | Parking Garage - Second DC Fast     | 09/20/2020   | 6,350.75           | .00         |           |
| Total 5632: |                           |                |                                     |              | 6,702.25           | .00         |           |
| 4699        | SNAKE RIVER ROASTING      | 672579         | coffee - 2x 5lb bags                | 09/18/2020   | 97.20              | .00         |           |
| Total 4699: |                           |                |                                     |              | 97.20              | .00         |           |
| 3989        | STINKY PRINTS, INC        | 52949          | GLS building prints                 | 06/06/2019   | 252.50             | .00         |           |
| Total 3989: |                           |                |                                     |              | 252.50             | .00         |           |
| 1054        | SUNRISE ENVIRONMENTAL     | 114084         | hand cleaner                        | 09/01/2020   | 177.09             | .00         |           |
| Total 1054: |                           |                |                                     |              | 177.09             | .00         |           |
| 996         | TETON COUNTY SPECIAL FIRE | 09012020SP     | SPECIAL FIRE FUND - AUGUST          | 09/01/2020   | 15,902.55          | .00         |           |
| 996         | TETON COUNTY SPECIAL FIRE | 09012020SP     | SPECIAL FIRE FUND - AUGUST          | 09/01/2020   | 12,747.40          | .00         |           |

| Vendor      | Vendor Name              | Invoice Number | Description                       | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|-------------|--------------------------|----------------|-----------------------------------|--------------|--------------------|-------------|-----------|
| Total 996:  |                          |                |                                   |              | 28,649.95          | .00         |           |
| 1355        | TETON COUNTY TRANSFER ST | 471466         | YARD WASTE                        | 08/06/2020   | 44.00              | .00         |           |
| 1355        | TETON COUNTY TRANSFER ST | 471540         | dim lumber                        | 08/06/2020   | 66.00              | .00         |           |
| 1355        | TETON COUNTY TRANSFER ST | 474392         | yard waste                        | 08/25/2020   | 96.00              | .00         |           |
| 1355        | TETON COUNTY TRANSFER ST | 475629         | dim lumber                        | 09/01/2020   | 57.00              | .00         |           |
| 1355        | TETON COUNTY TRANSFER ST | 475632         | dim lumber                        | 09/01/2020   | 28.00              | .00         |           |
| 1355        | TETON COUNTY TRANSFER ST | 476040         | yard waste                        | 09/03/2020   | 21.00              | .00         |           |
| Total 1355: |                          |                |                                   |              | 312.00             | .00         |           |
| 1614        | TETON COUNTY-FUND 10     | 08262020D      | DISPATCH - AUGUST BILLING         | 08/26/2020   | 26,964.56          | .00         |           |
| 1614        | TETON COUNTY-FUND 10     | 08262020P      | AUGUST - JOINT PLANNER            | 08/26/2020   | 3,900.10           | .00         |           |
| 1614        | TETON COUNTY-FUND 10     | 09012020P      | AUGUST PATHWAYS                   | 09/01/2020   | 6,152.45           | .00         |           |
| 1614        | TETON COUNTY-FUND 10     | PZ-2020-01     | Pathways: downtown pedestrian s   | 09/25/2020   | 1,975.74           | .00         |           |
| Total 1614: |                          |                |                                   |              | 38,992.85          | .00         |           |
| 166         | TETON COUNTY-FUND 19     | 090120         | AUGUST 2020 CAPITAL               | 09/01/2020   | 6,188.56           | .00         |           |
| Total 166:  |                          |                |                                   |              | 6,188.56           | .00         |           |
| 268         | TETON MOTORS INC         | 5094586        | tire sensor for sheriff           | 06/04/2020   | 44.83              | .00         |           |
| 268         | TETON MOTORS INC         | 5095677        | a/c condenser                     | 09/04/2020   | 136.51             | .00         |           |
| 268         | TETON MOTORS INC         | 5095681        | brakes                            | 09/08/2020   | 606.66             | .00         |           |
| 268         | TETON MOTORS INC         | 5095698        | sensors                           | 09/09/2020   | 245.00             | .00         |           |
| 268         | TETON MOTORS INC         | 5095725        | radiator                          | 09/11/2020   | 413.86             | .00         |           |
| Total 268:  |                          |                |                                   |              | 1,446.86           | .00         |           |
| 5846        | TETON TOOLS LLC          | 09082025067    | electric tools                    | 09/08/2020   | 416.20             | .00         |           |
| Total 5846: |                          |                |                                   |              | 416.20             | .00         |           |
| 6560        | THEMADJAJA, JAMIE LYNN   | 09222020       | REFUND NO COMPLIANCE BUS          | 09/22/2020   | 37.00              | .00         |           |
| Total 6560: |                          |                |                                   |              | 37.00              | .00         |           |
| 6579        | TITLE 22 CONSULTANTS     | 081420-R       | FY21 - 510 E Simpson Water Eas    | 09/30/2020   | 300.00             | .00         |           |
| Total 6579: |                          |                |                                   |              | 300.00             | .00         |           |
| 6363        | TMSC LLC                 | 2020-005-010   | breaker operator/complete replac  | 09/17/2020   | 16,000.00          | .00         |           |
| Total 6363: |                          |                |                                   |              | 16,000.00          | .00         |           |
| 6736        | TROIAN, VIOLETA          | 09222020       | BUSINESS LICENSE NON COM          | 09/22/2020   | 37.00              | .00         |           |
| Total 6736: |                          |                |                                   |              | 37.00              | .00         |           |
| 777         | UPPER CASE PRINTING INK  | 16170          | Water Bill Insert - August Town N | 08/31/2020   | 217.93             | .00         |           |
| Total 777:  |                          |                |                                   |              | 217.93             | .00         |           |
| 706         | USA BLUE BOOK            | 323104         | Dust Masks for sweeping and blo   | 08/10/2020   | 41.99              | .00         |           |

| Vendor      | Vendor Name                | Invoice Number | Description                         | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid  |
|-------------|----------------------------|----------------|-------------------------------------|--------------|--------------------|-------------|------------|
| Total 706:  |                            |                |                                     |              | 41.99              | .00         |            |
| 6731        | VINCI LAW OFFICE LLC       | 09242020       | GARNISHMENT #18119                  | 09/24/2020   | 252.13             | 252.13      | 09/24/2020 |
| Total 6731: |                            |                |                                     |              | 252.13             | 252.13      |            |
| 5022        | VISION SERVICE PLAN - (WY) | 810389989      | OCTOBER PREMIUM                     | 09/17/2020   | 1,763.80           | 1,763.80    | 09/22/2020 |
| Total 5022: |                            |                |                                     |              | 1,763.80           | 1,763.80    |            |
| 192         | WEBER, MICHELLE            | 09292020       | Sanitation supplies for CIT Trainin | 09/29/2020   | 71.90              | .00         |            |
| Total 192:  |                            |                |                                     |              | 71.90              | .00         |            |
| 6494        | WELLER TRUCK PARTS         | 401904931      | credit                              | 09/21/2020   | 1,200.00-          | .00         |            |
| Total 6494: |                            |                |                                     |              | 1,200.00-          | .00         |            |
| 6160        | WEST FORK CONSTRUCTION     | 1050003-004    | WWTP garage retainage final pay     | 05/19/2020   | 37,408.10          | .00         |            |
| Total 6160: |                            |                |                                     |              | 37,408.10          | .00         |            |
| 563         | WESTBANK SANITATION        | 3495717        | WWTP trash                          | 09/01/2020   | 1,428.80           | .00         |            |
| Total 563:  |                            |                |                                     |              | 1,428.80           | .00         |            |
| 1640        | WESTERN STATE              | IN001409830    | hydraulic couplings for backhoe     | 09/02/2020   | 476.44             | .00         |            |
| 1640        | WESTERN STATE              | IN001418199    | service call for motor grader       | 09/14/2020   | 1,197.38           | .00         |            |
| 1640        | WESTERN STATE              | IN001419081    | shift handle                        | 09/14/2020   | 363.50             | .00         |            |
| Total 1640: |                            |                |                                     |              | 2,037.32           | .00         |            |
| 6497        | WINTER & COMPANY           | 22729          | Town Square and Historic Preserv    | 08/18/2020   | 29,128.90          | .00         |            |
| Total 6497: |                            |                |                                     |              | 29,128.90          | .00         |            |
| 6704        | WOOD ENVIRONMENT & INFRA   | S34947131      | RFP DEVELOPEMENT                    | 08/25/2020   | 3,408.50           | .00         |            |
| 6704        | WOOD ENVIRONMENT & INFRA   | S34947274      | professional services for stormwat  | 09/25/2020   | 6,272.00           | .00         |            |
| Total 6704: |                            |                |                                     |              | 9,680.50           | .00         |            |
| 3619        | WY CHILD SUPPORT ENFORCE   | 09242020       | case #209790                        | 09/24/2020   | 146.76             | 146.76      | 09/24/2020 |
| Total 3619: |                            |                |                                     |              | 146.76             | 146.76      |            |
| 4139        | WY WORKERS' SAFETY & COM   | 09282020       | OCTOBER PREMIUM                     | 09/28/2020   | 1,877.84           | 1,877.84    | 09/28/2020 |
| Total 4139: |                            |                |                                     |              | 1,877.84           | 1,877.84    |            |
| 4198        | WYOMING FIRST AID & SAFETY | 194325         | First aid supplies                  | 09/24/2020   | 135.05             | .00         |            |
| Total 4198: |                            |                |                                     |              | 135.05             | .00         |            |
| 329         | WYOMING RETIREMENT SYST    | 198543         | SEPTEMBER CONTRIBUTIONS             | 09/28/2020   | 30,382.73          | 30,382.73   | 09/28/2020 |
| 329         | WYOMING RETIREMENT SYST    | 198544         | SEPTEMBER CONTRIBUTIONS             | 09/28/2020   | 25,748.70          | 25,748.70   | 09/28/2020 |
| 329         | WYOMING RETIREMENT SYST    | 198545         | SEPTEMBER CONTRIBUTIONS             | 09/28/2020   | 46,915.34          | 46,915.34   | 09/28/2020 |

| Vendor        | Vendor Name               | Invoice Number | Description                        | Invoice Date | Net Invoice Amount | Amount Paid | Date Paid |
|---------------|---------------------------|----------------|------------------------------------|--------------|--------------------|-------------|-----------|
| Total 329:    |                           |                |                                    |              | 103,046.77         | 103,046.77  |           |
| 6717          | WY-TEST                   | 36182          | Random urine drug screen DOT F     | 09/16/2020   | 80.00              | .00         |           |
| Total 6717:   |                           |                |                                    |              | 80.00              | .00         |           |
| 5539          | Y2 CONSULTANTS, LLC       | 16778          | record drawings                    | 09/03/2020   | 663.50             | .00         |           |
| Total 5539:   |                           |                |                                    |              | 663.50             | .00         |           |
| 2842          | YELLOW IRON EXCAVATION, L | 49789          | 8 additional trash cans in the Tow | 09/30/2020   | 2,270.00           | .00         |           |
| Total 2842:   |                           |                |                                    |              | 2,270.00           | .00         |           |
| Grand Totals: |                           |                |                                    |              | 489,917.12         | 119,955.70  |           |

Dated: \_\_\_\_\_

Mayor: \_\_\_\_\_

City Council: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

City Recorder: \_\_\_\_\_

City Treasurer: \_\_\_\_\_

## Report Criteria:

Detail report.

Invoices with totals above \$0 included.

Paid and unpaid invoices included.

**TOWN OF JACKSON VISA BILLS**

**ANIMAL SHELTER/CONTROL**

|                     |                  |
|---------------------|------------------|
| smiths              | 52.06            |
| dash medical gloves | 84.90            |
|                     | <b>\$ 136.96</b> |

**COMMUNITY DEVELOPMENT**

|             |                  |
|-------------|------------------|
| facebook ad | 2.76             |
| albertsons  | 8.98             |
| vistaprint  | 5.00             |
| vistaprint  | 5.30             |
| vistaprint  | 238.37           |
| soundcloud  | 144.00           |
|             | <b>\$ 404.41</b> |

**EMPLOYEE HOUSING**

|                           |                  |
|---------------------------|------------------|
| genuine replacement parts | 135.13           |
| zoro tools                | 135.24           |
|                           | <b>\$ 270.37</b> |

**FLEET SHOP**

|        |                  |
|--------|------------------|
| amazon | 23.61            |
| amazon | 47.22            |
| anazon | 30.60            |
|        | <b>\$ 101.43</b> |

**INFORMATION TECHNOLOGY**

|                       |                    |
|-----------------------|--------------------|
| concrete 5 paypal     | 90.00              |
| wondershare hong kong | 49.95              |
| garamin               | 64.95              |
| iACP                  | 75.00              |
| amazon                | 78.99              |
| iphone payment        | 193.50             |
| noregon systems       | 800.00             |
| dropbox               | 1,200.00           |
| dish network          | 0.05               |
| logmein               | 25.44              |
|                       | <b>\$ 2,577.88</b> |

**PERSONNEL/TOWN CLERK**

|                |                  |
|----------------|------------------|
| casper college | 275.00           |
| ace hardware   | 299.99           |
| jh flowers     | 99.50            |
|                | <b>\$ 674.49</b> |

**POLICE - ADMINISTRATION**

|                    |                  |
|--------------------|------------------|
| zoom               | 158.90           |
| american red cross | 30.00            |
| apple              | 127.19           |
|                    | <b>\$ 316.09</b> |

**POLICE - COMMUNITY SERVICE**

|                                |                      |
|--------------------------------|----------------------|
| credit national animal control | (1,190.00)           |
|                                | <b>\$ (1,190.00)</b> |

**POLICE - INVESTIGATIONS**

|     |                 |
|-----|-----------------|
| ups | 12.75           |
| ups | 8.50            |
| ups | 18.18           |
|     | <b>\$ 39.43</b> |

**POLICE - PATROL**

|                                     |                    |
|-------------------------------------|--------------------|
| amazon                              | 2.50               |
| travel to chubbuck                  | 34.00              |
| credit airbnb                       | (63.80)            |
| credit hilton memphis               | (1,189.14)         |
| travel expenses douglas             | 54.53              |
| travel expenses douglas             | 78.62              |
| travel expenses douglas             | 68.42              |
| travel expenses Alice training      | 300.27             |
| travel expenses douglas             | 71.28              |
| travel expenses fbi command college | 792.88             |
| travel expenses hostage training    | 1,553.45           |
|                                     | <b>\$ 1,703.01</b> |

**PUBLIC WORKS**

|          |                  |
|----------|------------------|
| b2b plan | 179.00           |
|          | <b>\$ 179.00</b> |



|                                |                                  |                    |
|--------------------------------|----------------------------------|--------------------|
|                                | <b><u>SEWER DEPARTMENT</u></b>   |                    |
| amazon                         |                                  | 45.00              |
|                                |                                  | <b>\$ 45.00</b>    |
|                                | <b><u>START</u></b>              |                    |
| Coolworks                      |                                  | 149.00             |
| amazon foamicide for fogger    |                                  | 156.84             |
| amazon fogger                  |                                  | 221.53             |
| amazon tyvek suit for cleaning |                                  | <b>\$ 32.22</b>    |
|                                |                                  | <b>\$ 559.59</b>   |
|                                | <b><u>TOWN-WIDE SERVICES</u></b> |                    |
| amazon                         |                                  | 319.99             |
| amazon                         |                                  | 69.40              |
|                                |                                  | <b>\$ 389.39</b>   |
|                                | <b><u>VICTIM SERVICES</u></b>    |                    |
| staples                        |                                  | 128.01             |
| coca cola                      |                                  | 10.60              |
| dominos                        |                                  | 41.06              |
|                                |                                  | <b>\$ 179.67</b>   |
|                                | <b><u>WATER DEPARTMENT</u></b>   |                    |
| ceuplan                        |                                  | 139.75             |
|                                |                                  | <b>\$ 139.75</b>   |
| VISA ALLOCATION                |                                  | <b>\$ 6,526.47</b> |

# STAFF REPORT



**MEETING DATE & TITLE:** October 5, 2020 Regular Town Council Evening Meeting

**SUBMITTING DEPARTMENT:** Administration

**PRESENTER:** Carl Pelletier

**SUBJECT:** Special Event: JHHS Homecoming Parade

**PUBLIC COMMENT:**

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## **PURPOSE & POLICY CONSIDERATIONS:**

To consider the special event request made by the Jackson Hole High School to host a 2020 Homecoming vehicle parade. This request involves the use of public space and personnel.

## **REQUESTED ACTION:**

Approve or deny the special event request for the Homecoming Parade submitted by the Jackson Hole High School.

## **RECOMMENDATION:**

Approval of the Jackson Hole High School Homecoming special event request.

## **BACKGROUND:**

On Friday, October 9, 2020, Jackson Hole High School requests Council permission to hold a driving parade to celebrate their homecoming. Due to COVID-19, several of the traditional homecoming events have been cancelled (notably a high school dance).

This event would be very similar to a request which was approved earlier this year for the Jackson Hole High School graduation parade.

Cars in the homecoming parade would travel from JHHS to the TC Fairgrounds parking lot. Once assembled in the Fairgrounds parking lot the vehicles would be joined by vehicles from the Jackson Police Department, Teton County Sheriff Department and Jackson Hole Fire/EMS. The vehicles would then proceed towards the Jackson Town Square and circle the Town Square before returning to the TC Fairgrounds parking lot. It is estimated that this parade would last from approximately 1:00pm until 1:30pm. It is estimated that 200 vehicles would be involved in the procession.

There are no road closure requests associated with this application, but the organizers have requested the Police Department to provide escort and traffic control at some of the major intersections in town to allow the procession to proceed throughout the parade route.

The Police Department indicated that they could utilize 6 on-duty patrol officers and 2 community service officers on the town route.

The applicant will work with the Jackson Police Department on the details of the route and exact operations. The Police Department has indicated that they would provide a plan for the applicant to follow as well as a briefing to all of the participants prior to the procession.

## **ANALYSIS:**

This request has been submitted to all departments for review including the Teton County Health Department. The organizers would work with the Jackson Police Department to develop an exact route and plan. The organizers are working with the Teton County Department of Health to ensure that all current health orders are met. If the public health orders were to change prior to October 9, 2020, the applicant would need to abide by all current health orders.

**ALTERNATIVES:**

N/A

**COMPREHENSIVE PLAN & PRIORITY ALIGNMENT:**

This event aligns with our Quality of Life which is important to our community. We have always been a diverse community that supports a variety of lifestyles and employment opportunities, and we welcome others to share in the enjoyment of our ecosystem and western mountain lifestyle.

**FISCAL IMPACT:**

N/A

**STAFF IMPACT:**

Staff impact would include the utilization of all 6 JPD patrol officers on duty that day as well as the 2 Community Service Officers on duty that day to provide an escort on the parade route.

**ATTACHMENTS OR LINKS:**

Special event application

**SUGGESTED MOTION:**

I move to approve the request made by Jackson Hole High School for the homecoming car procession as presented in the staff report.

# Special Event Application

## Submit Completed Document To:

Town Hall  
Town of Jackson - Special Events  
150 East Pearl Street  
P.O. Box 1687  
Jackson, Wyoming 83001

cpelletier@townofjackson.com  
(307) 733-3932 ext. 1112 (phone)  
(307) 739-0919 (fax)



**A completed application  
must be submitted at least  
21 days prior to your event.**

Non-Profit Fee: \$25  
For-Profit Fee: \$150

## APPLICANT INFORMATION

Name of Event: Homecoming Parade

Name of Organization: Teton County School District - Jackson Hole High School

Type of Organization: ☐ Non-Profit ☒ Public Agency ☐ For-Profit Business

Mailing Address: PO Box 568

City: Jackson State: WY Zip Code: 83001

Name of Person Completing Application: Michael Hansen

Email Address: mhanzen@tcsd.org

Work Phone: 3072001942 Cell Phone: 3072001942

## EVENT INFORMATION

Type of Event: ☐ Run / Walk ☐ Concert ☐ Filming ☐ Assembly  
☒ Parade ☐ Festival ☐ Biking ☐ Education  
☐ Other: \_\_\_\_\_

Description & Purpose of Event *(Attach additional sheets if necessary):* \_\_\_\_\_

Homecoming Parade since we will not likely have some other homecoming events, notably a

Location of Event: From the fairgrounds, around the Alternative Location: Whatever route the

Date(s) of Event: 10/9/2020 Event Operating Hours: 30 minutes

Event Set Up Begins Date: October 09, 2020 Time: 1:30

Event Clean Up Ends Date: October 09, 2020 Time: 2:30

# Special Event Application

## EVENT INFORMATION (Continued)

Estimated Event Attendance (Spectators and Participants) Per Day: 300 Total Event: 300

Special Considerations (check all that apply):

- |                                              |                                               |                                                |
|----------------------------------------------|-----------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Alcoholic Beverages | <input type="checkbox"/> Cooking/Grilling     | <input type="checkbox"/> Electricity Requested |
| <input type="checkbox"/> Food Sales          | <input type="checkbox"/> Merchandise Sales    | <input type="checkbox"/> Recurring Event       |
| <input type="checkbox"/> Ticketed Admission  | <input type="checkbox"/> Sound Amplification  | <input type="checkbox"/> Pets or Animals       |
| <input type="checkbox"/> Tents               | <input type="checkbox"/> Street Closure       | <input type="checkbox"/> Sidewalk Closure      |
| <input type="checkbox"/> Overnight Parking   | <input type="checkbox"/> Overnight RV Camping | <input type="checkbox"/> Use of Town Square    |

Event Co-Sponsor (s): \_\_\_\_\_

***All for-profit organizations must submit a letter of event sponsorship from a non-profit organization if sales are requested on public property.***

Will you be charging admission or a fee for your event? ☐ Yes ☐ No

Alternative Contact Information During the Event (someone besides applicant who will be on site and available for Town personnel or Police to contact during the event):

Name: Dan Abraham Cell Phone: 307-413-7570

## EVENT SITE PLAN

On a separate sheet of paper, provide a Site Plan sketch of the event. Include maps or a diagram of the entire event including the names of streets or areas that are part of the venue and the surrounding area. The plan should include the following (if applicable):

- |                                                         |                                                           |
|---------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Tents (X)                      | <input type="checkbox"/> Food Vendors (FV)                |
| <input type="checkbox"/> Beverage Vendors (BV)          | <input type="checkbox"/> Alcohol Vendors (A)              |
| <input type="checkbox"/> Portable Toilets (T)           | <input type="checkbox"/> Hand Washing Sink (HWS)          |
| <input type="checkbox"/> Stages or Amplified Sound (SO) | <input type="checkbox"/> Bleachers (BL)                   |
| <input type="checkbox"/> Garbage Receptacles (G)        | <input type="checkbox"/> Recycling Receptacles (RR)       |
| <input type="checkbox"/> Retail Merchants (RM)          | <input type="checkbox"/> Security (P)                     |
| <input type="checkbox"/> Fire Lane (FL)                 | <input type="checkbox"/> Fire Extinguishers (EX)          |
| <input type="checkbox"/> First Aid / EMS (FA)           | <input type="checkbox"/> Barricades (B)                   |
| <input type="checkbox"/> Electricity / Generator (EL)   | <input type="checkbox"/> Trailers, Vehicles, Storage (TR) |

***Fire hydrants or sidewalk curb breaks that are used for ADA accessibility may not be blocked at any time.***

# Special Event Application

## STREET / SIDEWALK / PUBLIC PARKING LOT - CLOSURE REQUESTS

Will the event close any street, sidewalk, alley or public parking lot? ☐ Yes ☐ No

| Area of Closure Request | Date(s) | Start Time | End Time |
|-------------------------|---------|------------|----------|
|-------------------------|---------|------------|----------|

Not necessarily looking for a closure, just a route where we could have a parade with fire/ems

The applicant will be responsible for production, posting and removal of "No Parking" and "Handicap Parking" signs along Town streets where public parking spaces exist within the event site. If the event involves a closure this will be need to be coordinated with the Jackson Police Department at least 2 weeks prior to the requested closure date. Jackson Police Department: (307) 733-1430. All parking signs, road signs, cones and barricades must be taken down immediately following the event's ending time.

Will the event restrict / close access to any public parking spaces? ☐ Yes ☒ No

If "Yes", how many parking spaces will be unavailable due to the event: \_\_\_\_\_ parking spaces

Will the event closure requests impact any START Bus routes? ☐ Yes ☒ No

If "Yes", which routes will be impacted? Has START Bus been contacted about this impact?

Route Description: \_\_\_\_\_ START Bus contacted? ☐ Yes ☐ No

## RESIDENT AND/OR BUSINESS NOTIFICATION

Events that require road closures, parking space closures, or sidewalk closures or may cause disruption for the Town of Jackson residents, businesses, churches, etc. may be required to mail or hand deliver notification to the affected parties within a two block radius at least one week prior to the event's Town Council consideration meeting. Notices must reflect the date(s), day(s), time(s) and location(s) of the event, types of activities taking place at the event, the event coordinator's contact information and the date and time of the Town Council meeting.

Have you provided a sample of the notice and a proposed list of recipients?

☐ Yes ☒ No



# Special Event Application

## TOWN EQUIPMENT REQUESTS

Indicate the type and the quantity of items that you are requesting:

|                                 |                                         |
|---------------------------------|-----------------------------------------|
| _____ Large Street Barricades   | _____ "Road Closed" Street Signs        |
| _____ Small Sidewalk Barricades | _____ "Local Traffic Only" Street Signs |
| _____ 28 Inch Street Cones      | _____ "Detour" Street Signs             |
| _____ Candlestick Cones         | _____ 32-Gallon Recycling Bins          |

☼ The equipment above can be arranged through the Public Works Department (307) 733-3079. A \$500 deposit will be required at the time of pick-up for equipment. The applicant is responsible for arranging the pick up of equipment from the Public Works Department as well as returning equipment immediately following the event. The Town of Jackson will only deliver equipment to parades and Town sponsored events.

☼ The Town of Jackson has a very limited number of recycling bins that can be utilized as part of your event's recycle plan. The applicant will be responsible for emptying the recycle containers and cleaning the bins before they are returned to the Public Works Department.

☼ If you are uncertain of the exact number of equipment needed please feel free to contact either the special event coordinator or the Public Works Department for additional information.

☼ Additional equipment such as bleachers, electrical spiderboxes, etc., can be requested through the Parks and Recreation Department (307) 732-5753.

## TOWN SERVICES REQUESTS

Indicate the Town services that you are requesting. *Please note: you will need to coordinate services with individual departments and a fee may be associated with your request.*

### POLICE DEPARTMENT

(307) 733-1430

|                                             |                                                              |                                                             |
|---------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Event Security     | <input type="checkbox"/> Mounted Horse Patrol                | <input type="checkbox"/> Traffic Control                    |
| <input type="checkbox"/> Race Lead Vehicle  | <input checked="" type="checkbox"/> Parade Lead Vehicle      | <input type="checkbox"/> General Presence                   |
| <input type="checkbox"/> Towing / Ticketing | <input type="checkbox"/> Assistance with<br>Parking Closures | <input type="checkbox"/> Assistance with<br>Street Closures |

Please describe in detail your request: \_\_\_\_\_

I emailed the chief of both JPD and TCSO

**The Chief of Police determines if police services will be needed at the special event for public safety concerns. The Chief of Police will also determine the number of police officers to staff the event. Fees may be associated with the need for additional police services at the event.**

# Special Event Application

## TOWN SERVICES REQUESTS (Continued)

### PUBLIC WORKS DEPARTMENT (307) 733-3079

☐ Street Sweeping

☐ Snow Removal

☐ Street Marking

Please describe in detail your request

### PARKS AND RECREATION DEPARTMENT (307) 732-5753

☐ Irrigation Locates - Any event placing stakes in turf must obtain irrigation locates.

☐ Electricity Access

☐ Turf / Tree Care - Any additional mowing, raking, trimming or spraying needs.

☐ Additional Public Restroom Cleaning

Please describe in detail your request: \_\_\_\_\_

*\*Please note: if you are requesting the use of a public park or public ball field you must confirm and reserve your space through the Parks and Recreation Department. The only exception is George Washington Memorial Park (Town Square), which does not require a reservation form.*

Is the requested event site a public park or ball field? ☐ Yes ☐ No

If "Yes", has the site been reserved with Parks and Recreation? ☐ Yes ☐ No

### FIRE / EMS DEPARTMENT (307) 733-4732

☐ Foot Patrol

☐ Ambulance

☐ Fire Engine

☐ Rescue Truck

☐ Bicycle Patrol

☐ Event Site Inspection

Please describe in detail your request: \_\_\_\_\_



# Special Event Application

## TOWN SERVICES REQUESTS (Continued)

START BUS

(307) 732-8651

☐ Event Specific Shuttle(s)

Please describe in detail your request: \_\_\_\_\_

## VOICE / MUSIC AMPLIFICATION REQUESTS

Will your event have any amplified sound? ☐ Yes ☒ No

If "Yes", please indicate times: Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_

Will your event feature any musical entertainment? ☐ Yes ☒ No

*If "Yes", please attach the schedule of any music or entertainment proposed to occur during event.*

## SIGN or BANNER REQUESTS

Are you requesting to hang signs or banners? ☐ Yes ☒ No

If "Yes", have you completed a sign permit application? ☐ Yes ☐ No

*A Sign Permit Application will need to be submitted along with this application if signs are requested. This permit can be accessed on the Town of Jackson website or through the Planning Department.*

## INSURANCE REQUIREMENTS

An insurance certificate is required prior to the start of your event. This certificate must name the "Town of Jackson as an additional insured including its Officers, Officials, Employees, and Volunteers" and must also state that coverage is primary and non-contributory is required for every event. Insurance limits must be at least \$1,000,000/occurrence and \$1,000,000 aggregate. **The additional insured language on the certificate may not include any limitations or exclusions.** Insurance certificates are subject to the review and approval of the Town Attorney. Please be sure to include alcohol liability if there will be alcohol at the event. You must supply insurance before your event.

A certificate of insurance is attached: ☐ Yes ☒ No

## Special Event Application

## PORTABLE RESTROOMS AND SINKS

**The Town of Jackson requires the applicant to provide additional chemical toilets or portable toilets for all events with an anticipated peak time attendance exceeding 75 people.**

You are required to provide portable restroom facilities at your event unless you can substantiate the sufficient availability of both ADA accessible and non-accessible facilities in the immediate area of the event site which will be available to the public during your event. The Town of Jackson may determine the total number of required restroom facilities required on a case-by-case basis based on the presence of food and drink at the event and the maximum number of attendees at your event during peak time. The Town of Jackson may determine that you need to coordinate with Parks and Recreation for additional public restroom cleanings if you intend on using a public restroom as part of your restroom facility plan.

Do you plan to provide portable restroom facilities? ☐ Yes ☒ No

If "Yes", please indicate the total number of portable toilets and number of ADA accessible toilets.

Total Number of Portable Toilets: \_\_\_\_\_ Number of ADA Accessible Portable Toilets: \_\_\_\_\_

If "No", please explain: Only in vehicles for 30 minutes and we will have bathrooms at the school

**Portable restrooms may not be located within 50 feet of any food vendor.**

Restroom Company: \_\_\_\_\_

Restroom Drop off / Pick Up      Date for Drop Off:      Time for Drop Off:\_\_\_\_\_

Date for Pick Up: \_\_\_\_\_ Time for Pick Up: \_\_\_\_\_

## ALCOHOL

Will there be alcoholic beverages at the event? ☐ Yes ☒ No

Will you be offering any alcoholic beverages besides beer? ☐ Yes ☒ No

If "Yes", what will be offered in addition to beer?

*If you are planning on serving alcoholic beverages at your event, then either a completed Malt Beverage Permit (beer only) or Catering Permit (beer, wine and/or spirits) must be submitted. You can access these applications on the Town of Jackson website.*

# Special Event Application

## VENDORS / MERCHANTS / SALES

Will anything be sold at your event?

☐ Yes

☒ No

***If you are planning on selling items at your event then you will need to complete either an Exposition Business License (for 2 or more vendors) or a Transient Merchant License (for 1 vendor). A complete list of vendors, including a vendor tax ID, must be submitted to the Town of Jackson and to the State of Wyoming's Department of Revenue prior to the event. Both the Exposition License and the Transient Merchant License are on the Town of Jackson's website.***

Please describe any sales activity at your event:

Will any food or beverages be sold at your event?

☐ Yes

☐ No

***If "Yes", you will need to contact the Teton County's Department of Environmental Health prior to the event (307) 732-8490.***

## TRASH REMOVAL PLAN

All events are required to have a plan for the collection removal of trash during and after the event. The trash receptacles located in the Town parks, parking lots, ball fields, sidewalks and public restrooms should not be included in the waste removal plan. ***For assistance with formulating a Trash Removal Plan please contact Integrated Solid Waste and Recycling at (307) 732-5771.***

Will you be using a waste company for your waste removal plan?

☐ Yes

☒ No

If "Yes", which company will you be using? \_\_\_\_\_

How many trash receptacles will be supplied for your event? \_\_\_\_\_

When will the trash receptacles be delivered? \_\_\_\_\_

When will the trash receptacles be picked up and removed from site? \_\_\_\_\_

Describe your plan for the collection and removal of trash during your special event:

No trash will be accrued I do not think

***Applicants are responsible for cleaning and restoring the site immediately following the event. Please pick up all trash associated with your event including, but not limited to paper, bottles, cans, signs, course markings, etc. The cost of any employee overtime incurred because of an applicant's failure to clean / restore the site following the event will be borne by the applicant and will be considered in future application requests. If you believe that no litter will be generated during your event please state this in your plan.***

# Special Event Application

## SUSTAINABLE EVENT PLANNING

The Town of Jackson encourages all special events to strive to be sustainable in our community and for our environment. We have partnered with the **Teton County Integrated Solid Waste and Recycling (ISWR)** to offer opportunities to help your special event to be as "green" as possible. Opportunities available:

- ☐ Rental / Use of Recycling Bins for Special Events
- ☐ Use of JH20 Water Bottle Refilling Station for Special Events
- ☐ Consultation on Conducting Green Special Events

Please contact the Waste Diversion and Outreach Coordinator at ISWR at 307-732-5771.

## RECYCLING PLAN

All events are required to have a plan for the collection and removal of recyclable materials during and after the event. The recycling receptacles located in the Town parks, parking lots, ball fields, sidewalks and public restrooms should not be included in the recycling collection and removal plan. ***For assistance with formulating a Recycling Plan please contact Teton County Integrated Solid Waste and Recycling (ISWR) at (307) 732-5771.***

Will you be using a company for your recycling plan?

☐ Yes

☒ No

If "Yes" which company will you be using? \_\_\_\_\_

How many recycling receptacles will they (or you) supply for your event? \_\_\_\_\_

When will these recycling receptacles be delivered? \_\_\_\_\_

When will recycling receptacles be picked up and removed from site? \_\_\_\_\_

Describe your plan for collection and removal of recyclable materials during your special event:  
No recycling should be accrued

*Applicants are responsible for cleaning and restoring the site immediately following the event. If you believe that no recyclable materials will be generated during your event please state this in your plan. For a list of recyclables and how they need to be sorted, or for information about where the recycling bins are located call ISWR (307) 732-5771.*

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# Special Event Application

## SIGNIFICANT EVENT CHANGES

Has this event been approved in the Town of Jackson in previous years?

☒ Yes

☐ No

If "YES" please indicate any significant changes to the event request since its last approval:

I have been told there used to be a homecoming parade but that it has not happened in many, many, years

## STANDARD CONDITIONS OF APPROVAL

***Please review the following standard list of conditions and restricts for events. Initial the bottom of each page indicating that you have read, understand and agree to these conditions and restrictions.***

### GENERAL

The event shall be conducted in a timely, safe and professional manner.

All town ordinances, including, but not limited to noise, possession and use of weapons, open fires and animals (including the prohibition of dogs in any town park) shall apply to all events except where specifically granted relief by the Town Council.

The applicant shall advise and instruct all participants, volunteers, vendors, merchants and spectators on event conditions, restrictions, prohibitions and responsibilities as indicated by the Town Council in the staff report.

Initials: MH

# Special Event Application

## STANDARD CONDITIONS FOR ALL EVENTS (continued)

### TRASH / CLEAN UP

The applicant shall clean up immediately following each event and shall be responsible for the collection and removal of all refuse generated by the event.

If trash will be generated from the event, then the applicant must supply extra trash and containers and dispose of all trash generated by the event. Trash containers shall not be permitted to overflow.

If recyclable materials are generated from the event, then the applicant is required to provide recycling containers and provide for the removal of all recycled material. Recycling containers shall not be permitted to overflow.

### STREETS

Fire department access roads shall have and maintain a clear and unobstructed width of 20 feet and unobstructed vertical clearance of not less than 13 feet 6 inches to allow for emergency vehicle traffic along ALL areas of open and closed streets (IFC 503.2.1). Booths and tents may be erected on either side of street, however, a 20 foot straight path must be provided.

### SIDEWALKS

The applicant shall not block walkways or otherwise obstruct pedestrian traffic.

All walkways, boardwalks, entrances and ADA ramps must be kept open and unobstructed at all times

All power and sound cords that cross walkways shall be taped and secured to avoid a tripping hazard.

### POWER / ELECTRICAL

Electrical power is available from Town Square. The applicant shall coordinate all power needs with the Parks & Recreation Department's Park Manager (307-733-5057) at least three (3) business days prior to the event.

All power and sound cords that cross walkways shall be taped and secured to avoid a tripping hazard.

All electrical/temporary power shall be in accordance with the 2011 National Electric Code and subject to inspection from this Department (IFC 605.9).

### ADDITIONAL PERMIT & LICENSE FEES

The applicant shall apply and pay for all licenses and/or permits prior to the events.

Initials: MH

# Special Event Application

## STANDARD CONDITIONS FOR ALL EVENTS (continued)

### TOWN EQUIPMENT

The use of the Parks & Recreation Department bleachers shall be coordinated through that department (307) 732-5753.

Barricade, road sign, cone and recycle bin use shall be coordinated through the Public Works Department. The applicants shall be responsible for pick up, setup, placement and disassembly and return. All equipment use require a \$500 damage deposit that must be submitted at the time of pick up at the Public Works Department to protect against any loss or damage.

All barricades, cones, bins and road signs must be removed immediately following the event. These items must be returned the same location as they were picked up.

### PORTABLE RESTROOMS

If applicable, the applicant shall provide an adequate number of port-a-potties at the event site and shall arrange for their removal immediately at the conclusion of the event.

The applicant shall ensure all port-a-potties are placed on paved areas.

### INSURANCE

The applicant and all participating organizations are required to maintain liability insurance in the amount of \$1,000,000.00. Prior to the event, each organization shall provide a certificate of insurance naming the Town of Jackson as an additional insured including its Officers, Officials, Employees, and Volunteers and must also state that coverage is primary and non-contributory. The Town Attorney shall approve all certificates of insurance.

### FOOD / VENDING

The applicant shall obtain the necessary food service permits from Teton County Environmental Health.

The applicant shall provide additional trash receptacles in the food service areas.

Per Section 5.20 of the Municipal Code: The applicant shall be responsible for ensuring that all sales tax receipts are remitted to the Wyoming Department of Revenue and in no event later than the thirtieth day of the month following the exposition [and] acquire and keep on file names, addresses and phone numbers of all participants.

In addition to providing a list of all participating vendors, artists, and merchants, along with their social security numbers and addresses, to the Wyoming Department of Revenue, pursuant to Jackson Municipal Code Section 5.20.020 A.1.b., the applicant shall also provide that same list to the Town of Jackson Finance Department.

Vendors shall not dump hot water or other liquids on the turf.

Initials: MH

# Special Event Application

## STANDARD CONDITIONS FOR ALL EVENTS (continued)

### ALCOHOL

The applicant shall take all measures necessary to comply with applicable alcohol dispensing laws and regulations, including the prevention of sales to and consumption by minors and the prohibition of consumption off the authorized premises. All ID's must be checked and ID bracelet system may be required.

Only 16oz or small plastic cups are used for beer and alcohol sales.

No alcohol shall be served in bottles or glass containers.

The applicant shall be responsible to be alert to and report any instances of underage drinking to the Jackson Police Department.

It is recommended that servers be TIPS trained prior to serving alcohol. No "over serving" shall be allowed to occur or serving to obviously intoxicated persons.

Participants shall not be permitted to leave the event with open containers.

No more than two beers shall be sold to any person at any one time.

### TOWN PARKS

The applicant shall coordinate the use of any public park (including the Town Square), including reservations, paperwork and applicable fees, with the Parks and Recreation Department.

The applicant shall coordinate park reservation and the payment of Parks & Recreation fees at least 30 days prior to the event.

The applicant is required to provide turf protection in front of and behind any table or other exhibit where crowds will stand. The applicant shall abide by all Parks & Recreation Department recommendations with regards to turf protection.

Vehicles are prohibited on all turf areas of any park or anywhere within the Town Square.

No trees or other forestry may be moved, modified, damaged or destroyed to set up booths, tents, or exhibits. No ropes, exhibits, signs, banners or booths may be secured to any live forestry.

Use of Town Square shall be subject to the submission to and approval of staff of a detailed site plan, indicating set-up, safety procedures and turf protection, and the imposition of such other conditions or restrictions deemed necessary.

Irrigation locates are required if stakes are placed in the ground. Applicant may forfeit damage deposit if an irrigation locate is not conducted and irrigation equipment is damaged.

Per Municipal Code, dogs are not allowed in Town Parks.

Initials: MH



# Special Event Application

## STANDARD CONDITIONS FOR ALL EVENTS (continued)

### TENTS

Irrigation locates are required before any tents may be erected or stakes or any other items are placed in any public park, including the Town Square. The applicant shall coordinate all water locates with the Parks & Recreation Department's Park Manager (307-732-5793) at least three (3) business days prior to the event.

All tents having an area in excess of 200 square feet shall require advance permitting through the Fire Department unless open on all sides (IFC 105.6.43).

Tents which can hold over 50 or more occupants must provide the Fire Department with a detailed site and floor plan detailing means of egress, seating capacity, location and type of heating and electrical equipment (IFC 3103.6).

Tents, canopies or membrane structures shall not be located within 20 feet of lot lines, buildings, other tents, canopies or membrane structures, parked vehicles or internal combustion engines (IFC 3103.8.2).

Tents must meet the flame propagation performance criteria of NFPA 701 (IFC 3104.2).

Combustible materials shall not be located within any tent, canopy or membrane structure in use for public assembly (IFC 3104.5).

Smoking shall not be permitted in tents, canopies or membrane structures. Approved "No Smoking" signs shall be conspicuously posted (IFC 3104.6).

All open flame devices are strictly prohibited within tents unless approved by the fire code official (IFC 3104.7)

Portable 2A:10B-C fire extinguishers shall be provided, one minimum, for tents requiring permits with a 75 foot travel distance (IFC 3104.12).

Any cooking performed within tents shall require advance approval by the Fire Department (IFC 3104.15.3 – 3104.15.7).

Generators and other internal combustion power sources shall be separated from tents, canopies or membrane structures by a minimum of 20 feet and shall be isolated from contact with the public by fencing, enclosure or other approved means (IFC 3104.19).

### FAIR GROUNDS / RODEO GROUNDS

All use of the Rodeo Grounds shall be coordinated through and subject to the approval of the Fair Manager under the authority of the Parks and Recreation Department.

Anyone camping at the Rodeo Grounds shall indicate that they are affiliated with the group by placing a card in the windshield of their vehicle. Campers are reminded that fires are not permitted.

Initials: MH

# Special Event Application

## STANDARD CONDITIONS FOR ALL EVENTS (continued)

### ROAD CLOSURES / PUBLIC PARKING CLOSURES

The applicant shall notify all business, residences, churches, etc. affected by the street closures and public parking closures prior to the public hearing.

The applicant shall notify, in advance, all business, residences, churches, etc. affected by the street closures and public parking closures and shall provide advance community radio and/or newspaper announcements regarding the event and the closures.

The applicant shall coordinate all road closures with the Police Department and shall provide an adequate number of volunteers to assist with traffic control and barricade setup/removal during each event.

The applicant shall coordinate all road closures with START, Fire/EMS, Public Works and the Police Department. Volunteer placement and assignments shall be reviewed and approved in advance with the Police Department.

The applicant shall be responsible for producing, posting and removing the temporary No Parking signs. No Parking signs must be posted two days prior to the parking closures. The applicant should meet with the Police Department two weeks prior to the event to discuss the procurement, posting and removal of the signs.

Emergency vehicle access lanes shall be maintained during the event.

### FIREWORKS

All fireworks displays must be approved by the Fire Chief prior to the event.

The Fire Department will monitor the firing area potential for wildfire. The Department will make recommendations directly to the applicant for mitigation and will give final approval the day of the event.

The application shall be subject to the review and approval of the Fire Department and any additional conditions or restrictions placed by such Department.

***Please note, that the conditions and restrictions listed above are standard for special events held in Town, additional conditions or restrictions may be required by the Town Council and/or staff upon further review of the application.***

I have read and understand the standard conditions for events. I have answered all of the questions in this application truthfully and to the best of my knowledge.

APPLICANT:   
Signature

APPLICANT: Michael M Hansen  
Printed Name

DATE: 09/16/2020

TITLE: Activities Director

# STAFF REPORT



**MEETING DATE & TITLE:** October 5, 2020; Council Regular Meeting

**SUBMITTING DEPARTMENT:** Planning Department      **PRESENTER:** Paul Anthony

**SUBJECT: P20-170** TEMPORARY SIGN PERMIT – Teton County Search & Rescue Foundation – Wyoming Snow & Avalanche Workshop

**PUBLIC COMMENT:** Yes

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## **PURPOSE & POLICY CONSIDERATIONS:**

To approve or deny relief from the Town's sign ordinance for the use of temporary signage not requiring a special event or exposition license.

## **REQUESTED ACTION:**

The applicant has requested temporary banners under Section 5.6.1.C.4.d of the LDRs to be located at:

105 Buffalo Way, Albertsons during:  
October 11, 2020 to October 25, 2020

10 E. Snow King Avenue, Phil Baux Park, during:  
October 11, 2020 to October 25, 2020

Section 6.5.1.C.4 of the Town's Land Development Regulations allows Council to approve up to four (4) off-site banners. The event does not require any Town services; therefore, a special event license is not required. Staff recommends approval, as the Town has permitted such signs in the past, as long as all other regulations for signage are complied with.

## **RECOMMENDATION:**

The Planning Director recommends **approval** of the banners based on finding that the request is consistent with the LDRs subject to the following four conditions:

1. The use of the site shall be granted by the property owner.
2. The signs shall not be located on the sidewalks or in the public right of way.
3. The site shall state the date(s) of the advertised "virtual shadow day."
4. The sign for WYSAW may be installed at:

105 Buffalo Way, Albertsons during:  
October 11, 2020 to October 25, 2020

10 E. Snow King Avenue, Phil Baux Park, during:  
October 11, 2020 to October 25, 2020

**BACKGROUND:** none

**ANALYSIS:** none

**COMPREHENSIVE PLAN & PRIORITY ALIGNMENT:** none

**FISCAL IMPACT:** none

**STAFF IMPACT:** none

**ATTACHMENTS OR LINKS:** Applicant Submittal

**SUGGESTED MOTION:**

I move to **approve** Item P20-170 the temporary banner requested by the Teton County Search and Rescue subject to four (4) conditions of approval.

1. The use of the site shall be granted by the property owner.
2. The signs shall not be located on the sidewalks or in the public right of way.
3. The site shall state the date(s) of the advertised “virtual shadow day.”
4. The sign for WYSAW may be installed at:

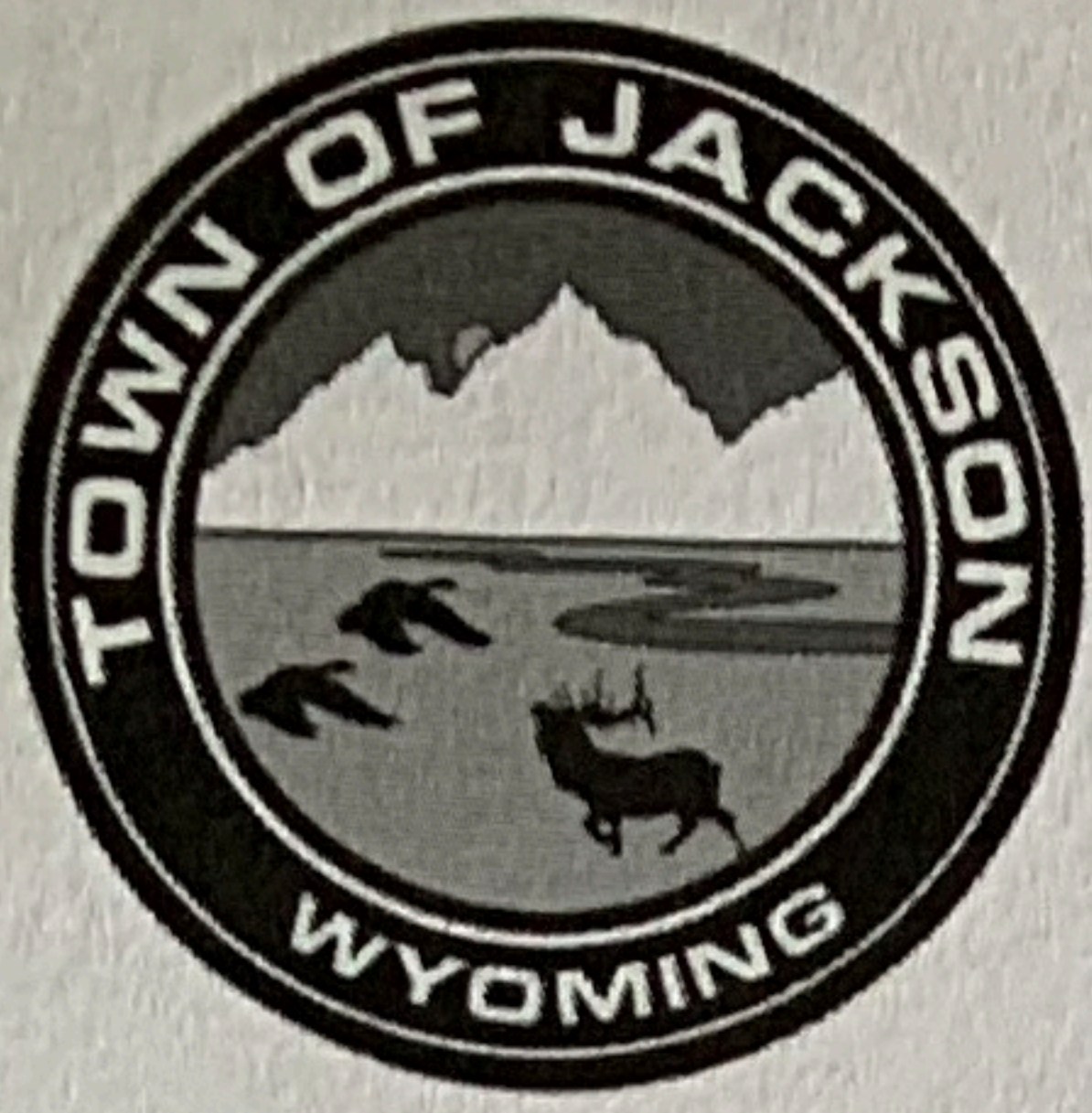
105 Buffalo Way, Albertsons during:  
October 11, 2020 to October 25, 2020

10 E. Snow King Avenue, Phil Baux Park, during:  
October 11, 2020 to October 25, 2020

**TIME REQUESTED:**

Consent





# TEMPORARY SIGN PERMIT APPLICATION

## Planning & Building Department

150 East Pearl Ave. | ph: (307) 733-0440  
P.O. Box 1687 | www.townofjackson.com  
Jackson, WY 83001

**First, go to [www.townofjackson.com/245/Temporary-Sign-Permit](http://www.townofjackson.com/245/Temporary-Sign-Permit) for process and other necessary information.**

### EVENT NAME:

Event Name: Wyoming Snow & Avalanche Workshop Physical Address of Event: 265 S. Cache, Jackson, WY

Description of Event: This year's WYSAW, an annual workshop dedicated to improving winter backcountry safety, will be virtual.

Grand Opening ☐ Yes ☐ No ☒

EVENT SPONSOR/APPLICANT: Name: Teton County Search & Rescue Foundation

Mailing Address: PO Box 1063, Jackson, WY Phone: 970-846-7766

E-mail: matt@tetoncountysar.org ZIP: 83001

Non-Profit: ☒ For Profit: ☐

### TEMPORARY BANNER LOCATION: Consent from Property Owner Required

Business/Description: Alberton's

Physical Address: 105 Buffalo Way

Dates of Display: 10/11-10-25, 2020

Consent from Owner Obtained? Yes ☒ No ☐

Business/Description: \_\_\_\_\_

Physical Address: \_\_\_\_\_

Dates of Display: \_\_\_\_\_

Consent from Owner Obtained? Yes ☐ No ☐

Business/Description: Phil Baux Park

Physical Address: 10 E. Snow King Ave.

Dates of Display: 10/11-10/25, 2020

Consent from Owner Obtained? Yes ☒ No ☐

Business/Description: \_\_\_\_\_

Physical Address: \_\_\_\_\_

Dates of Display: \_\_\_\_\_

Consent from Owner Obtained? Yes ☐ No ☐

### SUBMITTAL REQUIREMENTS. Have you attached the following? Please answer accordingly.

Yes ☒ No ☐ Illustration of each proposed sign that includes dimensions, colors, materials and type of sign.

Yes ☒ No ☐ Installation specifications, and any structural details or specifications required for freestanding signs.

*Under penalty of perjury, I hereby certify that I have read this application 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 the Town of Jackson to enter upon the above-mentioned property during normal business hours, after making a reasonable effort to contact the owner/applicant prior to entering.*

Signature of Authorized Event Applicant

Matt Hansen  
Applicant Name Printed

Date

8/20/20  
Communications  
Director

Title

TCSAR F



Teton County Search and Rescue Foundation  
Matt Hansen, Communications Director  
(970) 846-7766  
[matt@tetoncountysar.org](mailto:matt@tetoncountysar.org)

Re: Temporary Sign Permit Application

Banner description: WYSAW banners are vinyl. Colors are blue and white, and include name of event, registration website, date and sponsor logos. The banners this year will specifically note that the 2020 WYSAW will be a virtual event for online viewers.

The Phil Baux banner measures 69 inches tall by 71 inches wide (roughly 6 by 6 feet). The Albertson's banner measures 91.5 inches tall by 92.5 inches wide (roughly 8 by 8 feet).

The banners will be hung by zip ties and/or rope at appropriate locations as advised by property owners.

# STAFF REPORT



|                               |                           |                        |                 |
|-------------------------------|---------------------------|------------------------|-----------------|
| <b>Meeting Date:</b>          | October 5, 2020           | <b>Meeting Title:</b>  | Regular Meeting |
| <b>Submitting Department:</b> | Administration            | <b>Presenter:</b>      | Larry Pardee    |
| <b>Agenda Item:</b>           | Attorney Contract Renewal | <b>Public Comment:</b> | Yes             |

## **Purpose & Policy Considerations.**

The purpose of this item is to renew the employment contract with the Town Attorney.

## **Requested Action.**

The requested action is to authorize the Mayor to execute a new contract with the Town Attorney.

## **Recommendations.**

Staff recommends authorizing the Mayor to execute the contract as drafted.

## **Background.**

The existing contract with the Town Attorney has been updated with respect to extending it for two (2) years, the standard contract term the Town Council has used for its Town Attorney. No other terms or conditions have been adjusted.

Stakeholders include the Town of Jackson organization, the Town Council, the Town Attorney, Town staff that rely on the Town Attorney for legal advice and review, the general citizenry of the Town of Jackson that rely on the Town Attorney to represent the Town's interests in all legal matters.

## **Analysis.**

The Wyoming State Statutes dictate that the Town Council contract directly with a town attorney. The attached contract for Council review is on the same terms and conditions as the previous contract, including:

- Salary (continues at \$125,000)
- Benefits (same as all Town employees)
- Duties (same and commensurate with Jackson Municipal Code 2.14 and Resolution 95-10)
- Termination (employment continues on an at-will basis)

The only change to the contract is the Term, specifically extending it for 2 years beyond its current end-date.

## **Alternatives (Optional).**

## **Comprehensive Plan & Priority Alignment.**

This item aligns with Quality of Life: Common Value 3. Securing professional, skilled and dedicated legal staff ensures timely, efficiently and safely delivered quality legal services in a fiscally responsible and coordinated manner.

## **Fiscal Impact.**

The contract will be renewed on the same terms and conditions of employment, including the same salary of \$125,000.

## **Staff Impact.**

Staff impact of approving the contract is minimal. It involves coordinating execution of the contract.



**Attachments or Links.**

- An updated version of the Town Attorney Contract.

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

I move to approve the Town Attorney contract as presented and direct the Mayor to take action necessary to execute it.



## EMPLOYMENT AGREEMENT BETWEEN THE TOWN OF JACKSON AND LEA COLASUONNO

This Employment Agreement Between The Town Of Jackson And Lea Colasuonno ("Agreement") is made and entered into the \_\_\_\_\_ day of \_\_\_\_\_, 2020 ("Effective Date") by and between the Town of Jackson, Wyoming, a municipal corporation of P.O. Box 1687, Jackson, Wyoming 83001 ("Town"), and Lea Colasuonno, an individual of P.O. Box 10225 Jackson, Wyoming 83002 ("Town Attorney"), together "Parties," both of whom understand and agree as follows:

### RECITALS:

**WHEREAS**, Chapter 2.14 of the Municipal Code of the Town of Jackson, as amended, provides for the office of Town Attorney to be retained by the Town of Jackson Town Council ("Town Council") to perform the duties and responsibilities of the office; and

**WHEREAS**, the Town Council makes this Agreement for the purpose of retaining the Town Attorney to provide for legal services to the Town.

**NOW THEREFORE**, in consideration of the mutual covenants herein contained, the Parties agree as follows:

- 1. APPOINTMENT.** The Town Council of the Town of Jackson appoints and employs Lea Colasuonno as the Town of Jackson Town Attorney. The Town Attorney accepts the appointment and employment with the Town of Jackson, Wyoming, committing to perform her legal duties to the best of her abilities and in accordance with the highest standards of the legal profession, both as to standards of law practice and the ethics and rules of professional conduct.
- 2. COMMENCEMENT.** The Town Attorney will commence her duties as Town Attorney with the Town on the Effective Date.
- 3. DUTIES.** The Town Attorney's duties, to which she shall devote her time, skill, attention and best efforts to the discharge of, include but are not limited to:
  - a.** Performing the duties and obligations set forth in Resolution 95-10, which is incorporated herein fully by this reference, and which may, within reason and



at the Town Council's discretion, be amended from time to time by a majority vote of the Town Council.

- b. Representing the Town, including one of its authorities, agencies or employees, in all cases before all courts and all legally constituted tribunals or administrative agencies, including as the Prosecutor of all ordinance violations unless such cases and prosecution shall be contracted out separately and as approved by the Town Council.
- c. Developing and submitting a requested budget to the Town Manager for providing legal services to the Town for each fiscal year.
- d. Managing, administering, and overseeing the Legal Department, and the staff and independent contractors thereof.
- e. Providing administration, oversight and direct control of special counsel engagements, and consultants and experts necessary to support special counsel engagements, including review, analysis and recommendation regarding payment of all billings and work.
- f. Preparing and submitting to the Council all reports and advisory memos required by it or that the Town Attorney may consider advisable.

**4. SALARY AND EMPLOYMENT BENEFITS.** If there is a conflict between the Town of Jackson Personnel Rules and Regulations Policy Manual and this Agreement, the terms of this Agreement shall control the employment relationship. As and for compensation and remuneration for Town Attorney's employment and services, the Town shall:

- a. Provide the Town Attorney with an annual salary of One Hundred Twenty-Five Thousand Dollars (\$125,000.00), this salary being referred to herein as the "Base Salary." Any change of the Base Salary shall require a written amendment to this Agreement; however, the Base Salary may be raised periodically for cost of living increases as granted to all other Town employees without amending this Agreement.
- b. Provide, as the Town Attorney is an employee of the Town, employment



benefits equal to all other employees of the Town, which may include, insurance policies for life, disability, dental, vision and medical; retirement; Health Savings Account; paid time off; professional development and licensure; and any and all other benefits in effect now or that come into effect in the future.

- c. Upon resignation, in good standing, the Town shall pay the Town Attorney, all accrued benefits the Town Attorney is entitled to pursuant to the Town of Jackson Personnel Rules and Regulations and under this Agreement, as they may, from time to time, be amended. If the Town Council terminates the Town Attorney's employment without cause, the Town shall pay the Town Attorney, in addition to any accrued benefits the Town Attorney is entitled to pursuant to the Town of Jackson Personnel Rules and Regulations and under this Agreement to the termination date, six (6) months' severance pay of the Town Attorney's then current Base Salary, to be paid periodically in accordance with the Town's normal payroll policies, which is not pensionable under the Wyoming State Retirement System.
- d. If the Town fails to pay any of the Town Attorney's benefits set forth herein in any budget year, the Town Attorney, at her discretion, may deem her employment terminated without cause.
- e. If the Town Council modifies the duties and obligations set forth in Resolution 95-10 in such material ways so as to fundamentally alter the Town Attorney's duties she may, at her discretion, deem her employment terminated without cause.

5. **HOURS OF WORK.** The normal business hours of the Town of Jackson are 8:00 a.m. to 5:00 p.m. Monday through Friday and the Town Attorney shall generally be present in the Legal Department to tend to the public work during these hours and days, reasonable deviation, breaks and vacation excepted. The Town Attorney shall generally be present at all meetings of the Town Council, reasonable deviation, breaks and vacation excepted.



## **6. PERFORMANCE REVIEW.**

- a. The Council may, in its discretion, review and evaluate the performance of the Town Attorney at least once annually, said review and evaluation to be in accordance with specific criteria developed by the Council, and shall be conducted by a third-party facilitator. The Mayor shall provide opportunity for the Town Attorney to discuss her evaluation with her/himself and the Council.
- b. Periodically, the Council and Town Attorney shall define such goals and performance objectives which they determine necessary for the proper operation of the Town, and in the attainment of the Council's policy objectives. Said goals and objectives may be reduced to writing. They shall generally be attainable, within the time limitations specified and appropriations provided.

## **7. TERM**

- a. The Town Attorney agrees to remain in the full time employ of the Town until December 31, 2023 and not accept other full-time employment. The term "employment" shall not be construed to include occasional teaching, writing, consulting, coaching or related services performed on the Town Attorney's time off.
- b. Unless written notice of a desire to terminate this agreement is given by the Town at least one hundred and eighty (180) days prior to December 31, 2023, this agreement shall be extended on the same terms and conditions herein provided, for an additional period of two (2) years.

## **8. TERMINATION.**

- a. The Town Attorney will not have, or acquire, any property or liberty interest or gift in continued employment by Town. The Town Attorney is employed on an at-will basis, and under applicable law at-will employees may be dismissed or terminated from employment by the Town without cause. Without modifying the Town Attorney's at-will status, the Town Attorney shall serve at the pleasure of the Council, and her employment may be terminated, without



cause, at any time by a majority vote of the Council. By signing this Agreement, the Town Attorney certifies and acknowledges that she has read this paragraph regarding her at-will status, and acknowledges and agrees that her employment shall be subject to those terms.

- b. If the Town Attorney's employment is terminated, it shall be deemed to be without cause, unless otherwise specified, and the Town Attorney shall be entitled to the severance benefits as set forth in Section 4(c) of this Agreement. If the Town Attorney's employment is terminated for cause, the Town Attorney shall not be entitled to the severance benefits as set forth in Section 4(c) of this Agreement.
- c. The Town Council may, by approval of a majority of its members, terminate the employment of the Town Attorney for "cause" at any time by the service of written notice of Termination for Cause. "Cause" for termination is defined as fair and honest reasons, regulated by good faith on the part of the Town, that are not trivial, arbitrary or capricious, unrelated to business needs or goals, or pretextual; a reasoned conclusion supported by substantial evidence gathered through an adequate investigation that includes notice of the claimed misconduct and a chance for the Town Attorney to respond.
- d. For purposes of this Agreement, "Cause" includes: **i)** the willful and/or continued failure of the Town Attorney to perform substantially her duties under the law, rules of professional conduct or conditions of this Agreement (other than any such failure resulting from the Town Attorney's incapacity due to illness); **ii)** the willful engagement by the Town Attorney in illegal conduct or personal dishonesty or gross misconduct that is injurious to the Town of Jackson; **iii)** a material breach by the Town Attorney of this Agreement; or **iv)** the Town Attorney's loss of her license to practice law.
- e. If the Town Attorney resigns her position, the Town shall be provided thirty (30) days' notice in advance of her last day.

**9. INDEMNIFICATION.** Employer shall defend, save harmless and indemnify the Town



Attorney against any unintentional tort, professional liability claim or demand or other legal action whether groundless or otherwise, arising out of an alleged act or omission occurring in the performance of her duties as Town Attorney with the exception of any such action brought by the Town. Employer will compromise or settle any such claim or suit and will be responsible for the payment of any settlement or judgment rendered.

**10. POST-EMPLOYMENT OBLIGATIONS.**

- a. Upon termination of this Agreement, the Town Attorney shall promptly return to the Town all property of the Town in her possession.
- b. The Town Attorney agrees that both during and after employment with the Town, she shall, at the request of Council, render all assistance and perform all lawful acts that the Council considers necessary or advisable in connection with any litigation involving the Town or any officer, employee, agent, representative, consultant, client or vendor of the Town. Reasonable costs and time incurred by the Town Attorney shall be paid by the Town.

**11. NOTICES.** Notices pursuant to this Agreement shall be in writing and given by personal delivery or through certified mail of the United States Postal Service, postage prepaid and addressed as follows:

Town of Jackson:

Town of Jackson  
c/o Town Manager  
P.O. Box 1687  
Jackson, Wyoming 83001

Town Attorney:

Lea Colasuonno  
P.O. Box 10225  
Jackson, WY 83002

## 12. GENERAL PROVISIONS.

- a. **Entire Agreement.** This text constitutes the entire agreement between the Parties.
- b. **Applicable Law.** This Agreement shall be construed, performed and enforced in accordance with, and governed by the laws of the State of Wyoming and venue shall lie in Teton County, Wyoming.
- c. **Severability.** If any provision, or any portion thereof contained in this Agreement is held unconstitutional, invalid, or unenforceable, the remainder of this agreement, or portion thereof, shall be deemed severable, and shall be affected and shall remain in full force and effect.
- d. **Successors.** This Agreement shall be binding upon the parties hereto, their heirs, devisees, successors or personal representatives.
- e. **Construction; References; Captions.** Since the Parties or their agents have participated fully in the preparation of this Agreement, its language shall be construed according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not business days. The captions of sections and paragraphs herein are for convenience and ease of reference, and do not define, limit, augment or describe the scope, content or intent of this Agreement.
- f. **Waiver.** Any waiver or consent by either party with respect to any term or provision of this Agreement shall be effective only in the specific instance and for the specific purpose for which given and shall not be deemed, regardless of frequency given, to be a further or continuing waiver or consent. The failure or delay of either party at any time or times to require performance of, or to



exercise any of its powers, rights or remedies with respect to, any term or provision of this Agreement or any other aspect of either party's conduct or employment in no manner (except as otherwise expressly provided herein) shall not affect the right at a later time to enforce any such term or provision.

**g. Amendments.** Any changes, modifications, revisions, or amendments to this Agreement which are mutually agreed upon by the Parties shall be incorporated by written instrument, executed and signed by both Parties hereby.

**IN WITNESS WHEREOF**, as of the Effective Date the Town of Jackson has caused this Agreement to be signed and executed on its behalf by its Mayor, and duly attested by its Town Clerk, and the Town Attorney has signed and executed this Agreement.

**ATTORNEY**

\_\_\_\_\_  
Lea Colasuonno

**TOWN OF JACKSON, WYOMING**

\_\_\_\_\_  
Pete Muldoon, Mayor

**ATTEST:**

\_\_\_\_\_  
Sandra P. Birdyshaw

# STAFF REPORT



|                               |                                 |                        |                          |
|-------------------------------|---------------------------------|------------------------|--------------------------|
| <b>Meeting Date:</b>          | October 5, 2020                 | <b>Meeting Title:</b>  | Town Council Regular Mtg |
| <b>Submitting Department:</b> | Administration                  | <b>Presenter:</b>      | Larry Pardee             |
| <b>Agenda Item:</b>           | Town Manager Contract Extension | <b>Public Comment:</b> | Yes                      |

## **Purpose & Policy Considerations.**

The Town Council approves the Town Manager contract. The overarching issue being addressed with this extension is continuity of government and consistency with staffing and leadership.

## **Requested Action.**

The request is for the Town Council to approve the updated Town Manager contract as proposed which has a term ending June 30, 2023 and authorize the Mayor to execute the contract on behalf of the organization.

## **Recommendations.**

Staff recommends the Town Council approve the updated Town Manager contract as proposed.

## **Background.**

The initial Town Manager contract with Larry Pardee expired on June 30, 2020 but is currently valid under the 2 year extension provision. This updated contract would have a term ending June 30, 2023. The contract also reflects a wage increase for Larry Pardee that would track employee wage increases provided to the Town Manager since 2018 when the contract was initial signed. The Town Manager contract language is essentially the same language that has been in place since the early 2000s and has been carried over to each new administrator/manager. Besides the term and the updated salary, amendments are included that closer track the language in the Town Attorney contract that was updated more recently by outside legal counsel that includes a performance review but does not set a deadline for that review and instead leaves it up to Council discretion. Council has indicated their desire to review performance annually during the same time frame that other Town employees receive reviews from their supervisors.

Extension of the Town Manager's contract at this time provides an additional level of comfort moving into the election and a newly seated Council in January of 2021. The contract still has the same provisions that allow the Council to make a change whenever they deem necessary. The Town Manager serves at the pleasure of the Town Council.

## **Analysis.**

The desired outcome is for a contract extension. Stakeholders include Larry Pardee, the Town Council, the Town organization as a corporation for continuity and consistency, the employees in the Town organization in terms of consistent leadership, and the community that receives the combined public service of the Town organization and the Town Manager as the leader of that organization.

## **Alternatives (Optional).**

As noted below under Motion options, the Town Council can continue the issue to a future Town Council meeting at their discretion.

## **Comprehensive Plan & Priority Alignment.**

This action is in alignment with Section 8, Quality Community Service provision in that the Town Manager leads the organization through the budget process, service level discussions, balancing priorities for Council and staff, coordinating all services provided by the Town of Jackson.



**Fiscal Impact.**

The fiscal impact of extending this contract would be the continuation of the current salary of the Town Manager at \$155,324 annually.

**Staff Impact.**

The staff impact of an updated Town Manager contract would be positive in that it sends a message to staff that there is consistency and continuity in the leadership of the Town of Jackson.

**Attachments or Links.**

Draft updated Town Manager contract.

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

I move to approve the updated Town Manager contract with Larry Pardee as proposed and direct the Mayor to execute the finalized contract on behalf of the Town of Jackson.

## **TOWN MANAGER CONTRACT**

This agreement made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2020, to become effective as set forth in Section 22(C) hereof, by and between the Town of Jackson, State of Wyoming, a municipal corporation of P.O. Box 1687, Jackson, Wyoming 83001, hereinafter referred to as "Employer", and Larry Pardee, hereinafter referred to as "Employee", both of whom understand and agree as follows:

### **WITNESSETH:**

WHEREAS, Employer desires to employ the services of Larry Pardee, as Town Manager of the Town of Jackson as provided by Chapter 2.12 of the Municipal Code of the Town of Jackson; and

WHEREAS, it is the desire of the Governing Body, hereinafter called "Town Council" to provide certain benefits, establish certain conditions of employment and to set working conditions of said Employee; and

WHEREAS, it is the desire of the Town Council to (1) secure and retain the services of Employee and to provide inducement for him to remain in such employment, (2) to make possible full work productivity by assuring Employee's morale and peace of mind with respect to future security, and (3) to provide a just means for terminating Employee's services at such time as he may be unable to fully discharge his duties or when Employer may otherwise desire to terminate his employ; and

WHEREAS, Employee desires to accept employment as Town Manager,

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties agree as follows:



1. DUTIES. Employer hereby agrees to employ Larry Pardee, as Town Manager of the Employer to perform the functions and duties specified in Chapter 2.12 of the Municipal Code of the Town of Jackson, and to perform other legally permissible duties and functions as the Town Council shall from time to time approve as part of the Town Manager's job description, which shall be approved by the Town Council and which shall include the following duties and responsibilities:

(A) Enforce and observe all laws of the State of Wyoming, and the ordinances of the Town of Jackson, Wyoming, as required to maintain the public health, safety and welfare of the inhabitants of the Town of Jackson.

(B) Attend all meetings of the Town Council.

(C) Perform all duties required of this office as directed by the Town Council.

(D) Prepare and submit to the Town Council all reports required by it or that the Town Manager may consider appropriate.

(E) Keep the Town Council fully advised of the Town's financial condition and its future needs.

(F) Prepare and submit to the Town Council an annual budget.

(G) Serve as the Town's Emergency Management Coordinator

(H) Recommend policies and practices to the Town Council and departments of the Town that are necessary for the efficient conduct of Town business.

(I) Keep the Town Council advised and informed of the needs and conditions of all departments under his direction, and maintain a liaison with community organizations and other public agencies.

(J) Except as otherwise set forth herein, devote his entire work time to the services, employment and requirements of the Town.

2. TERM.

- A. Nothing in this agreement shall prevent, limit or otherwise interfere with the right of the Town Council to terminate the services of the Employee at any time, subject only to the provisions set forth in Section 4, paragraph A(1) and A(2), of this agreement.
- B. Nothing in this agreement shall prevent, limit or otherwise interfere with the right of the Employee to resign at any time from his position with Employer, subject only to the provisions set forth in Section 4, paragraph A(3), of this agreement.
- C. Employee agrees to remain in the Full-time employ of Employer until June 30, 2023, and not accept other full-time employment. The term "employment" shall not be construed to include occasional teaching, writing, consulting, coaching or related services performed on Employee's time off.
- D. Unless written notice of a desire to terminate this agreement is given by the employer at least one hundred and eighty (180) days prior to the termination date as provided herein, this agreement shall be extended on the same terms and conditions herein provided, for an additional period of two years.
- E. Employee may terminate this agreement with ninety (90) days written notice.

3. SUSPENSION. Employer may suspend the Employee with full pay and benefits at any time during the term of this agreement, but only if:

- (A) A majority of Town Council and Employee agree; or
- (B) After hearing before the Town Council, which may be public at the request of the Employee, a majority of the Town Council votes to suspend Employee for just cause provided, however, that Employee shall have been given at least ten (10) days notice prior to such hearing by the Town Council.



4. TERMINATION, SEVERANCE PAY AND NON-RENEWAL

A. In the event Employee is terminated by the Town Council before expiration of the aforementioned term of employment without cause, and during such time that Employee is willing and able to perform his duties under this agreement, then in that event Employer agrees to pay Employee his regular salary for six (6) months and his health insurance coverage for six (6) months, and Employee shall be entitled to continuation of health care coverage after such six month term as may be provided for in the Town of Jackson Personnel Policy Manual, provided:

(1) That at such time as Employee shall take other employment, these payments shall terminate; and

(2) In the event Employee is terminated for just cause, then Employer shall have no obligation to pay any severance sum designated in this agreement.

(3) In the event Employee voluntarily resigns his position with Employer before expiration of the term of this agreement, then Employee shall give Employer ninety (90) days notice in advance, unless the parties otherwise agree.

B. In the event Employer provides less than a one hundred eighty (180) day notice of non-renewal, Employee shall work through the end of the term of the agreement. Additionally, Employee will receive his salary and benefits such that the remaining term of the agreement combined with additional time after agreement expires shall equal six (6) months.

5. DISABILITY. If Employee is permanently disabled or is otherwise unable to perform his duties because of sickness, accident, injury, mental incapacity or health for a period of ninety (90) successive days beyond any accrued sick or vacation

leave, Employer shall have the option to terminate this agreement, subject to the severance pay requirements of section 4. However, Employee shall be compensated for any Paid Time Off (PTO), compensatory time and disability benefits as provided for in the Town of Jackson's Personnel Policy Manual.

6. SALARY.

- A. Employer agrees to pay Employee for services rendered at the rate of \$155,324 annually, this salary being referred to herein as the "Base Salary." Said Base Salary shall be payable in installments at the same time as other employees of the Employer are paid. Any change in Base Salary shall require a written amendment to this Agreement; however, the Base Salary may be raised periodically for cost of living increases as granted to all other Town employees without amending this Agreement.

7. PERFORMANCE EVALUATION.

- A. The Town Council may, in its discretion, review and evaluate the performance of the Employee at least once annually, said review and evaluation to be in accordance with specific criteria developed by the Council, and may be conducted by a third-party facilitator at the Council's discretion. The Mayor shall provide opportunity for the Employee to discuss the evaluation with her/himself and the Council.

8. HOURS OF WORK. It is recognized that Employee must devote a great deal of time outside the normal office hours to the business of the Employer.

9. AUTOMOBILE. Employer shall provide Town owned vehicle for the employee's use. Employee shall follow Town policies regarding use of Town owned vehicle.

10. DISABILITY, HEALTH AND LIFE INSURANCE.



- A. Employer agrees to put into force and to make all required premium payments for Employee for insurance policies for life, disability, dental, vision and medical insurance covering Employee and his dependents, and to make provision for payment of annual physical examinations of Employee, equal to that which is provided for all other employees of Employer.
- B. Employer agrees to provide hospitalization, surgical and comprehensive medical insurance for Employee and his dependents and to pay all premiums thereon equal to that which is provided for all other employees of Employer.
11. RETIREMENT. Employee may participate in any Employer sponsored retirement program as provided for all other employees of Employer.
12. VACATION. Employee shall be entitled to the accrual and payment of PTO and other leave as set forth in Section XIV of the Town of Jackson Personnel Rules and Regulations Policy Manual, as that section may be amended from time to time, and shall commence his employment with 308 PTO hours.
13. DUES AND SUBSCRIPTIONS. Employer agrees to budget and pay for the subscriptions and professional dues of the Employee which are necessary for full participation in national, state and local associations.
14. PROFESSIONAL DEVELOPMENT.
- A. Employer hereby agrees to budget for and pay the travel and expenses of Employee for professional and official meetings and to continue the professional development of Employee and pursue the necessary organizational functions for the Employer. These shall include but are not limited to state and local governmental groups and committees on which the Employee serves as a member and which are approved in advance by the Town Council.

B. Employer also agrees to budget and pay for the travel and expenses of Employee for short courses, institutes and seminars that are necessary for his professional development and for the good of the Employer.

15. GENERAL EXPENSES. Employer recognizes that certain expenses of a non-personal and job-affiliated nature are incurred by Employee and agrees to reimburse or pay for such general expenses upon submittal of duly executed expense or cash vouchers, receipts, statements or personal affidavits.

16. SERVICE CLUB MEMBERSHIP. Employer recognizes the desirability of representation in local community organizations, and Employee is authorized to join a service organization of his choice for which Employer shall pay all expenses.

17. INDEMNIFICATION. Employer shall defend, save harmless and indemnify Employee against any unintentional tort, professional liability claim or demand or other legal action whether groundless or otherwise, arising out of an alleged act or omission occurring in the performance of Employer's duties as Town Manager with the exception of any such action brought by the Town. Employer will compromise or settle any such claim or suit and will be responsible for the payment of any settlement or judgment rendered. If Employer proposes to settle any claim which would call for the Employee to admit guilt or wrongdoing, then such settlement shall not be consummated without the written approval of Employee. In the event Employee refuses to consent to such settlement, then Employer's liability for payment shall be limited to the amount for which it offered to settle the matter.

18. BONDING. Employer shall bear the full cost of any fidelity or other bonds required of the Employee under any law or ordinance.

19. OTHER TERMS AND CONDITIONS OF EMPLOYMENT.

A. The Town Council, in consultation with the Town Manager, shall fix any such other terms and conditions of employment, as it may determine from time to time, relating to the performance of Employee, provided such terms



and conditions are not inconsistent with or in conflict with the provisions of this agreement, the Municipal Code of the Town of Jackson or any other law.

B. All other provisions of the Municipal Code of the Town of Jackson, and regulations and rules not otherwise modified by this agreement shall apply to Employee the same as they do to all employees of the Employer.

20. NO REDUCTION OF BENEFITS. Employer shall not at any time during the term of this agreement reduce the salary, compensation or other financial benefits of the Employee, except to the degree of such a reduction across-the-board for all employees of the Employer.

21. NOTICES. Notices pursuant to this agreement shall be given by personal delivery or through certified mail of the United States Postal Service, postage prepaid and addressed as follows:

Employer  
Town of Jackson  
P.O. Box 1687  
Jackson, Wyoming 83001

Employee  
Larry Pardee  
P.O. Box 9786  
Jackson, Wyoming 83002

Notice shall be deemed given as of the date of personal service or written evidence of the execution of return receipt in the course of transmission through the United States Postal Service.

22. GENERAL PROVISIONS.

- A. This text shall constitute the entire agreement between the parties and may not be modified or amended except in writing executed by both parties.
- B. This agreement shall be binding upon and inure to the benefit of the heirs and executors of the Employee.
- C. This agreement shall become effective June 4, 2018.
- D. If any provision, or any portion thereof contained in this agreement is held unconstitutional, invalid, or unenforceable, the remainder of this agreement, or portion thereof, shall be deemed severable, and shall be affected and shall remain in full force and effect.

IN WITNESS WHEREOF, The Town of Jackson has caused this agreement to be signed and executed in its behalf by its Mayor, and duly attested by its Town Clerk, and the Employee has signed and executed this agreement, the day and year first above written.

TOWN OF JACKSON, WYOMING

EMPLOYEE

\_\_\_\_\_  
Pete Muldoon, Mayor

\_\_\_\_\_  
Larry Pardee

ATTEST:

\_\_\_\_\_  
Sandy Birdyshaw, Town Clerk



# STAFF REPORT



|                               |                             |                        |                 |
|-------------------------------|-----------------------------|------------------------|-----------------|
| <b>Meeting Date:</b>          | October 5, 2020             | <b>Meeting Title:</b>  | Regular         |
| <b>Submitting Department:</b> | Administration              | <b>Presenter:</b>      | Sandy Birdyshaw |
| <b>Agenda Item:</b>           | School Resource Officer MOU | <b>Public Comment:</b> | Consent, yes    |

## **Purpose & Policy Considerations.**

The Town Council approves all major agreements on behalf of the Town of Jackson and the Mayor executes these agreements.

## **Requested Action.**

Consideration of renewing the School Resource Officer Program 3-year Memorandum of Understanding (MOU) with Teton County School District #1 and the Jackson Police Department.

## **Recommendations.**

To approve the renewal of the School Resource Officer Program 3-year MOU.

## **Background.**

The Teton County School District is requesting renewal of the agreement for the School Resource Officer (SRO) Program and has identified the following mission for the SRO Program: *Through education, enforcement and by cooperative efforts with the school staff, students, parents, courts, and the community's social service organizations, the School Resource Officer Program strives to assist the schools with providing a safe school environment, strives to hold juveniles responsible for their actions, and prevent individual problems from developing into patterns of delinquency.*

The Town of Jackson Police Department has been participating in the SRO Program for approximately thirteen years, by providing an officer placed on school campuses. Previous to the SRO program, the department participated for over fifteen years in the DARE program, which was similar in nature. In total, the Jackson Police Department has been providing a uniformed presence in the schools for well-over 25 years.

This Agreement is a renewal, as the previous three-year agreement expired in March 2020.

The SRO Program will be utilized at the Middle School, Davey Jackson Elementary, and John Colter Elementary, all of which are located within the town limits, during a nine-month period each year.

The Agreement outlines the duties of an SRO, some of which include:

- o Being an extension of the Principal's office for assignments consistent with this Agreement.
- o Be a visible, active law enforcement figure on campus dealing with law enforcement matters, school code violations, and juvenile investigations.
- o Be a classroom resource for law education, including a resource for teachers, parents, and students.
- o Provide crime reporting on crimes originating on campus.
- o Develop plans and strategies to prevent or minimize dangerous situations on campus

The SRO remains an employee of the Jackson Police Department and is subject to the administration, supervision, and control of the Police Chief. The School District would compensate the Police Department \$65,000 annually.

**Analysis.**

This program has proven to be a valuable resource to the School District and our local school children beyond increasing safety in and around schools. The School Resource Officer often fosters positive relationships with students while serving as a resource to students, teachers, and administrators to help solve problems.

**Alternatives (Optional).****Comprehensive Plan & Priority Alignment.**

This action is in direct alignment with Section 8 of the Comprehensive Plan: Quality Community Service Provision as well as the Town of Jackson Mission Statement. The Jackson Police Department is providing requested quality public services in a fiscally responsible manner by partnering with the School District for reimbursement of a portion of the expenses. One tenet in the Town of Jackson Mission is that the Town 'fosters partnerships to solve problems and more effectively use our resources.'

**Fiscal Impact.**

The fiscal impact is that the School District will provide a \$65,000 reimbursement to the Town of Jackson for three years. This amount provides sufficient funding to continue the current service level within the department of one officer on duty during school hours.

**Staff Impact.**

The staff impact of approving the updated arrangement is a positive one. It provides a comfort level in terms of staffing for the Jackson Police Department and the Town of Jackson. It allows the department to maintain a presence and a minimum level of service in our schools.

**Attachments or Links.**

2020 MOU

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

I move to approve the Memorandum of Understanding for the School Resource Office Program and authorize the Mayor to sign.



## SCHOOL RESOURCE OFFICER AGREEMENT

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### School Resource Officer Program Mission Statement

*Through education, enforcement and by cooperative efforts with the school staff, students, parents, courts, and the community's social service organizations, the School Resource Officer program strives to assist the schools with providing a safe school environment, strives to hold juveniles responsible for their actions, and prevent individual problems from developing into patterns of delinquency.*

This School Resource Officer Agreement (this "Agreement") is made and entered into to be effective as of this 9th day of September, 2020, by and among the **TETON COUNTY SCHOOL DISTRICT #1**, State of Wyoming (hereinafter referred to as "School District"), the **TOWN OF JACKSON, WYOMING**, a duly organized city of the State of Wyoming (hereinafter referred to as "TOJ"), and also by and through the **JACKSON POLICE DEPARTMENT** (hereinafter referred to as "Police Department")(and together collectively the "Parties") as follows:

#### WITNESSETH:

WHEREAS, the School District has the powers pursuant to Wyoming Statute §21-3-111(a)(iii) to enter into agreements with public agencies for the performance of acts or furnishing of services and Wyoming Statute §21-3-111(a)(xix) to develop policies to minimize risk to students and employees; and

WHEREAS, the TOJ, pursuant to Wyoming Statute §15-1-103 may make contracts in the exercise of its corporate powers; and

WHEREAS, the Jackson Police Department has the duty pursuant to Wyoming Statutes §§ 7-2-101(b) & 15-1-103 (a)(xviii) to preserve peace and enforce criminal laws within the Town of Jackson; and

WHEREAS, the TOJ and the Police Department desire to provide a School Resource Officer ("SRO") Program to the School District for the use in the Jackson Hole Middle School, Davey Jackson Elementary School, and the John Colter Elementary School located in the incorporated area of the Town of Jackson; and

WHEREAS, the School District, the TOJ, and the Police Department desire to set forth in this Agreement the specific terms and conditions of the services to be performed and provided by the SROs in the School District.

NOW THEREFORE, it is hereby resolved by the School District, the TOJ, and the Police Department, in consideration of the foregoing, and of the cooperation to be had among the Parties and the performance of the promises contained herein, and the Parties hereto agree as follows:

**1. Cost of the SRO Program.**

- A. The cost of the SRO Program shall be paid by the Parties as follows; The School District will compensate the Police Department in the amount of **\$65,000.00** annually per SRO. The School District shall provide a private office, phone, and computer for use by the SRO exclusively. The Police Department shall provide and maintain all law enforcement related uniforms and equipment customarily provided to other police officers. The Police Department shall maintain the SRO as a full-time employee with all the benefits included with that designation.

**2. Employment of School Resource Officers.**

- A. The SROs should be employees of the Police Department and shall be subject to the administration, supervision and control of the Police Department, specifically the Chief of Police or his or her designee.
- B. The SROs should be subject to all personnel policies and practices of the Police Department, except as such policies or practices may be modified by the terms and conditions of this Agreement.
- C. The Police Department, in its sole discretion, shall have the power and authority to hire, discharge, and discipline SROs.
- D. An advisory committee composed of representatives of the School District should make recommendations for the SRO positions to the Chief of Police, who shall assign such officers as he or she deems appropriate based upon qualifications set forth by the Police Department. If a principal is dissatisfied with an SRO who has been assigned to that principal's school, then that principal may request that the Chief of Police assign a different officer as the SRO for that school if measures to correct the elements of dissatisfaction are unsuccessful at remedying the matter.
- E. The School District may, at its discretion, prepare and submit comments to the Supervisor of the SRO for use in informing the SRO's annual performance appraisal.

**3. Duty Hours.**

- A. It is the intent of the Parties that the SRO's duty hours should conform to the school day.
- B. It is understood and agreed that time spent by SROs attending municipal court, juvenile court, and/or criminal cases arising from and/or out of their employment as an SRO shall be considered as hours worked under this Agreement.
- C. In the event an SRO is absent from work, the SRO should notify his or her supervisor in the Police Department and the principal of the school to which the SRO is assigned. The Police Department shall approve all time off from work for the SRO.
- D. The SRO is encouraged to work extracurricular activities as requested by the school administrator. It is recognized by all Parties that these assignments provide further opportunities for crime prevention and crime detection. Any work by the SRO in this capacity will be approved by the assigned Police Department Supervisor and will be consistent with the FLSA.



#### 4. **Term of Agreement.**

The initial term of this Agreement shall be three (3) years commencing on the effective date of this Agreement and terminate three (3) years thereafter; however, should either party encounter budgetary constraints that make the continuation of this agreement impractical, then either party may cancel this agreement upon sixty (60) days' notice to the other. Following the initial three (3) year term, this Agreement will automatically renew for successive one (1) year terms unless and until either party requests termination or modification of this Agreement. Any request for termination or modification shall be made in writing and provided to the other party prior to April 15th of the initial or any succeeding term.

#### 5. **Duties of School Resource Officers.**

The SRO's duties will include, but not be limited to, the following:

- A. To be an extension of the principal's office for assignments consistent with this Agreement.
- B. To be a visible, active law enforcement figure on campus dealing with law enforcement matters and school code violations originating on the assigned campus and any other matter involving juvenile investigations effecting the TOJ or the School District or its inhabitants. As to school code violations, the SRO may take the student to the principal's office for discipline to be meted out by school officials.
- C. To act as the designee of the campus administrator in maintaining the physical plant of the assigned campus to provide a safe environment as to law enforcement matters and school code violations. This includes building(s), grounds, parking lot(s), lockers and other public school property.
- D. To provide a classroom resource for law education using approved materials.
- E. To be a resource for students which will enable them to be associated with a law enforcement figure and role model in the students' environment.
- F. To be a resource for teachers, parents and students for conferences on an individual basis dealing with individual problems or questions.
- G. To make appearances before site councils, parent groups, and other groups associated with the campus and as a speaker on a variety of requested topics, particularly drug and alcohol abuse and/or on school safety.
- H. The SRO will be involved in school discipline, when it pertains to preventing a disruption that would, if ignored, place students, faculty and staff at risk of harm, the SRO will resolve the problem to preserve the school climate.
- I. IN ALL OTHER CASES, disciplining students is a School District responsibility, and the SRO will take students who violate the code of conduct to the principal where school discipline can be meted out.
- J. It will be the responsibility of the SRO to take reports on all crimes originating on campus. Information on cases that are worked off-campus by the Police Department or other agencies involving students on a campus served by an SRO will be provided to the SRO, but the SRO may or may not be actively involved in off-campus investigation(s).

- K. The SRO will share information with the administrator about persons and conditions that pertain to campus safety concerns as provided by law.
- L. The SRO will be familiar with helpful community agencies, such as the Department of Family Services, Circuit Court Diversion, the Child Protection Team, and the Community Counseling Center. Referrals will be made when necessary based upon Police Department policy and procedures.
- M. The SRO and the principal will develop plans and strategies to prevent and/or minimize dangerous situations on school grounds.
- N. The SRO should coordinate all of his/her activities with the principal and staff members concerned and should seek permission, guidance, and advice prior to enacting any programs within the school.
- O. As it relates to programs within the school the SRO may be asked to provide community wide crime prevention presentations that include, but are not limited to:
  - Drugs and the law – Adult and juvenile;
  - Alcohol and the law – Adult and juvenile;
  - Sexual assault prevention;
  - Safety programs – Adult and juvenile;
  - Assistance in other crime prevention programs as assigned.
- P. The SROs will wear approved department issued equipment, uniform, formal business attire or business casual with appropriate logos and name badges depending on the time of school year, the type of school activity or program, and the requests of the school and/or Police Department. The Police Department and the principal should jointly set expectations and resolve any disputes in this area.
- Q. The SROs will wear their department authorized duty weapons in accordance with department policy.

## 6. **Chain of Command.**

- A. As employees of the Police Department, SROs will be subject to the chain of command of the Police Department.
- B. In the performance of their duties, SROs should coordinate and communicate with the principal or the principal's designee of the school to which they are assigned. The SRO will attempt when practical to notify school administration when he/she needs to leave campus for an extended amount of time beyond customary absences for administrative duties or follow up investigations.

## 7. **Transporting Students.**

- A. SROs should not transport students in Police Department vehicles except:
  - (1) When the students are victims of a crime, under arrest, or some other emergency circumstances exist; and
  - (2) When students are suspended and/or sent home from school pursuant to school disciplinary actions, if the student's parent or guardian has refused or is unable to pick up the child within a reasonable time period and the student



is disruptive/disorderly and his/her continued presence on campus is a threat to the safety and welfare of other students and school personnel.

- B. Students should not be transported to any location unless it is determined that the student's parent or guardian is at the destination to which the student is being transported or it is authorized by the parent or guardian. SROs should not transport students in their personal vehicles.
- C. SROs should notify school personnel upon removing a student from campus.

**8. Interviewing Students.**

- A. The Jackson Police Department recognizes that School District policy dictates that an attempt at parental contact should be made prior to law enforcement interviewing a student with regards to criminal matters when practical.
- B. However, if the SRO determines that this will be detrimental to the investigation he/she will follow current Police Department policy in regards to interviewing juveniles.
- C. Interviews of a criminal nature should be conducted at the Police Department in the interview room, however; there are times when this is not practical and the interviews can be conducted at the schools, safe guarding the student's privacy as much as practical.

**9. Access to Education Records.**

- A. School officials should allow SROs to inspect and copy any public records maintained by the school to the extent allowed by law.
- B. If some information in a student's record is needed in an emergency to protect the health or safety of the student or other individuals, school officials should disclose to the SRO that information which is needed to respond to the emergency situation based on the seriousness of the threat to someone's health or safety; the need of the information to meet the emergency situation and the extent to which time is of the essence.
- C. If confidential student record information is needed by an SRO, but no emergency situation exists, the information may be released only as allowed by law.
- D. The SRO will have limited access to the School District's "PowerSchool" program for the purpose of contacting parents and/or locating students in situations when access to school personnel is unavailable.

*[signatures follow on next page ]*

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the day and year indicated, but to effective as of the day and year above written.

**TETON COUNTY SCHOOL DISTRICT #1, State of Wyoming**

DocuSigned by:  
*Betsy Carlin*  
E8518D14431045B...

\_\_\_\_\_  
Betsy Carlin, Chair

Date: 9/10/2020

DocuSigned by:  
*Annie Band*  
0F405D8B7182494...

Attest: \_\_\_\_\_

Annie Band, Clerk

**TOWN OF JACKSON, WYOMING**

\_\_\_\_\_  
Pete Muldoon, Mayor

Date: \_\_\_\_\_

Attest: \_\_\_\_\_

Sandy Birdyshaw, Town Clerk

**TOWN OF JACKSON POLICE DEPARTMENT**

\_\_\_\_\_  
Michelle Weber, Acting Chief of Police

Date: \_\_\_\_\_



# STAFF REPORT



|                               |                                                                         |                        |                      |
|-------------------------------|-------------------------------------------------------------------------|------------------------|----------------------|
| <b>Meeting Date:</b>          | October 5, 2020                                                         | <b>Meeting Title:</b>  | Town Council Regular |
| <b>Submitting Department:</b> | Public Works                                                            | <b>Presenter:</b>      | Brian Lenz           |
| <b>Agenda Item:</b>           | (consent) P20-155 Encroachment Agreement for retaining wall on Aspen Dr | <b>Public Comment:</b> | Consent, yes         |

## **Purpose & Policy Considerations.**

Town Council consideration of an Encroachment Agreement with Sno-King Village Association for proposed shoring of a retaining wall that is currently failing.

## **Requested Action.**

Approve execution of the Encroachment Agreement between the Town and Sno-King Village.

## **Recommendations.**

Staff recommends approving the Encroachment Agreement (subject to meeting conditions of approval).

## **Background.**

An existing reinforced masonry block retaining wall supports a parking lot for Sno-King Village condominiums, adjacent to the south side of the Town's right-of-way (ROW) for Aspen Drive. This retaining wall was constructed in 2000 and over time has deteriorated and now bulges. Nelson Engineering has monitored wall movement and deflection since 2014 and observes increased rates of movement over recent months and they have concluded that wall repairs are necessary.

The contractor hired to design and build the wall reinforcement proposes soil nail reinforcements and a reinforced shotcrete wall face, several inches thick, being placed over the existing wall face. The finished appearance of this face will be stained and stamped to look similar to the existing block wall. A portion of the new wall face material will extend into the Town ROW varying widths (between approximately 1 and 1.5 feet) along the length of the wall as shown on the Exhibit provided, thus requiring an Encroachment Agreement.

## **Analysis.**

The Town Engineer included the following conditions in the Agreement:

1. Encroachment requires Town Council Approval.
2. Encroaching Party shall submit shoring plans prepared and stamped by a professional engineer licensed in the state of Wyoming. An approved grading permit is required for the proposed soil nail wall.
3. An approved Public Right-of-Way permit is required for construction use of the right-of-way.
4. Encroaching Party shall provide all the required exhibits for the Encroachment Agreement as approved by the Town Engineer.
5. Encroaching Party may have additional obligations related to utility locations and conditions verification as part of a subsequent grading permit.
6. Applicant may have to post a financial assurance that complies with Town of Jackson Land Development Regulation 8.2.11 for the installation of the Encroaching Property.
7. Prior to the Town Engineer's Final Inspection, Encroaching Party must provide the Town Engineer record drawings of the shoring to document the Encroaching Property's "as-built" location.
8. Town reserves the right to hire a Town-selected qualified engineering consultant licensed in the state of Wyoming to review the proposed shoring calculations, plans, and specifications to objectively determine whether each technical report or document adequately addresses and characterizes the geological and structural parameters and assumptions, consistent with concerns with design principles and practices in use at this time. Encroaching Party would be required to bond for and pay for all costs of said consultant.

9. Town reserves the right to hire a Town-selected qualified engineering consultant licensed in the state of Wyoming to monitor the installation of the Encroaching Property. Encroaching Party would be required to bond and pay for all costs of said consultant.
10. When necessary the Town reserves the right to utilize the Encroaching Property in lieu of street signposts.

The Town is not currently requiring third party engineering review of the wall design but has reserved the right to do so if issues arise. In the event the Town deems a third-party review necessary, the Encroaching Party would then be required to bond and pay for all costs of the third-party consultant.

#### **Alternatives (Optional).**

Town Council may choose to approve or deny this request.

#### **Comprehensive Plan & Priority Alignment.**

While the Encroachment Agreement itself does not directly relate to the Comp Plan, the proposed wall reinforcement generally supports Comp Plan Community Value 3 Quality of Life, Section 8 Quality Community Service Provision by helping to protect residents' safety and retain current level of service for Town ROW access.

#### **Fiscal Impact.**

This agreement does not require an exchange of funds between the Town and the Encroaching Party. As stated above, if a third-party review is deemed necessary, the Encroaching Party would pay for the associated costs.

#### **Staff Impact.**

Town Engineering and Legal staff have contributed approximately 10 hours of their time to process and produce the Encroachment Agreement.

#### **Attachments or Links.**

Draft Encroachment Agreement with Exhibit  
Design Plans

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

I move to approve the Encroachment Agreement between the Town of Jackson and Sno-King Village Association, Inc. to allow reinforcement of the existing retaining wall to encroach into the Town's public right-of-way for Aspen Drive, subject to the recommended conditions listed therein, and upon approval by the Town Engineer and Town Attorney authorize the Mayor to execute all necessary contract Agreements.



## **TOWN OF JACKSON ENCROACHMENT AGREEMENT**

**THIS ENCROACHMENT AGREEMENT** ("Agreement"), by and between Sno-King Village Association, Inc., with an address of 40, 60, and 80 Aspen Drive, hereinafter referred to as "Encroaching Party" and the TOWN OF JACKSON, a municipal corporation of the State of Wyoming, with an address of P.O. Box 1687 Jackson, WY 83001 hereinafter referred to as "Town," together "Parties," provides as follows:

### RECITALS

**WHEREAS**, Encroaching Party is the owner in fee simple of that certain real property in Teton County, Wyoming, described as follows:

Street Address: 40, 60, and 80 Aspen Drive

Location: PT NE1/4SE1/4, SEC. 33, TWP. 41, RNG.116. (COMMON AREA)

PIDN: 22-41-16-33-4-17-007

**WHEREAS**, the Town is the owner of that certain public right-of-way known as Aspen Drive, which public right-of-way adjoins Encroaching Party's property;

**WHEREAS**, the Encroaching Party shall encroach in a portion of the above-noted Aspen Drive right-of-way as set forth in Exhibit A, attached hereto and made a part hereof, for:

A Versa-Lok masonry block geogrid reinforced earth retaining wall that has deflected and bulged into the right-of-way and is repaired with soil nail reinforcements and a reinforced shotcrete wall face that further extends into the right-of-way approximately 1-1.5 feet as shown in the Exhibit A attached hereto, (hereinafter "Encroaching Property").

**WHEREAS**, on October 5, 2020 the Jackson Town Council voted to approve and authorize the mayor to sign the Encroachment Agreement between the Town of Jackson and the Encroaching Party for the Encroaching Property subject to final review and approval by the Town Attorney and the following conditions:

1. Encroachment requires Town Council Approval; and
2. Encroaching Party shall submit shoring plans prepared and stamped by a professional engineer licensed in the state of Wyoming. An approved grading permit is required for the proposed soil nail wall; and
3. An approved Public Right-of-Way permit is required for construction use of the right-of-way; and
4. Encroaching Party shall provide all the required exhibits for the Encroachment Agreement as approved by the Town Engineer; and
5. Encroaching Party may have additional obligations related to utility locations and conditions verification as part of a subsequent grading permit; and
6. Applicant may have to post a financial assurance that complies with Town of Jackson Land Development Regulation 8.2.11 for the installation of the Encroaching Property; and
7. Prior to the Town Engineer's Final Inspection, Encroaching Party must provide the Town Engineer record drawings of the shoring to document the Encroaching Property's "as-built" location; and
8. Town reserves the right to hire a Town-selected qualified engineering consultant licensed in the state of Wyoming to review the proposed shoring calculations, plans, and specifications to objectively determine whether each technical report or document adequately addresses and characterizes the geological and structural parameters and assumptions, consistent with concerns with design principles and practices in use at this time. Encroaching Party would be required to bond for and pay for all costs of said consultant; and
9. Town reserves the right to hire a Town-selected qualified engineering consultant licensed in the state of Wyoming to monitor the installation of the Encroaching Property. Encroaching Party would be required to bond and pay for all costs of said consultant; and
10. When necessary, the Town reserves the right to utilize the Encroaching Property in lieu of street signposts.

**WHEREAS**, Encroaching Party recognizes that it cannot acquire any right, title, or interest in and to the said public rights-of-way by adverse possession or otherwise due to the encroachment.

**NOW, THEREFORE, IT IS HEREBY AGREED** that for and in consideration of the aforesaid premises and good and valuable consideration, the receipt of which is hereby acknowledged, paid by each of the said parties to the other, Encroaching Party and the Town do mutually covenant and agree as follows:

**1. ACKNOWLEDGMENT OF TOWN'S RIGHTS:**

Encroaching Party acknowledges the Town's exclusive rights, title, and interest in the public rights-of-way and that it cannot acquire any right, title, or interest in the afore-referenced public right-of-way now or hereafter.

**2. AGREEMENT TO ALLOW ENCROACHMENT:**

The Town agrees that Encroaching Party shall have the right to have the Encroaching Property extend beyond the boundary line of the Property and to encroach within the Town right-of-way to the extent set forth herein.

The Encroaching Party shall submit to the Town Engineer record drawings of the retaining wall repairs to document the "as-built" location.

**3. RIGHT TO MAINTAIN:**

Encroaching Party shall have the right from time to time to go upon the adjoining Town right-of-way for the purpose of maintaining the Encroaching Property, provided that any damage occurring to the property of the Town as a result of such maintenance shall be corrected or repaired at the sole expense of Encroaching Party or its successors and assigns. Under no circumstances shall the Encroaching Party be allowed to increase the existing encroachment, absent written approval (including applicable regulatory approval) from the Town. Notwithstanding the foregoing, no provision in this Agreement shall limit or prohibit the Town from pursuing its right of eminent domain with regard to the Encroaching Property and no provision of this Agreement shall limit or prohibit Encroaching Party from defending its property therefrom.

**4. RELEASE OF CLAIMS:**

Encroaching Party, and its successors or assigns hereby releases and holds harmless the Town from any and all damage, claim, cause, or right of action which may arise from normal use by the Public, Town use, maintenance, construction, repair or replacement activities by the Town associated with the Town rights-of-way in its present configuration and alignment and any of the present utilities within the Town rights-of-way and which may arise due to the proximity of the Encroaching Property to the work activity being conducted by the Town.

**5. INDEMNIFICATION:**

Encroaching Party, and its successors in interest and assigns, hereby agrees to indemnify and hold harmless the Town of Jackson from any and all losses, damages, claims, causes of action, or rights of action, including reasonable attorney's fees, which the Town may incur as a result of or in any way related to the construction, use, and/or maintenance of the Encroaching Property. The Town will give the Encroaching Party prompt notice of any claims against it arising from or related to such Encroaching Property and the Encroaching Party will be kept fully informed and advised of material matters relating to the defense and handling of such claim by the Town, its insurers, or its attorneys. Nothing in this Agreement shall alter, amend, modify, or diminish the existing statutory, constitutional, or legal defenses of the Town in relation to such claims under the Wyoming law.

**6. BINDING COVENANT:**

The provisions of this Agreement shall operate as a covenant running with all parcels of land above described and shall bind both parties hereto and their respective successors and assigns in ownership.

**7. TERM OF AGREEMENT:**

This instrument and all the undertakings, promises and covenants contained herein shall remain in full force and effect until such time as the Encroaching Property is removed, demolished or destroyed, whether intentionally or by casualty loss, such as fire, earthquake, or other unforeseen occurrence, in which event all of the rights of the Encroaching Party hereunder to the encroachment shall cease. Upon the development of compelling municipal interests with which the Encroaching Property may interfere, Encroaching Party, its successors and assigns agree to cooperate with the Town to the fullest extent possible under then existing circumstances to accommodate and/or mitigate such interference by its Encroaching Property.



8. NO THIRD-PARTY BENEFICIARY:

This Agreement is made solely and specifically among and for the benefit of the parties hereto, and their respective successors and assigns, and no other person or entity will have any rights, interest, or claims hereunder or be entitled to any benefits under or on account of this Agreement as a third party beneficiary or otherwise.

9. HEADINGS:

Headings used in this Agreement are for convenience only and shall not be deemed to constitute a part hereof, or shall not be deemed to limit, characterize, or in any way affect the provisions of this Agreement.

10. MODIFICATION IN WRITING:

No modification, waiver, amendment, addition or cancellation of this document shall be effective unless in writing and signed by both parties.

11. BINDING EFFECT AND SEVERABILITY:

This Agreement, including its Recitals, shall be binding upon and inure to the benefit of the parties hereto, their heirs, legal representatives, successors, and permitted assigns unless voluntarily terminated upon agreement by all parties or their heirs, legal representatives, successors, and permitted assigns. If a Court finds any provision of this Agreement to be invalid or unenforceable, such finding shall not render the entire Agreement void or unenforceable. If feasible, the offending provision shall be deemed modified within the limits of enforceability or validity. If the offending provision cannot be modified, it shall be stricken and all other provision of this Agreement in all other respects shall remain valid and enforceable.

12. RECORDING:

This Agreement shall be executed upon its approval by the Jackson Town Council and shall thereupon be filed with the Town Clerk and recorded in the Land Records of Teton County, Wyoming at the Encroaching Party's sole cost.

13. GOVERNING LAW AND FORUM:

This Agreement shall be construed, performed and enforced in accordance with, and governed by, the laws of the State of Wyoming, without giving effect to the principles of conflict of laws thereof. The parties hereto irrevocably elect as the sole judicial forum for the adjudication of any matters arising under or in connection with this Agreement, and consent to the jurisdiction of, the courts of the County of Teton, State of Wyoming, or the United States of America for the District of Wyoming. This Agreement was negotiated by both parties hereto. As such, this Agreement shall not be construed against or in favor of any party by virtue of which party drafted it or any portion thereof.

14. COUNTERPARTS:

This Agreement may be executed in multiple counterparts, each of which shall be an original but all of which together constitute one and the same instrument.

15. GOVERNMENTAL IMMUNITY:

The Town of Jackson does not waive its governmental immunity by entering into this agreement, and fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this Encroachment Agreement.

16. WAIVER:

A waiver by the either party regarding the breach of any of the provisions of this Water Agreement shall not bar the right of the parties to enforce the terms of this Agreement.

17. ENTIRE AGREEMENT:

The parties agree that this Agreement reflects the entire agreement between the parties as to the subject matter hereof, and no amendment of such agreement shall be effective unless in writing and signed by both parties.

**IN WITNESS WHEREOF**, the effective date of this agreement is \_\_\_\_\_.

**[*signatures follow on next page*]**



## ENCROACHING PARTY

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

[illegible]

The foregoing instrument was acknowledged before me by \_\_\_\_\_, as its property owner this \_\_\_\_ day of \_\_\_\_\_, 2020.

Witness my hand and official seal.

Notary Public

My commission Expires:

**TOWN OF JACKSON,  
a municipal corporation  
of the State of Wyoming**

By: \_\_\_\_\_  
Pete Muldoon, Mayor

Date: \_\_\_\_\_  
ATTEST: Sandra P. Birdyshaw, Town Clerk

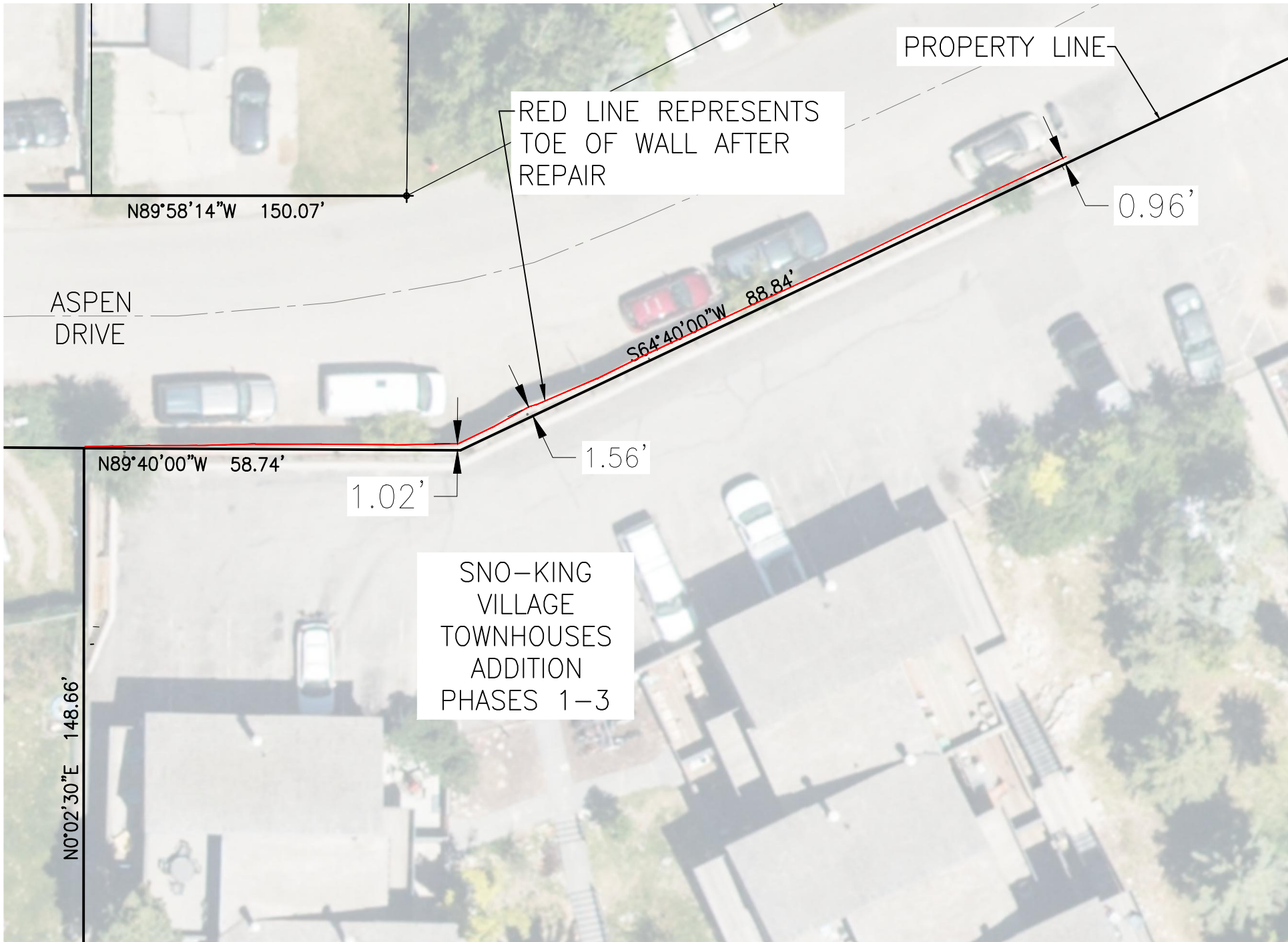
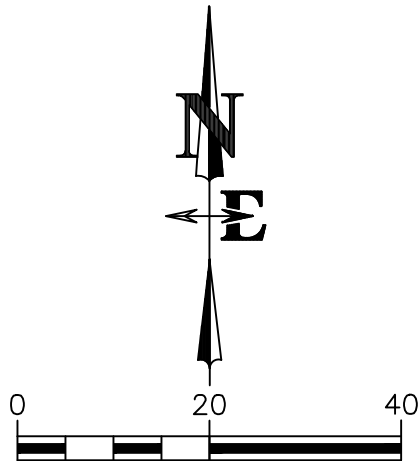
STATE OF WYOMING )  
 ) ss.  
COUNTY OF TETON )

The foregoing instrument was acknowledged before me by Pete Muldoon and Sandra P. Birdyshaw, who are each personally known to me or has each established their identity and authority to me by reasonable proof, this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

Witness my hand and official seal.

My commission Expires:

\_\_\_\_\_  
Notary Public



|            |                              |                             |            |    |        |  |
|------------|------------------------------|-----------------------------|------------|----|--------|--|
| DRAWING NO | DRAWING TITLE                |                             | DATE       |    |        |  |
|            | EXHIBIT                      | RETAINING WALL ENCROACHMENT | ENGINEERED | PG | 8/5/20 |  |
| JOB NO     | SNO-KING VILLAGE ASSOCIATION |                             | DRAWN      | SK |        |  |
| 14-235-2   |                              |                             | CHECKED    | LR |        |  |
|            |                              |                             | APPROVED   |    |        |  |

**NELSON**  
**ENGINEERING**

P.O. BOX 1599, JACKSON WYOMING (307) 733-2087



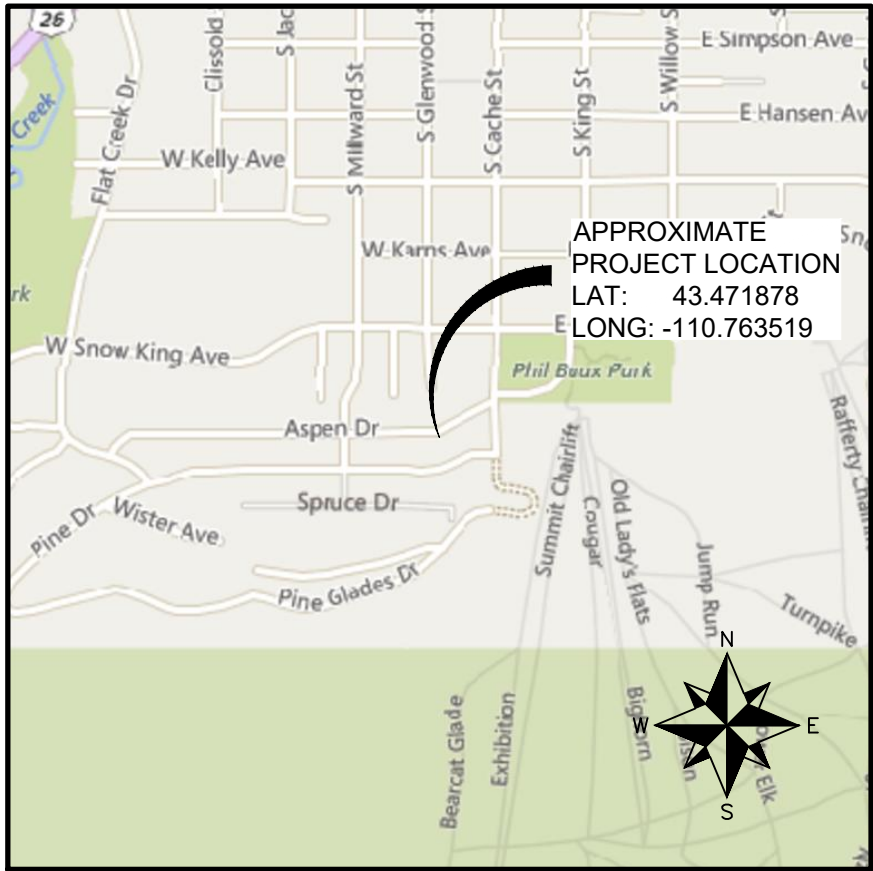
# EXISTING RETAINING WALL STABILIZATION

## PERMANENT RETAINING WALL STABILIZATION

84 ASPEN DRIVE  
JACKSON, WY  
SNO-KING VILLAGE HOA

### SHEET INDEX

| NO.  | DESCRIPTION                    |
|------|--------------------------------|
| C-01 | COVER SHEET                    |
| C-02 | GENERAL NOTES                  |
| C-03 | SITE PLAN                      |
| C-04 | PROFILE VIEWS                  |
| C-05 | SECTION VIEWS                  |
| C-06 | STANDARD NAIL & FACING DETAILS |
| C-07 | STANDARD DRAINAGE DETAILS      |
| C-08 | NAIL SCHEDULE                  |



VICINITY MAP  
(NOT TO SCALE)

| SHEET REVISIONS                                                                                                                                                                                                                                                                                                                                           |                   |     | PROJECT NAME:<br><br>PERMANENT RETAINING WALL STABILIZATION |  |             |  |            | <div><br/>GeoStabilization International®</div> <div>Phone: 855.579.0536   Fax: 970.245.7737<br/>www.geostabilization.com</div> |                 | <div></div> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----|-------------------------------------------------------------|--|-------------|--|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------|
| DATE                                                                                                                                                                                                                                                                                                                                                      | DESCRIPTION       | NO  |                                                             |  |             |  |            |                                                                                                                                                                                                                      |                 |                                                                                                  |
| 08/21/20                                                                                                                                                                                                                                                                                                                                                  | ISSUED FOR REVIEW | IFR | SHEET TITLE:<br><br>COVER SHEET                             |  |             |  |            | DRAWN BY:                                                                                                                                                                                                            | CHECKED BY:     | DATE:                                                                                            |
| 08/24/20                                                                                                                                                                                                                                                                                                                                                  | ISSUED FOR PERMIT | IFP |                                                             |  |             |  |            |                                                                                                                                                                                                                      |                 |                                                                                                  |
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|                                                                                                                                                                                                                                                                                                                                                           |                   |     | SSE                                                         |  | DEB         |  | 08/24/2020 |                                                                                                                                                                                                                      | 200492WY01      |                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                           |                   |     |                                                             |  |             |  |            |                                                                                                                                                                                                                      | C-01            |                                                                                                  |

CONSTRUCTION SEQUENCE/WORK SCHEDULE:  
THE CONTRACTOR WILL PROVIDE AND INSTALL THE SPECIFIED SOIL NAILS AND SLOPE SURFACE TREATMENT PER THE CONSTRUCTION DOCUMENTS. THE ANTICIPATED CONSTRUCTION SEQUENCE IS AS FOLLOWS:

1. DELINEATE LIMITS OF STABILIZATION. NOTIFY LOCAL UTILITIES PROVIDERS TO LOCATE AND MARK POTENTIAL UNDERGROUND FACILITIES. DAYLIGHTING OF UTILITIES IN POTENTIAL CONFLICT, AS NECESSARY.
2. PREPARE THE WORK AREA FOR STABILIZATION CONSTRUCTION (BY OTHERS).
  - 2.1. ESTABLISH TRAFFIC CONTROL.
  - 2.2. PREPARE SITE ACCESS.
3. EXCAVATE, REMOVE, AND DISPOSE OF SPOILS MATERIAL GENERATED DURING EXCAVATION (BY OTHERS).
4. MARK THE LOCATIONS OF THE PROPOSED SOIL NAILS WITH SURVEY MARKING PAINT.
5. INSTALLATION OF SOIL NAILS. NAILS WILL BE GROUTED DURING DRILLING UNLESS APPROVED OTHERWISE BY GSI ENGINEER.
6. INSTALL SURFACE TREATMENT PER THE CONSTRUCTION DOCUMENTS.

HOUSE KEEPING:

- THE SITE WILL BE ORGANIZED AND CLEAR OF ANY TRASH OR DEBRIS. ALL TRASH WILL BE PLACED IN A PROPER CONTAINER AND REMOVED AT THE END OF EACH WORK DAY.

SAFETY:

- ALL SAFETY PLANS FOR LIFTING, HEARING, DUST CONTROL, PPE ETC. WILL BE IN PLACE AND FOLLOWED ACCORDINGLY. PPE INCLUDES SAFETY VEST, STEEL TOED SHOES, HARD HAT, SAFETY GLASSES, RESPIRATOR DURING DUST PRODUCING ACTIVITIES, AND GLOVES.
- ALL FIELD PERSONNEL SHALL ATTEND SITE SPECIFIC ORIENTATION PRIOR TO BEING ON SITE, AS REQUIRED.
- DAILY PRE/POST JOB BRIEFINGS WILL BE HELD AND DOCUMENTED; ALL ON SITE PERSONNEL WILL BE REQUIRED TO REVIEW AND SIGN

SIZE AND TYPE OF NAILS:

- THE SOIL NAIL ELEMENTS SHALL CONSIST OF 38mm NOMINAL DIAMETER, SELF-DRILLING SOIL NAILS OF DOMESTIC MANUFACTURE.
- SACRIFICIAL DRILL BITS WILL BE ATTACHED TO THE SOIL NAIL PRIOR TO INSTALLING THE NAIL IN THE GROUND.
- SACRIFICIAL DRILL BITS ARE NOT PERMANENTLY INCORPORATED INTO THE PROJECT AND MAY BE REMOVED AFTER DRILLING OR LEFT AT THE PROJECT FOR THE CONTRACTOR'S CONVENIENCE. SACRIFICIAL DRILL BITS ARE NOT END PRODUCTS. SACRIFICIAL DRILL BITS ARE NOT PRODUCED IN THE UNITED STATES.
- SOIL NAILS WILL BE CONSTRUCTED USING DOMESTIC HOLLOW BAR.
- GSI ENGINEER MAY ELECT TO MODIFY THE NAIL TYPE OR GSI SUPERNAILS WITH #6 INNER BAR, DEPENDING ON ACTUAL DRILLING CONDITIONS.

FACING AND DRAINAGE SYSTEM:

- STRIP DRAINS WILL BE PROVIDED AND INSTALLED BETWEEN THE SOIL NAILS EVERY 6-FEET ALONG THE FACE OF THE EXCAVATION. THE STRIP DRAINS SHALL BE PLACED WITH THE GEOTEXTILE SIDE AGAINST THE GROUND. STRIP DRAINS WILL BE CONTINUOUS AND ANY SPLICES SHALL BE MADE WITH A ONE-FOOT MINIMUM OVERLAP SUCH THAT THE FLOW OF WATER IS NOT IMPEDED. STRIP DRAINS SHALL EXTEND BEYOND THE FACE OF THE SHOTCRETE AT THE DOWNHILL FACE.
- STRIP DRAINS SHALL BE MINIMUM 12" WIDE.

REINFORCING STEEL PLACEMENT:

- WELDED WIRE MESH WILL BE PLACED ALONG THE FACE OF THE EXCAVATION WITH A SEPARATION OF NO LESS THAN 2 INCHES BETWEEN THE WIRE MESH AND THE SOIL.
- NO. 4 REBAR WILL BE TIED TO THE WIRE MESH. VERTICAL BARS WILL BR 36 INCHES IN LENGTH AND THE HORIZONTAL BARS WILL BE CONTINUOUS (WITH OVERLAP SPLICES) IN THE SHOTCRETE.

BEARING PLATE PLACEMENT:

- 8" X 8" X 3/8" GALVANIZED STEEL BEARING PLATES WILL BE PLACED OVER THE NAILS AND ATTACHED WITH A HEX NUT TO SECURE THE WIRE MESH AND REBAR DURING SHOTCRETE PLACEMENT. IF THE SOIL NAILS EXTEND BEYOND THE HEX NUTS OR WELDED PLATES, THEY WILL BE TRIMMED.

SHOTCRETE APPLICATION:

- SHOTCRETE WILL BE PLACED FROM THE LOWER PART OF THE AREA UPWARDS TO PREVENT ACCUMULATION OF REBOUND. THE NOZZLE WILL BE ORIENTED A PROPER DISTANCE FROM AND APPROXIMATELY PERPENDICULAR TO THE WORKING FACE SO THAT REBOUND WILL BE MINIMAL AND COMPACTION WILL BE MAXIMIZED. CARE WILL BE TAKEN WHILE ENCASING REINFORCING STEEL AND MESH TO KEEP THE FRONT FACE OF THE REINFORCEMENT CLEAN DURING PLACEMENT OPERATIONS, SO THAT SHOTCRETE BUILDS UP FROM BEHIND, TO ENCASE THE REINFORCEMENT AND PREVENT VOIDS OR POCKETS FROM FORMING.
- ROUGH GUN SHOTCRETE APPLICATION WILL MAKE UP THE STRUCTURAL PORTION OF THE WALL AND WILL CONSIST OF A 4 INCH TO 6 INCH FACING THICKNESS. AN ADDITIONAL LAYER OF SHOTCRETE WILL BE APPLIED FOR PURPOSES OF SCULPTING AN AESTHETIC FINISH SIMILAR TO THE EXISTING CMU BLOCK APPEARANCE.

EMPLOYEE CERTIFICATIONS:

- 10-HOUR OCCUPATIONAL SAFETY AND HEALTH TRAINING COURSE IN CONSTRUCTION SAFETY & HEALTH
- AMERICAN RED CROSS STANDARD FIRST AID TRAINING
- AMERICAN RED CROSS BLOODBORNE PATHOGENS TRAINING: PDT

GROUT MIX DESIGN:

- DESIGN 28 DAY COMPRESSIVE STRENGTH = 3,000 PSI
- THE GROUT WILL BE A TYPE I/II/IV PORTLAND CEMENT. THE WATER/CEMENT RATIO WILL BE 0.5 TO 0.6. NO ADDITIONAL AGGREGATE OR ADMIXTURES WILL BE ADDED TO THE GROUT.

| TYPICAL GROUT MIX DESIGN (PER 5-94LBBAG MIX) |               |                           |                     |
|----------------------------------------------|---------------|---------------------------|---------------------|
| MATERIAL                                     | WEIGHT (LBS.) | VOLUME (FT <sup>3</sup> ) | FIELD UNIT VOLUME   |
| WATER                                        | 235-282       | 3.8-4.5                   | 28.4 - 33.7 GALLONS |
| CEMENT (TYPE I/II)                           | 470           | 2.37                      | 5 BAGS (94 LBS.)    |
| TOTAL UNIT                                   | 705 - 752     | 6.17-6.87                 | --                  |

| TTYPICAL GROUT MIX DESIGN(PER 94 LB. BAG) |               |                           |                   |
|-------------------------------------------|---------------|---------------------------|-------------------|
| MATERIAL                                  | WEIGHT (LBS.) | VOLUME (FT <sup>3</sup> ) | FIELD UNIT VOLUME |
| WATER                                     | 47 - 56.4     | 0.75 - 0.9                | 5.6 - 6.8 GALLONS |
| CEMENT (TYPE I/II)                        | 94            | 0.47                      | 1 BAG             |
| TOTAL UNIT                                | 141 - 150.4   | 1.22 - 1.37               | --                |

SHOTCRETE MIX DESIGN:

- SHOTCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ACI 506.2, "SPECIFICATIONS FOR MATERIALS, PROPORTIONING AND APPLICATION OF SHOTCRETE", EXCEPT AS OTHERWISE SPECIFIED. SHOTCRETING CONSISTS OF APPLYING ONE OR MORE LAYERS OF CONCRETE CONVEYED THROUGH A HOSE PNEUMATICALLY PROJECTED AT A HIGH VELOCITY AGAINST A PREPARED SURFACE.
- THE WET-MIX PROCESS CONSISTS OF THOROUGHLY MIXING ALL THE INGREDIENTS, INTRODUCING THE MIXTURE INTO THE DELIVERY EQUIPMENT AND DELIVERING IT, BY POSITIVE DISPLACEMENT, TO THE NOZZLE. AIR JET THE WET-MIX SHOTCRETE FROM THE NOZZLE AT HIGH VELOCITY ONTO THE SURFACE.
- GSI STANDARD SHOTCRETE MIX DESIGN SHALL BE USED UNLESS SHOTCRETE TEMPERATURES ARE ANTICIPATED TO REACH AND/OR EXCEED 85°F. IN THIS EVENT, GSI HOT WEATHER MIX MAY BE USED.

| MIX DESIGN      | STANDARD        | HOT WEATHER |
|-----------------|-----------------|-------------|
| MATERIAL        | WEIGHT (LBS/CY) |             |
| 3/8" ROCK       | 650 LBS         | 600 LBS     |
| SAND            | 1800 LBS        | 1800 LBS    |
| CEMENT          | 750 LBS         | 700 LBS     |
| WATER           | 300 LBS         | 315 LBS     |
| FLY ASH         | 150 LBS         | 300 LBS     |
| AIR ENTRAINMENT | 6% (1.6 CF)     | 6% (1.6 CF) |
| W/C RATIO       | 0.4 TO 0.5      | 0.4 TO 0.5  |

TESTING PROCEDURE AND EQUIPMENT:

- JACK, PRESSURE GAUGES, AND PUMPS WILL HAVE BEEN CALIBRATED WITH EACH OTHER WITHIN THE LAST 12 MONTHS.
- MOVEMENT OF THE NAIL HEAD SHALL BE MEASURED WITH AT LEAST ONE DIAL GAUGE. GENERALLY TWO DIAL GAUGES ARE UTILIZED IF POSSIBLE.
- THE PROOF TEST LOAD (PTL) IS DETERMINED BY THIS EQUATION: PTL = LB \* RPO \* 1.5, WHERE LB IS EQUAL TO THE BOND LENGTH WHICH IS 10' FOR 15' NAILS AND 5' FOR 10' NAILS. RPO IS THE ALLOWABLE BOND CAPACITY, WHICH IS 800LB/FT FOR THIS PROJECT.

PROOF NAIL TEST LOADING SCHEDULE:

| LOAD (800 LB/FT) | HOLD TIME    |
|------------------|--------------|
| AL (0.025 PTL)   | 1 MINUTE     |
| 0.17 PTL         | UNTIL STABLE |
| 0.33 PTL         | UNTIL STABLE |
| 0.50 PTL         | UNTIL STABLE |
| 0.67 PTL         | UNTIL STABLE |
| 0.83 PTL         | UNTIL STABLE |
| 1.00 PTL         | (CREEP TEST) |
| AL (0.025 PTL)   | 1 MINUTE     |

TEST NAIL ACCEPTANCE CRITERIA:

- THE CREEP RATE DOES NOT EXCEED 0.04 INCHES BETWEEN 1 AND 10 MINUTE READINGS, OR THAT THE CREEP RATE DOES NOT EXCEED 0.08 INCHES BETWEEN 6 AND 60 MINUTE READINGS.
- THE TOTAL MEASURED MOVEMENT MEASURED AT THE 1.00 PTL EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE TEST NAIL UNBONDED LENGTH.
- PULLOUT FAILURE DOES NOT OCCUR DURING THE TEST LOADING.

SHEET REVISIONS

| DATE     | DESCRIPTION       | NO  |
|----------|-------------------|-----|
| 08/21/20 | ISSUED FOR REVIEW | IFR |
| 08/24/20 | ISSUED FOR PERMIT | IFP |
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PROJECT NAME:

PERMANENT RETAINING WALL STABILIZATION

SHEET TITLE:

GENERAL NOTES

DRAWN BY:

SSE

CHECKED BY:

DEB

DATE:

08/24/2020

PROJECT NUMBER:

200492WY01

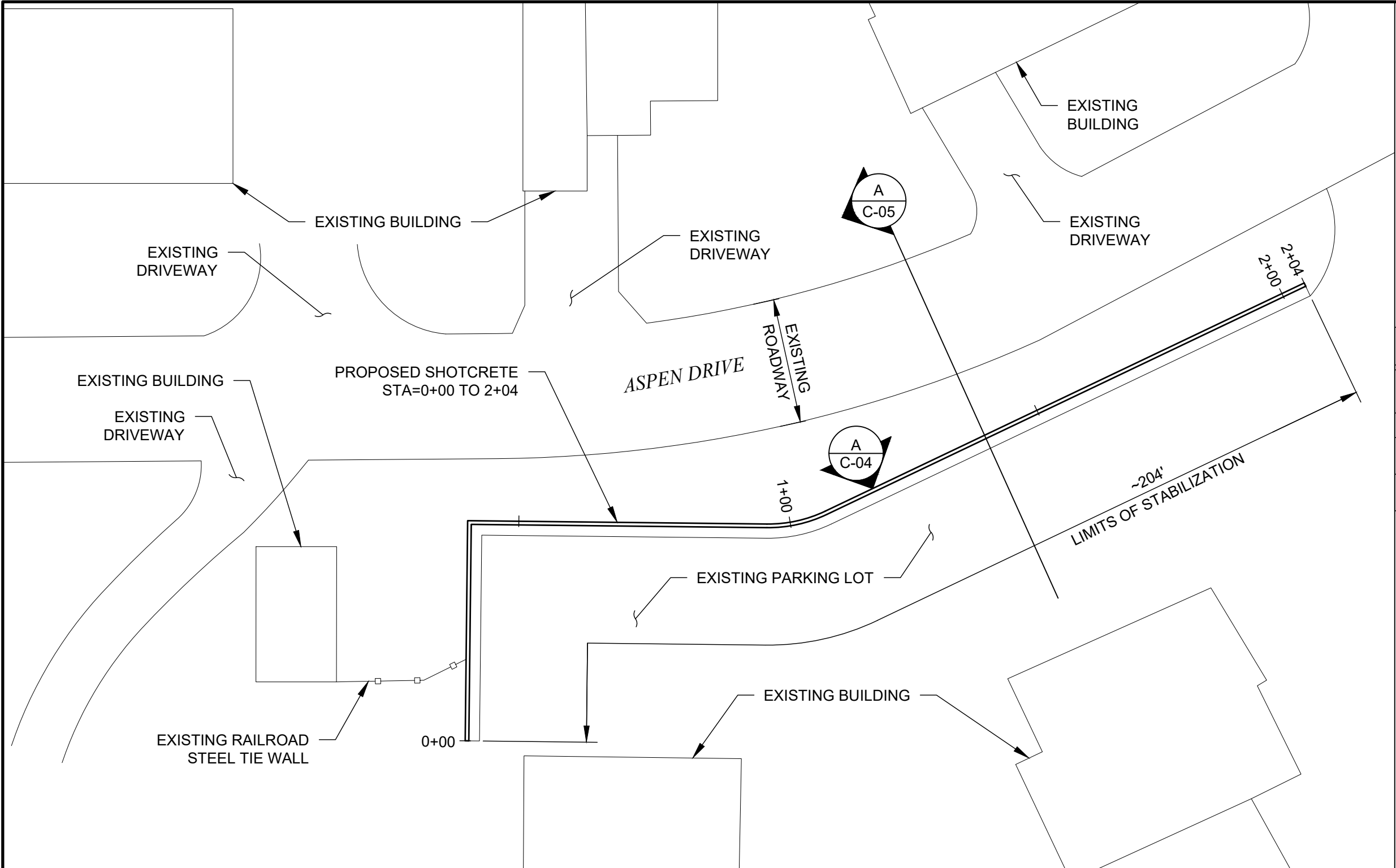
SHEET

C-02



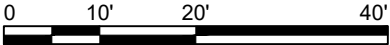
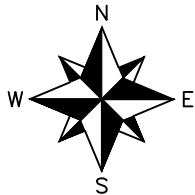
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ESTIMATED QUANTITIES

| PAY ITEM                   | QTY  | QTY (AB) | UNIT |
|----------------------------|------|----------|------|
| PROOF TESTING              | 3    | -        | EA   |
| PERMANENT SOIL NAIL WALL   | 1456 | -        | SF   |
| STAMPED AND STAINED FINISH | 1456 | -        | SF   |



| SHEET REVISIONS                                                                                                                                                                                                                                                                                                                                            |                   |     |
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| DATE                                                                                                                                                                                                                                                                                                                                                       | DESCRIPTION       | NO  |
| 08/21/20                                                                                                                                                                                                                                                                                                                                                   | ISSUED FOR REVIEW | IFR |
| 08/24/20                                                                                                                                                                                                                                                                                                                                                   | ISSUED FOR PERMIT | IFP |
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|--------------------------------------------------------------------|------------------------|-------------------------|-----------------------------------|-------------------|
| PROJECT NAME:<br><br><i>PERMANENT RETAINING WALL STABILIZATION</i> |                        |                         |                                   |                   |
| SHEET TITLE:<br><br><i>SITE PLAN</i>                               |                        |                         |                                   |                   |
| DRAWN BY:<br><br>SSE                                               | CHECKED BY:<br><br>DEB | DATE:<br><br>08/24/2020 | PROJECT NUMBER:<br><br>200492WY01 | SHEET<br><br>C-03 |

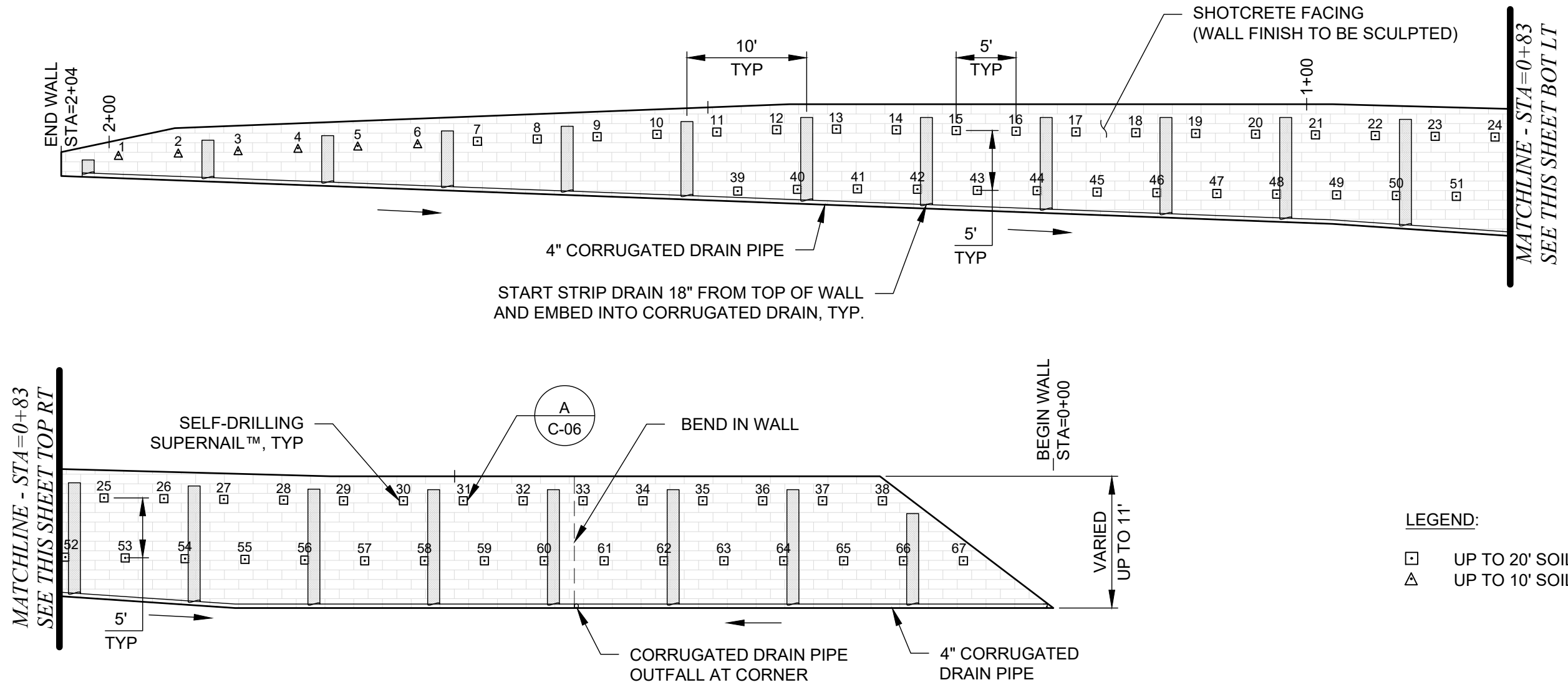


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NOTES:  
ALL DISTANCES ARE SLOPE DISTANCE  
UNLESS NOTED OTHERWISE.



**A** TYPICAL PROFILE  
SCALE: 1" = 10'

| SHEET REVISIONS |                   |     |
|-----------------|-------------------|-----|
| DATE            | DESCRIPTION       | NO  |
| 08/21/20        | ISSUED FOR REVIEW | IFR |
| 08/24/20        | ISSUED FOR PERMIT | IFP |
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| PROJECT NAME:                          |                 |
| PERMANENT RETAINING WALL STABILIZATION |                 |
| SHEET TITLE:                           |                 |
| PROFILE VIEWS                          |                 |
| DRAWN BY:                              | CHECKED BY:     |
| SSE                                    | DEB             |
| DATE:                                  | PROJECT NUMBER: |
| 08/24/2020                             | 200492WY01      |
| SHEET                                  |                 |
| C-04                                   |                 |



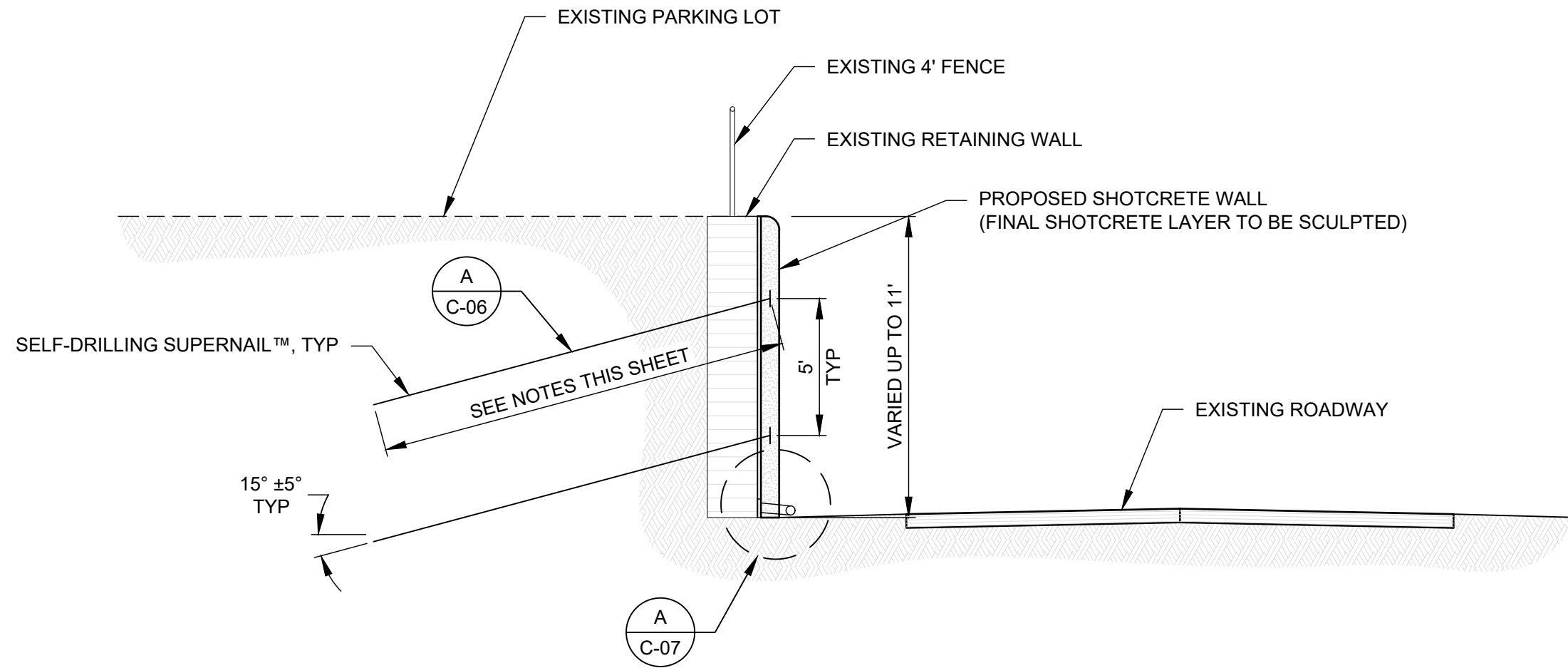
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- NOTES:
- EXCAVATE SLOPE VERTICAL.
  - FIRST (6) SOIL NAILS NEAR THE SHORT END OF WALL TO BE 10' IN LENGTH. THE REMAINING SOIL NAILS (~61) TO BE 15' IN LENGTH.



**A** **TYPICAL SECTION**  
SCALE: 1" = 5'

*SHEET REVISIONS*

| DATE     | DESCRIPTION       | NO  |
|----------|-------------------|-----|
| 08/21/20 | ISSUED FOR REVIEW | IFR |
| 08/24/20 | ISSUED FOR PERMIT | IFP |
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PROJECT NAME:  
*PERMANENT RETAINING WALL STABILIZATION*

SHEET TITLE:  
*SECTION VIEWS*

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| DRAWN BY:<br>SSE | CHECKED BY:<br>DEB | DATE:<br>08/24/2020 | PROJECT NUMBER:<br>200492WY01 | SHEET<br>C-05 |
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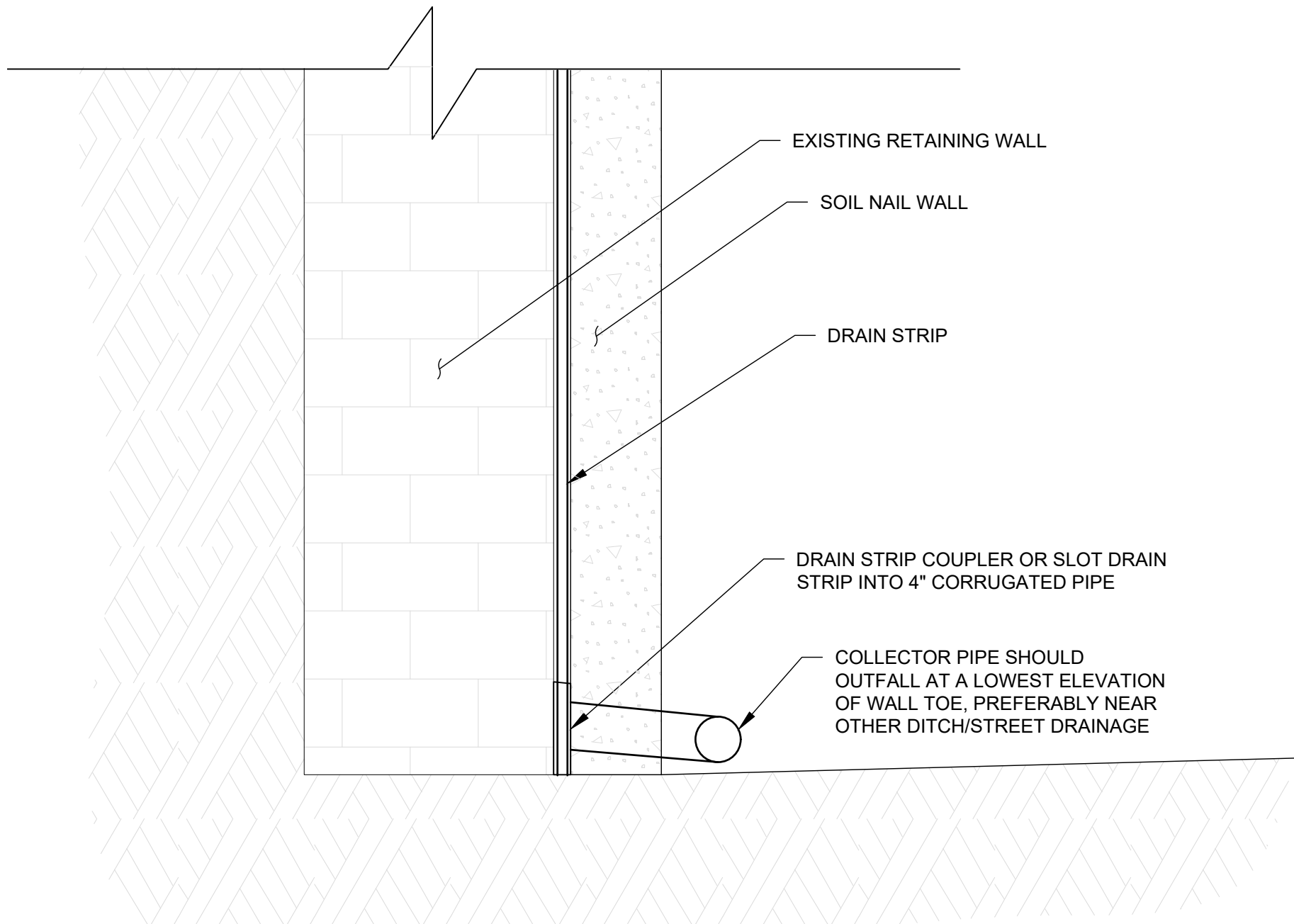


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**A** **TYPICAL WALL DRAINAGE DETAIL**  
N.T.S.

| SHEET REVISIONS                                                                                                                                                                                                                                                                                                                                            |                   |     |
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| DATE                                                                                                                                                                                                                                                                                                                                                       | DESCRIPTION       | NO  |
| 08/21/20                                                                                                                                                                                                                                                                                                                                                   | ISSUED FOR REVIEW | IFR |
| 08/24/20                                                                                                                                                                                                                                                                                                                                                   | ISSUED FOR PERMIT | IFP |
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|--------------------------------------------------------------------|------------------------|-------------------------|-----------------------------------|-------------------|
| PROJECT NAME:<br><br><i>PERMANENT RETAINING WALL STABILIZATION</i> |                        |                         |                                   |                   |
| SHEET TITLE:<br><br><i>STANDARD DRAINAGE DETAILS</i>               |                        |                         |                                   |                   |
| DRAWN BY:<br><br>SSE                                               | CHECKED BY:<br><br>DEB | DATE:<br><br>08/24/2020 | PROJECT NUMBER:<br><br>200492WY01 | SHEET<br><br>C-07 |



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| NAIL ID | DATE    |         | EMBEDMENT LENGTH (ft) |      |
|---------|---------|---------|-----------------------|------|
|         | DRILLED | GROUTED | SOIL                  | ROCK |
| 1       |         |         |                       |      |
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SHEET REVISIONS

| DATE     | DESCRIPTION       | NO  |
|----------|-------------------|-----|
| 08/21/20 | ISSUED FOR REVIEW | IFR |
| 08/24/20 | ISSUED FOR PERMIT | IFP |
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PROJECT NAME:

PERMANENT RETAINING WALL STABILIZATION

SHEET TITLE:

NAIL SCHEDULE

DRAWN BY:

SSE

CHECKED BY:

DEB

DATE:

08/24/2020

PROJECT NUMBER:

200492WY01

SHEET

C-08



Phone: 855.579.0536 | Fax: 970.245.7737  
www.geostabilization.com



# STAFF REPORT



**MEETING DATE & TITLE:** Oct. 5, 2020, Regular Meeting

**SUBMITTING DEPARTMENT:** Planning

**PRESENTER:** Tyler Valentine

**SUBJECT: ITEM P20-056:** DEVELOPMENT PLAN FOR PHASES 2 THROUGH 5 OF THE CORE SERVICES VEHICLE MAINTENANCE FACILITY AT 55 KARNS MEADOW DRIVE

**PUBLIC COMMENT:** Yes

## PURPOSE & POLICY CONSIDERATIONS:

This Town is applying for approval of a Development Plan to complete the Core Services Vehicle Maintenance Facility located at the START Bus site on Karns Meadows Drive and owned by the Town of Jackson. SPET funds would be used to construct the facility which would provide a centralized location to service, repair, and refuel the Town of Jackson and Teton County's fleet of vehicles of all types (police cruisers, snow plows, buses, etc.).

## REQUESTED ACTION:

The applicant is requesting approval of a Development Plan for the Phases 2 through 5 of the original Teton County/Town of Jackson Transit and Maintenance Facility for the property located at 55 Karns Meadow Drive. This project is being submitted as a result of the 2019 SPET vote initiative which approved funding for Phase 2 which includes the following items:

- Core Services Vehicle Maintenance Facility
- North and South Parking Lots
- Complete Site Work (including landscaping)
- Grading and Drainage

Although the above items only cover Phase 2, this Development Plan would allow Phases 2 through 5 to move forward, with Phase 2 being constructed immediately and the remaining phases being constructed successively as funding sources become available. Phase 6 (housing) is not included in this Development Plan because it was not included in the SPET initiative and because the specifics of the housing component (i.e. unit types, density, floor plans, etc.) are unknown. Please see the BACKGROUND/ALTERNATIVES section below for more details on each phase.

## RECOMMENDATION:

The Planning Director and Planning Commission recommend **approval** of a Development Plan (P20-056) for the Core Services Vehicle Maintenance Facility for the property located at 55 Karns Meadow Drive, subject to the department reviews and the following conditions:

- 1) At the time of Building Permit submittal the applicant shall provide a bond for 125% of the cost of off-site mitigation. All mitigation work shall be completed prior to issuance of a Certificate of Occupancy/Completion. In addition, the applicant shall provide a revised cost estimate that shows realistic cost values for the Cottonwood trees at the time of Building Permit submittal.
- 2) Upon completion (i.e. Certificate of Occupancy/Completion) of Phase 2, a building permit for the next phase shall be submitted within 3 years. Each subsequent phase shall follow this same expiration pattern until all phases are



completed. Failure to submit a building permit within the 3-year timeframe shall result in the expiration of all unfinished phases.

## BACKGROUND:

### History of the Site

Historically this site has been agricultural pasture. In 2001, the Teton County Housing Authority acquired the parcel as a potential site for housing development. In the mid-2000's, START began identifying potential sites for a permanent shelter and maintenance facility in order to accommodate a growing fleet, and then SPET elections were held in 2008 and 2010 to fund the land acquisition, planning, and design of the facility. The subject property, due to its central location, available land, and proximity to other Town/County support facilities, was ultimately selected by the Town Council and Teton County Commissioners as the preferred site. In 2009, the Town, on behalf of START, began negotiations to trade the "Grove" property at 825 W. Snow King Avenue and 250 Scott Lane for the subject property for the purposes of locating the START facility on the subject property. The Town formally acquired the parcel in August 2011. The Council and the County Commission identified the final programming of the proposed facility, and directed START to begin the planning and design process for a building containing bus shelter, public works, Town/County fleet maintenance, bus maintenance, START administration, and employee housing facilities.

### Previous Approvals

In November 2011, the Council approved a Conditional Use Permit and Sketch Plan (Items P11-045 & P11-046) for a proposed facility. The building (approximately 95,000 sf) occupied a 5.75-acre site and contained facilities for START fleet storage, fleet maintenance, START administration and operations offices, a Compressed Natural Gas (CNG) outbuilding, employee housing, and surface parking. Below is the original breakdown of use and square footage:

| Program Component             | Square Footage | Floor                           |
|-------------------------------|----------------|---------------------------------|
| Bus Storage                   | 23,730         | First Floor                     |
| Circulation Area              | 18,160         | First Floor                     |
| Vehicle Maintenance           | 25,800         | First Floor                     |
| Administrative and Operations | 13,152         | Second Floor                    |
| Employee Housing              | 8,780          | Second and Third Floor          |
| CNG Outbuilding               | 2,380          | First Floor (Separate Building) |
| <i>Total Square Footage</i>   | <i>92,002</i>  |                                 |

- In April and September 2013, the Council approved amendments to the previously approved Sketch Plan, and CUP along with a Final Major Development Plan (FDP) for the site (Items P12-099, P12-100 & P12-101). Despite the FDP being composed of six (6) phases, the applicant only received approval for the construction of Phase I. This was due to only final materials and exterior elevations being presented to the Design Review Committee, Planning Commission and Town Council for consideration. Because the overall project would be built in successive phases, each phase required FDP review and approval in order to ensure an orderly buildout that would take place over the course of 20 years. Phase 1 has since been completed. Below is a breakdown of all 6 phases:

**Phase 1 - Completed**

50% bus storage, internal bus circulation, administrative office (approximately 47,000 sf)

Grading and drainage

Landscaping and building access along east side

Green roof

Connector road (i.e. Karns Meadow Drive)

Rooftop solar panels

**Phase 2 - Funding available via SPET.**

Core Services Vehicle Maintenance Facility (32,263 sf)

North and south parking areas

Complete site work (including landscaping)

Grading and Drainage

**Phase 3**

Second half of bus storage (approximately 11,700 sf)

**Phase 4**

Fueling island

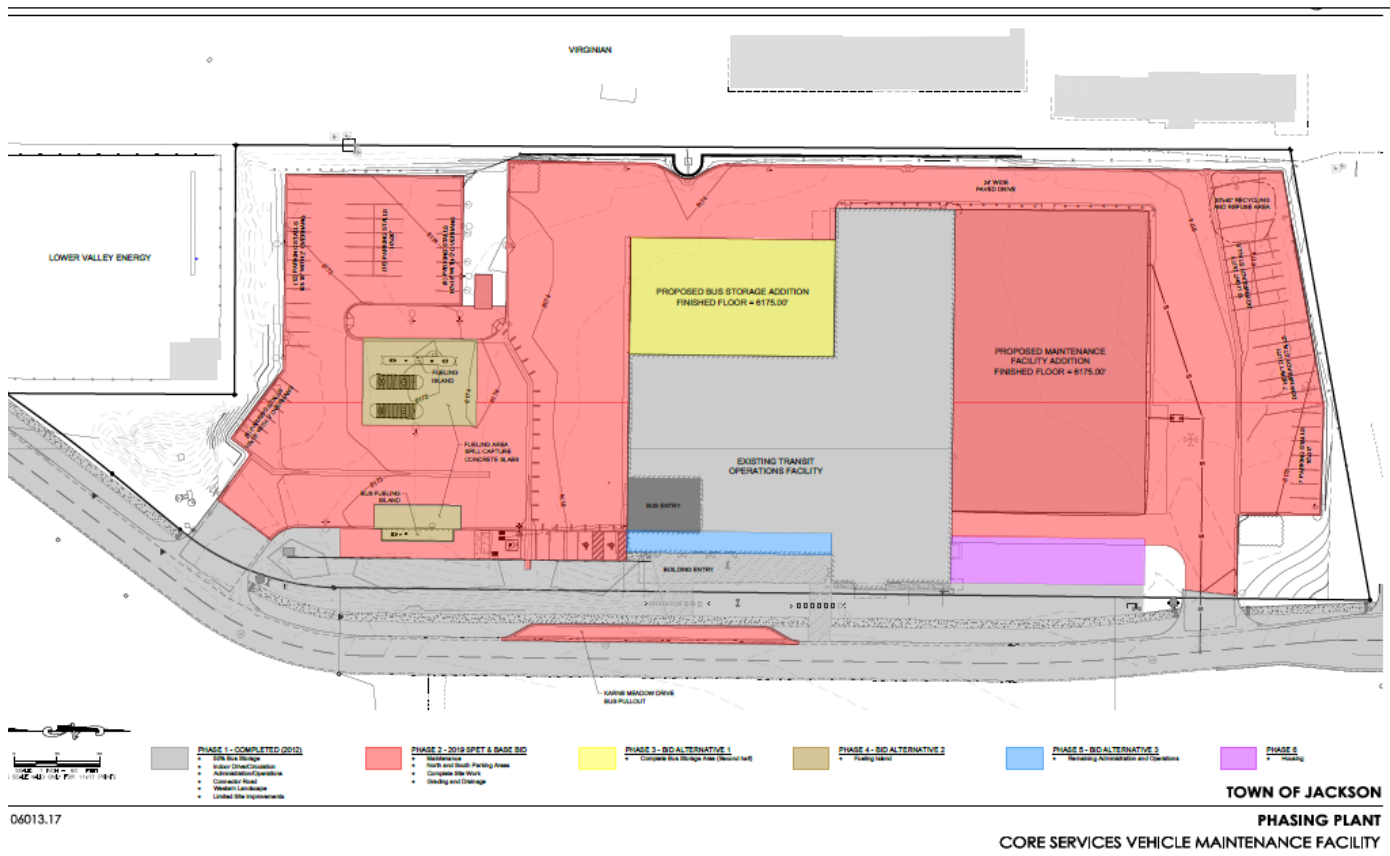
**Phase 5**

Remaining administration and operations (approximately 6,700 sf)

**Phase 6**

Housing (approximately 8,800 sf)

The following phasing plan shows the completed Phase 1 in light blue along with Phases 2 - 6:



## 2019 SPET Initiative

In 2019 the community voted for the following SPET initiative:

*“\$18,500,000.00 for planning, designing, engineering, and constructing a Core Services Vehicle Maintenance Facility, to service and maintain critical response and general use vehicles of Teton County and the Town of Jackson. These include, but are not limited to, snowplows, street maintenance vehicles, law enforcement vehicles, water/sewer maintenance vehicles, and buses. Any unexpended funds, including any unused contingency funds, shall be placed into a designated account, the principal and interest of which shall be used for operations and maintenance of the Core Services Vehicle Maintenance Facility.”*

## General Description of Project

The applicant is requesting approval of a Development Plan for Phases 2 through 5 (as described and depicted above) of the Teton County/Town of Jackson Transit and Maintenance Facility. Current funding, as a result of the 2019 SPET vote, is sufficient to cover the planning, design and construction of Phase 2 which includes the Core Services Vehicle Maintenance Facility (CSVMF), north and south parking areas, complete site work (i.e. landscaping), and grading and drainage. This facility will service both Town and County vehicles including, but not limited to, snowplows, street maintenance vehicles, law enforcement vehicles, water/sewer vehicles and buses. The building addition (32,263 sf) is located on the north side of the existing building and is one story with a mezzanine. The height of the addition will be 35'-3" and exterior materials will match the existing building.

## Changes from Sketch Plan

The applicant is proposing a few minor changes since the approval of the original Sketch Plan. The first change is to remove and fill in a 'notch' on the north elevation. The second change is to replace the green roof on Phase 3 (2<sup>nd</sup> half of



bus storage) with solar panels. All existing roofs will remain as is. The third change slightly reduces the amount of hardscape in the northeast corner replacing it with a larger green space.

**Bidding Process**

As the applicant puts the project out for bid for Phase 2, Phase 3 (2<sup>nd</sup> half of bus storage) & Phase 4 (fueling island) will be included as bid alternatives in the event that bids come in lower than expected. In the event bid comes in lower than expected, Phase 3 and Phase 4 would be built in conjunction with Phase 2. In the event bids are not lower than expected, Phases 3 & 4 would fall under the phasing plan as described below.

**Phasing**

As previously mentioned, SPET funding will allow for Phase 2 to be constructed first. Following completion of Phase 2 each phase will be constructed successively as funding sources are secured. The applicant had not proposed a specific deadline for when a building permit needs to be submitted after a previous phase is completed. However, the applicant has provided the following estimated time frames for when each future phase would start:

- Phase 3 – Commences 2022 to 2023
- Phase 4 – Commences 2023 to 2024
- Phase 5 – Commences 2023 to 2024

*Note: Please see the ‘Phasing’ section below for staff’s recommended deadline for each phase.*

**Phase 6**

Phase 6 (housing) is not part of this application and will be part of a separate Development Plan that would be submitted in the future when funding is available. The main reason Phase 6 is not included is because the type of units and density have not yet been determined and to include Phase 6 in this Development Plan would be premature. For Phase 6 to be included in this Development Plan or a future Development Plan, details pertaining to density, unit types, and floors plans is essential for Planning review and unfortunately those details are not yet available. The applicant has stated they have every intention on completing the housing component when the funding is available and plans are finalized.

**ANALYSIS:**

**Development Plan Review**

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. The overall project requires both Sketch Plan and Development Plan because the project’s original 95,000 sf of qualifying floor area exceeded the 15,000 sf threshold for a Sketch Plan and Development Plan in the P/SP Zone. Since a Sketch Plan has already been approved for the overall development, the remaining phases are allowed to be permitted through the Development Plan. Staff finds that the information submitted by the applicant to be appropriate for reviewing the proposed development at this final Development Plan phase.

Below is the Development Standards for the P/SP Zoning District:

| LDR STANDARD      | REQUIRED | PROPOSED                                                                  | COMPLIES? |
|-------------------|----------|---------------------------------------------------------------------------|-----------|
| FAR               | N/A      | Existing – 46,606 sf<br>Proposed – 43,992 sf<br>Total – 90,598 sf or 0.36 | Yes       |
| LSR / Plant Units | N/A      | 47,346 sf                                                                 | Yes       |

|                      |                         |                                       |     |
|----------------------|-------------------------|---------------------------------------|-----|
| Height               | N/A                     | 35'-3"                                | Yes |
| Front Setback (east) | N/A                     | 5'                                    | Yes |
| Side Setback (north) | N/A                     | +100'                                 | Yes |
| Side Setback (south) | N/A                     | 272'                                  | Yes |
| Rear Setback (west)  | N/A                     | 45'                                   | Yes |
| Parking              | Independent Calculation | 77 (please see parking section below) | Yes |

### Conformance with the Comprehensive Plan

This site is located Character District 4: Midtown and Subarea 4.3: Central Midtown. This is a *Transitional* area intended for redevelopment with a mixture of 2 to 3-story mixed-use buildings. Commercial uses are intended to be on the ground level with residential on the upper floors. A goal of this area is to transform into a walkable area and to expand the limited street network in order to break up large existing blocks and increase connectivity for all transportation modes. Parking should be hidden behind buildings, and buildings should be orientated toward the street with a landscape buffer screening the development. Staff finds that the project is consistent with these goals but please see the section on Findings for Development Plans for staff's more detailed analysis on the project's conformance with the Comprehensive Plan.

### Changes from Sketch Plan

This Development Plan is proposing a few changes from the original Sketch Plan approval, which is common considering a Sketch Plan is conceptual in design and is often modified by the time of final Development Plan.

- The first change only impacts the northern elevation of the building for Phase 2. The original Sketch Plan had a 'notch' in the building and the applicant has removed the notch as it provides a more practical and useable space for vehicle maintenance. The Design Review Committee (DRC) reviewed this change at the May 2020 DRC meeting and did not express any concerns. Staff also supports the change because it is minor in nature and has a practical application to the uses within the building.
- The second change only impacts Phase 3 (2<sup>nd</sup> half of bus storage) by removing the green roof and replacing it with solar panels. The exiting green roof on Phase 1 will remain as is. Staff supports this change because it will increase the building's energy efficiency which is in line with the Town's energy consumption goals and efforts.
- The third change is minor and only impacts the northeastern corner of the site. Specifically, the applicant will be reducing the amount of hardscape (i.e. pavement) and replace it with additional green space. This change will not impact access or reduce parking. Staff supports this change because additional green space will be useful for snow storage and aesthetics.

### Phasing

Staff is aware that upon completion of Phase 2, a reasonable amount of time will be need for the applicant to secure funding for the next phase. Generally, with phased developments the applicant has 3 years to submit a building permit or else the remaining unbuilt phases will expire. Staff has applied his same deadline application to this project and has added the following condition of approval:

*Upon completion (i.e. Certificate of Occupancy/Completion) of Phase 2, a building permit for the next phase shall be submitted within 3 years. Each subsequent phase shall follow this same expiration pattern until all phases are completed. Failure to submit a building permit within the 3-year timeframe shall result in the expiration of all unfinished phases.*

## **Vehicular Access / Circulation / Parking**

Proposed vehicular access has not changed since the original Sketch Plan approval. Access to the project would be provided by the two existing access points off Karns Meadow Drive: one at the north end of the site and one at the south end. The site is designed so that large fleet vehicles can maneuver easily throughout the site whether they are entering the building through the garage doors or circulating around the building to access a parking lot or fuel station. Once in the site, vehicles can drive to either end of the property through the drive aisle along the western property line.

With regards to parking, the applicant has estimated a need for 77 parking spaces which are provided at two parking lots: one at the north end of the site and the other at the south end. This parking layout is consistent with the original Sketch Plan approval. The applicant has provided a detailed breakdown of the parking demand based on users. Staff finds the parking provided to be sufficient to meet the needs of the facility, guests, residents, and staff.

## **Landscaping**

There is no landscaping requirement for this project because the P/SP zone has no LSR or plant unit requirement. However, the overall project includes a landscaping plan which provides a total of 14 plant units and native grasses. When Phase 1 was built, roughly half of the proposed landscaping was installed along Karns Meadow Drive and along the western boundary. Phase 1 included 62 trees, 46 shrubs and 21,973 sf of native grasses. The native grasses were a requirement per the original Environmental Analysis. Please see the Environmental Analysis section below for more details on final mitigation requirements.

Phase 2 would complete the landscape plan with 51 new trees, 47 new shrubs and native grasses. Most of the new plantings will be located along the northern property line and in the southern corner of the property near the employee parking lot. Staff finds the landscape plan to be more than sufficient considering that no landscaping is required. The proposed trees along the northern property line will be especially helpful in screening the building from West Broadway. Furthermore, the use of native grasses and native planting will be beneficial from a maintenance and environmental standpoint.

## **Environmental Analysis – 2:1 Off-Site Mitigation Update**

As part of the Sketch Plan approval, an Environmental Analysis was required because the property is located within the Natural Resource Overlay (NRO) and the project's impacts required mitigation at a 2:1 ratio. Phase 1 completed half of the mitigation work by installing approximately 22,000 sf of native grasses along with native trees and shrubs along the eastern portion of the site. Phase 2 will end up disturbing an area of existing cottonwood trees (approximately 6,700 sf) which requires 13,424 sf of new cottonwoods and native shrubs to be planted in Karns Meadow. The location of mitigation will be adjacent to Flat Creek slightly northeast of the solar arrays. The applicant has provided an update to the EA which summarizes their mitigation plan along with a maintenance and monitoring program. Staff finds that the 2:1 off-site mitigation plan is consistent with the LDRs and with the original EA. Staff has added a condition of approval requiring a bond for the cost of the mitigation be submitted with the building permit. In addition, the condition will require that the cost estimate for the Cottonwood trees be revised to be a more realistic number. Currently the mitigation plan estimates that each Cottonwood costs \$36 per plant when in reality they cost closer to \$350 per plant.

## **Phase 6 – Housing**

In general, Section 4.2.1. Public / Semi-Public exempts all uses from being required to provide affordable housing. However, the original Sketch Plan and CUP included a housing component which will be attached to the main building in the northeastern corner. The original plan called for approximately 8,800 sf of housing on two floors. Because the specifics of the housing component (i.e. density, type of units, floor plans, etc.) have not been finalized, this phase is not included in this Development Plan. However, the applicant fully intends on building this housing in the future when funding sources are identified. Staff agrees that including Phase 6 in this Development Plan would be premature.



## Pathway/Road Connector to Virginian Property

Part of the desired vision for subarea 4.3 Central Midtown states that “*Opportunities should be taken to expand the currently limited street network in order to break up large existing blocks and increase connectivity for all transportation modes.*” This vision was carried out in Phase 1 when Karns Meadow Drive was installed which provided a vehicular and pedestrian connection between West Broadway and Snow King Avenue. This effort broke up a large block and provided a north and south connection. As this Development Plan is being reviewed, staff identified an additional opportunity to meet the above-mentioned vision that would further break up this large block. This could be accomplished by adding a road or pedestrian pathway (or both) through the START site that would connect to a future road through the Virginian property when that property redevelops. Since the Virginian recently sold, there has been talk of a potential comprehensive redevelopment, but the timing of such redevelopment is unknown. What is known is that the Virginian will likely be redeveloped, and staff wants to ensure that there is adequate vehicular/bike/pedestrian connects between these two large parcels.

This road connection was not discussed as part of the approved Sketch Plan but staff finds that it is appropriate to explore the issue as part of the Development Plan review process. Brian Schilling, Pathways Director, also recommends that a pathway connection be considered along the same general alignment as suggested by Planning staff, which would likely be located toward the southern portion of the subject property near or through a portion of the proposed employee parking lot and just north of the LVE transformer site. Because formal discussions concerning a connector started after the submittal of the Development Plan, no schematic designs for the connector were submitted. During the formal discussions the applicant raised initial concerns that any roadway through the property would significantly reduce the number of parking spaces they believe they need, and would impact the circulation and safety of the site which is intended for large industrial type vehicles. That being said, staff still raised the idea of the connector for further exploration at the August 19, 2020, Planning Commission meeting where the Commission members all felt strongly that some sort of connection should be considered. As a result, the Planning Commission added the following condition:

*The applicant shall provide a conceptual alternative site design for a connector road to the Virginian property for Council consideration prior to approval of the Development Plan, provided that the alternative site design does not reduce the amount of necessary parking or otherwise compromise the safety or core function of the site as a municipal fleet storage and maintenance facility.*

Since the Planning Commission meeting, the applicant has provided a response to the above condition which concludes that a vehicular connector road cannot be incorporated into the site without significantly impacting the turning movements for large industrial vehicles and without reducing a significant amount of surface parking which the applicant deems as necessary. The applicant did however conclude that a 10'-wide pathway could be designed into the site along the southern property line which connects the Virginian RV Park property to Karns Meadow Drive. This 10' pathway would not impact parking or turning movements and could be multi-use (i.e. bike and pedestrian).

Pathway's Director Brian Schilling has reviewed the proposed pathway and supports the alignment and location, but is recommending that the pathway continue north along the subject property's western property line for another +/-100' so that it ends at the dividing property line of the two Virginian properties. Planning agrees with this recommendation as the site plan appears to provide ample space between the surface parking lot and the western property line for a 10'-wide pathway. Before requiring that the pathway be extended north, the applicant should be provided the opportunity to respond to this recommendation to determine whether a practical or technical difficulty (i.e. utility, slopes, etc.) exists that would prohibit a 10'-wide pathway along the western property line.

At this point, Planning, Pathways and the Planning Commission are in favor of the 10'-wide pathway. The idea is that any future redevelopment of the Virginian property(ies) would be required to connect to the existing or future pathway on the START site. The outstanding question is when the pathway should get constructed. The upside to constructing the pathway now is that it will ensure one section of pathway is built and secured for future development to connect. In addition, it would be easier to build the pathway now while the site is under construction than to add it later when the site is complete. The downside to constructing a pathway now is the pathway will connect to nowhere with an unknown

date of when one or both of the Virginian properties redevelop. And if there is no redevelopment of the Virginian site, then building the pathway now would be a waste of resources.

Staff is recommending that Council consider the following condition of approval if the Council agrees that a 10'-wide pathway should be included in this Development Plan:

The final site plan shall include a 10'-wide pathway that runs along the southern property line and connects Karns Meadow Drive to the Virginian property. In addition, the applicant shall comply with the recommendations of Brian Schilling, Pathways Director, provided that the recommendations do not conflict with any technical constraints.

**Planning Commission**

The Planning Commission voted unanimously in favor of this Development Plan at the August 19, 2020, meeting. As mentioned above in the **Cut-Thru Connector from Virginian Property** section, the Planning Commission was strongly in favor of a connector road, pathway, or combination thereof. A condition was added by the Planning Commission which required a conceptual design for a connector road provided it did not reduce the parking or compromise the safety or function of the site. As stated above, a road would not be possible but a 10'-wide pathway is possible.

**ALTERNATIVES (Optional):**

No alternatives provided other than those provided above.

**COMPREHENSIVE PLAN & PRIORITY ALIGNMENT:**

**Staff Findings**

**Development Plan** - Pursuant to Section 8.3.2 Development Plan of the Land Development Regulations, 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.***

The proposed application is located in Character District #4 Midtown, specifically Sub-area 4.3 Central Midtown of the 2012 Comprehensive Plan. In order to review the application for conformance with the Comprehensive Plan, staff has reviewed the Policy Objectives for District 4 as follows:

***Common Value 1: Ecosystem Stewardship***

Not Applicable.

***Common Value 2: Growth Management***

*Policy 4.1.b: Emphasize a variety of housing types, including deed-restricted housing*

Complies. Although the housing component is not part of the Development Plan request, staff finds that the future employee housing of phase 6 is voluntary and is thus consistent with this policy.

*Policy 4.1.d: Maintain Jackson as the economic center of the region*

Complies. Staff finds that this very important regional transportation and maintenance facility is located within the Town of Jackson, thus furthering the intent of this policy.

*Policy 4.2.c: Create vibrant walkable mixed-use subareas*

Complies. Staff finds the proposed location of the facility, which is at the far edge of the Central Midtown subarea, furthers this goal as it allows the core subarea to evolve into a vibrant, walkable mixed use subarea. Sidewalks have already been installed along the eastern property line linking West Broadway to Snow King Avenue. In addition, a future connector road from the Virginian property, if developed, would accommodate both vehicles and pedestrians.

*Policy 4.3.a: Preserve and enhance stable subareas*

Not Applicable

*Policy 4.3.b: Create and develop transitional subareas*

Complies. Staff finds that this development will enhance the built environment of the subarea and provide a successful transition between it and the adjacent Karns Meadow subarea, which is designated as an area of preservation.

*Policy 4.4.b Enhance Jackson gateways*

Not Applicable

*Policy 4.4.d: Enhance natural features in the built environment*

Complies. Staff finds that the riparian areas adjacent to the development will be enhanced as wildlife corridors will be enhanced through the implementation of the off-site 2:1 mitigation.

**Common Value 3: Quality of Life**

*Policy 5.2.d: Encourage deed-restricted rental units*

Complies. Although the housing component is not part of the Development Plan request, staff finds that the future employee housing of Phase 6 will encourage deed-restricted rental units.

*Policy 5.3.b: Preserve existing workforce housing stock*

Not Applicable

*Policy 6.2.b: Support businesses located in the community because of our lifestyle*

Not Applicable

*Policy 6.2.c: Encourage local entrepreneurial opportunities*



Not Applicable

*Policy 7.1.c: Increase the capacity for use of alternative transportation modes*

Complies. Staff finds that the proposed development is exactly the type of facility necessary to support and implement this policy.

*Policy 7.2.d: Complete key Transportation Network Projects to improve connectivity*

Complies. The overall Core Services Vehicle Maintenance Facility project originally built a connector road between West Broadway and Snow King Avenue which improved transportation connectivity. This Development Plan will allow the completion of future phases of the original project. In addition, staff has added a condition of approval requiring that a multi-modal roadway connection be made through this site to the Virginian site in an effort to further break up the large block and improve connectivity.

*Policy 7.3.b: Reduce wildlife and natural and scenic resource transportation impacts*

Complies.

Staff finds that the project is consistent with all the applicable policies listed above from District 4 of the 2012 Comprehensive Plan.

In addition, staff finds that the application should be reviewed for consistency specifically with subarea 4.3 Central Midtown which states as follows as the desired vision for the subarea:

*This TRANSITIONAL Subarea in the core of the district will be critical in achieving the overall goal of transforming the area into a walkable mixed use district. Opportunities should be taken to expand the currently limited street network in order to break up large existing blocks and increase connectivity for all transportation modes. Key to this transition will be the addition of increased residential intensity in a variety of types and forms to take advantage of the Complete Neighborhood amenities in the area. Mixed use structures will be encouraged with non-residential uses located predominantly on the street level and residential units on upper levels. Multifamily structures in a variety of forms will also be desirable. Mixed use and multifamily residential buildings should be a combination of two and three story structures oriented to the street, though a buffer should be placed between buildings and the street with green space and/ or hardscaping. Parking areas should be predominantly located behind buildings or screened from view. Live-work housing opportunities will be encouraged, as well as any other opportunities to promote local entrepreneurship. Single family residential units are not envisioned for this area. Particular care and attention will need to be given to ensure a successful transition between this mixed use subarea to the adjacent Midtown Residential (Subarea 4.3). The location of buildings and parking, types of uses and overall intensity of use should be considered to ensure a successful blend of these two subareas.*

Staff finds that the project is consistent with the vision for subarea 4.3 as described above. This Development Plan will allow the original project to continue forward which is comprised of a 2-story mixed-use building. Although some parking will be located in the front of the building, most of the parking is along the sides and rear of the building and screened by vegetation. The existing project successfully broke up a large block with the completion of Karns Meadow Drive providing a vehicular and pedestrian connection between Snow King Avenue and West Broadway. A future phase will include housing on the upper levels which also is envisioned for this area. Overall staff finds that this project will contribute to the transformation of this subarea while providing crucial services to Town and County fleet vehicles.

2. ***Achieves the standards and objective of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable.***

Complies. Consistent with the original mitigation plan, Phase 1 included 21,973 sf of native vegetative screening along the eastern property line. In order to complete the mitigation plan, Phase 2 will be required to install 13,424 sf of off-site cottonwoods and willows in Karns Meadow.

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. Staff finds that the proposed use will have minimal impacts on public facilities such as transportation, potable water and waste water facilities. As a community facility itself, the bus facility is increasing the capacity for needed community services.

4. ***Complies with the Town of Jackson Design Guidelines, if applicable.***

The DRC reviewed the project on March 11, 2020, and May 13, 2020. The DRC unanimously recommended approval to the Town Council.

5. ***Complies with all relevant standards of these LDRs and other Town Ordinances.***

Complies. Staff finds the proposed development will comply with all other standards of the Land Development Regulations. In addition, the project is in compliance with all other Town Ordinances.

6. ***Is in substantial conformance with all standards or conditions of any prior applicable permits or approvals.***

Complies. Staff finds that the proposed project is in substantial conformance with prior permits and approvals, specifically the approved Sketch Plan and CUP. These future phases were always intended and this current proposal is consistent with the original design and intent.

**FISCAL IMPACT:**

None. Funding for this project was approved by the community through the 2019 SPET initiative.

**STAFF IMPACT:**

There will be no significant staff impact to the Town.

**ATTACHMENTS OR LINKS:**

- Department Reviews
- Applicant Submittal

**SUGGESTED MOTION:**

Based upon the findings as presented in the staff report and made by the applicant for a **Development Plan** (Item P20-056), I move to make findings 1-6 in Section 8.3.2.C of the Land Development Regulations related to 1) Consistency with the Comprehensive Plan; 2) Achieves purpose of NRO & SRO overlays; 3) Impact of public facilities & services; 4) Complies with Town Design Guidelines; 5) Compliance with relevant LDRs & Town Ordinances; 6) Conformance with past permits & approvals, to **approve** a Development Plan for the Core Services Vehicle Maintenance Facility for the property

located at 55 Karns Meadow Drive, subject to the departmental reviews, this staff report dated October 5, 2020, and the following conditions:

- 1) At the time of Building Permit submittal the applicant shall provide a bond for 125% of the cost of off-site mitigation. All mitigation work shall be completed prior to issuance of a Certificate of Occupancy/Completion. In addition, the applicant shall provide a revised cost estimate that shows realistic cost values for the Cottonwood trees at the time of Building Permit submittal.
- 2) Upon completion (i.e. Certificate of Occupancy/Completion) of Phase 2, a building permit for the next phase shall be submitted within 3 years. Each subsequent phase shall follow this same expiration pattern until all phases are completed. Failure to submit a building permit within the 3-year timeframe shall result in the expiration of all unfinished phases.



## PLANNING

|                       |                                              |                |                 |      |
|-----------------------|----------------------------------------------|----------------|-----------------|------|
| <b>Project Number</b> | P20-056                                      | <b>Applied</b> | 3/16/2020       | STOL |
| <b>Project Name</b>   | Dev Plan - Core Services Vehicle Maintenance |                | <b>Approved</b> |      |
| <b>Type</b>           | DEVPLAN Facility                             | <b>Closed</b>  |                 |      |
| <b>Subtype</b>        |                                              | <b>Expired</b> |                 |      |
| <b>Status</b>         | STAFF REVIEW                                 | <b>Status</b>  |                 |      |

|                  |  |              |                          |
|------------------|--|--------------|--------------------------|
| <b>Applicant</b> |  | <b>Owner</b> | TOWN OF JACKSON, WYOMING |
|------------------|--|--------------|--------------------------|

|                       |             |              |            |
|-----------------------|-------------|--------------|------------|
| <b>Site Address</b>   | <b>City</b> | <b>State</b> | <b>Zip</b> |
| 55 Karns Meadow Drive | JACKSON     | WY           | 83001      |

|                    |                  |                     |
|--------------------|------------------|---------------------|
| <b>Subdivision</b> | <b>Parcel No</b> | <b>General Plan</b> |
|                    | 22411633200025   |                     |

| Type of Review | Status | Dates |     |          | Remarks |
|----------------|--------|-------|-----|----------|---------|
|                |        | Sent  | Due | Received |         |

|                                                                                                                          |                       |           |          |           |  |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|-----------|--|
| Building<br>Kelly Sluder<br>(3/19/2020 3:54 PM KS)<br>New construction must meet the current adopted codes for the Town. | APPROVED W/CONDITIONS | 3/18/2020 | 4/8/2020 | 3/19/2020 |  |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|----------|-----------|--|

|                    |          |           |          |           |  |
|--------------------|----------|-----------|----------|-----------|--|
| Fire<br>Kathy Clay | APPROVED | 3/18/2020 | 4/8/2020 | 4/16/2020 |  |
|--------------------|----------|-----------|----------|-----------|--|

|                                    |            |           |          |          |  |
|------------------------------------|------------|-----------|----------|----------|--|
| Joint Housing Dept<br>Stacy Stoker | NO COMMENT | 3/18/2020 | 4/8/2020 | 4/8/2020 |  |
|------------------------------------|------------|-----------|----------|----------|--|

|                         |  |           |           |  |  |
|-------------------------|--|-----------|-----------|--|--|
| Legal<br>Lea Colasuonno |  | 3/18/2020 | 4/17/2020 |  |  |
|-------------------------|--|-----------|-----------|--|--|

|                                                                                                           |            |           |          |          |  |
|-----------------------------------------------------------------------------------------------------------|------------|-----------|----------|----------|--|
| Parks and Rec<br>Steve Ashworth<br>(4/9/2020 9:52 AM STOL)<br>No comment on P20-056 at this time. Thanks. | NO COMMENT | 3/18/2020 | 4/8/2020 | 4/8/2020 |  |
|-----------------------------------------------------------------------------------------------------------|------------|-----------|----------|----------|--|

Andy Erskine, CPSI

We are generally comfortable with the mitigation plan as presented. It is important that the plantings allow for visual access to the creek and are not planted so densely to allow for hiding spots. Also, in review of the cost estimate the numbers provided seem very low. A 3" cal. Tree usually runs in the neighborhood of \$350, not \$36. I suggest that this be reviewed.

-Steve Ashworth

|                             |                       |           |          |          |  |
|-----------------------------|-----------------------|-----------|----------|----------|--|
| Pathways<br>Brian Schilling | APPROVED W/CONDITIONS | 3/18/2020 | 4/8/2020 | 4/1/2020 |  |
|-----------------------------|-----------------------|-----------|----------|----------|--|

| Type of Review                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Status             | Dates     |           |           | Remarks               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------|-----------|-----------|-----------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    | Sent      | Due       | Received  |                       |
| <b>Contact</b><br><b>Notes</b><br>(3/20/2020 9:00 AM STOL)<br>P20-056, 55 Karns Meadow Dr. – Core Maintenance Facility – DEV<br>Comments from Teton County/TOJ Pathways Department<br>Status: approved w/conditions <ul style="list-style-type: none"><li>• Pathway connections<ul style="list-style-type: none"><li>o Town Planning and Pathways have a longstanding goal to break up the “super blocks” generally bounded by Scott Lane and Flat Creek Dr. on the west and east sides, and Broadway and Snow King Ave. on the north and south. With the Virginian parcel up for sale and other connections possible in the future, pathways requests that space along the west and south side of the parcel (generally the southwest corner) be allocated for a future pathway connection between the Virginian parcel and Karns Meadow Dr.</li><li>o Staff can provide additional information and detail as needed.</li></ul></li><li>• Bicycle Parking<ul style="list-style-type: none"><li>o Existing bike parking from Phase 1 may be sufficient for Phase 2 as well, but please show the amount and location of bike parking on the plans.</li><li>o Given the location, type of use, and parking plan of the proposed development, staff expects that there will be a moderate demand for bicycle parking. Staff recommends that at least 10 bike parking spaces be provided (5 or more U-racks).</li><li>o Staff supports credits for bike parking towards the development’s overall parking requirement.</li><li>o The bike parking could be a mix of “short-term” and “long-term”.</li><li>o Short-term parking typically describes one or more “single inverted-U” racks located near the entrance it serves to be used for visitor or guests parking for a few hours or less. In this case the U-racks would mostly serve the seasonal/daily needs of residents but could also be used by guests to the development. “Wave,” “ribbon,” and “toaster” style racks shall not be used. Bike parking should be hardscaped and should not obstruct pedestrian flow.</li><li>o Long-term parking typically describes a secure area for employees and long-term storage by residents that need to park for more than a few hours—i.e. all-day or overnight). If the short-term parking isprotected from rain/snow, then this will probably suffice as long-term parking for the current development phase.</li><li>o The bike parking should be constructed on a concrete pad. A grass or dirt surface will quickly deteriorate into mud from foot traffic during wet seasons and will be difficult to keep clear of snow. Also a concrete surface will provide a more secure mounting surface for the racks and will discourage theft.</li><li>o Rack type and storage locations should be shown on site plans.</li><li>o Staff supports including the bike parking towards the landscape surfacing requirement so that switching from grass to hardscape for the bike parking does not detract from the applicant’s landscape requirements.</li><li>o Jackson Hole Community Pathways will be happy to provide additional background information and guidance on site selection, layout, rack selection, and rack installation.</li></ul></li></ul> |                    |           |           |           |                       |
| ***See PDF in attachments***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |           |           |           |                       |
| Planning<br>Tyler Valentine<br>(8/14/2020 10:23 AM TV)<br>Please see staff report for recommended conditions of approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | APPROVED W/CONDITI | 3/18/2020 | 4/8/2020  | 8/14/2020 |                       |
| Police<br>Todd Smith                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    | 3/18/2020 | 4/17/2020 |           |                       |
| Public Works<br>Jeff Silliman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | APPROVED           | 3/18/2020 | 4/8/2020  | 4/8/2020  | Approved. No Comments |





# **Development Plan for Core Services Vehicle Maintenance Facility**

**The Town of Jackson, Wyoming**

**55 Karns Meadow Drive**

**Applicant:**

Town of Jackson, Wyoming  
PO Box 1687  
Jackson, WY 83001

Submittal Date: March 16, 2020  
Project No. 06013

Prepared by:



**JORGENSEN**

It's About People, Trust and Know How



**Stantec**

## **SECTION 1 – PROJECT BACKGROUND AND OVERVIEW**

### **A. PROJECT HISTORY & BACKGROUND**

The Town of Jackson/Teton County Transit Operations and Maintenance Facility site is a 5.75 Acre Parcel at 55 Karns Meadow Drive, Jackson, WY and more specifically described as PT. SW1/4NE1/4 & PT. SE1/4NW1/4 SEC. 33, TWP. 41, RNG. 116, Teton County Wyoming, located in an area generally known as Karns Meadow. The parcel is bordered on the west and north by private lands with commercial uses. The property south of the site is owned by Lower Valley Energy and is used as an electrical power substation facility. The property to the east is Karns Meadow Tract 5 and is currently open space with a restrictive covenant held by the Jackson Hole Land Trust. Access to the project site is via Karns Meadow Drive via a 60-foot road easement that connects Snow King Avenue and Wyoming State Highway 89 (West Broadway).

After acquiring the property from Teton County in 2011 it was rezoned to Public-Semi Public-Town of Jackson (P-SP ToJ). A Sketch Plan for a multiphase project was approved in November of 2011. Subsequent to this approval the project went through several changes to reduce the cost and refine the project. This required additional amendments and approvals. In April of 2013, the Town of Jackson/Teton County Transit Operations and Maintenance Facility was approved and the construction process began. The grand opening of the facility was in 2014 and was completed with most of the site improvements that included the connector road (Karn's Meadow Drive) and some site work.

The facility includes indoor storage for the START Bus fleet, maintenance operations for the Town and County's vehicle fleet (relocated from the current Town Public Works facility), bus wash, indoor vehicle circulation, maintenance parts storage, a fueling station for the Town and County, employee housing, and administration and operations offices.

The facility is housed in a single building with a footprint of approximately 76,000 square feet. Through the concept site planning process, enclosing these many uses in a single facility became the most effective and efficient way to proceed with the development of a joint Town/County project on the site. Advantages include increased energy efficiencies through fewer door openings and closings and a singular HVAC system. Once inside the building, vehicle circulation between maintenance and fleet storage occurs indoors, significantly reducing noise from vehicles maneuvering outdoors and the need to leave busses running for long periods to warm up in the winter.

Programming for this facility was initiated in 2006, updated in 2010 and 2012. Through a process of interviews with key START Bus and Public Works staff, the Design Team identified program needs for the entire facility based upon specific relevant expertise with the design, construction, operation, and maintenance of transit and maintenance facilities. These needs were summarized in the Final Programming Report and reviewed by the START Bus and Public Works Directors to ensure they are practical and appropriate for the Town of Jackson and Teton County. The program projects the fleet maintenance needs of the Town of Jackson and START out for 20 years to the year 2032. The facility required to serve the program includes:

- Heated Storage for 36 Buses
- 5 Maintenance Repair Bays
- 3 Heavy Duty Repair Bays
- 3 Light Duty Repair Bays
- 2 Buildout Bays
- Employee/Visitor Parking
- Parts Storage
- START Administration/Operations
- TOJ/TC Employee Housing
- Fueling Island with Diesel and Unleaded Gasoline.

Karns Meadow Drive connects Snow King Avenue to West Broadway. The road, sidewalk, and drainage features were designed as a “complete transportation corridor.” Safe access is provided for all users: pedestrians, bicyclists, motorists, and public transportation users. A connecting pathway will be an important component of the future Karns Meadow pathway system and the WY 22/US Highway 89 Pathway Connector Project – East Segment is not part of this phase, but may be developed in the future.

A goal of the project planning and design was to develop the site efficiently to meet the facility 20 year program and the 50 year building life-span goals. A balance was sought to ensure the facility functions well while remaining of limited size and footprint. Buildings are functional, aesthetically pleasing and sustainable through the use of solar on the roof to help offset the energy demands of the facility.

Landscaping includes all native plant material and be designed to minimize long term maintenance costs. Screening fences and noise barrier walls will be considered, especially along the west and north property lines. Applying creativity to these elements will result in a more interesting design that can be tied back to the building’s architecture and become an amenity to the site.



Proper stormwater management is critical to the health of the receiving waters of Flat Creek. No untreated stormwater will be allowed to enter Flat Creek from this project site. Stormwater will be routed using curb and gutters, bioswales, stormwater treatment chambers (sand/oil separators), and detention ponds.

## **B. OWNER & PROJECT TEAM INFORMATION**

### **PROPERTY OWNERS & APPLICANT**

Town of Jackson, Wyoming  
PO Box 1687  
Jackson WY 83001  
307-733-3932

### **ENGINEERING & LAND PLANNING**

Jorgensen Associates, Inc.  
1315 Highway 89 South, Suites 201 & 203; 83001  
P.O. Box 9550  
Jackson, Wyoming 83002  
307-733-5150

### **ARCHITECTURE**

Stantec Architecture Inc.  
1050 17th Street Suite A200  
Denver CO 80265-2016 US

## **C. DEVELOPMENT PROPOSAL**

In November of 2019 the community voted via the 2019 SPET to continue this project and address several critical fleet maintenance needs. This begins with Phase 2: The Core Services Vehicle Maintenance Facility built for the purpose of servicing and maintaining critical response and general use vehicles for Teton County and the Town of Jackson. These include, but are not limited to, snowplows, street maintenance vehicles, law enforcement vehicles, water/sewer maintenance vehicles, and buses. This building is the signature phase in this development plan and also includes the North and South Parking Areas and all of the remaining grading, drainage, landscaping and site work. The building has very a minor change from the Sketch Plan that fills in the “notch” that had existed on the North elevation and the northeast corner of the building.

Phases 3, 4, and 5 are also a part of this development plan, but timing and funding for those phases is still yet to be finalized. Phase 3 -Second Half of Bus Storage has a minor change in that the building will be replacing the proposed green roof with solar panels.

The green roof on the existing bus storage will stay in place. Construction is set to start as soon as possible for this project. After this process concludes, the project will proceed through a building permit review and bidding process with the ultimate goal of beginning construction in late summer.

#### **D. PHASING**

- **Phase One (Completed)**
  - 50% Bus Storage & Indoor Drive/Circulation
  - Administration/Operations Offices
  - Connector Road
  - Landscaping
  - Limited Site Work
- **Phase Two – Begins Summer 2020 and concludes Fall 2021**
  - Core Services Vehicle Maintenance Facility
  - North and South Parking Areas
  - Complete Site Work
  - Grading and Drainage
- **Phase Three – 2022 to 2023 (Funding Dependent)**
  - Second Half of Bus Storage
- **Phase Four – 2023 to 2024 (Funding Dependent)**
  - Fueling Island
- **Phase Five – 2023 to 2024 (Funding Dependent)**
  - Remaining Administration and Operations
- **Phase Six – (Future Phase not a part of this application)**
  - Housing

#### **A. FINDINGS FOR APPROVAL**

Division 8.3.2.C Development Plan Findings for approval:

**1. *Is consistent with the desired future character for the site in the Jackson/Teton County Comprehensive Plan. Complies.***

This project is in direct alignment with the following sections of the Teton County Comprehensive Plan, Section 7: Multimodal Transportation. Policy 7.1.c: Increase the capacity for use of alternative transportation modes and Policy 7.1.f: Establish a regional transportation strategy. Section 8: Quality Community Service Provision.

Principle 8.2: Coordinate the provision of infrastructure and facilities needed for service delivery. Integrated Transportation Plan (ITP): the plan is to increase service levels (frequency, hours of operation and connectivity) on local routes, bringing much better service to areas of the town and county. The project's location is within the Comprehensive Plan District 4 – Midtown, Subarea 4.3 – Central Midtown.

**2. *Achieves the standards and objectives of the Natural Resource Overlay (NRO) and Scenic Resources Overlay (SRO), if applicable. Complies.***

Most of the property resides within the NRO. The proposed development will occur in areas of the parcel that are already disturbed from Phase 1. Since there are no new impacts to protected cover types during Phases 2 through 6, the project complies with NRO standards and meets this finding.

For further details on impacts realized and mitigation required during Phase 1 of this project see Section I.4. ENVIRONMENTAL STANDARDS on page 7.

**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 existing development is already connected to public utilities for water and sewer, and the project will continue to utilize these public utilities. The project is within town limits and is currently served by police, public works, fire and EMT services; the development will not result in increased impacts on availability of these services. Moreover, this project actually expands the Town's capacity to deliver these services to the general public by resolving current issues with capacity for repair and maintenance of all Town and County vehicles and equipment.

Multiple transportation options already exist in proximity to the property: these include pedestrian and bicycle connections to the Teton County Pathway System and Town Shuttle stops.

**4. *Complies with all relevant standards of these LDRs and other Town Ordinances. Complies.***

The 5.75-acre site provides enough space to build out the final phases of the project to fit programming and circulation needed for this important community facility. Setbacks are not applicable in the P-SP. The building location, bulk and scale generally conform to the 2013 Sketch Plan Approval with the exception of a few minor modifications and conform to all other requirements of the LDR's when pertaining to the P-SP Zoning District. The project also conforms to the purpose of the P-SP Zoning



District in that the project needs the flexibility intended for this zone and is under the control of the local government.

- 5. *Is in substantial conformance with all standards or conditions of any prior or applicable permits or approvals. Complies.*** The building location, bulk and scale generally conform to the 2013 Sketch Plan Approval its subsequent Final development Plan and amendments thereto, with the exception of a few minor modifications as noted.

**F. ADDITIONAL ZONE-SPECIFIC STANDARDS, SECTION 2.2.6.E.**

There are no zone-specific standards within the zone of Public/Semi-Public.

**G. PROPOSED DEVELOPMENT PROGRAM**

The proposed size of the **Core Services Vehicle Maintenance Facility** is depicted within Architectural Plans in **Section 3**. A proposed development program is depicted in the table below.

| PROPOSED DEVELOPMENT PROGRAM                          |      |
|-------------------------------------------------------|------|
| Area Calculations for 55 Karns Meadow Drive - Phase 2 |      |
| Gross Site Area                                       | 5.75 |
| Land within road easements and right-of-way           | 0.00 |
| Land within existing vehicular access easements       | 0.00 |
| Land between levees or banks of rivers and streams    | 0.00 |
| Lakes or ponds > 1 acre                               | 0.00 |
| Open Space                                            | 0.00 |
| 50% of lands with slopes greater than 30%             | 0.00 |
| Base Site Area                                        | 5.75 |
| Adjusted Site Area                                    | 5.75 |

| DEVELOPMENT CALCULATIONS  | Existing | Proposed | Gross  |
|---------------------------|----------|----------|--------|
| Floor area                | 46,606   | 40,499   | 87,105 |
| FAR or maximum floor area | N/A      | N/A      | N/A    |
| Site Development          | N/A      | N/A      | N/A    |
| Landscape Surface Area    | 0        | 47,346   | 47,346 |
| Landscape Surface Ratio   | 0        | 0.19     | 0.19   |
| Setbacks                  |          |          |        |
| Front or street yard      | N/A      | N/A      | N/A    |
| Rear yard                 | N/A      | N/A      | N/A    |
| Side yard                 | N/A      | N/A      | N/A    |
| Height                    | N/A      | N/A      | N/A    |

**H. LANDSCAPING STANDARDS**

Landscaping Standards are not applicable within Zone P/SP-ToJ. During Phase 1, some plant units and landscaping were planted as part of that phase. Phases 2 through 6 will also have landscaping installed as part of each phase, in accordance with the LDRS where appropriate, and not in a manner that would hinder the construction of future phases.

## I. ENVIRONMENTAL STANDARDS

1. **Natural Resource Buffers (Wetlands and Water bodies)** there are no wetlands or bodies of water on the property according to the Environmental Analysis dated December 12, 2012 issued by Alder Environmental attached in **Section 4**.
2. **Wildlife Friendly Fencing** – no fencing is proposed nor required.
3. **Water Quality** - See subsequent Engineer's report in **Section 2** of this application for discussion on this item.
4. **Natural Resources Overlay (NRO)** The property is located within the NRO. During Phase 1 of this project some protected cover types were predicted to be impacted during construction and a mitigation was compiled to compensate for these impacts at 2 to 1 ratio as required by the LDR's. See the Environmental Analysis dated December 12, 2012 issued by Alder Environmental attached in **Section 4**. It is possible that the mitigation plan and its requirements will be reduced due to the wetlands not being impacted during construction of the Karn's Meadow Drive during Phase 1. Alder Environmental will be inspecting the wetlands in the next week. Should there be a reduction in the required mitigation a revision to the mitigation plan will be submitted concurrently with the grading permit for this project.
5. **Bear Conflict Area** – The property is not mapped as a bear conflict area.

## J. SCENIC STANDARDS

1. **Exterior Lighting** - Exterior lighting will be addressed during the Building Permit and will follow requirements in LDR's.
2. **Scenic Resource Overlay (SRO) Standards** - The property is not located within SRO.

## K. NATURAL HAZARDS TO AVOID

1. **Steep Slopes** - There are no steep slopes on the site. There is a moderate slope that begins at the northern boundary of the site. This slope will be dealt with using a retaining wall.
2. **Unstable Soils** – In our opinion, the biggest geotechnical concern at the site was the presence of the undocumented fills encountered across the site during the 2010 and 2020 test pit excavation. Undocumented fills and topsoil are unsuitable as subgrade

soils for foundation elements and will have to be removed part of the construction of the foundation of the Core Services Vehical Maintenance Facility.

3. **Fault Areas** – The most potentially active fault in the area is the Teton Fault, which lies approximately 5-miles west of the site. The inferred (buried) traces of the Cache Creek and Jackson thrust faults are located near the site, crossing the town of Jackson on a generally east-west trend. These faults are considered to be relatively old and inactive by the USGS and do not affect the project.
4. **Floodplains** – A portion of the proposed development resides within FEMA Flood Hazard Zone X, Area of Minimal Flood Hazard, and will be comply with Chapter 15.30 for Flood Damage Prevention within the Municipal Code of the Town of Jackson.
5. **Wildland Urban Interface** – The site is not within the WUI

#### K. SIGN STANDARDS

Sign Standards are not applicable within Zone P/SP-ToJ.

#### L. GRADING, EROSION CONTROL, DRAINAGE, & STORMWATER

See subsequent Engineer's report in **Section 2** of this application for discussion on these items.

#### M. ALLOWED USES & USE REQUIREMENTS

1. **Allowed Uses** - The proposed uses within the development include Heavy Industry for transport terminals and the maintenance and repair of trucks and heavy equipment.
2. **Parking** - See subsequent Engineer's report in **Section 2** of this application for discussion on these items.
3. **Operational Standards**
  - a. **Outside Storage** - The development will be for storing, maintaining, and repairing buses within a roofed facility, and thus, will not be using outdoor displays.
  - b. **Refuse and Recycling** - The development will include two areas for consolidating trash and recycling. One enclosed area near the north-eastern corner of the proposed maintenance facility addition and one open space area near the north-eastern corner of the property.



- c. **Noise** - Noise levels will be kept within the permitted 65 DBA, consistent with LDR restrictions for the P/SP Zoning District.
- d. **Vibration** - The development does not include uses in which any regular activity shall cause or create displacements for given frequencies as prescribed by LDR restrictions.
- e. **Electrical Disturbance** - The development does not include any activities which could cause electromagnetic radiation and disturbed operation of equipment such as radios and TVs.
- f. **Fire and Explosive Hazards** – The development will adhere with the fire codes adopted by the State of Wyoming and the Town of Jackson pertaining to the manufacturing, possession, storage, transportation or use of hazardous materials.

#### **N. ALLOWED SUBDIVISION AND DEVELOPMENT OPTIONS**

- 1. **Standards Applicable to all Subdivisions** – Although no subdivision is currently proposed the project will adhere to all standards provided in Sections 7.1, 7.2, 7.4 & 7.5 of the LDRs which include developer responsibilities, permits required, installation, working with a professional engineer, over sizing and off-site improvements, and acceptance by Town.

#### **O. DEVELOPMENT EXACTION AND AFFORDABLE HOUSING STANDARDS**

- 1. **Employee Housing** –The project is exempt from Affordable Workforce Housing Standards as per the LDR's in the P-SP zone. However, as per the 2013 Sketch Plan, voluntary affordable housing was proposed onsite for Town and County employees. This building had gone through two different iterations based on the varying needs of community over time. Because these needs change over time and this phase being scheduled so far in the future (5+ years) it is not a part of this development plan application. Once it is funded a final design will be put through the appropriate permit application to this a site at that time.
- 2. **School and Parks Exactions** – No saleable subdivision of land is proposed and therefore no School and Park Exactions are required.

## **P. CONSTRUCTION MANAGEMENT**

1. Development coordination between the Town and the 660 West Broadway developer agreed that as part of their project, they could grade over their south property line and onto the subject property. Coordination and alteration of the design of the proposed retaining wall and landscaping around the parking lot is necessary.
2. Construction Staging will occur on the property and adjacent Karns meadow as follows:
  - a. Most of the staging for construction will occur in the Employee Parking area south of the existing building
  - b. If needed some staging can occur on the north side of the site except when the north wall between the properties is being built.
  - c. Parking for construction workers will occur on the Karns meadow property. This temporary parking lot will be shown in future grading permits. Parking is allowed by the covenant that is recorded in this property in Doc #

## **Q. INFRASTRUCTURE**

1. **Transportation Facilities** - See plan sheets provided in **Section 3**.
2. **Required Utilities** - See Engineers Report in **Section 2** and plan sheets provided in **Section 3**.

## **SECTION 2 – ENGINEER’S REPORT**

### **A. INTRODUCTION**

The following Engineer’s Report is intended to provide the engineering basis for design and to discuss engineering related items for the Core Services Vehicle Maintenance Facility. Supporting infrastructure will include driveway access improvements and utility connections to the Town of Jackson water and sewer mains as well as connections to cable utility mains that serve this portion of the Town of Jackson. The basic layout and design elements are shown on the plan set attached in **Section 3**.

### **B. SOILS AND SITE CONDITIONS**

The project site is located within the Town of Jackson just north of Flat Creek in the Quaternary-aged flood-plain deposits (Love and Albee, 2004). Womack and Associates, Inc. (WAI) completed a Geotechnical Investigation Report (Report) for the property located at 55 Karns Meadow drive in December of 2010 for the construction of the START Facility. In order to reduce uncertainty during construction of the proposed addition, Jorgensen Geotechnical (JG) excavated an additional three test pits. In addition to the field work, JG updated all references to building codes and pertinent seismic data to ensure they are current and applicable for the proposed new Core Services Vehicle Maintenance Facility.

In summary, the test pits excavated in 2010 as well as the test pits excavated in 2020 encountered a fill and topsoil layer of varying thickness overlying the alluvial flood plain deposits. The report describes the geological site conditions and includes a site location and geologic map and test pit logs. The report provides engineering analyses (including pavement design, settlement, bearing capacity, lateral pressures, and soil friction) and offers recommendations for construction of foundation elements.

A copy of the Geotechnical Engineering Report by Jorgensen Geotechnical is included in **Section 5** of this report.

### **C. GRADING, EROSION CONTROL & DRAINAGE**

Development on the site will accommodate stormwater by routing drainage through the available green spaces on site. These areas are sufficient to accommodate stormwater runoff and treatment. The parcel is relatively flat and underlain by semi-permeable surface soils and very permeable subsoils.

A Town of Jackson Grading and Erosion Control Permit will be required prior to construction. The GEC permit application drawings will incorporate any revisions made



during the Development Plan process and as a result of incorporating final design elements and coordination with the Town and other utility companies.

#### **D. WATER QUALITY AND STORMWATER**

Design of stormwater shall meet or exceed the requirements stated in The Town of Jackson Land Development Regulations: *Article IV*:

*Development Standards Division 4900 – Stormwater Management Provisions*-The release rate for the post development 10 and 100-year storm events will not exceed the pre-development release rate for these storms. All culverts, channels, and other conveyances will be sized to accommodate the post-development 100-year event peak discharge rate. Given the proximity to Flat Creek, stormwater flows will be managed with sand/oil separators, infiltrators, vegetated bio-swales and detention/retention areas to reduce contaminants that may threaten the health of Flat Creek. The balance of the stormwater from impervious surfaces on the project within the boundaries of the property will be collected, run through separating chambers to remove coarse and fine sediment, debris, and oils, then through a series of stepped vegetated drainage features designed to further remove silts and contaminants. The runoff will then run through a series of stepped infiltration swales. Larger storms will pass through the infiltration structures and be detained in basins. Only the largest storms will fill the detention basins and flow across the connector road into the final treatment wetland that will be constructed as part of the mitigation for any wetland disturbance from construction.

Coordination with the Town Engineer and the information from the stormwater treatment system created on the east side of the Karns Meadow will inform the design of this system to help protect the aquatic habitat of Flat Creek and the wildlife that depends on it.

#### **E. ROADS, ACCESS, AND PARKING**

The site is presently served by access directly off of Karns Meadow drive via Snow King Avenue or Broadway (Highway 89)

The amount of parking required for the facility was determined in the Final Programming Report which was developed a series of interviews with START Bus and Public Works staff as well as the relevant technical expertise of the Design Team in these types of facilities. The report anticipated parking needs for the facility looking out approximately 20-years to 2032.

The parking lot on the south end of the site is intended to accommodate START employees, Fleet Maintenance employees, and residents of the employee housing that are Town and/or County employees. The employee housing parking qualifies for shared

parking. 10 visitor parking spaces are located north of the administration portion of the facility, below employee housing. The visitor spaces can serve as parking spaces during the evening for non-Town or County employees residing in the employee housing. 10 additional spaces are located in the northeast corner of the site for visitors and longer-term employee housing. A total of 10 spaces are also available for the down/ready vehicles. These spaces are for vehicles waiting to be maintained, or for which maintenance has been completed. One of the design goals was to break up the parking to prevent one area of the site to have all the parking and become a 'sea' of cars. This was especially important to mitigate views from the 5<sup>th</sup> side of the project (the views from above). A total of 77 spaces are provided on the project site. The parking summaries are included in the table on the next page.

| <b>PARKING CALCULATIONS</b>               |               |
|-------------------------------------------|---------------|
| <b>Use</b>                                | <b>Spaces</b> |
| <b>Support Vehicle Parking</b>            |               |
| Director Vehicle                          | 1             |
| Supervisor Van                            | 2             |
| Shop Service Truck                        | 1             |
| Step Van                                  | 1             |
| <b>Employee/Visitor Parking</b>           |               |
| Administration/Operations                 | 8             |
| Drivers/Service Workers                   | 38            |
| Visitor                                   | 5             |
| Accessible                                | 2             |
| <b>Maintenance Fleet/Employee Parking</b> |               |
| Light Down/Ready Vehicles                 | 6             |
| Heavy Down/Ready Vehicles                 | 5             |
| Employees                                 | 8             |
| <b>Employee Housing</b>                   |               |
| Studio                                    | Shared        |
| 2 – Bedroom                               | Shared        |
| 4 – Bedroom                               | Shared        |
| <b>Total Spaces</b>                       | <b>77</b>     |
| <b>Total Spaces Provided</b>              | <b>77</b>     |

#### **F. WATER SUPPLY AND DISTRIBUTION SYSTEM**

A 12-inch water main runs north-south within the Karns Meadow Drive road easement for most of the site then cuts across the northern portion of the property in an easement before heading up to Broadway Avenue. There it joins an existing east-west main running parallel to Broadway Avenue.

The portion of the main crossing the property will be abandoned and relocated in the connector road easement. This relocation did not happen in Phase 1. According to the Town Engineer the water main is very deep and was not be affected by the limited

amount of grading that will go on in this location during Phase 1. During Phase 2 this water main will need to be relocated.

The point of connection for the facility will be a 4-inch line extended to the building from the existing 12-inch main to serve domestic use, facility uses, lawn watering, and fire suppression.

A separately metered irrigation system will be installed for the property. This system will limit spray irrigation with a preference for drip system, where appropriate to save water.

#### **G. WASTEWATER COLLECTION AND TREATMENT**

Two parallel sewer mains exist in Karn's Meadow Road easement at this time. The rationale for two parallel lines is unknown. During, Phase 1 these lines were not consolidated because it was determined to that the best approach was to wait until the lines on Snow King were going to be upgraded and consolidated. One of the lines within Karn's Meadow Drive was upgraded to handle all the flow needed going through this corridor. This would facilitate this inevitable transition with the obsolete line proposed to be abandoned in place. The timing of this sewer project on Snow King is to be determined.

The point of connection for the facility's sanitary sewer will be a 6-inch line installed with a new saddle-tap on the existing 20-inch main running closest to the building. Two-way cleanouts will be provided before to entering the building.

Flow calculations will be provided at building permit. The connection to the Town sewer system will require coordination with the Town Public Works Department to identify the appropriate arrangement. A permit to construct will be required through the Wyoming DEQ. The new sewer lines will be owned and operated by the Town.

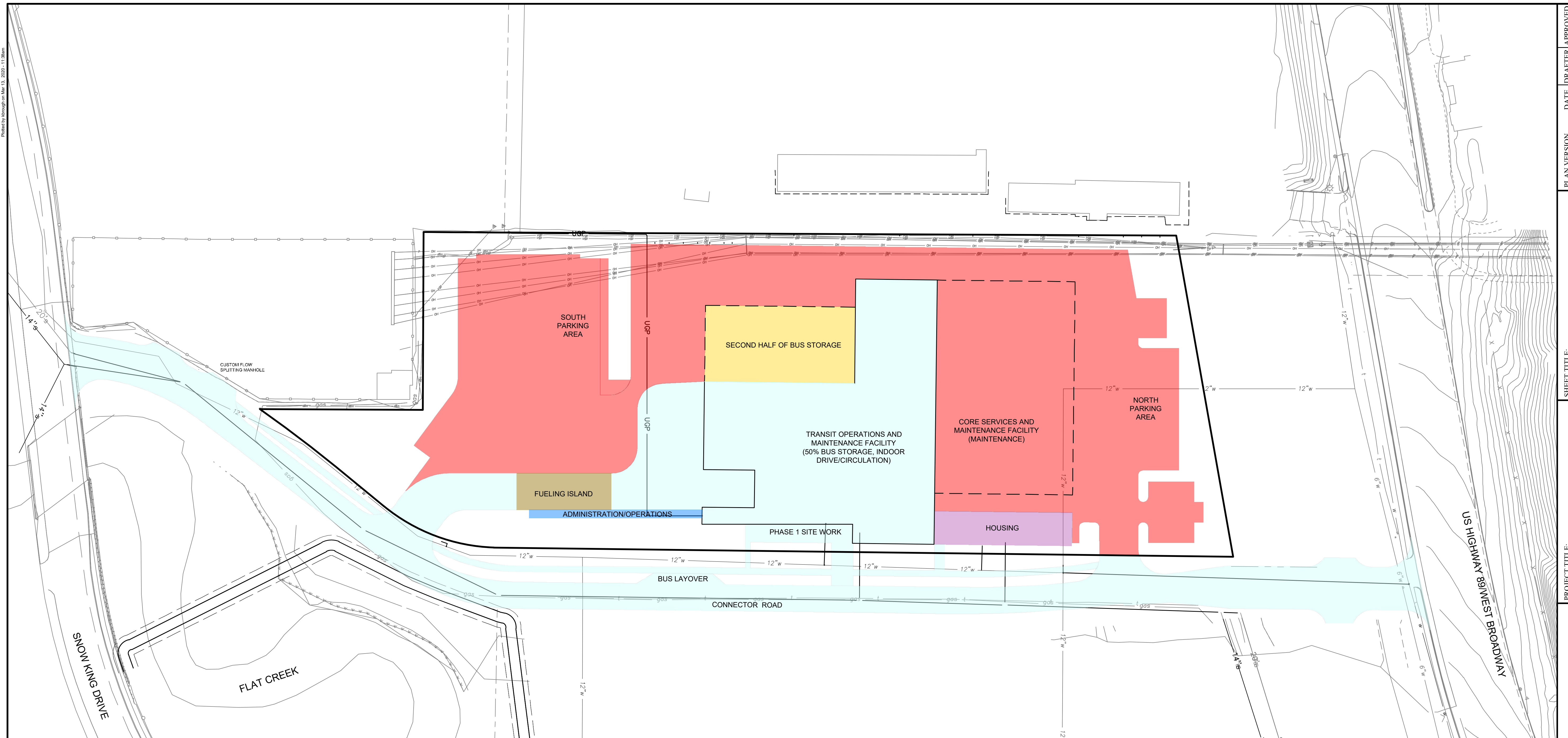
#### **H. CABLE UTILITIES**

Power and Communications lines will be accessible to the entire project. Lower Valley Energy Electrical Power and Natural Gas, Silverstar Fiber-Optic Communications, Charter Cable Television and Communication, and Century Link communications services are all available to this location.



### **SECTION 3 –DRAWINGS**

- PHASING PLAN
- ARCHITECTURAL DRAWINGS 11 X 17 FORMAT
  - CIVIL DRAWINGS 11" X 17' FORMAT



LEGEND

- PHASE 1 - COMPLETED (2012)**
- 50% Bus Storage
  - Indoor Drive/Circulation
  - Administration/Operations
  - Connector Road
  - Western Landscape
  - Limited Site Work

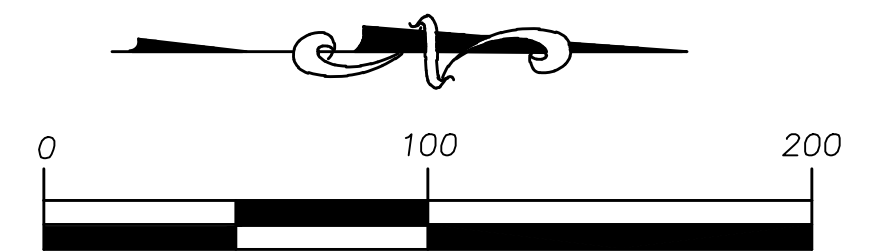
- PHASE 2 - 2019 SPET & BASE BID**
- Maintenance
  - North and South Parking Areas
  - Complete Site Work
  - Grading and Drainage

- PHASE 3 - BID ALT. 1
- Second Half of Bus Storage

- PHASE 4 - BID ALT. 2
- Fueling Island

- PHASE 5 - BID ALT. 3
- Remaining Administration and Operations

- PHASE 6
- Housing



Scale: 1 Inch = 100 Feet

This scale valid only for 11x17 prints.

— PRELIMINARY —  
SUBJECT TO CORRECTION  
AND APPROVAL

|                |          |
|----------------|----------|
| PROJECT NUMBER | 06013.10 |
|----------------|----------|

## HEET

### C2.2

PHASING PLAN OVERVIEW

**TOWN OF JACKSON/  
TETON COUNTY  
TRANSIT OPERATIONS  
AND MAINTENANCE  
FACILITY**

 **JORGENSEN ASSOCIATES, P.C.**  
Engineering • Land Surveying • Planning  
1000 West 10th Street, Suite 200  
P.O. Box 95500 • Anchorage, Alaska 99509-0500  
Phone: (907) 733-5511 FAX: (907) 733-5187  
E-mail: [jai@jorgensenassociates.com](mailto:jai@jorgensenassociates.com)





EXISTING PHASE 1 CONSTRUCTION





VIEW FROM KARNS HILLSIDE



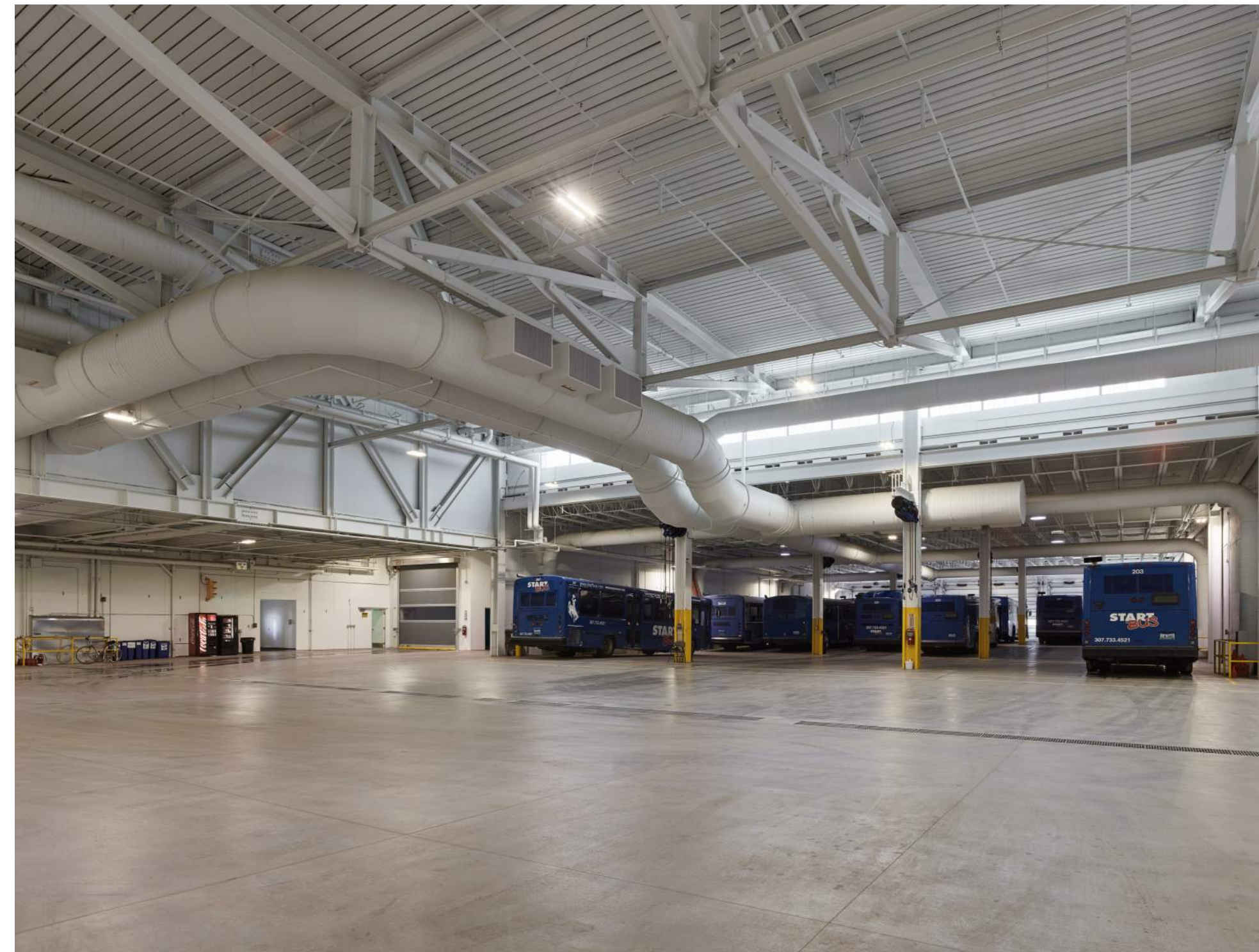
VIEW FROM KARNS MEADOW



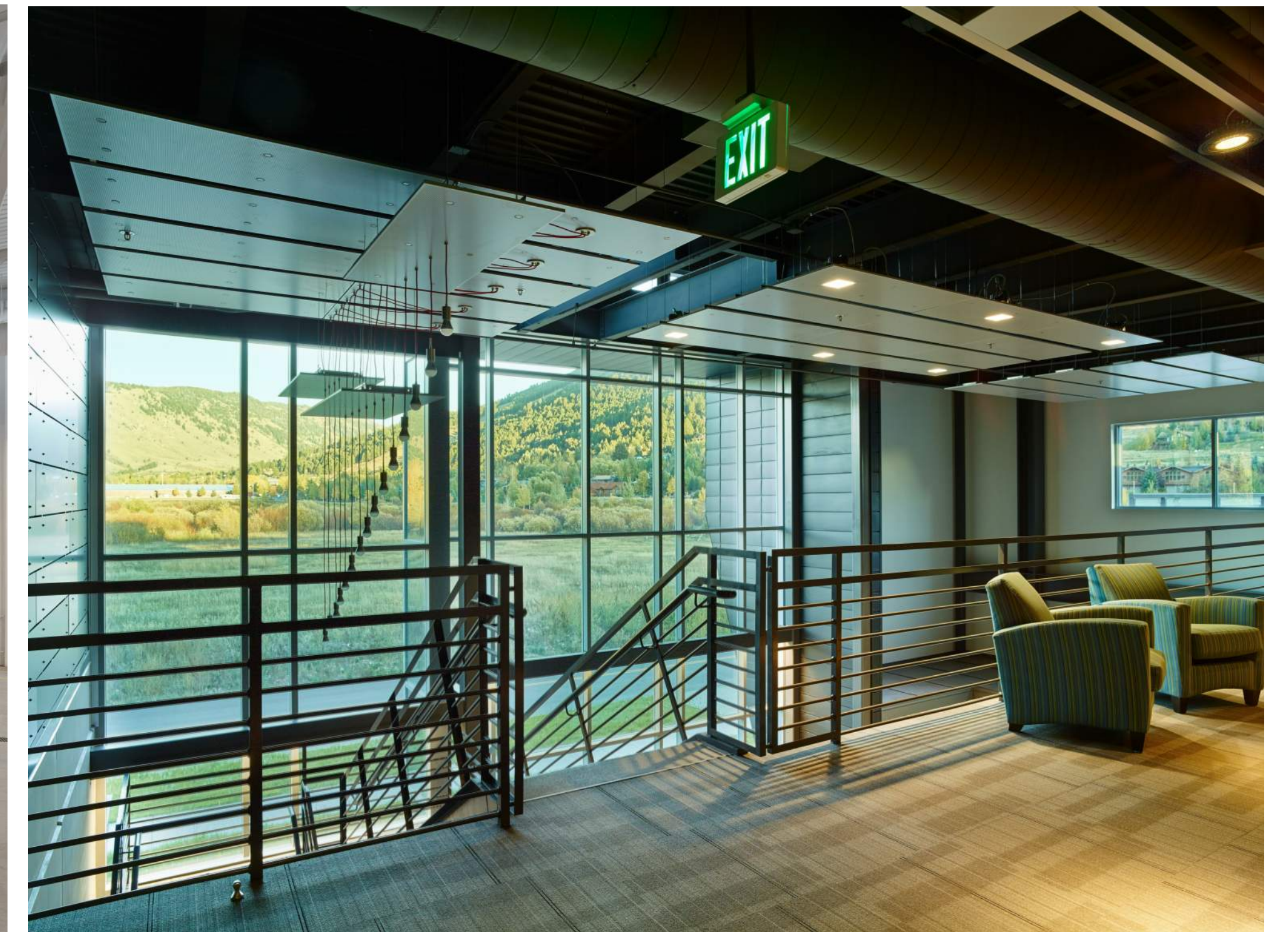
VIEW OF EAST ELEVATION



VIEW OF BUS STORAGE



INTERIOR VIEW OF BUS STORAGE AND DRIVE AISLE



INTERIOR VIEW OF 2ND FLOOR OPERATIONS

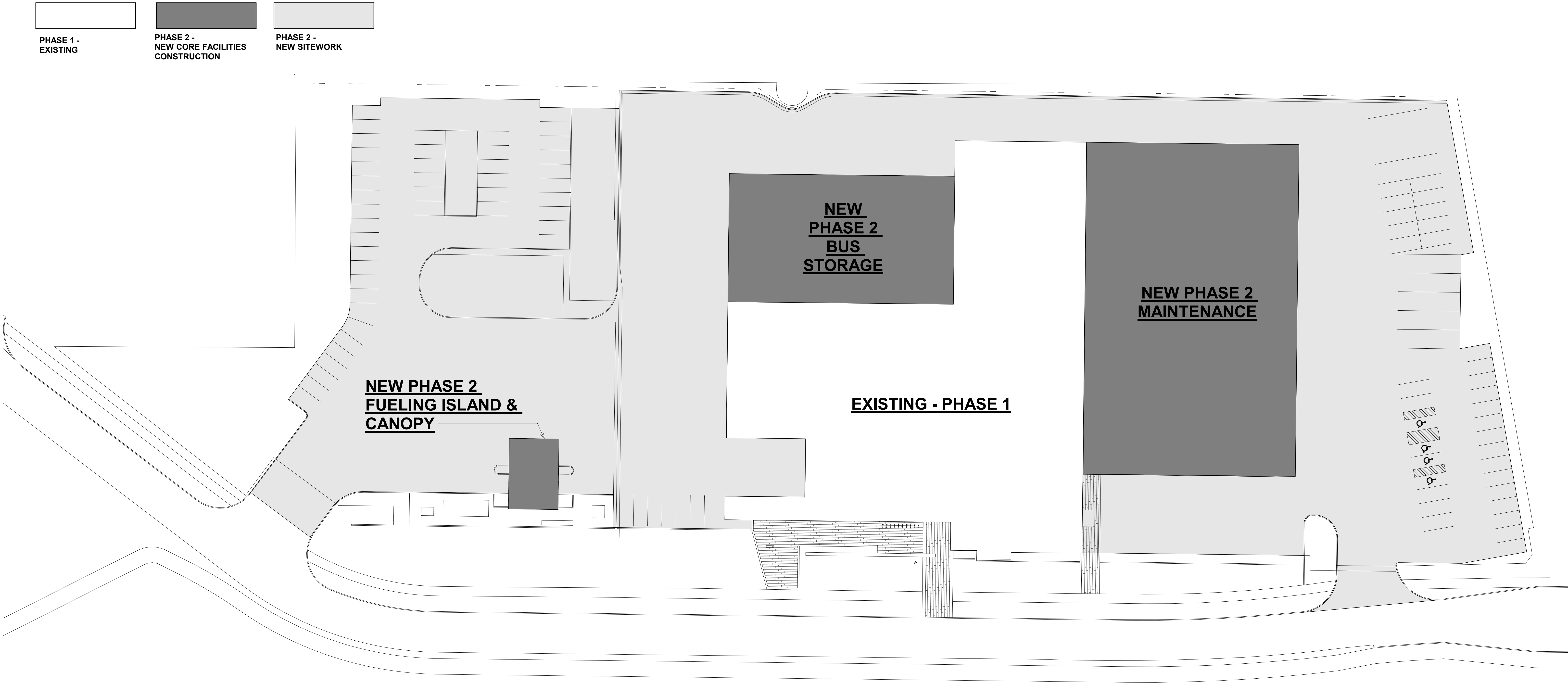
REFERENCE IMAGES

**TOWN OF JACKSON**

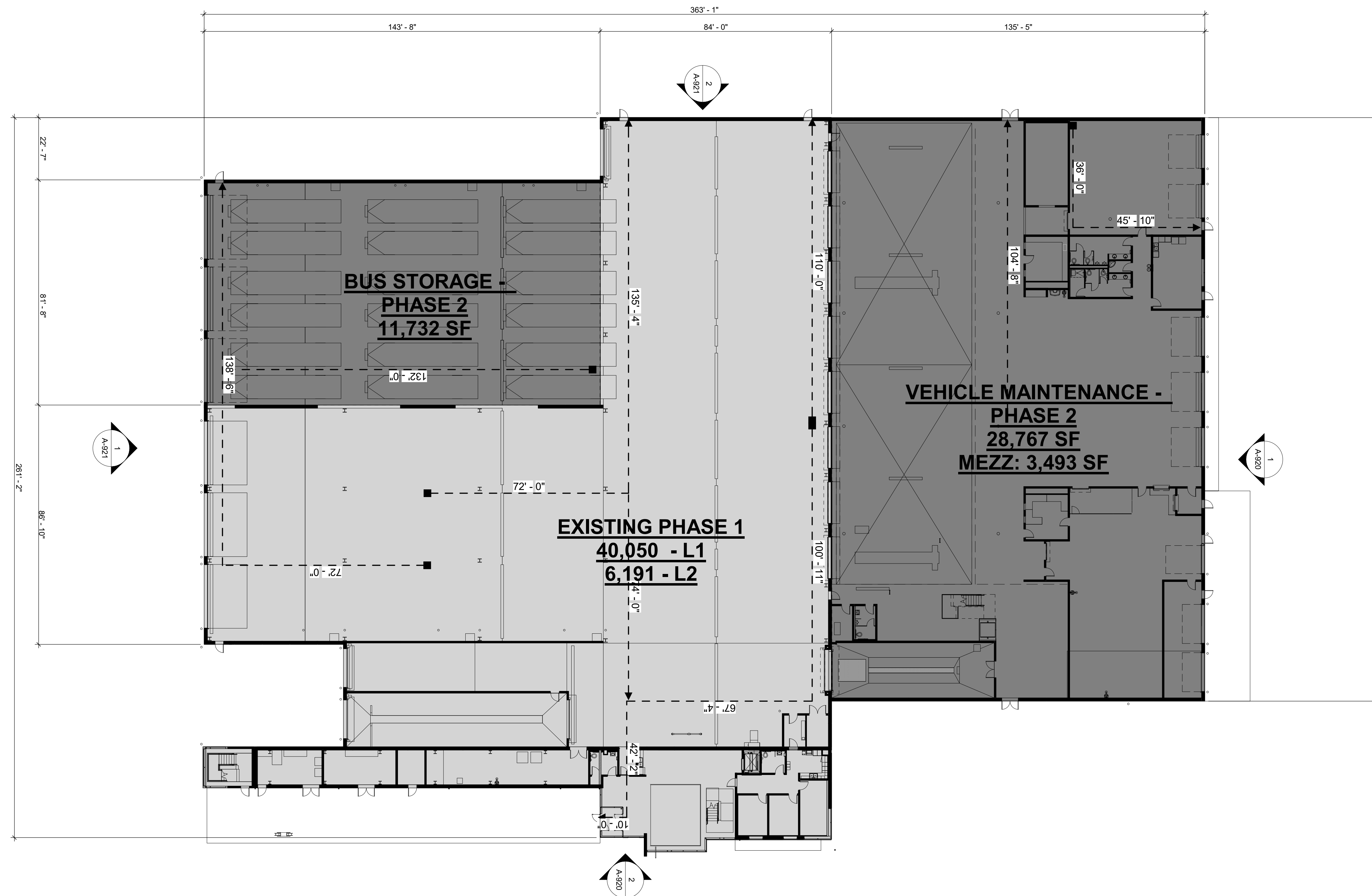
**EXISTING BUILDING - PHASE 1**

**CORE SERVICES VEHICLE MAINTENANCE FACILITY**

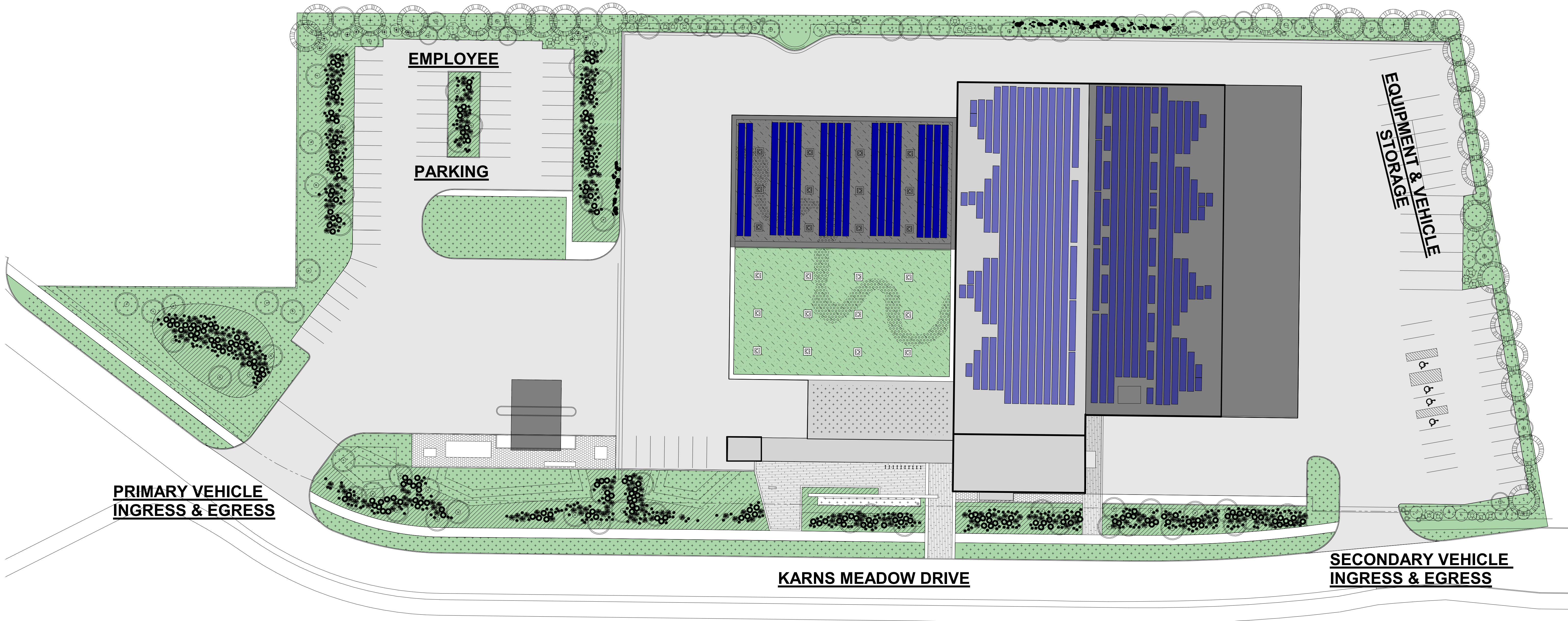




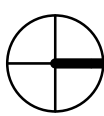








NORTH



2270312310

A-903

TOWN OF JACKSON

SITE PLAN - PHASE 2

CORE SERVICES VEHICLE MAINTENANCE FACILITY

02/28/20



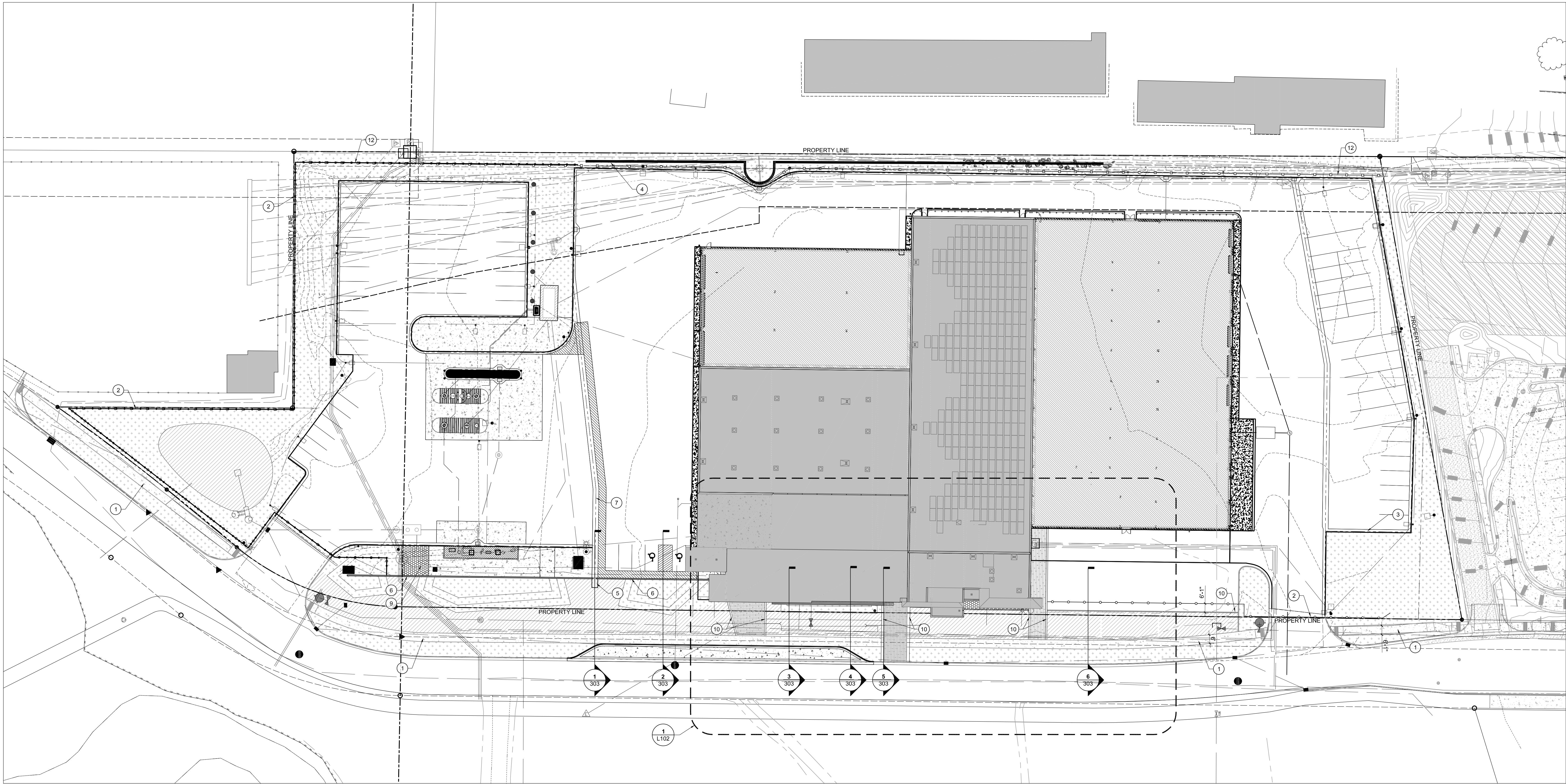
F

D

C

B

A



#### KEYNOTES

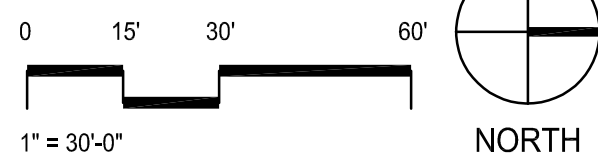
- 1 CONCRETE SIDEWALK, RE: 1/L301
- 2 SECURITY FENCE, RE: 7/L301
- 3 SITE LIGHTING POLE, RE: ELEC
- 4 N/A
- 5 CIP CONCRETE SPILL CHANNEL, RE: 5/L303
- 6 EXISTING PRECAST CONCRETE SCREEN WALL
- 7 CONCRETE PAN, RE: CIVIL
- 8 (NOT IN USE)
- 9 ROCK MULCH, RE: 3/L301
- 10 CIP CONCRETE EDGE, RE: 3/L301
- 11 (NOT IN USE)
- 12 EXISTING ACOUSTIC FENCE

#### LEGEND

- PROPOSED BUILDING, RE: ARCH
- CONCRETE UNIT PAVERS, RE: 2/L301
- ROCK MULCH, RE: 3/L301
- SECURITY FENCE, RE: 7/L301
- EXISTING ACOUSTIC FENCE
- BIKE RACK, RE: 2/L302
- PRECAST CONCRETE SITE WALL, RE: 3/L301
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- SEGMENTAL RETAINING WALL, RE: CIVIL
- EXISTING FLAGPOLE
- DECORATIVE PAVEMENT MARKINGS, RE: SPECS

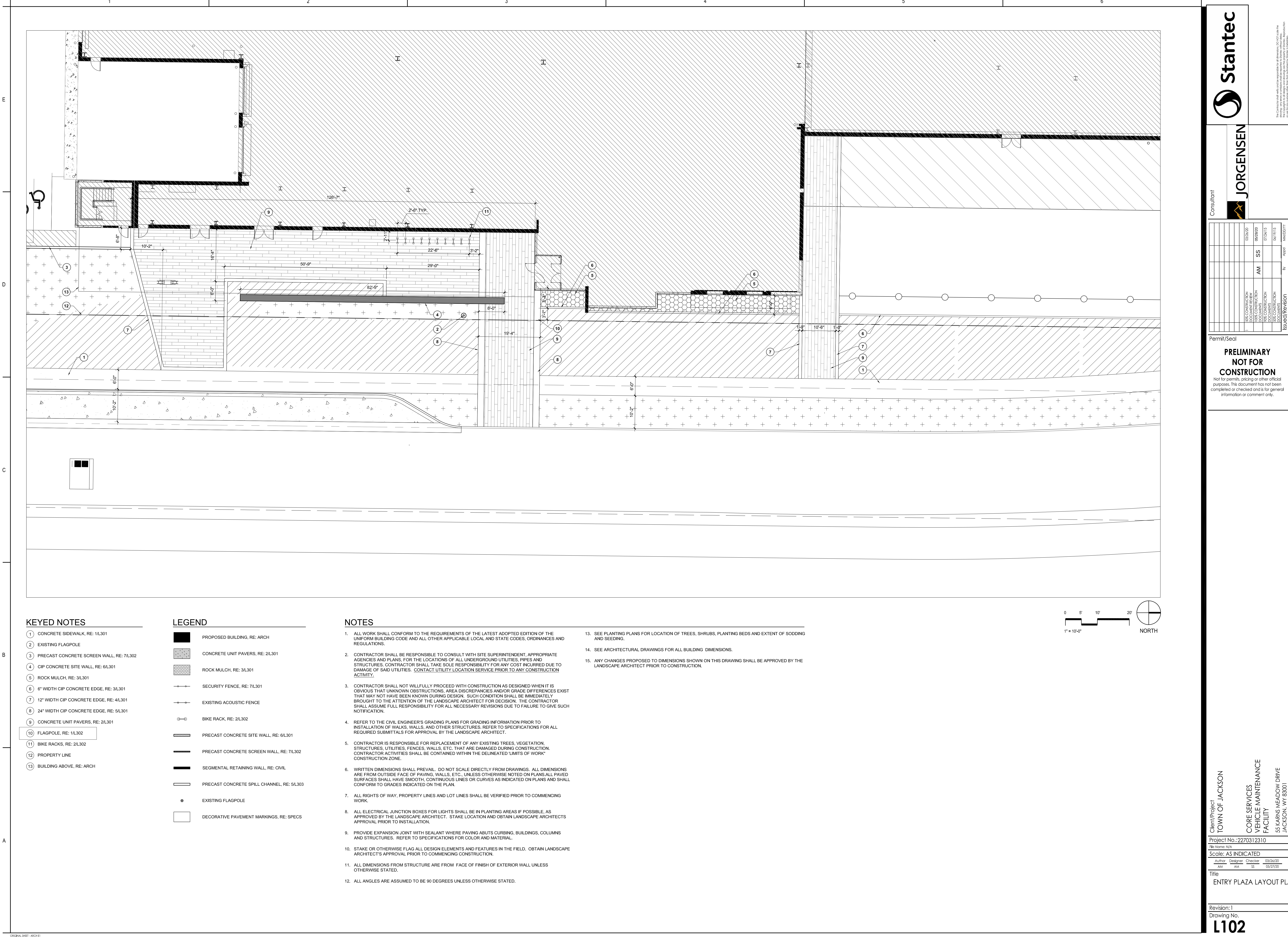
#### NOTES

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2. CONTRACTOR SHALL BE RESPONSIBLE TO CONSULT WITH SITE SUPERINTENDENT, APPROPRIATE AGENCIES AND PLANS, FOR THE LOCATIONS OF ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES. CONTACT UTILITY LOCATION SERVICE PRIOR TO ANY CONSTRUCTION ACTIVITY.
3. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS, AREA DISCREPANCIES AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITION SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR DECISION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
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13. SEE PLANTING PLANS FOR LOCATION OF TREES, SHRUBS, PLANTING BEDS AND EXTENT OF SODDING AND SEEDING.
14. SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS.
15. ANY CHANGES PROPOSED TO DIMENSIONS SHOWN ON THIS DRAWING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.



| Issued/Revision                  | By | App'd | MM/DD/YY |
|----------------------------------|----|-------|----------|
| USE CONSTRUCTION DOCUMENT REVIEW | AM | SS    | 03/24/20 |
| USE CONSTRUCTION DOCUMENT REVIEW | AM | SS    | 06/28/20 |
| USE CONSTRUCTION DOCUMENT REVIEW | AM | SS    | 07/24/21 |
| USE CONSTRUCTION DOCUMENT REVIEW | AM | SS    | 04/17/23 |





KEYED NOTES

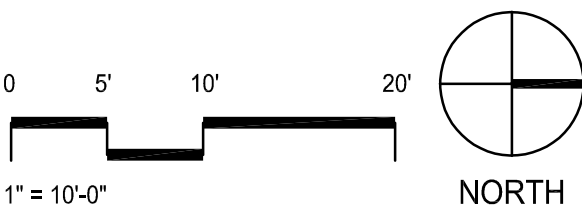
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- 2 EXISTING FLAGPOLE
- 3 PRECAST CONCRETE SCREEN WALL, RE: 7/L302
- 4 CIP CONCRETE SITE WALL, RE: 6/L301
- 5 ROCK MULCH, RE: 3/L301
- 6 6" WIDTH CIP CONCRETE EDGE, RE: 3/L301
- 7 12" WIDTH CIP CONCRETE EDGE, RE: 4/L301
- 8 24" WIDTH CIP CONCRETE EDGE, RE: 5/L301
- 9 CONCRETE UNIT PAVERS, RE: 2/L301
- 10 FLAGPOLE, RE: 1/L302
- 11 BIKE RACKS, RE: 2/L302
- 12 PROPERTY LINE
- 13 BUILDING ABOVE, RE: ARCH

LEGEND

- PROPOSED BUILDING, RE: ARCH
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Consultant

| Issued/Revision | By | App'd | MAINTENANCE |
|-----------------|----|-------|-------------|
| 03/24/20        | SS |       |             |
| 06/28/20        | AM |       |             |
| 07/24/21        |    |       |             |
| 04/17/23        |    |       |             |

Permit/Seal

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Not for permits, pricing or other official purposes. This document has not been completed or checked and is for general information or comment only.

Client/Project  
TOWN OF JACKSON

Core Services  
VEHICLE MAINTENANCE  
FACILITY

55 KARNS MEADOW DRIVE  
JACKSON, WY 83001

Project No.: 2270312310

File Name: NA

Scale: AS INDICATED

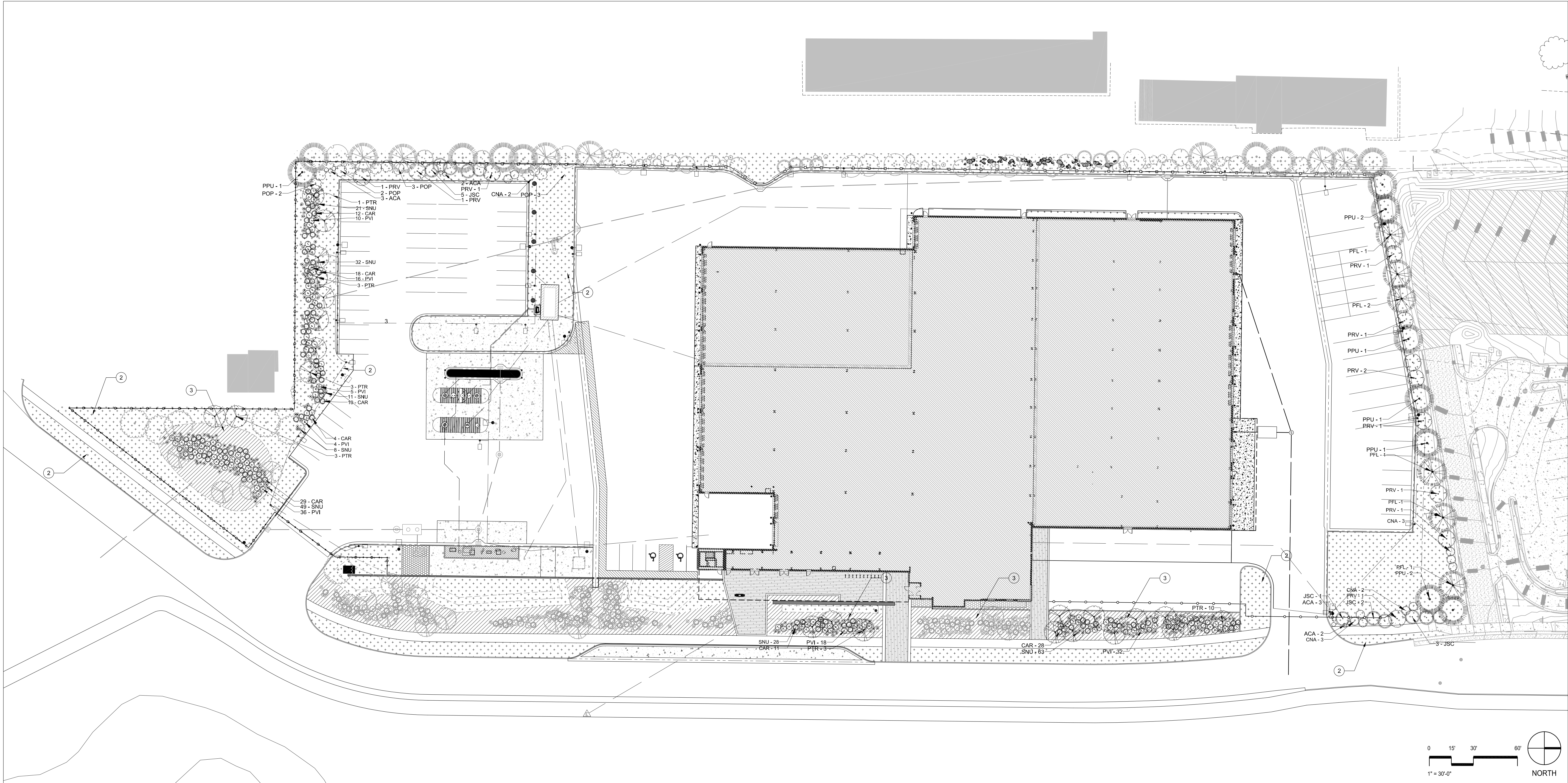
| Author | Designer | Checker | Date     |
|--------|----------|---------|----------|
| AM     | AM       | SS      | 05/27/20 |

Title  
ENTRY PLAZA LAYOUT PLAN

Revision: 1

Drawing No.  
**L102**





KEYED NOTES

- 1 LANDSCAPE BOULDER, RE: 6/L305
- 2 UPLAND PRAIRIE SEED MIX, RE: SCHEDULE
- 3 RIPARIAN SEED MIX, RE: SCHEDULE
- 5 TILTED PRAIRIE BERM, RE: 4/L303

LEGEND

- DECIDUOUS TREE, RE: 1/L302
- EVERGREEN TREE, RE: 2/L302
- ORNAMENTAL TREE, RE: 1/L302
- SHRUBS, RE: 3/L302
- PERENNIALS/ORNAMENTAL GRASSES, RE: 4/L302
- UPLAND PRAIRIE SEED MIX; 42,916 SF
- RIPARIAN SEED MIX; 2,321 SF
- LANDSCAPE BOULDER, RE: 6/L302

NOTES

- ALL PLANT MATERIAL AND FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
- IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT OWNER'S AUTHORIZED REPRESENTATIVE FOR IMMEDIATE RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE THE MATERIALS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING MATERIALS DAMAGED DURING PLANTING OPERATIONS.
- PLANT QUANTITIES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL FINAL QUANTITIES OF PLANTS.
- THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON ALL DRAWINGS.
- ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINE ESTABLISHED BY "THE AMERICAN STANDARD FOR NURSERY ASSOCIATION OF NURSERYMEN, LATEST EDITION.
- ALL PLANTS SHALL BE BALLED IN BURLAP OR CONTAINER GROWN UNLESS OTHERWISE NOTED ON THE PLANT LIST.
- CONTRACTOR SHALL STAKE ALL PLANT LOCATIONS IN THE FIELD. OBTAIN APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE STARTING PLANT INSTALLATION.
- PLANTS TO BE TRANSPLANTED SHALL BE FLAGGED AND EXACT PLANTING LOCATION STAKED IN THE FIELD.
- CONTRACTOR SHALL LOCATE AND VERIFY UTILITY LINE LOCATIONS PRIOR TO PLANTING AND REPORT ANY CONFLICTS TO LANDSCAPE ARCHITECT.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES OUTSIDE THE SITE SHALL BE FINE GRADED AND PLANTED WITH DESIGNATED GROUND COVER.

SCHEDULE

| PLANT SCHEDULE PHASE 1 |      |     |                                                                  |          |           |
|------------------------|------|-----|------------------------------------------------------------------|----------|-----------|
| DECIDUOUS TREES        | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|                        | PAN  | 7   | Populus angustifolia<br>Narrowleaf Poplar                        | 3" CAL.  |           |
|                        | PTR  | 19  | Populus tremuloides<br>Quaking Aspen                             | 3" CAL.  |           |
|                        | PRV  | 13  | Prunus virginiana<br>Chokeberry                                  | 6'-8" HT |           |
|                        | PRV  | 13  | Prunus virginiana<br>Chokeberry                                  | 6'-8" HT |           |
| EVERGREEN TREES        | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|                        | PPU  | 7   | Picea pungens<br>Colorado Spruce                                 | 8' HT.   |           |
|                        | PFL  | 7   | Pinus flexilis<br>Limber Pine                                    | 8' HT.   |           |
| ORNAMENTAL TREES       | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|                        | ASP  | 9   | Amelanchier alnifolia<br>Serviceberry                            | 6'-8" HT |           |
|                        | ACA  | 22  | Artemisia cana<br>Silver Sage                                    | 5 GAL.   | 36" o.c.  |
|                        | CNA  | 8   | Chrysothamnus nauseosus<br>Rubber Rabbitbrush                    | 5 GAL.   | 72" o.c.  |
|                        | JSC  | 7   | Juniperus scopulorum<br>Rocky Mountain Juniper                   | 5 GAL.   | 120" o.c. |
|                        | RTR  | 9   | Rhus trilobata<br>Stinkbush Sumac                                | 5 GAL.   | 72" o.c.  |
| SHRUBS                 | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|                        | ACA  | 22  | Artemisia cana<br>Silver Sage                                    | 5 GAL.   | 36" o.c.  |
|                        | CNA  | 8   | Chrysothamnus nauseosus<br>Rubber Rabbitbrush                    | 5 GAL.   | 72" o.c.  |
|                        | JSC  | 7   | Juniperus scopulorum<br>Rocky Mountain Juniper                   | 5 GAL.   | 120" o.c. |
|                        | RTR  | 9   | Rhus trilobata<br>Stinkbush Sumac                                | 5 GAL.   | 72" o.c.  |
| ORNAMENTAL GRASSES     | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|                        | CAR  | 74  | Calamagrostis x acutiflora 'Karl Foerster'<br>Feather Reed Grass | 1 GAL.   | 48" o.c.  |
|                        | PVI  | 79  | Panicum virgatum<br>Switch Grass                                 | 1 GAL.   | 48" o.c.  |
|                        | SNU  | 141 | Sorghastrum nutans Blue Bird<br>Blue Bird Indian Grass           | 1 GAL.   | 24" o.c.  |

| PLANT SCHEDULE PHASE TWO |      |     |                                                                  |          |           |
|--------------------------|------|-----|------------------------------------------------------------------|----------|-----------|
| DECIDUOUS TREES          | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|                          | PTR  | 24  | Populus tremuloides<br>Quaking Aspen                             | 3" CAL.  |           |
|                          | PRV  | 11  | Prunus virginiana<br>Chokeberry                                  | 6'-8" HT |           |
| EVERGREEN TREES          | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|                          | PPU  | 8   | Picea pungens<br>Colorado Spruce                                 | 8' HT.   |           |
|                          | PFL  | 6   | Pinus flexilis<br>Limber Pine                                    | 8' HT.   |           |
| SHRUBS                   | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|                          | ACA  | 10  | Artemisia cana<br>Silver Sage                                    | 5 GAL.   | 36" o.c.  |
|                          | CNA  | 13  | Chrysothamnus nauseosus<br>Rubber Rabbitbrush                    | 5 GAL.   | 72" o.c.  |
|                          | JSC  | 14  | Juniperus scopulorum<br>Rocky Mountain Juniper                   | 5 GAL.   | 120" o.c. |
|                          | POP  | 10  | Physocarpus opulifolius<br>Ninebark                              | 5 GAL.   | 96" o.c.  |
| ORNAMENTAL GRASSES       | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|                          | CAR  | 112 | Calamagrostis x acutiflora 'Karl Foerster'<br>Feather Reed Grass | 1 GAL.   | 48" o.c.  |
|                          | PVI  | 121 | Panicum virgatum<br>Switch Grass                                 | 1 GAL.   | 48" o.c.  |
|                          | SNU  | 212 | Sorghastrum nutans Blue Bird<br>Blue Bird Indian Grass           | 1 GAL.   | 24" o.c.  |

| PLANT UNIT TABLE |       |       |       |       |                  |
|------------------|-------|-------|-------|-------|------------------|
|                  | TOTAL | ALT A | ALT B | ALT C | LEFTOVER         |
| Evergreen        | 28    |       |       | 27    | 1 Required Units |
| Deciduous        | 23    | 7     |       | 16    | Proposed Units   |
| Ornamental Trees | 72    | 45    |       | 27    | 0                |
| 5 GAL Shrubs     | 77    | 28    |       | 18    | 31               |

| ABR.                               | BOTANIC NAME                          | COMMON NAME              | VARIETY   | MATURE SIZE | POUNDS PLS/ACRE |
|------------------------------------|---------------------------------------|--------------------------|-----------|-------------|-----------------|
| TYPE 1 UPLAND PRAIRIE SEED MIXTURE |                                       |                          |           |             |                 |
|                                    | Andropogon gerardii                   | Big Bluestem             | Champ     | 36 - 48"    | 2               |
|                                    | Bouteloua curtipendula                | Sideoats Grama           | Butte     | 18"         | 4               |
|                                    | Buchloe dactyloides                   | Buffalograss             | Topgun    | 4"          | 10              |
|                                    | Elymus canadensis                     | Canada Wildrye           | Lavaca    | 24 - 48"    | 2               |
|                                    | Elymus trachycaulus                   | Slender Wheatgrass       | Revenue   | 12 - 36"    | 5               |
|                                    | Chondrosium gracile                   | Blue Grama               | Hachita   | 8 - 12"     | 3               |
|                                    | Pascopyrum smithii                    | Western Wheatgrass       | Ariba     | 18"         | 5               |
|                                    | Sporobolus cryptandrus                | Sand Dropseed            | Native    | 18"         | 2               |
|                                    | Schizachyrium scoparium               | Little Bluestem          | Blaze     | 24"         | 4               |
|                                    | Sorghastrum nutans                    | Yellow Indiangrass       | Cheyenne  | 36 - 48"    | 3               |
|                                    | Stipa viridula (aka Nasella)          | Green Needlegrass        | Lordon    | 24 - 36"    | 3               |
|                                    | Triticum aestivum x Elytigia elongata | Regreen                  | Regreen   | 24 - 36"    | 10              |
|                                    | Artemisia frigida                     | Fringed Sage             | Native    | 12" x 12"   | 0.1             |
|                                    | Aster ericoides                       | White Aster              | Native    | 18"         | 0.1             |
|                                    | Aster oblongifolium                   | Aromatic Aster           | Native    | 24" x 24"   | 0.1             |
|                                    | Coreopsis palmata                     | Prairie Coreopsis        | Native    | 24" x 24"   | 0.1             |
|                                    | Penstemon strictus                    | Rocky Mountain Penstemon | Bandera   | 24"         | 0.1             |
|                                    | Rudbeckia hirta                       | Black Eyed Susan         | Native    | 24"         | 0.1             |
|                                    | Solidago speciosa                     | Showy Goldenrod          | Native    | 36 - 60"    | 0.1             |
| TOTAL POUNDS PLS/ACRE              |                                       |                          |           |             | 53.7            |
| TYPE 2 RIPARIAN SEED MIXTURE       |                                       |                          |           |             |                 |
|                                    | Buchloe dactyloides                   | Buffalograss             | Topgun    | 4"          | 6               |
|                                    | Carex nebrascensis                    | Nebraska sedge           | Native    | 12" - 18"   | 0.5             |
|                                    | Distichlis stricta                    | Inland saltgrass         | Native    | 6"          | 4               |
|                                    | Sporobolus airoides                   | Alkali sacaton           | Native    | 24" - 36"   | 3               |
|                                    | Panicum virgatum                      | Switchgrass              | Blackwell | 24-36"      | 6               |
| TOTAL POUNDS PLS/ACRE              |                                       |                          |           |             | 19.5            |

| Issued/Revision                  | By | Appd | DATE     |
|----------------------------------|----|------|----------|
| USE CONSTRUCTION DOCUMENT REVIEW |    |      | 03/24/20 |
| USE CONSTRUCTION DOCUMENT REVIEW |    |      | 09/04/15 |
| USE CONSTRUCTION DOCUMENT REVIEW |    |      | 07/24/15 |
| USE CONSTRUCTION DOCUMENT REVIEW |    |      | 04/17/15 |

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Client/Project  
TOWN OF JACKSON

Project No.: 2270312310

File Name: NA

Scale: AS INDICATED

|        |          |         |          |
|--------|----------|---------|----------|
| Author | Designer | Checker | 10/26/20 |
| AM     | AM       | SS      | 05/27/20 |

Title

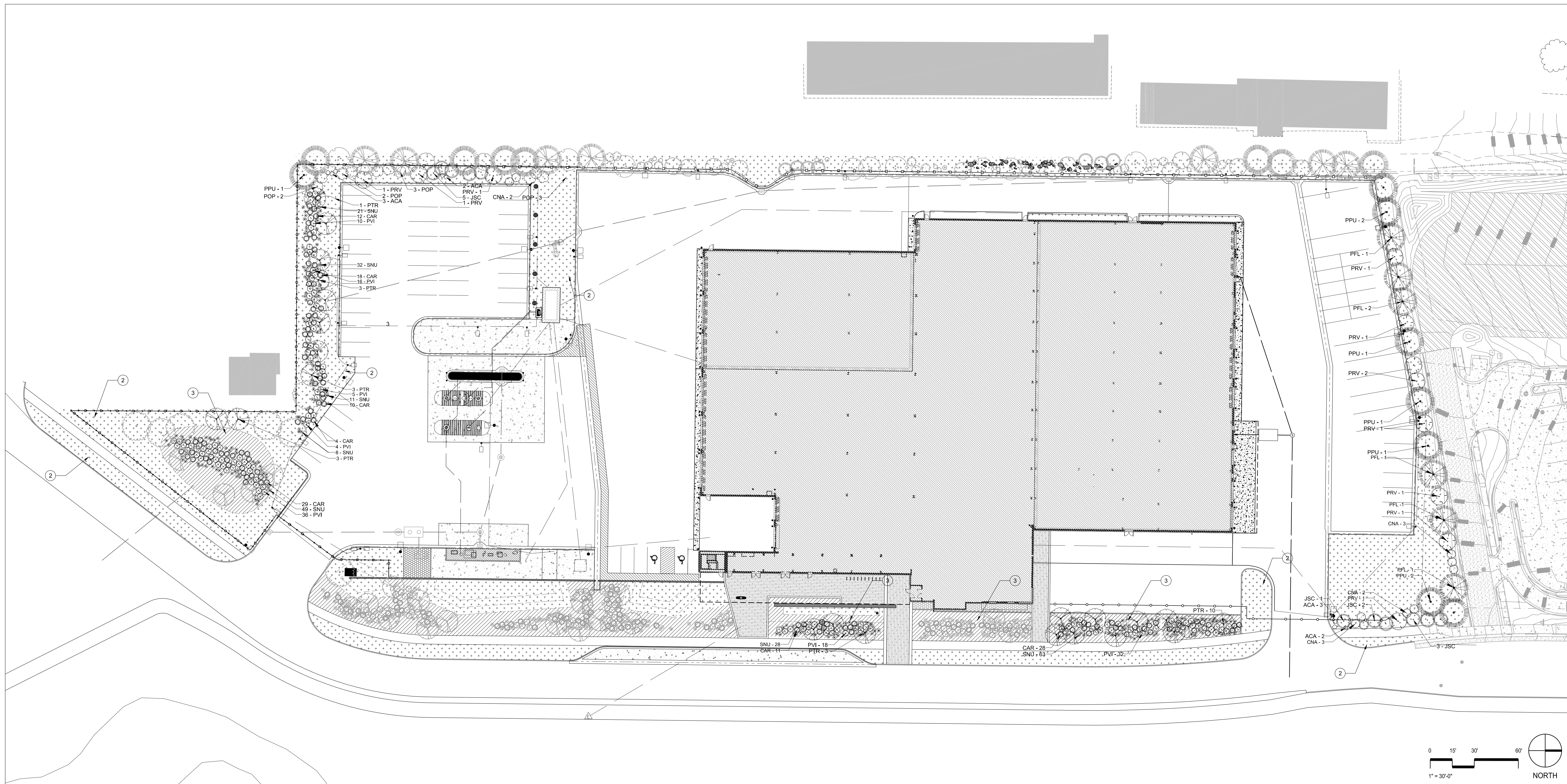
OVERALL PLANTING PLAN

Revision: 1

Drawing No.

L201





## KEYED NOTES

- ① LANDSCAPE BOULDER, RE: 6/L305
- ② UPLAND PRAIRIE SEED MIX, RE: SCHEDULE
- ③ RIPARIAN SEED MIX, RE: SCHEDULE
- ⑤ TILTED PRAIRIE BERM, RE: 4/L303

### LEGEND

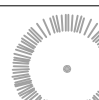
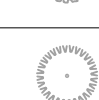
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|-------------------------------------------------------------------------------------|-------------------------------------------|
|  | DECIDUOUS TREE, RE: 1/L302                |
|  | EVERGREEN TREE, RE: 2/L302                |
|  | ORNAMENTAL TREE, RE: 1/L302               |
|  | SHRUBS, RE: 3/L302                        |
|  | PERENNIALS/ORNAMENTAL GRASSES, RE: 4/L302 |
|  | UPLAND PRAIRIE SEED MIX; 42,916 SF        |
|  | RIPARIAN SEED MIX; 2,321 SF               |
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## SCHEDULE

## PLANT SCHEDULE PHASE 1

| DECIDUOUS TREES                                                                       | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|---------------------------------------------------------------------------------------|------|-----|------------------------------------------------------------------|----------|-----------|
|  | PAN  | 7   | Populus angustifolia<br>Narrowleaved Poplar                      | 3" CAL.  |           |
|  | PTR  | 19  | Populus tremuloides<br>Quaking Aspen                             | 3" CAL.  |           |
|  | PRV  | 13  | Prunus virginiana<br>Chokecherry                                 | 6'-8" HT |           |
| EVERGREEN TREES                                                                       | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|  | PPU  | 7   | Picea pungens<br>Colorado Spruce                                 | 8" HT.   |           |
|  | PFL  | 7   | Pinus flexilis<br>Limber Pine                                    | 8" HT.   |           |
| ORNAMENTAL TREES                                                                      | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|  | ASP  | 9   | Amelanchier alnifolia<br>Serviceberry                            | 6'-8" HT |           |
| SHRUBS                                                                                | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|  | ACA  | 22  | Artemisia cana<br>Silver Sage                                    | 5 GAL.   | 36" o.c.  |
|  | CNA  | 8   | Chrysothamnus nauseosus<br>Rubber Rabbitbrush                    | 5 GAL.   | 72" o.c.  |
|  | JSC  | 7   | Juniperus scopulorum<br>Rocky Mountain Juniper                   | 5 GAL.   | 120" o.c. |
|  | RTR  | 9   | Rhus trilobata<br>Skunkbush Sumac                                | 5 GAL.   | 72" o.c.  |
| ORNAMENTAL GRASSES                                                                    | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|  | CAR  | 74  | Calamagrostis x acutiflora 'Karl Foerster'<br>Feather Reed Grass | 1 GAL.   | 48" o.c.  |
|  | PVI  | 79  | Panicum virgatum<br>Switch Grass                                 | 1 GAL.   | 48" o.c.  |
|  | SNU  | 141 | Sorghastrum nutans Blue Bird<br>Blue Bird Indian Grass           | 1 GAL.   | 24" o.c.  |

## PLANT SCHEDULE PHASE TWO

| DECIDUOUS TREES                                                                       | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|---------------------------------------------------------------------------------------|------|-----|------------------------------------------------------------------|----------|-----------|
|  | PTR  | 24  | Populus tremuloides<br>Quaking Aspen                             | 3' GAL.  |           |
|  | PRV  | 11  | Prunus virginiana<br>Chokecherry                                 | 6'-8' Ht |           |
| EVERGREEN TREES                                                                       | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     |           |
|  | PFU  | 8   | Picea pungens<br>Colorado Spruce                                 | 8' Ht.   |           |
|  | PFL  | 6   | Pinus flexilis<br>Limber Pine                                    | 8' Ht.   |           |
| SHRUBS                                                                                | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|  | ACA  | 10  | Artemisia cana<br>Silver Sage                                    | 5 GAL.   | 36" o.c.  |
|  | CNA  | 13  | Chrysothamnus nauseosus<br>Rubber Rabbitbrush                    | 5 GAL.   | 72" o.c.  |
|  | JSC  | 14  | Juniperus scopulorum<br>Rocky Mountain Juniper                   | 5 GAL.   | 120" o.c. |
|  | POP  | 10  | Physocarpus opulifolius<br>Minibark                              | 5 GAL.   | 96" o.c.  |
| ORNAMENTAL GRASSES                                                                    | CODE | QTY | BOTANICAL / COMMON NAME                                          | CONT     | SPACING   |
|  | CAR  | 112 | Calamagrostis x acutiflora 'Karl Foerster'<br>Feather Reed Grass | 1 GAL.   | 48" o.c.  |
|  | PVI  | 121 | Panicum virgatum<br>Switch Grass                                 | 1 GAL.   | 48" o.c.  |
|  | SNU  | 212 | Sorghastrum nutans Blue Bird<br>Blue Bird Indian Grass           | 1 GAL.   | 24" o.c.  |

| PLANT UNIT TABLE |       |       |       |       |          |                |    |
|------------------|-------|-------|-------|-------|----------|----------------|----|
|                  | TOTAL | ALT A | ALT B | ALT C | LEFTOVER |                |    |
| Evergreen        | 28    |       |       | 27    | 1        | Required Units | 12 |
| Deciduous        | 23    | 7     |       |       | 16       | Proposed Units | 14 |
| Ornamental Trees | 72    | 45    |       | 27    | 0        |                |    |
| 5 GAL Shrubs     | 77    | 28    |       | 18    | 31       |                |    |

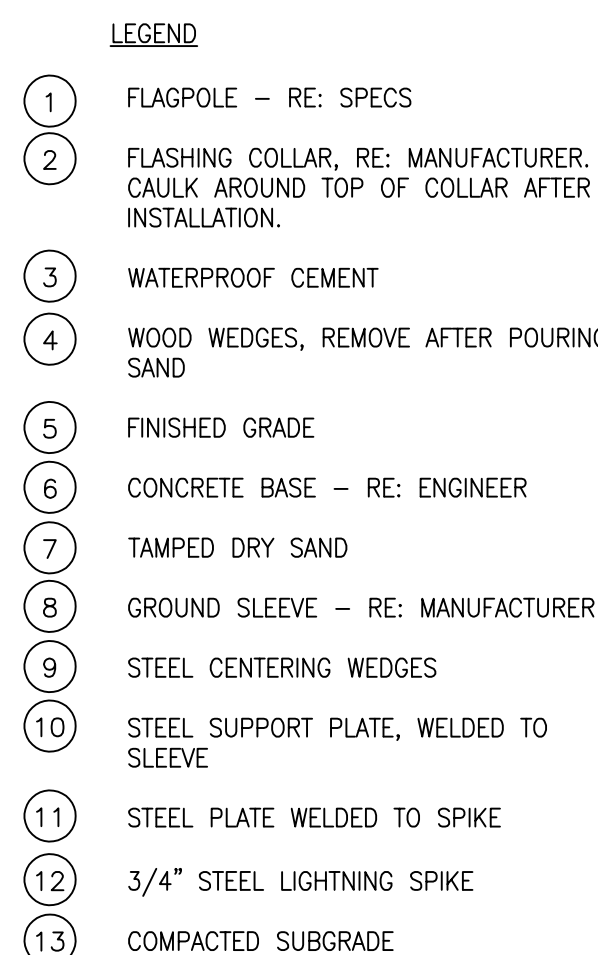
| ABR.                                      | BOTANIC NAME                       | COMMON NAME              | VARIETY   | MATURE SIZE | POUNDS PER ACRE |
|-------------------------------------------|------------------------------------|--------------------------|-----------|-------------|-----------------|
| <b>TYPE 1 UPLAND PRAIRIE SEED MIXTURE</b> |                                    |                          |           |             |                 |
|                                           | Andropogon gerardi                 | Big Bluestem             | Champ     | 36 - 48"    | 2               |
|                                           | Bouteloua curtipendula             | Sideoats Grama           | Butte     | 18"         | 4               |
|                                           | Buchloe dactyloides                | Buffalograss             | Topgunn   | 4"          | 10              |
|                                           | Elymus canadensis                  | Canada Wildrye           | Lavaca    | 24 - 48"    | 2               |
|                                           | Elymus trachycaulus                | Slender Wheatgrass       | Revenue   | 12 - 36"    | 5               |
|                                           | Chondrosium gracile                | Blue Grama               | Hachita   | 8 - 12"     | 3               |
|                                           | Paspopyrum smithii                 | Western Wheatgrass       | Arba      | 18"         | 3               |
|                                           | Sporobolus cryptandrus             | Sand Dropseed            | Native    | 18"         | 2               |
|                                           | Schizachyrium scoparium            | Little Bluestem          | Blaze     | 24"         | 4               |
|                                           | Sorghastrum nutans                 | Yellow Indiangrass       | Cheyenne  | 36 - 48"    | 3               |
|                                           | Tripa viridula (aka Nasella)       | Green Needlegrass        | Lordon    | 24 - 36"    | 3               |
|                                           | Sitona aestuum x Elytigia elongata | Regreen                  | Regreen   | 24 - 36"    | 10              |
|                                           | Artemisia frigida                  | Fringed Sage             | Native    | 12" x 12"   | 0.1             |
|                                           | Aster ericoides                    | White Aster              | Native    | 18"         | 0.1             |
|                                           | Aster oblongifolium                | Aromatic Aster           | Native    | 24" x 24"   | 0.1             |
|                                           | Coreopsis palmata                  | Prairie Coreopsis        | Native    | 24" x 24"   | 0.1             |
|                                           | Penstemon strictus                 | Rocky Mountain Penstemon | Bandera   | 24"         | 0.1             |
|                                           | Rudbeckia hirta                    | Black Eyed Susan         | Native    | 24"         | 0.1             |
|                                           | Solidago speciosa                  | Showy Goldenrod          | Native    | 36 - 60"    | 0.1             |
| <b>TOTAL POUNDS PLS/ACRE</b>              |                                    |                          |           |             | <b>53.7</b>     |
| <b>TYPE 2 RIPARIAN SEED MIXTURE</b>       |                                    |                          |           |             |                 |
|                                           | Buchloe dactyloides                | Buffalograss             | Topgunn   | 4"          | 6               |
|                                           | Carex nebrascensis                 | Nebraska sedge           | Native    | 12" - 18"   | 0.5             |
|                                           | Distichlis spicata                 | Inland saltgrass         | Native    | 6"          | 3               |
|                                           | Sporobolus airoides                | Alkali sacaton           | Native    | 24" - 36"   | 4               |
|                                           | Panicum virgatum                   | Switchgrass              | Blackwell | 24-36"      | 6               |
| <b>TOTAL POUNDS PLS/ACRE</b>              |                                    |                          |           |             | <b>19.5</b>     |



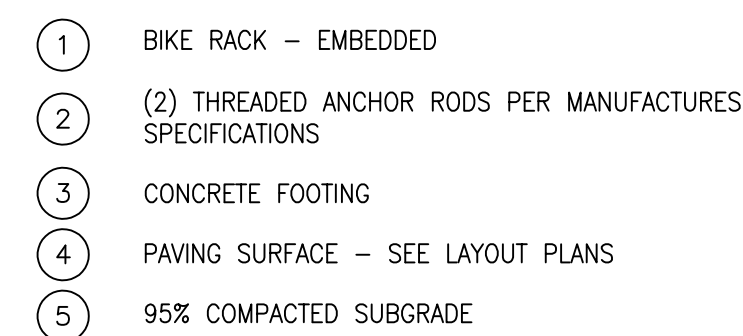
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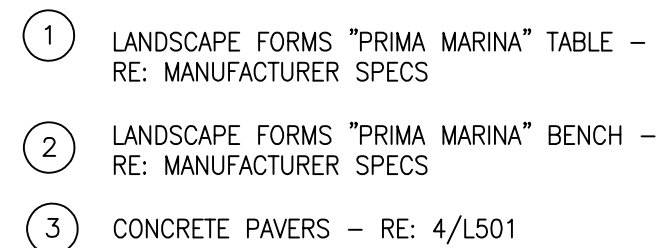
(1)  $\frac{1}{3/4'' = 1'-0''}$



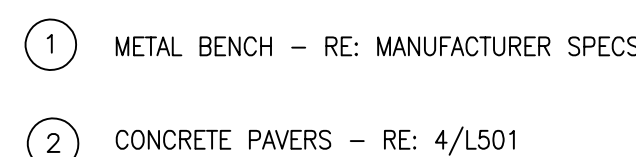
(2)  $\frac{3}{4}" = 1' - 0"$



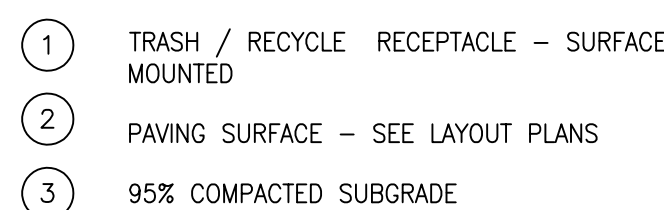
(3)  $\frac{L_{\text{eff}}}{1/2''} = 1'-0''$



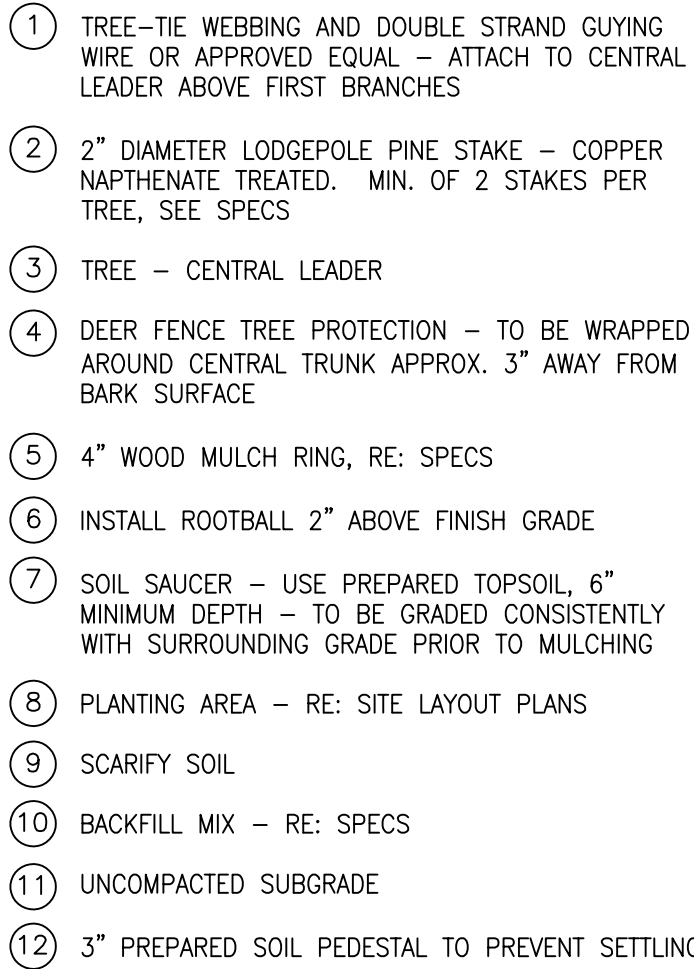
(4)  $\frac{1 \text{ O.D.}}{3/4" = 1'-0"}$



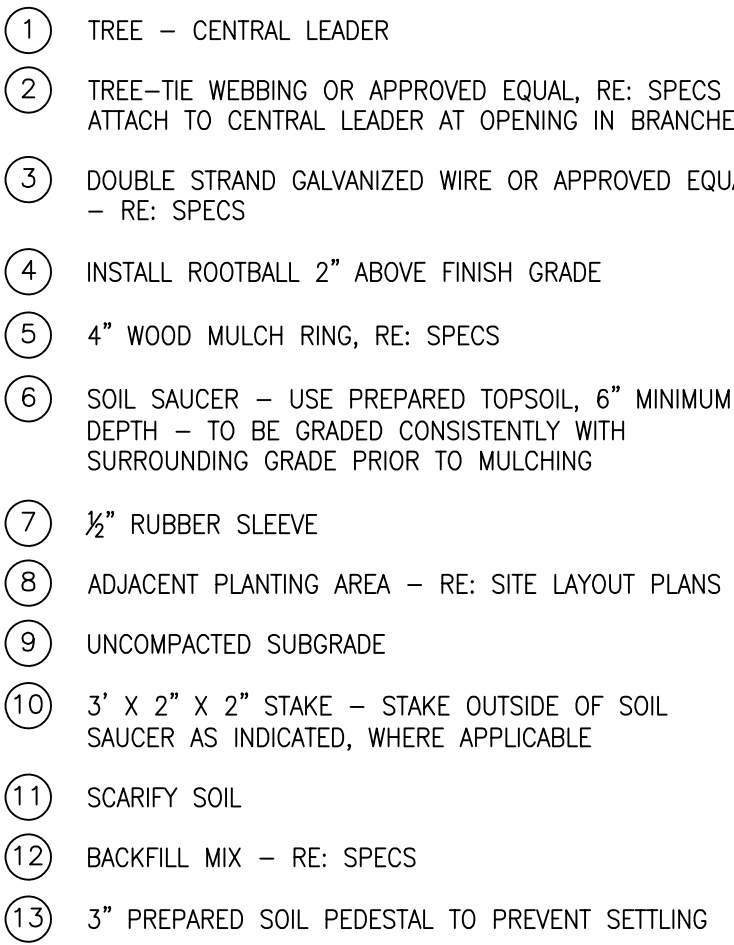
(5)  $\frac{LH}{H} = \frac{3/4''}{1'-0''}$



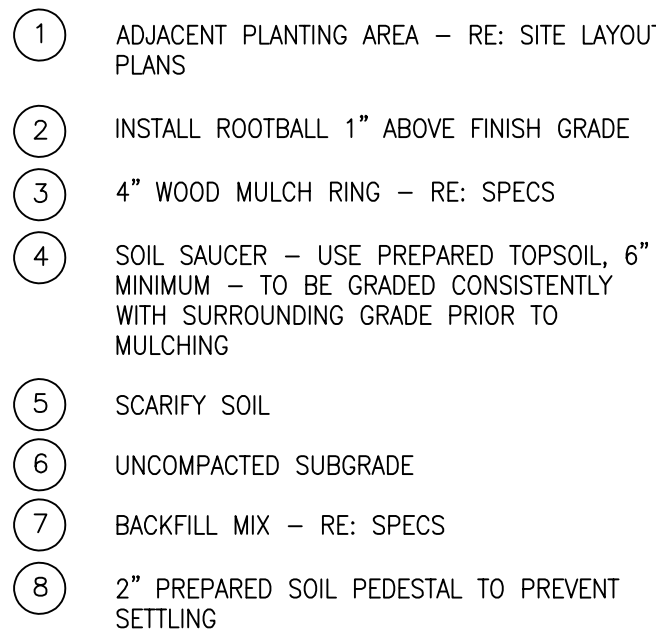




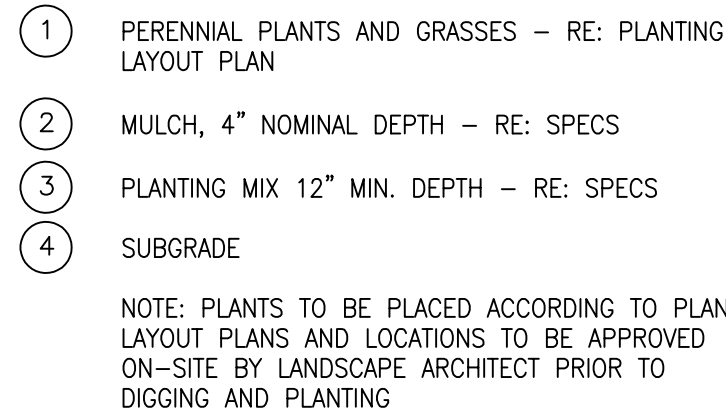
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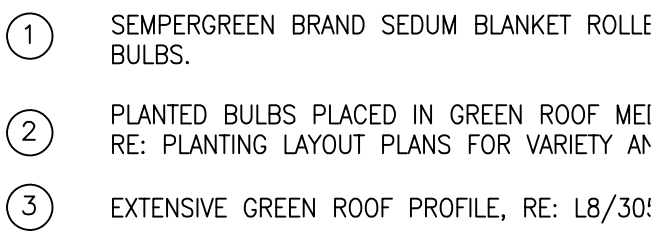
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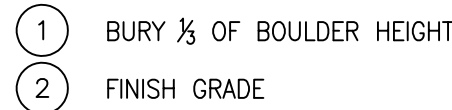
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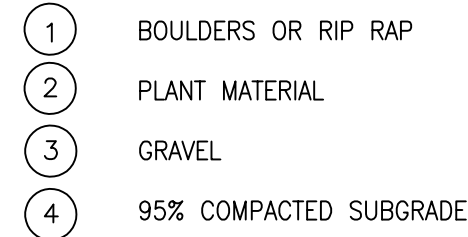
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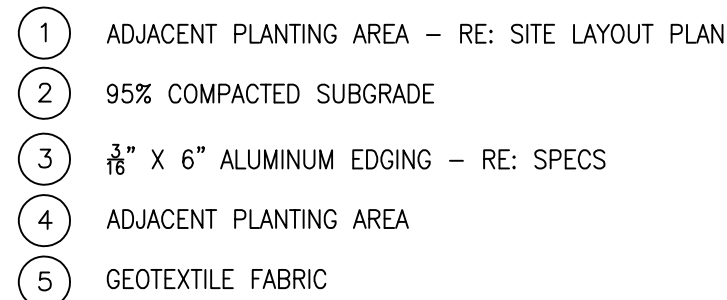
6)  $\frac{1}{N.T.S.}$

**GENERAL NOTES**

- ALL Boulders SHALL BE FIELD SELECTED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLACEMENT. ANY SCARRED Boulders SHALL BE REJECTED.
- ALL Boulders SHALL BE PLACED CAREFULLY WITH A PADDED BUCKET. DIRECT DUMPING IS NOT ALLOWED FOR PLACEMENT. LANDSCAPE ARCHITECT SHALL APPROVE PLACEMENT OF ALL Boulders.
- Boulders SHALL BE BURIED ½ HT. AS SHOWN. PITS MUST BE DUG, FILLING AROUND Boulders IS UNACCEPTABLE.



N.T.S.



8) N.T.S.





| Issued/Revision | By | App'd | MM/DD/YY |
|-----------------|----|-------|----------|
| 1               | AM | SS    | 05/27/20 |
| 2               | AM | SS    | 06/28/20 |
| 3               | AM | SS    | 07/24/20 |
| 4               | AM | SS    | 08/17/20 |
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| 99              | AM | SS    | 08/17/20 |
| 100             | AM | SS    | 08/17/20 |

Permit/Seal

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Not for permits, pricing or other official purposes. This document has not been completed or checked and is for general information or comment only.

Client/Project  
TOWN OF JACKSON

Project No.: 2270312310

File Name: N/A

Scale: AS INDICATED

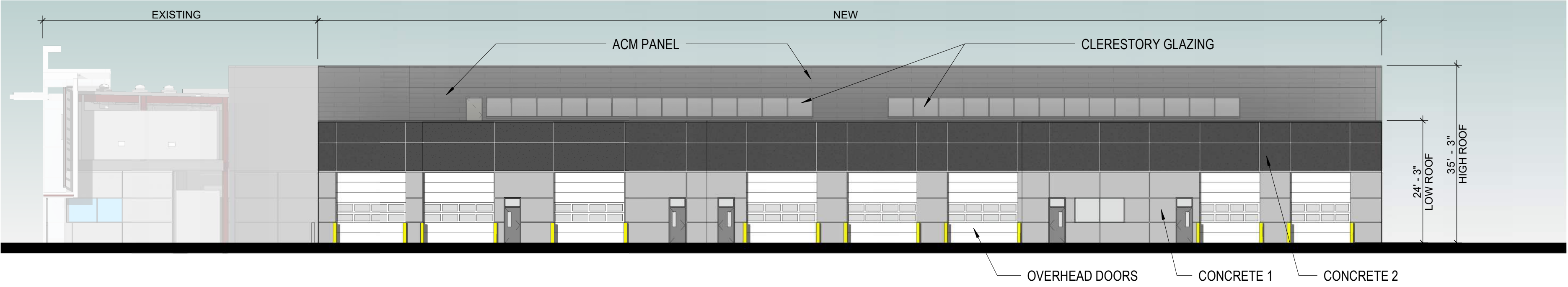
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Revision: 1

Drawing No. L303

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JACKSON, WY 83001

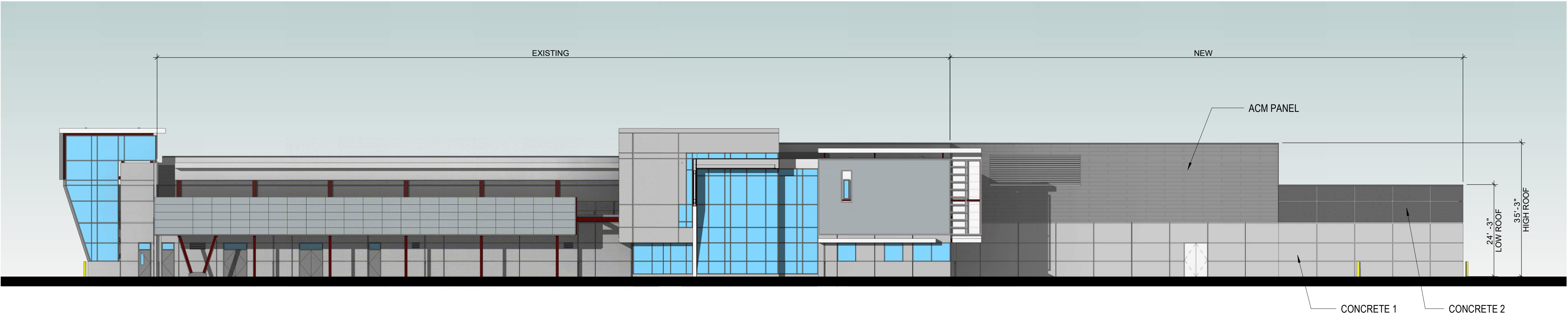




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NORTH ELEVATION

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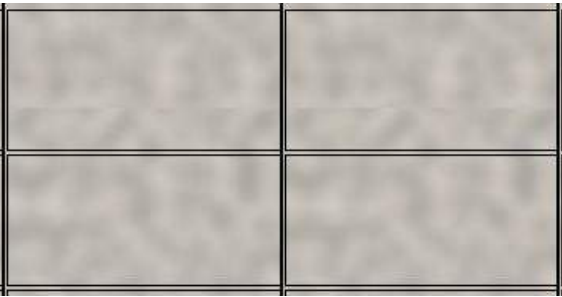


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EAST ELEVATION

1/16" = 1'-0"

MATERIAL GRAPHIC LEGEND



CONCRETE 1 - LIGHT



CONCRETE 2 - DARK



ACM PANEL

EXISTING PHOTO MATERIAL LEGEND

ACM PANEL



CONCRETE LIGHT

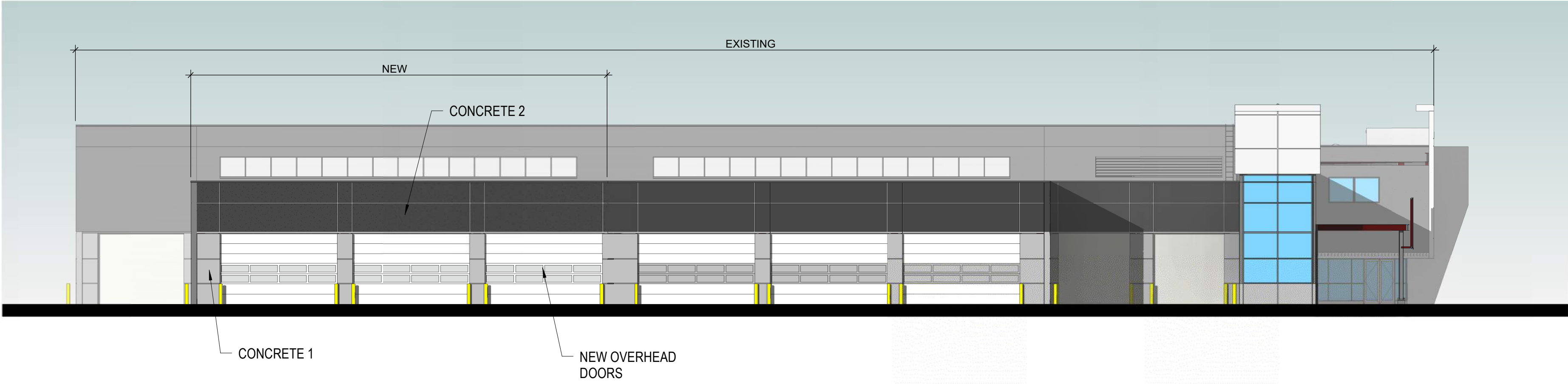


CONCRETE DARK



NOTE: MATERIALS FROM PHASE 1, WILL BE UTILIZED IN PHASE 2

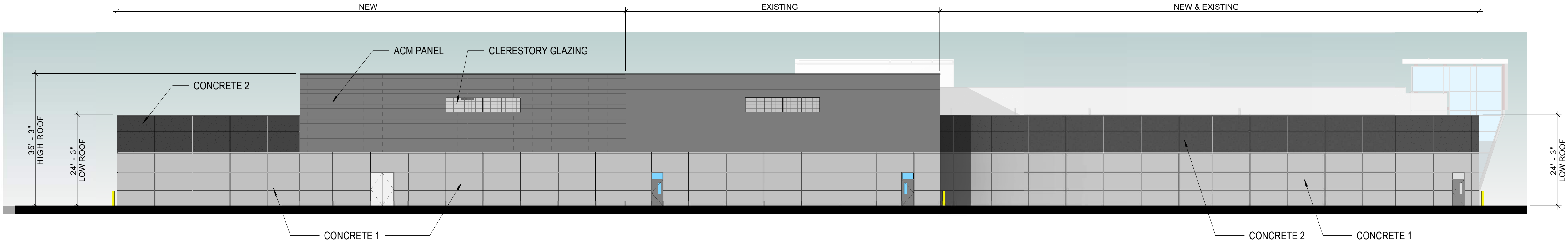




1

SOUTH ELEVATION

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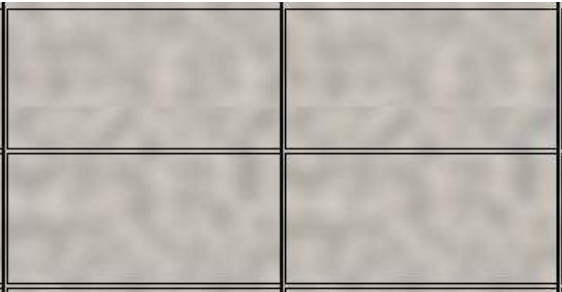


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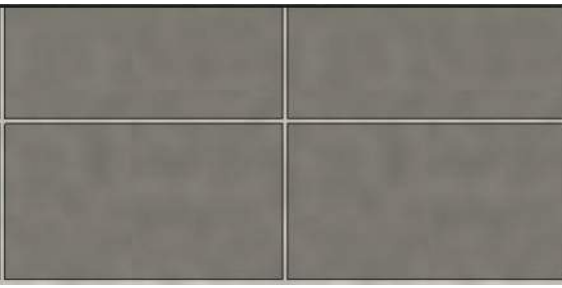
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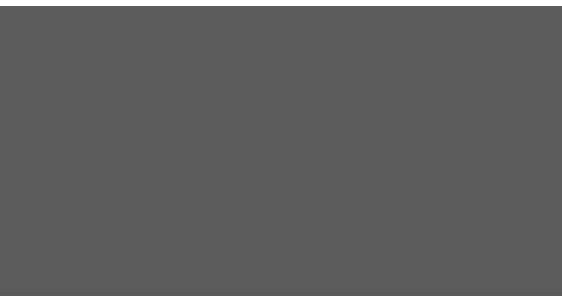
MATERIAL GRAPHIC LEGEND



CONCRETE 1 - LIGHT



CONCRETE 2 - DARK



ACM PANEL

EXISTING PHOTO MATERIAL LEGEND

ACM PANEL



CONCRETE LIGHT



CONCRETE DARK



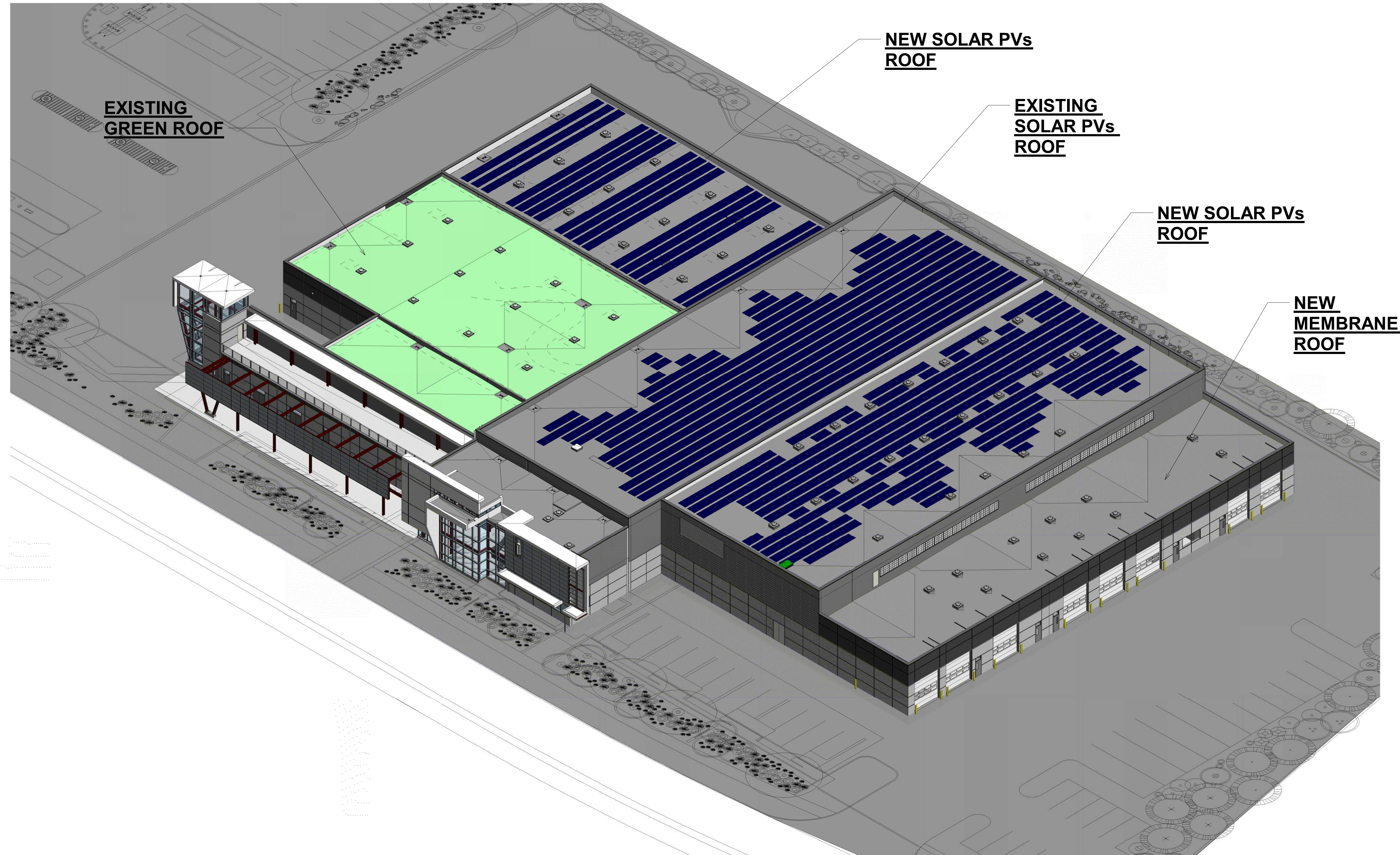
NOTE: MATERIALS FROM PHASE 1, WILL BE UTILIZED IN PHASE 2

TOWN OF JACKSON

BUILDING ELEVATIONS

CORE SERVICES VEHICLE MAINTENANCE FACILITY





TOWN OF JACKSON

2270312310

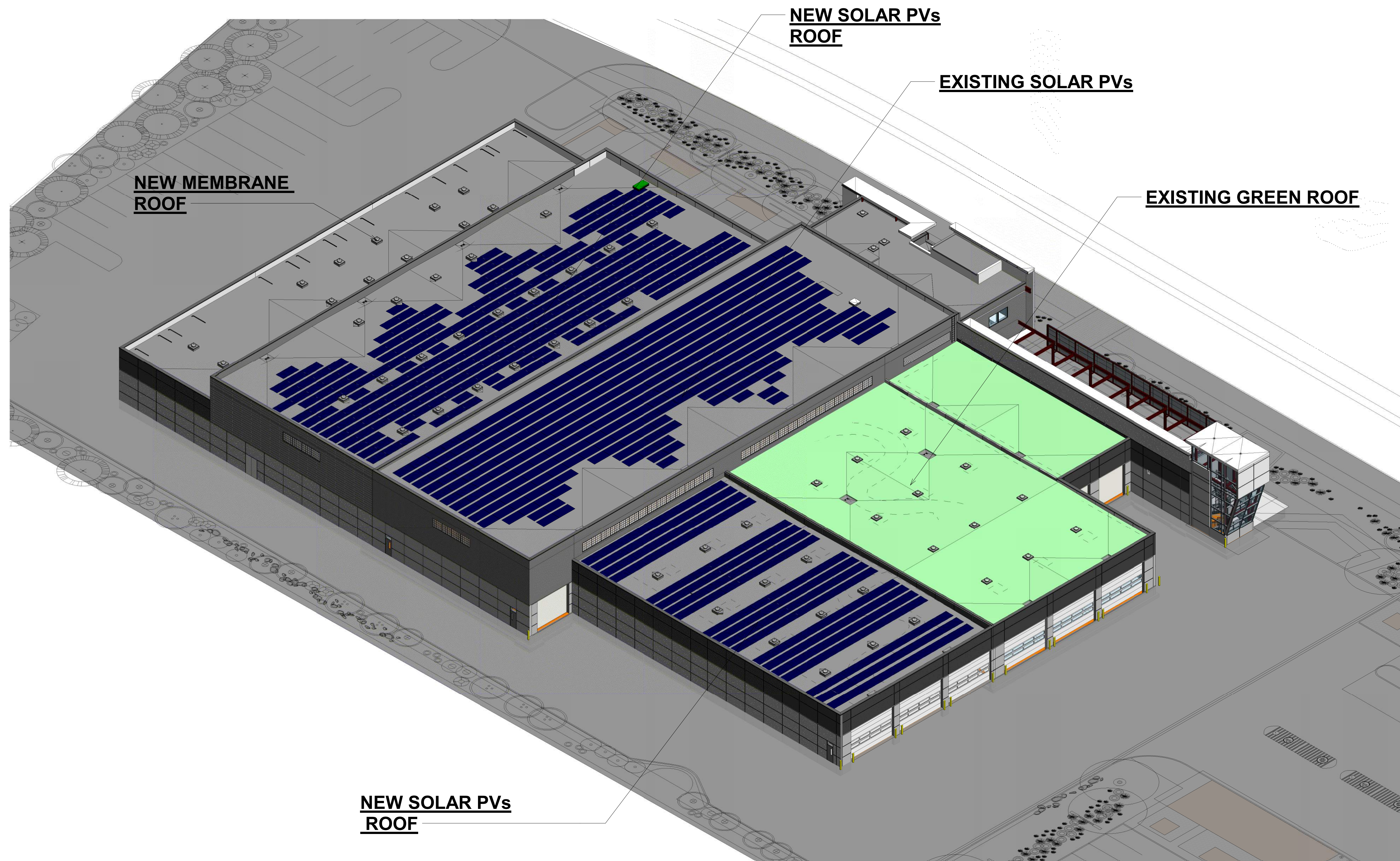
3D VIEW

CORE SERVICES VEHICLE MAINTENANCE FACILITY

A-930

02/28/20





TOWN OF JACKSON

2270312310

3D VIEW

CORE SERVICES VEHICLE MAINTENANCE FACILITY

A-931

02/28/20





1 VIEW FROM KARNS MEADOW DRIVE SOUTH



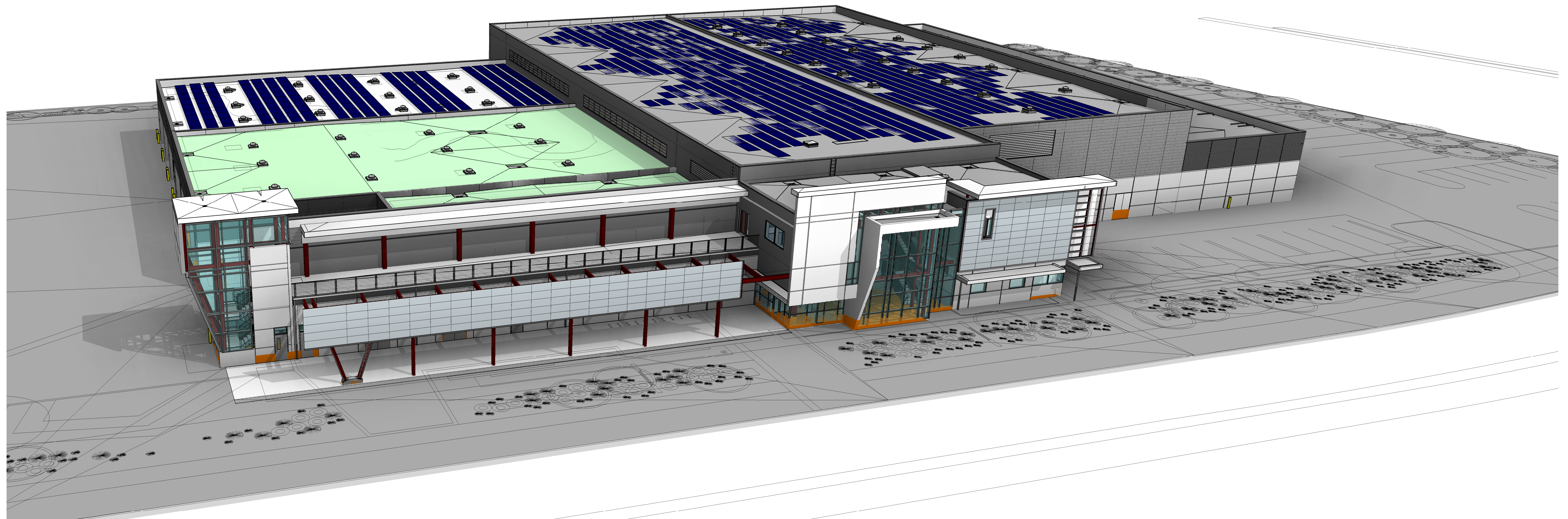
2 VIEW FROM KARNS MEADOW DRIVE NORTH

TOWN OF JACKSON

PERSPECTIVES

CORE SERVICES VEHICLE MAINTENANCE FACILITY





1 AERIAL VIEW



# TOWN OF JACKSON CORE SERVICES VEHICLE MAINTENANCE FACILITY DEVELOPMENT PLAN

LOCATED WITHIN  
SECTION 33, T41N, R116W, 6TH P.M.  
TETON COUNTY, WYOMING

1. THE LOCATION OF THE EXISTING UTILITIES AND PIPELINES SHOWN ON THE DRAWINGS IS BASED ON LOCATION INFORMATION PROVIDED BY THE OWNERS OF THE UTILITIES AND PIPELINES. LOCATION INFORMATION IS GENERAL. THE EXACT LOCATION OF THESE FACILITIES MAY NOT BE SHOWN ACCURATELY ON THE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY AND/OR PIPELINE COMPANIES IN THE AREA OF PLANNED WORK AND SECURE EXACT LOCATIONS FOR THOSE UTILITIES. THE CONTRACTOR SHALL REQUEST THE OWNER OF THE UTILITY TO PROVIDE THE NATURE, LOCATION, AND ELEVATION OF THE UTILITY AT EACH LOCATION AND AT WHATEVER INTERVAL IS NECESSARY FOR THE WORK. IF THE UTILITY COMPANY CANNOT OR WILL NOT PROVIDE THE INFORMATION, THE CONTRACTOR SHALL OBTAIN THE INFORMATION BY WHATEVER MEANS NECESSARY. THE CONTRACTOR SHALL SHOW THE NATURE, LOCATION, AND ELEVATION OF THE UTILITY ON THE ENGINEER'S CONTRACT DRAWINGS AND PROVIDE A COPY OF THE INFORMATION TO THE OWNER. NO TRENCHING OR EXCAVATION OPERATIONS SHALL TAKE PLACE UNTIL ALL UTILITY AND PIPELINE COMPANIES HAVE BEEN CONTACTED AND LOCATIONS AND ELEVATIONS OF THE UTILITIES AND PIPELINES CONFIRMED.
2. THE CONTRACTOR WILL CALL THE UTILITY NOTIFICATION WYOMING ONE CALL AT 1-800-348-1030 FOR UTILITY LOCATIONS AT LEAST 2 BUSINESS DAYS, NOT INCLUDING THE DAY OF ACTUAL NOTIFICATION, PRIOR TO ANY EXCAVATION.
3. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION, FROM ANY DAMAGE DURING CONSTRUCTION OPERATIONS. ANY EXISTING MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE RESET AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR AND ENGINEER SHALL NOTE THOSE MONUMENTS IN THE FIELD PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
5. WHERE IT IS REQUIRED TO CUT EXISTING PAVEMENT, THE CUTTING SHALL BE DONE TO A NEAT WORK LINE WITH A SAWCUT OR OTHER METHOD AS APPROVED BY THE ENGINEER.
6. ALL COORDINATES ARE GROUND COORDINATES NOT STATE PLANE COORDINATES. ELEVATIONS ARE DERIVED FROM BMV-40, NGVD1929.
7. BASE MAPPING PREPARED FROM SURVEYS PERFORMED BY JORGENSEN ASSOCIATES, INC. DURING THE SUMMER OF 2005, AND SOME TOPO PERFORMED IN FALL AND WINTER OF 2014.
8. IN GENERAL, EXISTING STRUCTURES AND FACILITIES ARE NOTED AS "EXISTING" AND SHOWN IN LIGHT LINE WEIGHTS, OR ARE SHOWN AS SCREENED BACKGROUND. NEW STRUCTURES AND FACILITIES ARE SHOWN IN HEAVY LINE WEIGHTS OR COLORS.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY NPDES PERMIT TO DISCHARGE WASTEWATER PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES.
10. PHASE 5: ADMIN/OPERATIONS AND PHASE 6: HOUSING NOT SHOWN HEREIN.

1. NO LANDSLIDES OR BEDROCK SLUMPS ARE APPARENT AT THE SITE. AVALANCHE PATHS DO NOT EXTEND DOWN TO THE PROPOSED DRIVEWAY OR BUILDING SITE.
2. THE SITE IS PREDOMINATELY VEGETATED WITH WILD GRASSES, SHRUBS AND WILLOWS.
3. REVEGETATION WILL OCCUR POST CONSTRUCTION. REFER TO LANDSCAPE PLANS FOR REVEGETATION PLAN AND SPECIFICATIONS.
4. CUT AND FILL SLOPES DO NOT EXCEED 2:1 AND CATCH POINTS ARE TO BE ROUNDED.
5. THE CATCH SLOPES FOR THE ROAD SECTIONS ARE APPROXIMATE AND MAY CHANGE ACCORDING TO FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER. MAXIMUM CUT AND FILL SLOPES OF 2:1 SHOULD BE ADHERED TO UNLESS OTHERWISE NOTED OR AS DIRECTED BY THE ENGINEER.
6. EXISTING GRADE WILL VARY AS SITE CONDITIONS CHANGE. VERIFY EXISTING GRADE BEFORE CONSTRUCTION. DESIGN BASED ON A COMBINATION A FULL BASEMAP TOPO IN 2005 AND LIMITED TOPO IN FALL AND WINTER OF 2014.
7. ALL NECESSARY CONSTRUCTION EASEMENTS AND NORTH EAST WALL EASEMENT MUST BE OBTAINED BEFORE CONSTRUCTION.
8. ALL NECESSARY PERMITS SHALL BE OBTAINED BEFORE CONSTRUCTION.
  - 8.1. SWPPP
  - 8.2. DEQ
  - 8.3. GRADING AND EROSION CONTROL PERMIT
  - 8.4. TOJ SEWER SERVICE TAPPING PERMIT
9. PROPERTY LINES SHALL BE MARKED BEFORE GRADING IS PERFORMED BY PROPERTY LINES. NO GRADING SHALL GO BEYOND PROPERTY LINES UNLESS EASEMENTS ARE GRANTED. NOTIFY ENGINEER AND OWNER IF DISTURBANCE FROM GRADING VARIES FROM WHAT IS SHOWN IN THE PLANS.

|  |                                        |
|--|----------------------------------------|
|  | BOUNDARY SUBJECT PROPERTY              |
|  | BOUNDARY, ADJACENT PROPERTY            |
|  | BOUNDARY, ROAD RIGHT-OF-WAY            |
|  | EASEMENT, AS NOTED                     |
|  | EASEMENT, AS NOTED                     |
|  | EASEMENT, AS NOTED                     |
|  | BOUNDARY, WETLAND                      |
|  | EDGE OF WATER                          |
|  | FENCE                                  |
|  | FENCE                                  |
|  | EDGE OF CONCRETE                       |
|  | EDGE OF GRAVEL                         |
|  | EDGE OF PAVEMENT                       |
|  | TOP BACK OF CURB                       |
|  | TOE OF SLOPE                           |
|  | TOP OF BANK                            |
|  | FLOWLINE                               |
|  | ROAD PAINT STRIPE                      |
|  | SEWER LINE                             |
|  | SEWER MANHOLE                          |
|  | 12" STORM WATER PIPE                   |
|  | RECTANGULAR STORM WATER INLET          |
|  | CULVERT                                |
|  | STORM DRAIN MANHOLE                    |
|  | WATER LINE                             |
|  | 6" WATER LINE                          |
|  | 12" WATER LINE                         |
|  | FIRE HYDRANT                           |
|  | WATER MANHOLE                          |
|  | WATER VALVE                            |
|  | GAS LINE                               |
|  | PHASE 1 GAS LINE                       |
|  | OVERHEAD POWER LINE                    |
|  | UNDERGROUND POWER LINE                 |
|  | PHASE 1 UNDERGROUND POWER LINE         |
|  | ELECTRIC BOX                           |
|  | ELECTRIC TRANSFORMER                   |
|  | LIGHT POLE                             |
|  | PHASE 1 SILVERSTAR COMMUNICATIONS LINE |
|  | UNDERGROUND TELEPHONE LINE             |
|  | TELEPHONE PEDESTAL                     |

|                                                                                       |                        |
|---------------------------------------------------------------------------------------|------------------------|
|  | BUILDING FOOTPRINT     |
|  | CONCRETE APRON         |
|  | FENCE                  |
|  | EDGE OF CONCRETE       |
|  | EDGE OF PAVEMENT       |
|  | GUARDRAIL              |
|  | TOP BACK OF CURB       |
|  | FLOWLINE               |
|  | SEWER LINE             |
|  | SEWER MANHOLE          |
|  | STORM WATER PIPE       |
|  | STORM DRAIN MANHOLE    |
|  | UNDERGROUND POWER LINE |
|  | SITE LIGHTING          |
|  | FUEL LINE              |

1" = 200' for 22x34 Prints  
1" = 400' for 11x17 Prints

C1 - TITLE, VICINITY MAP, SHEET INDEX, AND GENERAL NOTES

C2 - EXISTING CONDITIONS MAP

C3 - PROPOSED CONDITIONS

OWNER  
Town of Jackson, Wyoming  
P.O. Box 1687  
Jackson, WY 83001-1687

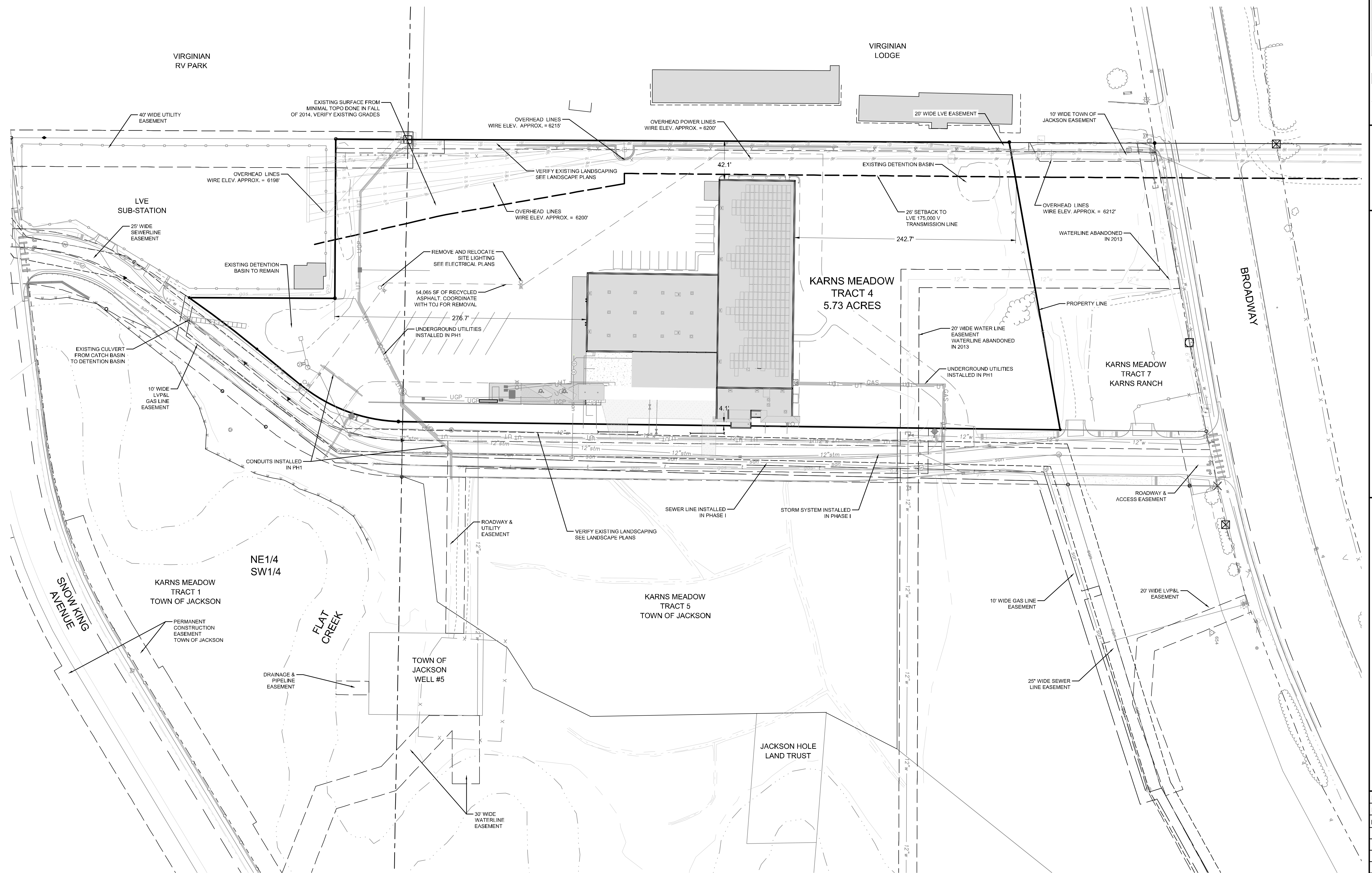
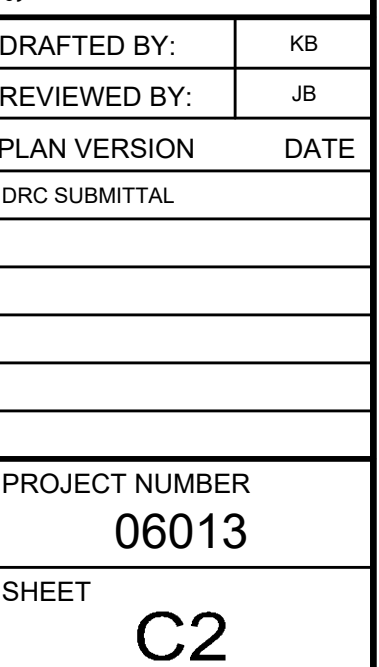
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TITLE, VICINITY MAP, SHEET INDEX, &  
GENERAL NOTES

|               |      |
|---------------|------|
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| REVIEWED BY:  | JB   |
| PLAN VERSION  | DATE |
| DRC SUBMITTAL |      |

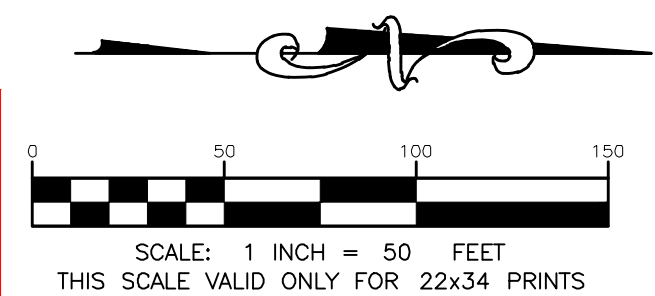
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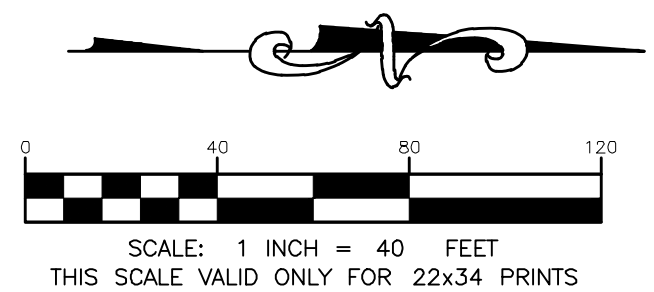




— PRELIMINARY —  
SUBJECT TO CORRECTION  
AND APPROVAL







## **SECTION 4 – SUPPORTING INFORMATION**

- 4.1 Geotechnical Engineering Report 12/6/2010
- 4.2 Addendum to Geotechnical Engineering Report dated 3/10/2020
  - 4.3 Comprehensive Plan: District 4.2 Northern Hillside



**GEOTECHNICAL SITE INVESTIGATION  
START FACILITY DEVELOPMENT  
KARNS MEADOW  
JACKSON, WYOMING**

**Prepared for:**

**Jorgensen Associates  
P.O. Box 9550  
Jackson, Wyoming 83001**

**Prepared by:**

**Womack & Associates, Inc.  
P.O. Box 12650  
Jackson, WY 83002**

**December 6, 2010**

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Appendix A – Test pit logs

## **1.0 INTRODUCTION**

As authorized by Jorgensen Associates, Womack & Associates, Inc. conducted a geotechnical site investigation for the proposed START Facility located between Karns Meadow and the Virginian Addition in the town of Jackson, Wyoming (Figure 1). The purposes were to investigate surface and subsurface soil conditions, evaluate soil-engineering properties, and to provide recommendations for foundation and roadway construction.

## **2.0 PROPOSED CONSTRUCTION**

It is our understanding that five new buildings are proposed, primarily with shallow slab-on-grade or crawl space construction. As originally proposed, the buildings would be as follows:

- |                                 |               |
|---------------------------------|---------------|
| • Administration and Operations | 6,900 sq.ft.  |
| • Heated Bus Storage            | 36,900 sq.ft. |
| • Fleet Maintenance             | 24,700 sq.ft. |
| • Fuel and Wash Stations        | 4,500 sq.ft.  |
| • Employee Housing (2 story)    | 6,000 sq.ft.  |

The bus storage facility may be built below existing grade. We have assumed that the perimeter footing depths will be about 3 feet below existing grade. Parking lots, driveways, and a Town of Jackson connector road between Snow King Avenue and West Broadway will be required.

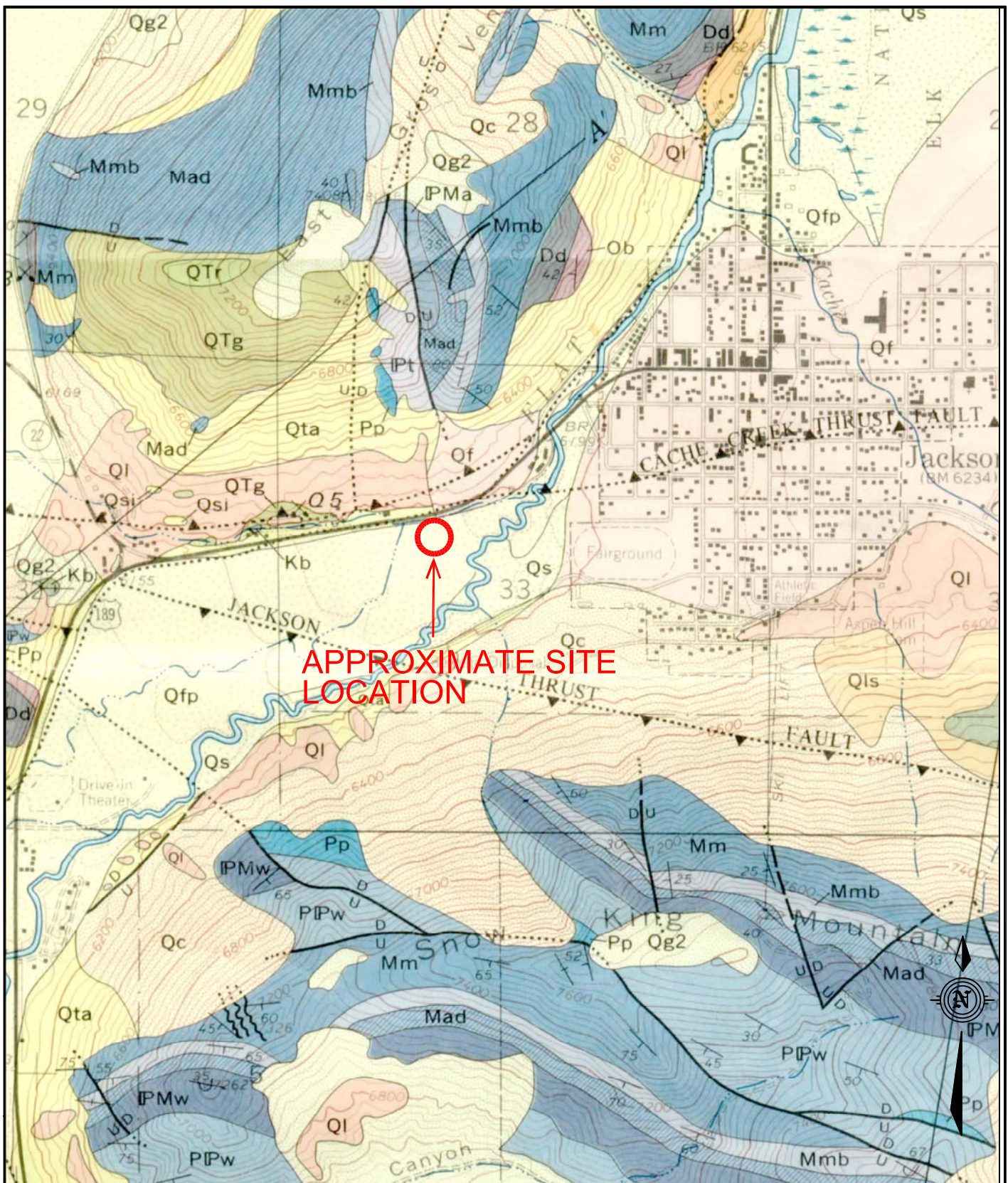
## **3.0 INVESTIGATION PROCEDURES**

### **3.1 Field Investigation**

The field investigation was conducted on June 10 and June 24, 2010. Fieldwork consisted of preliminary site reconnaissance and excavation and logging of 18 exploratory test pits. The test pits were excavated to depths of 6.5 to 13 feet in order to observe subgrade soil and groundwater conditions, and to obtain samples if necessary from below the depth of the proposed foundations. Test pit locations are shown on Figure 2. Descriptive logs of the test pits are appended.

Soil types, consistencies, and stratigraphic thicknesses were observed and documented by an Engineering Geologist. Field conditions were described and 5 standpipe piezometers were installed to allow monitoring of groundwater variability. General topography and site conditions were observed by the Geologist in order to place the test pits in representative locations. Note that site conditions may be variable and actual soil conditions may differ from those represented in the test pit logs.





APPROXIMATE SITE  
LOCATION

Map Symbols: Qal - Alluvium  
Ql - Loess  
Qc - Colluvium

SCALE: 1" = 1500'

Qfp - Flood Plain Deposits  
Qg2 - Glacial Deposits  
Qs - Swamp Deposits

Qta - Talus  
Qtc - Conglomerate  
Qf - Alluvial Fan

From Love et al, 1972, Geologic Map of the Jackson Quadrangle, Teton County, Wyoming

Geotechnical Investigation Report  
START Facility  
Karns Meadow  
Jackson, Wyoming

Site Location and  
Geologic Map

FIGURE

1

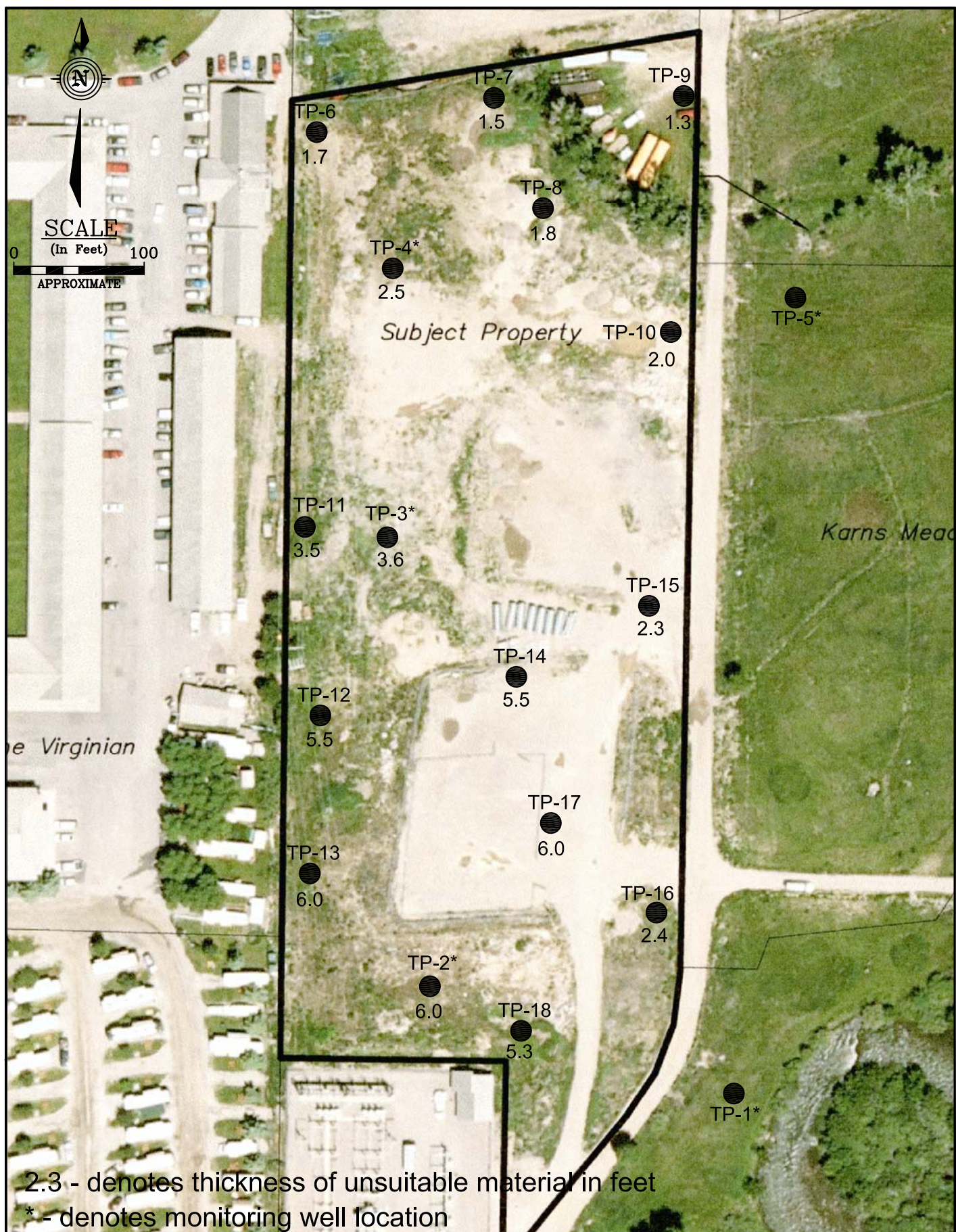
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Geotechnical Investigation Report  
START Facility  
Karns Meadow  
Jackson, Wyoming

Test Pit and Monitoring Well  
Locations and Site Layout Map

FIGURE

2



### **3.2 Laboratory Analysis**

Laboratory tests were not conducted for this investigation. The site is underlain by gravel and cobble alluvium that did not require testing.

### **3.3 Report Preparation**

The report presents the geological site conditions, test pit logs, location maps, engineering analyses, and recommendations.

## **4.0 SITE CONDITIONS**

### **4.1 Description**

The proposed building site is located in the town of Jackson just north of Flat Creek (Figure 1). The elevation at the site varies from about 6169 feet above sea level in the southeast corner to 6175 on mounds. The site is nearly level but has been used for fill storage, and contains irregular fill mounds up to 6 feet high. At the time of our investigation a small parking lot existed near the south end of the site and vehicles were stored near the northeast corner.

### **4.2 Geology**

Figure 1 shows the generalized geology for the Jackson area (Love, et al, 1972). Most of the west end of the town of Jackson, including the project site, is mapped as Quaternary flood plain deposits (Qfp) consisting of gravel, sand, silt, and clay. The underlying material described in the test pits consists of gravel and cobble with a little clay and silt.. Bedrock was not encountered in any of the test pits, and depth to bedrock is unknown.

The inferred (buried) traces of the Cache Creek and Jackson thrust faults are located near the site, crossing the town of Jackson on a generally east-west trend. These faults are considered to be relatively old and inactive and do not affect the project. The Teton fault at the base of the Teton Range about 5 miles west of the site is considered to be seismically active.

### **4.3 Soils**

Up to 5.5-feet of fill was found in most test pits, underlain by gravel/cobble alluvium. The fill varies from clayey gravel/cobble to gravelly clay, usually described as dark gray to black and very stiff/very dense. Much of the fill appears to represent recycled topsoil.

About 2-feet of black organic gravelly silt topsoil occurs at ground surface in undisturbed areas and underlies the fill in some places. The stony underlying alluvium consists of about 60% loose to very dense, stratified, subangular to subrounded limestone and sandstone gravel and cobbles up to about 6 inch diameter with occasional larger clasts up to about a foot diameter, in a matrix of well-graded sand, sometimes with a little clay or silt. Cobble size apparently increases with

depth. The gravel and cobble alluvium was described as dry to moist (wet only in TP-1 and TP-18 below water table),

#### **4.4 Groundwater**

Standpipe piezometers were installed in 5 of the test pits to depths of 6.5 to 13 feet bgs in order to monitor groundwater levels (Figure 2). Test pits TP-1 and 18, located adjacent to Flat Creek near the southeast corner of the site, encountered groundwater at about 5 to 7-feet below ground surface (bgs) at the time of the investigation on June 10 and 24, 2010. Jorgensen Associates measured groundwater depth on October 26, 2010, and all monitoring wells were reported dry. Groundwater levels probably fluctuate in response to seasonal precipitation and flow levels in Flat Creek.

Wyoming DEQ has informed Jorgensen that wells placed for other investigations along Virginian Lane and the public library parking lot encountered groundwater at 13 to 18 feet bgs. These values are too far down-valley from the START site to be definitive, but they suggest groundwater might interfere with construction of a basement. If a basement continues to be considered, two deeper wells should be installed in the basement area and monitored during the spring runoff season in 2011.

#### **4.5 Earthquakes and Ground Shaking**

Jackson Hole is located within the Intermountain Seismic Belt, a zone of seismicity that extends from southern Utah through eastern Idaho and western Montana and encompasses western Wyoming and the Teton Range (Smith and Arabasz, 1991). The Teton fault is located along the eastern margin of the Teton Range about 5 miles northwest of the site, and is considered an important structural element of the Intermountain Seismic Belt.

Site ground motion accelerations and design response spectra were derived in accordance with the general procedure defined in the 2006 International Building Code (IBC, unchanged in 2009). The provisions of the IBC are intended to provide uniform levels of performance for structures, depending on their occupancy and use and the risk inherent to their failure.

The approach adopted in the 2006 IBC is intended to provide a uniform margin of safety against collapse at the *design* ground 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. The Site Ground Motion and Design Response Spectrum for the 2003 IBC is presented in Figure 3 and seismic parameters are listed below.



*Earthquake Loads – Site Ground Motion and Design Response Spectrum 2006 International Building Code\**

Site Location: **Lat. 43.47° Lon. 110.78°**

Site Class: **D Stiff Soil**

Design Spectral Response Acceleration Parameters:

$$S_{DS} = \mathbf{0.78}$$

$$S_{D1} = \mathbf{0.42}$$

#### **4.6 Liquefaction Potential**

Loose, saturated sands and silty sands, and in some cases silts and gravels, may liquefy when exposed to seismic shaking. During investigation groundwater was encountered at depths 5 to 7 feet below the ground surface in TP-1 and TP-18 adjacent to Flat Creek.

The test pits encountered gravel and cobble alluvium that appears to be too dense to liquefy in a seismic event. However, it is possible that liquefiable materials occur at greater depths. Evaluation of deep subsurface conditions and assessment of liquefaction potential at this site were beyond the scope of this investigation. At this flat lying location, liquefaction could cause damaging differential settlement, but there appears to be little risk of lateral spreading, which is the most damaging phenomenon associated with liquefaction.

### **5.0 ENGINEERING ANALYSIS**

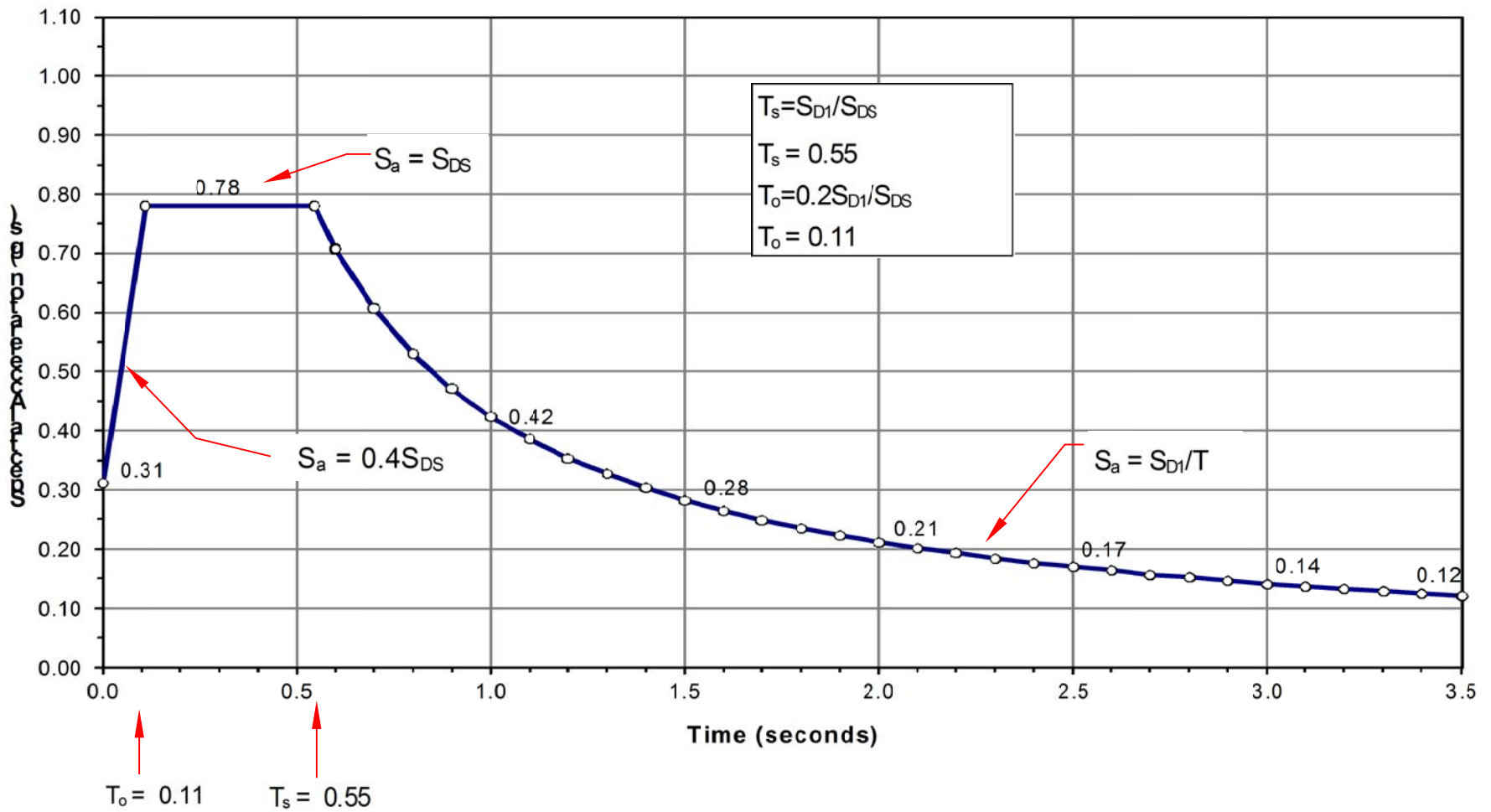
#### **5.1 Settlement**

Significant settlement is not anticipated in the stony gravel/cobble alluvium. Fill up to 6 feet thick covers most of the site, often underlain by about 2 feet of silty topsoil. The fill is variable and often consists primarily of silt or clay, perhaps derived from recycled topsoil. Fill and underlying topsoil should be removed down to gravel. Most pits encountered stony alluvium within 2 to 3 feet of existing ground surface. Test pits TP-2, 12, 13, 14, 17, and 18 encountered 5 to 6 feet of fill and topsoil on the fill mound surrounding the existing parking lot near the south end of the site (Figure 2). Other mounds at the site may be underlain by similar profiles, and over-excavation of mounded areas should be assumed. Foundation footings should be placed at depths of at least 3 feet below final grade on the gravel and cobble alluvium. .

#### **5.2 Bearing Capacity**

Bearing capacity of soil refers to its ability to resist shear failure under load. The bearing capacity of the stony gravel/cobble alluvium was estimated using Terzaghi's bearing capacity equation for strip footings (Bowles, 1996). Soil properties were estimated based on visual soil classification. The unit weight of the gravel is estimated to be about 135 pcf, with a friction angle of about 35 degrees (Pit Slope Manual, 1982; Huang, 1983). The foundation footings are assumed to be 2 feet wide, placed on the sandy gravel alluvium about 3.5 feet below the finished grade elevations. An allowable bearing capacity of about 7,000 psf is recommended. Allowable loads may include full dead load and 50 percent live load.

**Design Response Spectrum (2006 IBC) - Site Class D**  
**START Facility, 675 W. Snow King Avenue**



Geotechnical Investigation Report  
 START Facility  
 Karns Meadow  
 Jackson, Wyoming

DESIGN RESPONSE SPECTRUM

FIGURE

3

UPDATE TIME:

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### 5.3 Lateral Pressures

Lateral pressures against retaining or basement walls can be estimated using several methods, and there is no overwhelming consensus favoring any one technique. We have used what we believe to be reasonably conservative values that can be justified from normal practice and the technical literature. The main variables are assumptions regarding seismic forces, wall friction, and surcharge pressures created by slopes. As discussed above, the Jackson Hole area is potentially susceptible to ground shaking from earthquakes. A maximum horizontal seismic acceleration  $k_h$  of 0.22g is predicted for this site with a uniform likelihood of exceedance of 10 percent in 50 years (USGS 2002). Lateral pressures have been calculated assuming horizontal backslope conditions. Table 5-1 summarizes lateral pressure parameters applicable to the site.

**TABLE 5-1: Lateral Pressure Parameters**

| Condition                                      | Coefficient of Earth Pressure                | $\gamma K$ (equivalent fluid pressure) |
|------------------------------------------------|----------------------------------------------|----------------------------------------|
| <b>Static Conditions</b><br>Level Backfill     | $K_o = 0.43$<br>$K_a = 0.27$<br>$K_p = 3.69$ | 56 psf<br>35 pcf<br>480 pcf            |
| <b>Earthquake Conditions</b><br>Level Backfill | $K_{ae} = 0.33$<br>$K_{pe} = 3.47$           | 43 pcf<br>451 pcf                      |

#### 5.3.1 Active Pressures

For lateral pressure design of retaining walls, which are allowed to deflect and develop an active soil wedge, the calculated equivalent fluid pressure ( $\gamma K_a$ ) is about 35 pcf (pounds per cubic foot), assuming a horizontal ground surface behind the retaining wall. This pressure distribution would be equivalent to a force of approximately  $17.5H^2$  pounds per horizontal foot of wall acting at one-third the wall height (H) above the base.

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). Accordingly, active soil pressures have been divided into two components that act at different wall heights. The static force acts at the lower third-point, as discussed above. The Mononobe-Okabe equations are often used to estimate dynamic forces against retaining walls. Although there is considerable debate about the theoretical applicability of these equations to rigid walls, they have been used for many years for seismic design and the performance record of underground walls during earthquakes has generally been good. The Mononobe-Okabe equations were applied using half the maximum horizontal acceleration (Bowles, 1996; Whitman, 1990). This force would be in addition to static active earth pressure, equivalent to  $4H^2$  pounds per horizontal foot of wall applied at 50% of the wall height above the base.

### 5.3.2 Passive Pressures

For passive pressures, an equivalent fluid pressure ( $\gamma K_p$ ) of about 480 pcf was estimated for static conditions and about 451 pcf for seismic conditions. Passive earth pressures were calculated using the Coulomb and Mononobe-Okabe equations, respectively (Bowles, 1996).

### 5.3.3 At-Rest Pressures

For lateral pressure design of basement walls, which are restrained and not allowed to deflect, the calculated at rest earth pressure ( $\gamma K_o$ ) is about 56 pcf, assuming a horizontal ground surface behind the basement wall. Use the at-rest pressure or the active pressure under seismic conditions for basement wall design, whichever is greater.

## 6.0 RECOMMENDATIONS

### 6.1 Foundations

Excavation for the foundation footings should remove any unsuitable finer grained soil (topsoil and fill) and expose the underlying gravel/obble alluvium at foundation depth. Normal strip or column footings and slabs may be placed directly on the stony alluvium. A structural engineer should review the plans to check that adequate lateral restraint is provided to foundation walls. Minor cracks in the foundation walls, floor slabs, and sheetrock are normal and should not be a cause for concern.

### 6.2 Site Grading, Preparation and Backfill

Properly compacted backfill and good site drainage are important. Properly compacted backfill will reduce settlement of the soil against foundation walls and differential movement of exterior slabs.. Structural fill should consist of granular fill placed in lifts no greater than 9 inches loose thickness and compacted. Existing site material may be used for structural fill and other backfills if compacted and tested. Large cobbles (>6" diameter) or clay should not be used as structural backfill, except as specified in Table 5-2.

Pre-roll the surface to compact materials that have been disturbed during excavation using a smooth drum vibratory roller (in vibratory mode) with a minimum of three passes. 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.

**Table 6-1: Compaction Parameters for Stony Fill**

| Compactor Type    | Lift Thickness | Maximum Particle Size | Min. No. of Passes |
|-------------------|----------------|-----------------------|--------------------|
| 5-ton vibratory   | 12 inches      | 9-inch*               | 3                  |
| 1.5-ton vibratory | 9 inches       | 6-inch                | 5                  |
| Hand-held         | 4 inches       | 4-inch                | 5                  |

\* Occasional clasts to 12-inch are permitted, but should not be nested



If the number of passes and equipment used are verified by a qualified observer, density testing is not required. The actual number of passes should be determined by observing the 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. Fill should be placed in horizontal lifts.

Utility trenches and exterior backfill should be placed in lifts and compacted. Site materials other than very stony alluvium should be tested. **A compaction standard for non-structural fill of 92% Standard Proctor density (ASTM D 698) is recommended.** Final grading should provide protection from frost. Do not over-compact exterior backfills against “green” foundation walls.

Prior to placement of structural fill for foundations or exterior slabs-on-grade, the site should be cleared and grubbed. No brush, roots, sod, frozen material, or other unsuitable materials shall be incorporated in the foundation subgrade or structural fill.

Final grading in unpaved areas should provide positive drainage of at least 0.5 foot in the first 10 feet away from the structure.

### 6.3 Pavement Design

Pavement designs have been evaluated flexible and rigid pavements. Subgrade soils at the site include un-engineered fill and stony alluvial deposits. These materials will likely provide a good quality of roadbed.

Pavement designs were prepared using Chapter 4 of the AASHTO Guide for Pavement Structures, 1993. Pavement sections were developed based on the following design assumptions:

US Climate Region - VI

Reliability – 75 %

Relative Quality of Roadbed Soil – Good (stony alluvial deposits)

Traffic Level – medium (400,000 to 600,000 18-kip ESAL during the design period)

#### 6.3.1 Flexible Pavement Design

**Table 6-2: Pavement Design Parameters\***

| Climate Region | Roadbed | Traffic Level | SN  |
|----------------|---------|---------------|-----|
| VI             | Good    | Medium        | 3.2 |

\*Table 4.7 (AASHTO, 1993)

The design section is based on the following relationship, where the layer coefficient  $a_1$  is equal to 0.33 and  $a_2$  is equal to 0.12.

$$SN = a_1D_1 + a_2D_2$$

**Design section** should consist of:

**Pavement: 3-inches (D<sub>1</sub>) asphalt concrete (AC)**

**Base Course: 18 inches (D<sub>2</sub>) crushed gravel.**

### 6.3.2 Rigid Pavement Design

Cement slab thickness is based on the following design parameters and for 75 % reliability:

Base Course - consisting of 4 to 6-inches of high quality crushed gravel

PCC modulus of rupture (S'<sub>c</sub>) 600 psi

PCC elastic modulus 5,000,000 psi

**Table 6-3: Rigid Pavement Design Thickness**

| Roadbed Quality | Load Transfer Devices | Edge Support | S' <sub>c</sub> (psi) | Slab Thickness (inches) |
|-----------------|-----------------------|--------------|-----------------------|-------------------------|
| Good            | No                    | Yes          | 600                   | 6.5                     |
|                 |                       | No           | 600                   | 7.25                    |
|                 | Yes                   | Yes          | 600                   | 6.0                     |
|                 |                       | No           | 600                   | 6.75                    |

Thickness will vary depending on use of load transfer at joints and with or without edge support.

### 6.4 Interior Slabs-on-Grade

The interior floor slab should be at least 4 inches thick, and any slabs bearing vehicles should be at least 6 inches thick, or as approved by the .Structural Engineer. Minor floor cracking of slab-on-grade construction is difficult to prevent. Such cracking is normal and should be expected to occur with time. Buildings are almost never free of cracks, and cracking is caused by many factors other than soil movement, such as concrete shrinkage, normal activities, and daily and seasonal variability in temperature and humidity.

### 6.5 Exterior Slabs-on-Grade

Exterior slabs (sidewalks, patios, parking lots, etc.) typically sustain the greatest damage. Cracking is almost impossible to avoid, and freeze-thaw adds to the difficulty caused by soil consolidation. The following suggestions may reduce differential movement of exterior slabs.

Exterior concrete slabs should be at least 4 inches thick, 6 inches if supporting vehicles, or as approved by the .Structural Engineer. Exterior slabs should not be tied to foundation walls. Any movement of exterior slabs may be transmitted to the foundation walls, resulting in damage.



Posts for patios or other exterior columns should not bear on exterior slabs. If the slabs settle or rise, the movement can be transmitted to the post, resulting in damage to the structure.

Exterior slabs placed on topsoil or silty material may be very susceptible to frost heave, and any exterior flat work placed on these soils may perform poorly. Performance of the slabs may be improved by placement of at least 6 inches of gravel, preferably 12 inches, beneath the slab.

## **6.6 Potential Basement**

Groundwater may interfere with construction of a basement. Deeper piezometers (on the order of 20 feet deep) should be installed to monitor groundwater elevation during the spring 2011 runoff season. Boreholes would be required.

## **6.7 Ventilation**

Teton County Building Code requires that slabs below living spaces be ventilated.

## **6.8 Reinforcing, Concrete Considerations, and Utilities Testing**

Footings, slabs, and foundation walls should be reinforced to resist differential movement. We strongly recommend consultation with a structural engineer to specify adequate reinforcement. Exterior concrete should contain 5% to 7% entrained air. We recommend pressure testing of water and sewer lines before backfilling.

## **6.9 Observation during Construction**

A representative of this office should observe construction of any foundation elements recommended in this report. Site grading and soil compaction should be observed by a representative of this office. If any unexpected soils or conditions are revealed during construction, this office should be notified immediately to survey the conditions and make necessary modifications. In particular, the foundation excavations at the east end of the site should be observed by a representative of this office.

## **7.0 LIMITATIONS**

This report has been prepared based on a limited amount of data. Actual site conditions may vary. The report is for single use and under no circumstances are the figures and text to be used separately. 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 warranty is made or implied.

## **8.0 REFERENCES**

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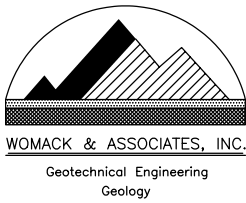
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Whitman, R.V., 1990, Seismic Design and Behavior of Gravity Retaining Walls *in* Design and Performance of Earth Retaining Structures (P.C. Lambe and L.A. Hansen ed): ASCE Geotechnical Special Publication 25, p. 817-842.

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**APPENDIX A**  
**TEST PIT LOGS**



P.O. Box 12650  
Jackson, WY 83002  
Telephone: (307)733-7209  
Fax:

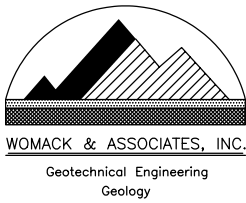
# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                                                              |               |        |                        |              |                           |                                 | DATE: 6/10/10                                                                                                                                                                                                                                               |                      |                               |                   |                      |                 |
|-----------------------------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                                        |               |        |                        |              |                           |                                 | HOLE NO.: TP-1                                                                                                                                                                                                                                              |                      |                               |                   |                      |                 |
| TEST HOLE LOCATION: Southeast of project site, in Karns Meadow ~30' west of Flat Creek bend, see site map |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6168                                                                               |               |        | TOTAL DEPTH (ft.): 6.5 |              |                           | GROUNDWATER LEVEL (ft.): 5.0    |                                                                                                                                                                                                                                                             |                      | MEASURED FROM: Ground Surface |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                                           |               |        | HAMMER:                |              |                           | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                             |                      | DRILLER: Bill                 |                   | LOGGED BY: ds        |                 |
| DEPTH (ft.)                                                                                               | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF) | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                                 | MOISTURE CONTENT (%) | DRY DENSITY (PCF)             | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                                         |               |        |                        |              |                           |                                 | 0.0-2.2ft SILT: Black, moist, soft, massive, abundant roots and organic matter [TOPSOIL]                                                                                                                                                                    |                      |                               |                   |                      |                 |
| 2                                                                                                         |               |        |                        |              |                           |                                 | 2.2-6.5ft Clayey sandy GRAVELS and COBBLES: Tan, moist to wet, loose, stratified, moderately plastic clay ~15%, sand ~20-25%, subangular to subround limestone gravels and cobbles up to 1' diameter ~60-65%, abundant caving due to groundwater [ALLUVIUM] |                      |                               |                   |                      |                 |
| 3                                                                                                         |               |        |                        |              |                           |                                 | Note: Abundant groundwater seeps at 5.0'<br>Installed perforated 4" PVC pipe to 6.5', stickup 3.5' (MW-1)<br>Pipe has a 79 degree angle to it (11 degrees from vertical)<br>Backfilled hole with spoils                                                     |                      |                               |                   |                      |                 |
| 4                                                                                                         |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 5                                                                                                         |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 6                                                                                                         |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 7                                                                                                         |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 8                                                                                                         |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 9                                                                                                         |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 10                                                                                                        |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 11                                                                                                        |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 12                                                                                                        |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 13                                                                                                        |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |
| 14                                                                                                        |               |        |                        |              |                           |                                 |                                                                                                                                                                                                                                                             |                      |                               |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 6/16/10





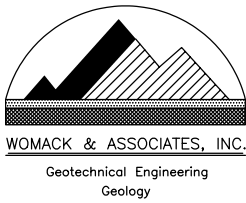
P.O. Box 12650  
Jackson, WY 83002  
Telephone: (307)733-7209  
Fax:

# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                               |               |        |                         |              |                              |                                 | DATE: 6/10/10                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
|------------------------------------------------------------|---------------|--------|-------------------------|--------------|------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                         |               |        |                         |              |                              |                                 | HOLE NO.: TP-2                                                                                                                                                                                                                                              |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: South of chainlink fence, see site map |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6173                                |               |        | TOTAL DEPTH (ft.): 10.3 |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                                             | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                            |               |        | HAMMER:                 |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                             | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN.  | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                                 | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                          |               |        |                         |              |                              |                                 | 0.0-4.0ft Clayey/silty GRAVELS and COBBLES: Light to dark brown, slightly moist, dense, massive, 3 different fill events are differentiated in the pit each ~1.3' thick, wavy contacts between fill horizons, planar contact with underlying topsoil [FILL] |                               |                   |                   |                      |                 |
| 2                                                          |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 3                                                          |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 4                                                          |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 5                                                          |               |        |                         |              |                              |                                 | 4.0-6.0ft Gravelly SILT: Black, dry, stiff to very stiff, layered (from machinery passing over), contains organics [BURIED TOPSOIL]                                                                                                                         |                               |                   |                   |                      |                 |
| 6                                                          |               |        |                         |              |                              |                                 | 6.0-7.0ft Sandy CLAY: Pale gray, slightly moist to moist, medium stiff, massive [ALLUVIUM]                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 7                                                          |               |        |                         |              |                              |                                 | 7.0-10.3ft Sandy GRAVELS and COBBLES: Yellowish-brown, dry, dense to very dense, stratified, trace (<5%) silt [ALLUVIUM]                                                                                                                                    |                               |                   |                   |                      |                 |
| 8                                                          |               |        |                         |              |                              |                                 | Note: No groundwater<br>Near refusal at bottom of hole<br>Installed 4" perforated PVC pipe to 10.3', stickup 1.5' (MW-2)<br>Backfilled hole with spoils                                                                                                     |                               |                   |                   |                      |                 |
| 9                                                          |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 10                                                         |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 11                                                         |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 12                                                         |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 13                                                         |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 14                                                         |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 6/16/10



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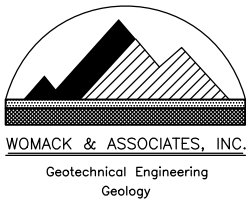
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                        |               |        |                         |              |                              |                                 | DATE: 6/10/10                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
|---------------------------------------------------------------------|---------------|--------|-------------------------|--------------|------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                  |               |        |                         |              |                              |                                 | HOLE NO.: TP-3                                                                                                                                                                                                                                                                      |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Central west side of project site, see site map |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6173                                         |               |        | TOTAL DEPTH (ft.): 11.3 |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                                                                     | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                     |               |        | HAMMER:                 |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                                                     | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                         | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN.  | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                                                         | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                   |               | D1     |                         |              |                              |                                 | 0.0-3.6ft Clayey/silty/sandy GRAVELS and COBBLES: Dark brown, moist, dense, massive, heterogenous, ~25% fines, ~25% sand, ~50% angular sandstone and limestone gravels and cobbles up to 8" in diameter, pockets of sandy clay and fines [FILL]                                     |                               |                   |                   |                      |                 |
| 2                                                                   |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 3                                                                   |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 4                                                                   |               | D2     |                         |              |                              |                                 | 3.6-11.3ft Sandy GRAVELS and COBBLES: Tannish-brown, moist, dense, stratified, ~40-45% sand, ~55-60% subangular to subround limestone and sandstone gravels and cobbles up to 5" in diameter, cobble size and density increase with depth, moisture decreases with depth [ALLUVIUM] |                               |                   |                   |                      |                 |
| 5                                                                   |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 6                                                                   |               |        |                         |              |                              |                                 | Note: No groundwater<br>Installed 4" perforated PVC pipe to 11.3', stickup 2.5' (MW-3)<br>Backfilled hole with spoils                                                                                                                                                               |                               |                   |                   |                      |                 |
| 7                                                                   |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 8                                                                   |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 9                                                                   |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 10                                                                  |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 11                                                                  |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 12                                                                  |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 13                                                                  |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 14                                                                  |               |        |                         |              |                              |                                 |                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 6/16/10





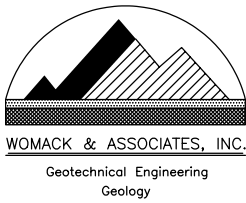
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Jackson, WY 83001  
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                        |               |        |                        |              |                                 |                | DATE: 6/10/10                                                                                                                                                                                                                                      |                               |                   |                   |                      |                 |
|---------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                  |               |        |                        |              |                                 |                | HOLE NO.: TP-4                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northwest portion of project site, see site map |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                         |               |        | TOTAL DEPTH (ft.): 13  |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                                    | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                     |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                                    | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                         | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                        | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                   |               | D1     |                        |              |                                 |                | 0.0-2.5ft Silty GRAVELS and COBBLES: Very dark brown/black, moist, loose to dense, massive to layered, 3 different fill events are represented in the pit [FILL]                                                                                   |                               |                   |                   |                      |                 |
| 2                                                                   |               |        |                        |              |                                 |                | 1.3ft As above, ~20% sand and gravel, ~30% silt, ~50% angular volcanic and limestone cobbles                                                                                                                                                       |                               |                   |                   |                      |                 |
| 3                                                                   |               |        |                        |              |                                 |                | 2.5-13.0ft Sandy GRAVELS and COBBLES: Tan, dry to slightly moist, medium dense, stratified, ~30% sand, ~70% subround sandstone and limestone gravels and cobbles up to 8" in diameter, cobble size/density/moisture increase with depth [ALLUVIUM] |                               |                   |                   |                      |                 |
| 4                                                                   |               |        |                        |              |                                 |                | Note: No groundwater                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 5                                                                   |               |        |                        |              |                                 |                | Installed 4" perforated PVC pipe to 13.0', stickup 0.9' (MW-4)                                                                                                                                                                                     |                               |                   |                   |                      |                 |
| 6                                                                   |               |        |                        |              |                                 |                | Pipe has a 75 degree angle to it (15 degrees from vertical)                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 7                                                                   |               |        |                        |              |                                 |                | Backfilled hole with spoils                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 8                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 9                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 10                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 11                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 12                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 13                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 14                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10



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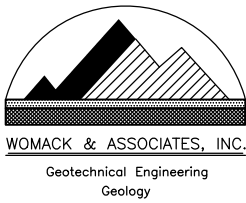
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                            |               |        |                        |              |                              |                                 | DATE: 6/10/10                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
|-------------------------------------------------------------------------|---------------|--------|------------------------|--------------|------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                      |               |        |                        |              |                              |                                 | HOLE NO.: TP-5                                                                                                                                                                                                                                              |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: East of project site, in Karns Meadow, see site map |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                             |               |        | TOTAL DEPTH (ft.): 9   |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                                             | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                         |               |        | HAMMER:                |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                             | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                             | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                                 | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                       |               |        |                        |              |                              |                                 | 0.0-2.0ft SILT: Black, moist, soft, massive, abundant roots and organic matter [TOPSOIL]                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 2                                                                       |               |        |                        |              |                              |                                 | 2.0-9.0ft Clayey sandy GRAVELS and COBBLES: Tan, moist to wet, loose, stratified, moderately plastic clay ~15%, sand ~20-25%, subangular to subround limestone gravels and cobbles up to 1' diameter ~60-65%, abundant caving due to groundwater [ALLUVIUM] |                               |                   |                   |                      |                 |
| 3                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 4                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 5                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 6                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 7                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 8                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 9                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 10                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 11                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 12                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 13                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 14                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 6/16/10





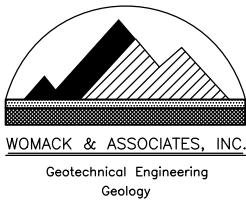
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                |               |        |                        |              |                                 |                                                                                                                                                                                                                                  | DATE: 6/24/10                                                                                                                                                                         |                               |                   |                   |                      |                 |
|-------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                          |               |        |                        |              |                                 |                                                                                                                                                                                                                                  | HOLE NO.: TP-6                                                                                                                                                                        |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northwest property corner, see site map |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6173                                 |               |        | TOTAL DEPTH (ft.): 7.1 |              | GROUNDWATER LEVEL (ft.): N/A    |                                                                                                                                                                                                                                  |                                                                                                                                                                                       | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                             |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                  | DRILLER: Bill                                                                                                                                                                         |                               | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                 | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION                                                                                                                                                                                                                   | DESCRIPTION                                                                                                                                                                           | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                           |               |        |                        |              | 2.75                            |                                                                                                                                                                                                                                  | 0.0-1.7ft Clayey/sandy GRAVELS and COBBLES: Dark brown, dry to slightly moist, medium dense, massive, consists of 2 fill events: upper has clay matrix, lower has sandy matrix [FILL] |                               |                   |                   |                      |                 |
| 2                                                           |               |        |                        |              |                                 | 1.7-7.1ft Gravelly SAND and COBBLES: Brown, slightly moist, dense, stratified, ~30% gravel, ~35% sand, ~35% subangular to subround limestone and sandstone cobbles up to 7 inches in diameter ~35%, trace (<5%) fines [ALLUVIUM] |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 3                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 4                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                   |                               |                   |                   |                      |                 |
| 5                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 6                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 7                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 8                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 9                                                           |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 10                                                          |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 11                                                          |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 12                                                          |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 13                                                          |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 14                                                          |               |        |                        |              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                               |                   |                   |                      |                 |

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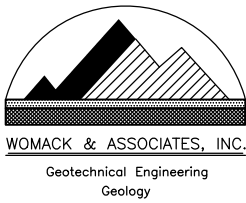
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                  |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                | DATE: 6/24/10                                                                                                                       |                      |                   |                   |                      |                 |
|-------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                            |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                | HOLE NO.: TP-7                                                                                                                      |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northwest side of proposed facility housing, see site map |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                                   |               |        | TOTAL DEPTH (ft.): 6.8 |              | GROUNDWATER LEVEL (ft.): N/A    |                                                                                                                                                                                                                                                                                                                | MEASURED FROM: Ground Surface                                                                                                       |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                               |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                                                                                | DRILLER: Bill                                                                                                                       |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                                   | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION                                                                                                                                                                                                                                                                                                 | DESCRIPTION                                                                                                                         | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                             |               | D1     |                        |              | 2.0                             |                                                                                                                                                                                                                                                                                                                | 0.0-1.5ft Gravelly SILT: Black, slightly moist, stiff, massive, non-plastic, ~20% gravel, ~80% silt, abundant large roots [TOPSOIL] |                      |                   |                   |                      |                 |
| 2                                                                             |               |        |                        |              |                                 | 1.5-6.8ft Sandy GRAVELS and COBBLES: Brown, slightly moist, dense, stratified, ~25% sand, subangular to subround limestone and sandstone cobbles to 6 inches in diameter ~45%, ~30% gravel, calcareous matrix, some cobbles have lime coating on surface, ~1/2 inch-sized vugs in limestone cobbles [ALLUVIUM] |                                                                                                                                     |                      |                   |                   |                      |                 |
| 3                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 4                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                | Note: No groundwater<br>Backfilled hole with spoils                                                                                 |                      |                   |                   |                      |                 |
| 5                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 6                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 7                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 8                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 9                                                                             |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 10                                                                            |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 11                                                                            |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 12                                                                            |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 13                                                                            |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |
| 14                                                                            |               |        |                        |              |                                 |                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10





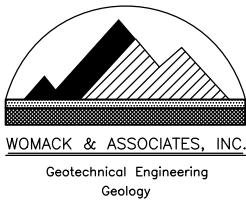
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Fax: (307) 733-8005

# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                  |               |        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
|-------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                            |               |        |                        |              |                                 |                | HOLE NO.: TP-8                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Southwest side of proposed facility housing, see site map |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6175                                                   |               |        | TOTAL DEPTH (ft.): 7   |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                  | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                               |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                                                                                                    |                               | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                                   | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                      | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                             |               | D1     |                        |              | 2.0                             |                | 0.0-0.1ft Clayey/silty GRAVELS and COBBLES: Gray, dry, dense, massive [FILL]<br>0.1-1.8ft Gravelly SILT: Black, slightly moist, stiff, massive [BURIED TOPSOIL]                                                                  |                               |                   |                   |                      |                 |
| 2                                                                             |               |        |                        |              |                                 |                | 1.8-7.0ft Gravelly SAND and COBBLES: Brown, slightly moist, dense, stratified, ~30% gravel, ~35% sand, ~35% subangular to subround limestone and sandstone cobbles up to 7 inches in diameter ~35%, trace (<5%) fines [ALLUVIUM] |                               |                   |                   |                      |                 |
| 3                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 4                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 5                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 6                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 7                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 8                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 9                                                                             |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 10                                                                            |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 11                                                                            |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 12                                                                            |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 13                                                                            |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
| 14                                                                            |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10



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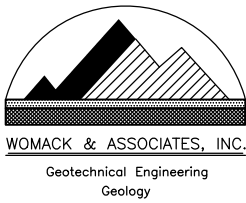
# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                             |               |        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                               |                               |                   |                   |                      |                 |
|--------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                       |               |        |                        |              |                                 |                | HOLE NO.: TP-9                                                                                                                                              |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: East side of proposed facility housing, see site map |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6176                                              |               |        | TOTAL DEPTH (ft.): 5   |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                             | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                          |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                               |                               | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                              | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                 | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                        |               |        |                        |              |                                 |                | 0.0-1.3ft Gravelly clayey SILT: Black, dry to slightly moist, stiff, massive [TOPSOIL]                                                                      |                               |                   |                   |                      |                 |
| 2                                                                        |               |        |                        |              |                                 |                | 1.3-5.0ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, very dense (extremely hard digging), stratified, at refusal at bottom of hole [ALLUVIUM] |                               |                   |                   |                      |                 |
| 3                                                                        |               |        |                        |              |                                 |                | Note: No groundwater<br>Backfilled hole with spoils                                                                                                         |                               |                   |                   |                      |                 |
| 4                                                                        |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 5                                                                        |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 6                                                                        |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 7                                                                        |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 8                                                                        |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 9                                                                        |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 10                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 11                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 12                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 13                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |
| 14                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                             |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10





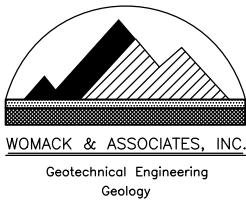
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                    |               |        |                        |              |                              |                                 | DATE: 6/24/10                                                                                                                                                                                                                                                                                                                                 |                               |                   |                   |                      |                 |
|-----------------------------------------------------------------|---------------|--------|------------------------|--------------|------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                              |               |        |                        |              |                              |                                 | HOLE NO.: TP-10                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northeast end of project site, see site map |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                     |               |        | TOTAL DEPTH (ft.): 9.1 |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                                                                                                                               | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                 |               |        | HAMMER:                |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                                                                                                               | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                     | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                   | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                               |               | D1     |                        |              | 1.5-3.0                      |                                 | 0.0-2.0ft Sandy/gravelly CLAY and COBBLES: Tan to dark brown, slightly moist to moist, dense (matrix is stiff to very stiff), massive, ~30% sand and gravel, ~35% moderately plastic clay, ~35% angular to subangular limestone and sandstone cobbles up to 7 inches in diameter, heterogenous, undulating contact with alluvium below [FILL] |                               |                   |                   |                      |                 |
| 2                                                               |               |        |                        |              |                              |                                 | Note: Conducted pebble count in fill                                                                                                                                                                                                                                                                                                          |                               |                   |                   |                      |                 |
| 3                                                               |               |        |                        |              |                              |                                 | 2.0-9.1ft Sandy GRAVELS and COBBLES: Brown, dry to very slightly moist, loose to medium dense (some caving despite difficult digging), stratified, ~25-30% sand, ~30% cobbles up to 6 inches in diameter, ~35% gravel, trace (~5%) fines, layers dip gently (~10 degrees) to the east [ALLUVIUM]                                              |                               |                   |                   |                      |                 |
| 4                                                               |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 5                                                               |               |        |                        |              |                              |                                 | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 6                                                               |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 7                                                               |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 8                                                               |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 9                                                               |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 10                                                              |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 11                                                              |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 12                                                              |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 13                                                              |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 14                                                              |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                                                               |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10



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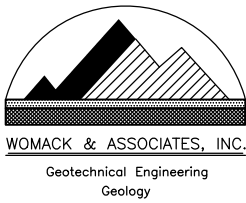
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                        |               |        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                                         |                      |                   |                   |                      |                 |
|-----------------------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                                  |               |        |                        |              |                                 |                | HOLE NO.: TP-11                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: West end of project site, below overhead powerlines, west of berm, see site map |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6171                                                                         |               |        | TOTAL DEPTH (ft.): 7.5 |              | GROUNDWATER LEVEL (ft.): N/A    |                | MEASURED FROM: Ground Surface                                                                                                                                                                                                                         |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                                     |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                                                                                                                         |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                                                         | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                           | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                                   |               | D1     |                        |              | 1.0                             |                | 0.0-3.5ft Gravelly CLAY: Dark gray to black, slightly moist to moist, medium stiff, massive, heterogenous, ~30% gravel up to 2 inches in diameter, ~70% clay [FILL]                                                                                   |                      |                   |                   |                      |                 |
| 2                                                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 3                                                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 4                                                                                                   |               |        |                        |              |                                 |                | 3.5-7.5ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, dense, stratified, ~40% medium-grained sand, ~60% angular to subround gravels and cobbles up to 5 inches in diameter, density increases with depth, coarsening downward [ALLUVIUM] |                      |                   |                   |                      |                 |
| 5                                                                                                   |               |        |                        |              |                                 |                | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 6                                                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 7                                                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 8                                                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 9                                                                                                   |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 10                                                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 11                                                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 12                                                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 13                                                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 14                                                                                                  |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10





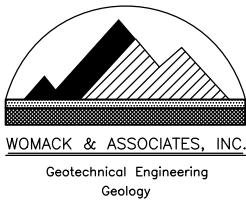
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                          |               |        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                          |                               |                   |                   |                      |                 |
|---------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                    |               |        |                        |              |                                 |                | HOLE NO.: TP-12                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: West end of project site, below overhead powerlines, see site map |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                                           |               |        | TOTAL DEPTH (ft.): 8.6 |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                        | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                       |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                        | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                           | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                            | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                     |               | D1     |                        |              | 2.0                             |                | 0.0-5.5ft Sandy clayey GRAVELS and COBBLES: Dark brown, slightly moist to moist, stiff to very stiff, massive, ~15% sand, ~35% low plastic clay, ~50% gravels and cobbles to 5 inches in diameter, heterogenous [FILL] |                               |                   |                   |                      |                 |
| 2                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 3                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 4                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 5                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 6                                                                                     |               |        |                        |              |                                 |                | 5.5-8.6ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, dense to very dense, stratified [ALLUVIUM]                                                                                                          |                               |                   |                   |                      |                 |
| 7                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 8                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 9                                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 10                                                                                    |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 11                                                                                    |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 12                                                                                    |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 13                                                                                    |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |
| 14                                                                                    |               |        |                        |              |                                 |                |                                                                                                                                                                                                                        |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10



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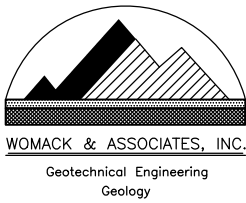
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                                            |               |        |                        |              |                              |                                 | DATE: 6/24/10                                                                                                                                                      |                               |                   |                   |                      |                 |
|-------------------------------------------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                                                      |               |        |                        |              |                              |                                 | HOLE NO.: TP-13                                                                                                                                                    |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Southwest portion of project site, below overhead powerlines, west of chainlink fence, see site map |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6171                                                                                             |               |        | TOTAL DEPTH (ft.): 9.4 |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                    | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                                                         |               |        | HAMMER:                |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                    | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                                                             | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                        | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                                                       |               | D1     |                        |              |                              |                                 | 0.0-4.5ft Sandy gravelly silty CLAY: Light brown, slightly moist, stiff, massive, ~15% sand, ~30% gravel and cobbles up to 4 inches in diameter, ~55% fines [FILL] |                               |                   |                   |                      |                 |
| 2                                                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 3                                                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 4                                                                                                                       |               |        |                        |              |                              |                                 | 4.5-6.0ft Gravelly SILT: Black, moist, soft to medium stiff, massive [BURIED TOPSOIL]                                                                              |                               |                   |                   |                      |                 |
| 5                                                                                                                       |               |        |                        |              |                              |                                 | 6.0-9.4ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, dense to very dense, stratified [ALLUVIUM]                                                      |                               |                   |                   |                      |                 |
| 6                                                                                                                       |               |        |                        |              |                              |                                 | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                |                               |                   |                   |                      |                 |
| 7                                                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 8                                                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 9                                                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 10                                                                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 11                                                                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 12                                                                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 13                                                                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 14                                                                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                    |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10





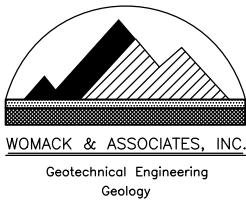
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                           |               |        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                         |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
|------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| PROJECT LOCATION: Jackson, Wyoming                                     |               |        |                        |              |                                 |                | HOLE NO.: TP-14                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| TEST HOLE LOCATION: Against north side of buckrail fence, see site map |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| ELEVATION G.S. (ft.): ~6173                                            |               |        | TOTAL DEPTH (ft.): 9.2 |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                       | MEASURED FROM: Ground Surface |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| DRILL TYPE: 580 Super L Backhoe                                        |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                       | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| DEPTH (ft.)                                                            | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                           | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 1                                                                      |               |        |                        |              | 2.5                             |                | 0.0-4.0ft Sandy clayey GRAVELS and COBBLES: Light to dark brown, moist, dense (matrix is very stiff), massive, ~15% sand, ~35% clay, ~50% angular to subround gravels and cobbles up to 6 inches in diameter, matrix-supported [FILL] |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 2                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 3                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 4                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  | 4.0-5.5ft Sandy clayey GRAVELS and COBBLES: Black, moist, dense (matrix is medium stiff to stiff), massive, ~20% sand, ~35% moderately plastic clay, ~45% subround limestone gravel and cobbles up to 6 inches in diameter [BURIED TOPSOIL]                           |  |  |  |  |
| 5                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  | 5.5-9.2ft Sandy GRAVELS and COBBLES: Brown, slightly moist to moist, very dense, stratified, ~10% clay, ~40% sand and gravel, ~50% angular to subround limestone cobbles up to 8 inches in diameter, lime coating on surface of cobbles, calcareous matrix [ALLUVIUM] |  |  |  |  |
| 6                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                                   |  |  |  |  |
| 7                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 8                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 9                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 10                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 11                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 12                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 13                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |
| 14                                                                     |               |        |                        |              |                                 |                |                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |  |  |                                                                                                                                                                                                                                                                       |  |  |  |  |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10



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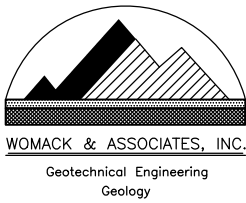
# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                                             |               |        |                        |              |                              |                                 | DATE: 6/24/10                                                                                                                                                                                 |                               |                   |                   |                      |                 |
|------------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                       |               |        |                        |              |                              |                                 | HOLE NO.: TP-15                                                                                                                                                                               |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Middle of driving roadway on east side of project site, see site map |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                                              |               |        | TOTAL DEPTH (ft.): 6.6 |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                               | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                          |               |        | HAMMER:                |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                               | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                              | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                   | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                        |               | D1     |                        |              |                              |                                 | 0.0-2.3ft Sandy/clayey GRAVELS and COBBLES: Light brown, dry to slightly moist, very dense, massive, ~25% sand, ~25% clay, ~50% angular gravels and cobbles up to 7 inches in diameter [FILL] |                               |                   |                   |                      |                 |
| 2                                                                                        |               |        |                        |              |                              |                                 | 1.8ft As above, clayey gravel, black                                                                                                                                                          |                               |                   |                   |                      |                 |
| 3                                                                                        |               |        |                        |              |                              |                                 | 2.3-6.6ft Sandy GRAVELS and COBBLES: Light brown, dry, very dense (extremely hard digging), stratified [ALLUVIUM]                                                                             |                               |                   |                   |                      |                 |
| 4                                                                                        |               |        |                        |              |                              |                                 | Note: Near refusal at bottom of hole<br>No groundwater<br>Backfilled hole with spoils                                                                                                         |                               |                   |                   |                      |                 |
| 5                                                                                        |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 6                                                                                        |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 7                                                                                        |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 8                                                                                        |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 9                                                                                        |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 10                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 11                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 12                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 13                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 14                                                                                       |               |        |                        |              |                              |                                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10





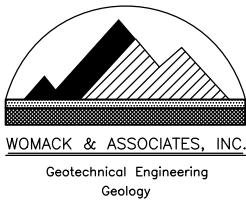
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                            |               |        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                             |                               |                   |                   |                      |                 |
|---------------------------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|---------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                                      |               |        |                        |              |                                 |                | HOLE NO.: TP-16                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: In grassy area between access roads on southeast side of project site, see site map |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                                                             |               |        | TOTAL DEPTH (ft.): 7.7 |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                           | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                                         |               |        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                           | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                                             | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                               | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                                       |               |        |                        |              |                                 |                | 0.0-1.6ft Gravelly CLAY and COBBLES: Light brown, dry, dense, massive, ~30% gravel, ~35% moderately plastic clay, ~35% angular cobbles up to 4 inches in diameter, matrix-supported [FILL]                |                               |                   |                   |                      |                 |
| 2                                                                                                       |               | D1     |                        |              |                                 |                | 1.6-2.4ft Sandy CLAY: Black, moist, stiff, massive [BURIED TOPSOIL]                                                                                                                                       |                               |                   |                   |                      |                 |
| 3                                                                                                       |               | U1     |                        |              | 3.0                             |                | 2.4-4.4ft Sandy CLAY: Pale gray, slightly moist, very stiff, massive, ~20% sand, ~80% clay, calcareous matrix, moderate pinhole voids [ALLUVIUM]                                                          |                               |                   |                   |                      |                 |
| 4                                                                                                       |               | D2     |                        |              |                                 |                | 4.4-7.7ft Clayey sandy GRAVELS and COBBLES: Yellow-brown, slightly moist to moist, very dense, stratified, ~10% clay, ~30% sand, ~30% gravel, ~30% subround cobbles up to 6 inches in diameter [ALLUVIUM] |                               |                   |                   |                      |                 |
| 5                                                                                                       |               |        |                        |              |                                 |                | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                       |                               |                   |                   |                      |                 |
| 6                                                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 7                                                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 8                                                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 9                                                                                                       |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 10                                                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 11                                                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 12                                                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 13                                                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 14                                                                                                      |               |        |                        |              |                                 |                |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |

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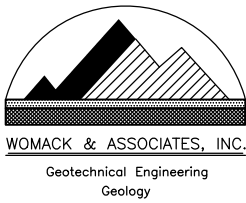
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                           |               |        |                        |              |                              |                                 | DATE: 6/24/10                                                                                                                                                                                                                                                                                     |                               |                   |                   |                      |                 |
|------------------------------------------------------------------------|---------------|--------|------------------------|--------------|------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                     |               |        |                        |              |                              |                                 | HOLE NO.: TP-17                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Against east side of chainlink fence, see site map |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                            |               |        | TOTAL DEPTH (ft.): 8   |              | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                                                                                   | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                        |               |        | HAMMER:                |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                                                                   | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                            | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                                                                       | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                      |               | D1     |                        |              | 2.5                          |                                 | 0.0-4.0ft Sandy clayey GRAVELS and COBBLES: Light brown, dry to slightly moist, loose to medium dense (clay is very stiff), ~15% sand, ~25% clay, ~30% gravel, ~30% angular limestone and sandstone cobbles up to 6 inches in diameter, pockets of clay and sand ~1'x1' in size throughout [FILL] |                               |                   |                   |                      |                 |
| 2                                                                      |               |        |                        |              |                              |                                 | Note: Conducted pebble count in fill                                                                                                                                                                                                                                                              |                               |                   |                   |                      |                 |
| 3                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 4                                                                      |               | U1     |                        |              | 3.5                          |                                 | 4.0-6.0ft Sandy gravelly CLAY: Black, slightly moist, very stiff, massive, ~10% sand, ~20% rounded gravel up to 1/2 inch in diameter, ~70% clay [BURIED TOPSOIL]                                                                                                                                  |                               |                   |                   |                      |                 |
| 5                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 6                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 7                                                                      |               |        |                        |              |                              |                                 | 6.0-8.0ft Sandy GRAVELS and COBBLES: Light brown, dry, very dense, stratified, calcareous, cobbles are typically 7 inches in diameter and smaller, one 2-foot boulder pulled from hole [ALLUVIUM]                                                                                                 |                               |                   |                   |                      |                 |
| 8                                                                      |               |        |                        |              |                              |                                 | Note: At refusal at bottom of hole<br>No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 9                                                                      |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 10                                                                     |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 11                                                                     |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 12                                                                     |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 13                                                                     |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 14                                                                     |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
|                                                                        |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10





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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                       |               |        |                        |              |                              |                                 | DATE: 6/24/10                                                                                                                                                                                                                      |                               |                   |                   |                      |                 |
|------------------------------------------------------------------------------------|---------------|--------|------------------------|--------------|------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                 |               |        |                        |              |                              |                                 | HOLE NO.: TP-18                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: South end of project site, in fill/rubble mounds, see site map |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6168                                                        |               |        | TOTAL DEPTH (ft.): 9   |              | GROUNDWATER LEVEL (ft.): 6.9 |                                 |                                                                                                                                                                                                                                    | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                    |               |        | HAMMER:                |              |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                    | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                        | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)    | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                        | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                  |               |        |                        |              |                              |                                 | 0.0-1.8ft Clayey sandy GRAVELS and COBBLES: Dark brown, slightly moist, loose to medium dense, massive, cobbles typically 5 inches in diameter or smaller, one 1' concrete stone, fill encountered at north end of pit only [FILL] |                               |                   |                   |                      |                 |
| 2                                                                                  |               |        |                        |              |                              |                                 | 1.8-4.3ft Gravelly CLAY: Black, slightly moist, stiff, massive, ~20% gravel up to 1/4 inch in diameter, ~80% clay, encountered at ground surface at all sides of pit except for north (see above fill) [TOPSOIL]                   |                               |                   |                   |                      |                 |
| 3                                                                                  |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 4                                                                                  |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 5                                                                                  |               |        |                        |              |                              |                                 | 4.3-5.3ft Sandy CLAY: Pale gray, slightly moist, very stiff, massive, ~20% sand, ~80% clay, calcareous matrix, moderate pinhole voids [ALLUVIUM]                                                                                   |                               |                   |                   |                      |                 |
| 6                                                                                  |               |        |                        |              |                              |                                 | 5.3-9.0ft Clayey sandy GRAVELS and COBBLES: Yellow-brown, slightly moist to wet, very dense, stratified, ~10% clay, ~25% sand, ~65% subangular to subround gravels and cobbles up to 8 inches in diameter [ALLUVIUM]               |                               |                   |                   |                      |                 |
| 7                                                                                  |               |        |                        |              |                              |                                 | Note: Encountered groundwater at 6.9 feet<br>Backfilled hole with spoils                                                                                                                                                           |                               |                   |                   |                      |                 |
| 8                                                                                  |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 9                                                                                  |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 10                                                                                 |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 11                                                                                 |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 12                                                                                 |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 13                                                                                 |               |        |                        |              |                              |                                 |                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |
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TEST\_HOLE\_LOG2 START FACILITY.GPJ WOMACK GDT 12/7/10



# JORGENSEN

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March 10, 2020

Jeff Bates  
Jorgensen Associates  
1315 HWY 89 S., Suite 201 | PO Box 9550  
Jackson, WY 83002

**RE: UPDATED GEOTECHNICAL INVESTIGATION REPORT, CORE SERVICES VEHICLE  
MAINTENANCE FACILITY, JACKSON, WYOMING  
PROJECT NO: 06013**

Dear Jeff,

As requested, this report has been prepared to update the Geotechnical Investigation Report originally submitted for the START Facility at Karns Meadow located at 55 Karns Meadow Drive in Jackson, Wyoming, issued by Womack and Associates, Inc., on December 6, 2010. The purposes of this updated report are to examine the original geotechnical recommendations, references to building codes, and updated seismic data to ensure they are current and applicable for the proposed new Core Services Vehicle Maintenance Facility addition. Additionally, 3 test pits were excavated in order to verify subsurface conditions encountered during the 2010 investigation and reduce uncertainty during construction.

In summary, the recommendations made in the 2010 Report are not changed, though code references, seismic data, and lateral pressure have been updated. Engineering analyses and recommendations presented in this report entirely replace those contained in the 2010 Report. The original test pits logs have been appended.

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.

Respectfully submitted,

**JORGENSEN GEOTECHNICAL**

Harrison Carter, P.E.  
Geotechnical Project Engineer

Reviewed by:

Colter H. Lane, P.E.  
Geotechnical Project Manager



**Geotechnical Investigation Report  
2020 Update  
Core Services Vehicle Maintenance Facility  
Jackson, Wyoming**

**Prepared for:**

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**March 10, 2020**



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## **1.0 INTRODUCTION**

Jorgensen Geotechnical (JG) has updated the original START Facility at Karns Meadow Geotechnical Investigation Report prepared by Womack & Associates, Inc. (WAI), to serve as the Geotechnical Investigation Report for the Core Services Vehicle Maintenance Facility located at 55 Karns Meadow Drive, in Jackson, Wyoming. WAI staff are now performing Geotechnical Engineering services as Jorgensen Geotechnical, LLC. The purposes of updating the report are to examine the original geotechnical recommendations in light of the of the proposed maintenance facility addition and to update references to currently adopted building codes and seismic data. The scope of services includes:

1. Review site plans made available to us for comparison to the existing subsurface database,
2. Excavate 3 additional test pits in the area of the proposed maintenance facility addition (Figure 2),
3. Review geotechnical engineering recommendations in light of proposed addition,
4. Update seismic and other code references,
5. Include additional recommendations or advice to support foundation design to improve development economy and/or efficiency, and
6. Prepare this Updated Geotechnical Investigation Report.

The Updated Report contains a summary of the surface and subsurface investigations performed, an evaluation of soil-engineering properties, and recommendations to support the design and construction of foundation elements for the proposed addition.

## **2.0 PROPOSED CONSTRUCTION**

The building site is located within the town of Jackson just north of Flat Creek (Figure 1). According to sheet C101 of the drawings dated 9/25/2015, the average existing elevation across the site is approximately 6,174 feet above mean sea level (AMSL). The site is relatively level but has been used for storage of various construction equipment, contains irregular fill mounds, and has had several improvements completed on the site in the past. The construction of the existing START Facility likely introduced additional fill material and soil disturbance. It is our understanding the proposed addition comprises approximately 28,000 square feet and will consist of standard reinforced concrete spread footings and slab-on-grade construction with a finished floor elevation of 6,175-ft AMSL, according to the sheet C201 of the provided plans.



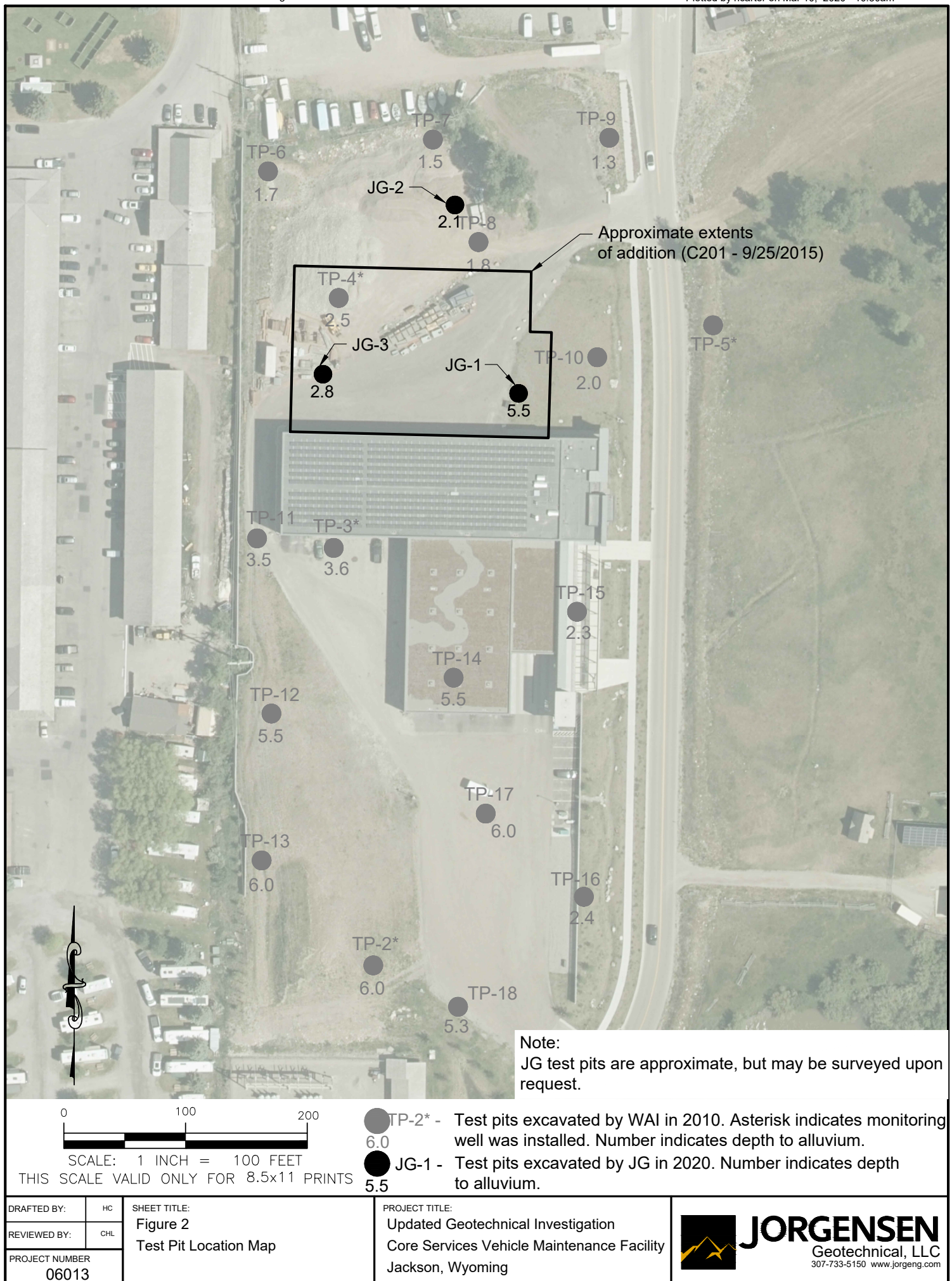


SCALE: 1 INCH = 2000 FEET  
THIS SCALE VALID ONLY FOR 8.5x11 PRINTS

Map symbols: Qfp - Flood-plain deposits - Sand, silt, clay and minor lenses of gravel

|                                |     |                                                                      |                                                                                                                        |                                                                                       |
|--------------------------------|-----|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| DRAFTED BY:                    | HC  | SHEET TITLE:<br><b>Figure 1</b><br>Site Location and<br>Geologic Map | PROJECT TITLE:<br>Updated Geotechnical Investigation<br>Core Services Vehicle Maintenance Facility<br>Jackson, Wyoming |  |
| REVIEWED BY:                   | CHL |                                                                      |                                                                                                                        |                                                                                       |
| PROJECT NUMBER<br><b>06013</b> |     |                                                                      |                                                                                                                        |                                                                                       |





DRAFTED BY: HC  
REVIEWED BY: CHL  
PROJECT NUMBER  
06013

SHEET TITLE:  
**Figure 2**  
**Test Pit Location Map**

PROJECT TITLE:  
Updated Geotechnical Investigation  
Core Services Vehicle Maintenance Facility  
Jackson, Wyoming

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### **3.0 SCOPE OF WORK PROCEDURE**

#### **3.1 Field Investigation Summary**

The original field investigation was conducted on June 10 and June 24, 2010. The 2010 fieldwork consisted of preliminary site reconnaissance and the excavation and logging of 18 exploratory test pits. The test pits were excavated to depths ranging from 6.5 to 13.0-feet below the ground surface (bgs) in order to observe subgrade soils, groundwater conditions, and to obtain bulk samples. Soil types, consistencies, and stratigraphic thicknesses were observed and documented by an Engineering Geologist. The original 2010 test pit locations are shown in gray in Figure 2. Field conditions were recorded and five standpipe piezometers were installed to facilitate groundwater monitoring. General topography and site conditions were observed by the Geologist in order to place the test pits in representative locations.

Three additional test pits were excavated on January 20, 2020, to depths ranging from 6.3 to 7.2-feet below the existing ground surface (bgs). Approximate test pit locations excavated in 2020 are shown in black in Figure 2. Soil type, thickness, consistency, and relative moisture content were observed and documented by a Jorgensen Geotechnical Engineer. Note that site conditions may be variable and actual soil conditions may differ from those represented in the test pit logs attached in Appendix A.

#### **3.2 Laboratory Analysis**

Due to the stony nature of the soils encountered throughout the site and our experience with similar deposits in the Jackson Hole area, laboratory testing was not conducted. Engineering properties of the soil have been estimated based on field observations.

#### **3.3 Report Preparation**

This report describes the general soil conditions encountered during the subsurface exploration conducted in both 2010 and 2020 and includes an updated test pit location map (Figure 2) and test pit logs. The 2010 and 2020 test pit logs can be found in Appendix A. Current code references, seismic design information, and lateral pressure parameters have also been updated from the original report.

### **4.0 SITE CONDITIONS**

#### **4.1 Geologic Conditions**

The geologic map of Grand Teton National Park (Figure 1, Love and Albee, 2004) covers portions of the Jackson Hole area and encompasses the project site. The map shows the location of surficial deposits, bedrock units, and geologic structures (i.e., faults and folds). Most of the west end of the town of Jackson, including the project site, is mapped as Quaternary-aged alluvial flood plain deposits (Qfp) consisting of gravel, sand, and floodplain deposits. The soils underlying the site are generally described as consisting of gravel and cobble alluvium with an overlying layer of variable fill and topsoil, and agree with the mapped geologic units in Figure 1. Bedrock was not encountered in any of the test pits, and is expected to be deep.

Numerous Quaternary-aged (i.e., relatively young and potentially active) faults have been mapped in the Teton County area (Case, 1997; Machette, et al, 2001). The most potentially active fault in the area is the Teton Fault which lies approximately 5 miles west of the site. The inferred (buried) traces of the Cache Creek and Jackson thrust faults are located near the site, crossing the town of Jackson on a generally east-west trend. These faults are considered to be relatively old and inactive by the USGS and do not affect the project. The Teton fault at the base of the Teton Range about 5 miles west of the site is considered to be seismically active.

#### **4.2 Soil Conditions**

During the 2010 investigation, up to 5.5-feet of fill and topsoil were found in most test pits underlain by gravel/cobble alluvium. The depth to the stony alluvium is shown in Figure 2 at each test pit location. The fill varies from clayey gravel/cobble to gravelly clay, usually described as dark gray to black and very stiff/very dense. Much of the fill appears to represent recycled topsoil. About 2-feet of black organic gravelly silt topsoil occurs at ground surface in undisturbed areas and underlies the fill in some places. The underlying stony alluvium was described in the 2010 report as consisting of about 60% loose to very dense, stratified, subangular to subrounded limestone and sandstone gravel and cobbles up to about 6-inch diameter with occasional larger clasts up to about a foot in diameter, in a matrix of well-graded sand, sometimes with a little clay or silt. Cobble size apparently increases with depth. The gravel and cobble alluvium was described as dry to moist (wet only in TP-1 and TP-18 below water table).

Similar soil conditions as encountered during the 2010 investigation were observed during the additional test pit excavation in 2020, with fill and topsoil extending to a maximum of 5.6-feet bgs in test pit JG-1.

#### **4.3 Groundwater**

Test pits TP-1 and 18, located adjacent to Flat Creek near the southeast corner of the site, encountered groundwater at about 5 to 7-feet below ground surface (bgs) at the time of the investigation on June 10 and 24, 2010. Jorgensen Associates measured groundwater depth on October 26, 2010, and all monitoring wells were reported dry. No groundwater was encountered in test pits excavated in January 2020.

Groundwater levels probably fluctuate in response to seasonal precipitation and flow levels in Flat Creek. Depending on the time of construction, if encountered, high groundwater may affect the performance of the subgrade soils and imported fill. It is recommended the subgrade preparation take place during a time of year when groundwater is expected to be low.

#### **4.4 Earthquakes and Seismicity**

Jackson Hole 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 about 5 miles west of the project 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 events in western Wyoming (Case, 1997), implying the risk of major earthquakes is relatively high.

Ground motion accelerations should be derived for the project site in accordance with the general procedure defined in the International Building Code (IBC). The IBC references ASCE 7-16 to determine the ground motion accelerations. The site class is determined by soil characteristics in the top 100-feet of the soils profile. Based on subsurface soils, geologic mapping, and our experience in the area, the site is classified as Site Class D (Stiff Soils). For your convenience, Seismic Design Maps (SEAOC, 2020) values are summarized in TABLE 4-1 below.

**Table 4-1: U.S. Seismic Design Maps Summary**

| <b>Maximum Considered Earthquake (MCE) Spectral Response Acceleration Parameters</b> |                  |
|--------------------------------------------------------------------------------------|------------------|
| Short Period ( $S_s$ ) = 1.042                                                       |                  |
| 1-Second Period ( $S_1$ ) = 0.344                                                    |                  |
| <b>Site Coefficients and Adjusted MCE Spectral Response Acceleration Parameters</b>  |                  |
| $F_a$ = 1.200                                                                        | $S_{MS}$ = 1.250 |
| $F_v$ = 1.956                                                                        | $S_{M1}$ = 0.673 |
| <b>Design Spectral Response Parameters</b>                                           |                  |
| $S_{DS}$ = 0.834                                                                     |                  |
| $S_{D1}$ = 0.449                                                                     |                  |

Note: 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 of ASCE 7-16

This report presents design ground motion values calculated in accordance with Chapter 11 of the 2018 IBC for structural design, though the Structural Engineer is ultimately responsible for complying with seismic design codes. Results of the ASCE 7-16 design values indicate the site is classified as Seismic Design Category D.

The site is in an area of moderate seismic activity. The current peak horizontal ground acceleration (PGA) with 10% probability of exceedance in 50-years is approximately 0.20g according to the USGS National Seismic Hazard Maps (2014). This has been applied in this report for analysis of seismic lateral loading on retaining walls in Section 5.3.

The provisions of the IBC are intended to provide uniform levels of performance for structures, depending on their occupancy and 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* ground 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 percent in 50 years (a return period of about 2,500 years). The owner should be aware that 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 to the owner.

#### **4.5 Geologic and Geotechnical Hazards**

The owner should be aware that in the event of a large magnitude earthquake (i.e., approximately 7.5 or greater), 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. Surface displacement due to faulting is very unlikely.

In our opinion, the biggest geotechnical concern at the site is the presence of the undocumented fills encountered across the site during the 2010 and 2020 test pit excavation. Mitigation measures to manage the undocumented fill are presented in Section 6.0.

Loose, saturated sands and silty sands, and in some cases, silts and gravels may liquefy when exposed to seismic shaking. The gravels and cobbles observed throughout the site are unlikely to liquefy in a seismic event. Liquefaction, if it were to occur, could cause differential settlement, particularly if a structure is placed partially on sand and partially on stony alluvium. However, liquefaction is unlikely to cause lateral spreading, which is major slope movement commonly responsible for catastrophic damage during earthquakes, at this relatively flat site.

### **5.0 ENGINEERING ANALYSES**

#### **5.1 Settlement**

Significant consolidation (e.g., greater than 1-inch total settlement or 0.5-inches differential settlement) of the stony alluvial deposits is not anticipated. Differential settlement potential will be increased if the structure is founded partially on the stony alluvium and partially on the fill or topsoil observed to overly the stony alluvium. Thus, over-excavation of all soils overlying the alluvium is recommended and foundation elements should be placed on native stony alluvium, approved site-derived stony soils, or an approved structural fill. Additional discussion of over-excavation may be found in Section 6.2. Any loose or disturbed material encountered on site should be prepared in accordance with Section 6.3. If lenses of loose sand, fine-grained material, or undocumented fills are observed within the stony material, they should be removed and replaced with approved structural fill or native stony alluvium and compacted following the recommendations of Section 6.2.

#### **5.2 Bearing Capacity**

Bearing capacity of soil refers to its ability to resist shear failure under load. It is assumed any overlying topsoil and fill will be removed from below foundation elements and footings will be placed directly on the native alluvium or an approved structural fill. If structural fills are required, compaction methods and specifications are discussed in Section 6.2.

The bearing capacity for the stony alluvium and approved fill was estimated using Terzaghi's bearing capacity equation for isolated strip footings (Bowles, 1996). Soil parameters (i.e., inputs to the bearing capacity equation) were derived based on visual classification of the soil and rock. Allowable bearing capacity is calculated to be 7,000 psf for footings placed a minimum of 3.0-ft below final grade.



Soil bearing capacity is dependent not only on its strength, but also the geometry of the foundation elements. The estimate above assumes 24-inch strip footings (i.e., “continuous”) placed at the depths mentioned above. If footing size or depth differs remarkably from these assumptions, Jorgensen should be notified to evaluate if the soil will support the proposed loading. It is often the case that heavily loaded, isolated column footings may be optimized (i.e., made smaller) and may reduce the quantity of concrete required. Please contact Jorgensen for an evaluation.

### 5.3 Lateral Loads on Foundation Walls

Lateral pressures were calculated using methods suggested by Bowles (1996). Lateral pressures were calculated for at-rest, active, and passive conditions and presented in Table 5-1. Values in the table have been calculated assuming level backfill adjacent to foundation walls

**Table 5-1: Lateral Pressure Parameters Stony Soils**

| Condition                                      | Coefficient of Earth Pressures               | $\gamma K$ (equivalent fluid pressure) |
|------------------------------------------------|----------------------------------------------|----------------------------------------|
| <b>Static Conditions</b><br>Level Backfill     | $K_o = 0.43$<br>$K_a = 0.27$<br>$K_p = 3.69$ | 55 pcf<br>35 pcf<br>480 pcf            |
| <b>Earthquake Conditions</b><br>Level Backfill | $K_{ae} = 0.33$<br>$K_{pe} = 3.49$           | 43 pcf<br>454 pcf                      |

\*Assumes a unit weight for the backfill of 130 pcf.

#### 5.3.1 Active Pressures

For lateral pressure design of retaining walls, which are allowed to deflect and develop an active soil wedge, the calculated equivalent fluid pressure ( $\gamma K_a$ ) is 35 pounds per cubic foot (pcf). This pressure distribution would be equivalent to a force of approximately  $17.5H^2$  pounds per horizontal foot of wall acting at one-third the wall height (H) above the base.

Lateral pressures on retaining walls from earthquakes were estimated using the Mononobe-Okabe equations (Bowles, 1996). Because the maximum acceleration occurs only briefly during an earthquake, it is common practice when designing dams and other earth structures to reduce the design acceleration to  $\frac{1}{2}$  of the maximum design acceleration (Hynes-Griffin and Franklin, 1984). Thus, we have calculated seismic lateral pressures using a horizontal acceleration  $k_h$  of 0.10g ( $\frac{1}{2}$  of  $k_h$  max) per the USGS (2014).

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). Accordingly, active soil pressures must be divided into two components that act at different wall heights. The static force acts at the lower third-point, as discussed above. The resultant force from seismic lateral pressures is applied at 60% of the wall height above the base with a

magnitude equal to the difference between seismic and static active pressures; i.e.,  $\frac{1}{2} (\gamma K_{ae} - \gamma K_a) H^2$ , or  $4.0H^2$ , pounds per horizontal foot of wall applied.

### **5.3.2 At-Rest Pressures**

For lateral pressure design of basement walls, which are restrained and not allowed to deflect, the calculated equivalent fluid pressure ( $\gamma K_o$ ) is 55 pcf. Design control of such walls shall be whichever generates the higher resultant force: at-rest pressures or active seismic pressures.

### **5.3.3 Passive Pressures**

For passive pressure design, the calculated equivalent fluid pressure ( $\gamma K_p$ ) is 450 pcf, assuming a horizontal ground surface adjacent to the wall, reduced to 454 pcf for seismic conditions. Passive pressure design should neglect loose fill and soil located within the frost zone.

## **5.4 Soil Friction**

Terzaghi et al. (1996) suggest use of the internal strength of the soil for the friction angle along a concrete base in granular soils, with a maximum value of 30 degrees. Assuming foundation elements will be placed on the stony alluvium or an approved structural fill (i.e. "pit-run"), a friction value of 0.58 ( $\tan 30^\circ$ ) is suggested. The friction value may be combined with the passive pressure to resist horizontal loads.

## **6.0 RECOMMENDATIONS**

### **6.1 Foundations**

In our opinion, the existing native stony alluvium, consisting of sandy gravels and cobble will provide adequate support for anticipated foundation loads. We recommend the building foundation systems be placed entirely on native stony material or compacted structural fill consisting of imported "pit-run" or re-compacted stony site soils. Any overlying fill or topsoil should be over-excavated according to the recommendations of Section 6.2.

The building code for Teton County requires that footings be placed at a minimum depth of 34 inches from finished grade, with a minimum foundation exposure of 6 inches above finished grade. Minor cracks in the foundation walls, floor slabs, and sheetrock are normal and should not be a cause for concern.

### **6.2 Over-Excavation and Replacement**

Over-excavation of the fill soils and topsoil should extend laterally at least one footing width (B) beyond the edge of the footing for strip footings and one-half footing width (0.5B) for square footings. The over-excavation should extend to the surface of the underlying stony alluvium and structural fill should contact directly with the alluvium as illustrated in Figure 3. Replacement material should be approved structural fill, such as imported "pit-run" or approved site material. Pit-run is easy to compact and strict moisture control is usually not required.



Prior to placement of structural fill, a representative of this office should verify the excavation has reached the native stony alluvium. Once approved, pre-roll the surface of the exposed alluvium to compact materials that have been disturbed during excavation using a smooth drum vibratory roller (in vibratory mode) with a minimum of three passes. 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. A representative of Jorgensen should observe the surface of the native soil prior to the placement of fill. Further discussion of site preparation is in Section 6.3.

Pit-run or other clean, stony material will compact into a dense, strong, well-drained structural fill, and tight moisture control during compaction is usually not required, though non-yielding states are difficult to achieve in saturated pit-run. A vibrating roller-compactor is required for adequate compaction of stony material. Compaction of stony material with a sheepsfoot roller is not recommended. Pit-run usually requires minimal compactive effort and, due to the stony nature of the materials, nuclear density testing can yield variable compaction results. Therefore, we recommend compacting stony fills using a **method specification**, for which Table 6-1 provides initial guidelines.

**Table 6-1: Compaction Method Specification for Stony Materials**

| Compactor Type        | Lift Thickness | Number of Passes* | Maximum Particle Size |
|-----------------------|----------------|-------------------|-----------------------|
| Hand held "whacker"   | 6-inches       | 5                 | 4-inches              |
| 1.5 ton static weight | 9-inches       | 5                 | 6-inches              |
| 5 ton static weight   | 12-inches      | 3                 | 9-inches**            |

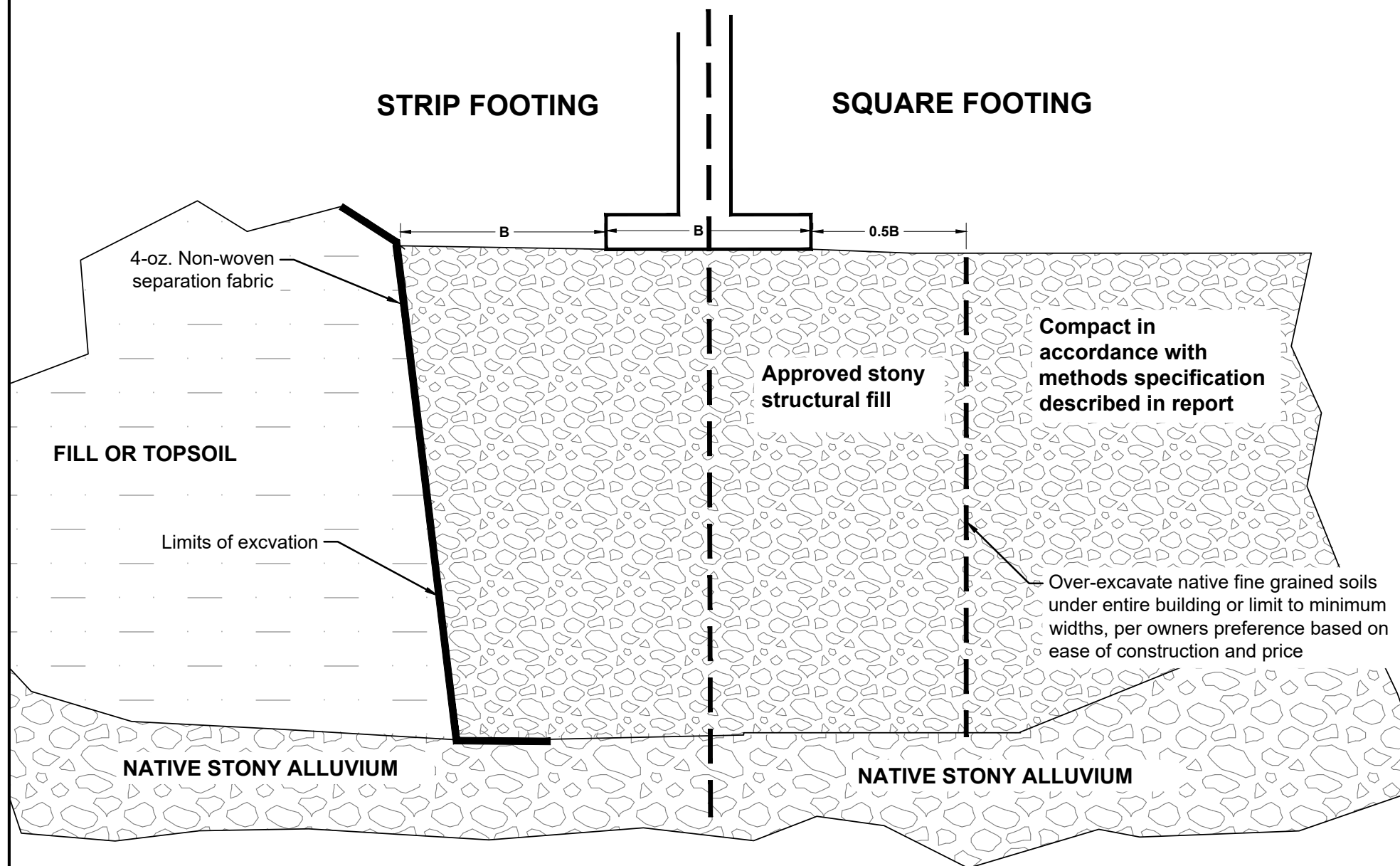
\*The actual number of passes should be determined by observing whether the surface is yielding after each pass. If the surface appears to be yielding, the number of passes should be increased until a non-yielding condition is observed.

\*\* Occasional 12-inch stones are allowable, but avoid nesting.

The method specification may be established as follows:

- The contractor will place fill in loose lifts no greater than specified in Table 6-1 for whichever class of compactor is used.
- Fill will be compacted with the *minimum* number of passes specified in Table 6-1. 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 building pad construction. JG should observe lift thickness, number of passes, and equipment used during compaction. Additional guidance on construction observations may be found in Section 6.11.



|                         |     |
|-------------------------|-----|
| DRAFTED BY:             | HC  |
| REVIEWED BY:            | CHL |
| PROJECT NUMBER<br>06013 |     |

SHEET TITLE:  
**Figure 3**  
**Over-Excavation and Replacement of**  
**Fill and Topsoil**

PROJECT TITLE:  
**Updated Geotechnical Investigation Report**  
**Core Services Vehicle Maintenance Facility**  
**Jackson, Wyoming**



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 Geotechnical, LLC  
 307-733-5150 www.jorgeng.com



### 6.3 Site Preparation

Prior to placement of foundation elements or structural fill, the site should be cleared and stripped of topsoil and 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 fill placement and/or construction of foundation elements.

The foundations shall bear directly on the native stony alluvium or approved structural fill placed in direct contact with the alluvium.

During excavation for the foundation footings, removal of large cobbles may disturb and loosen the surrounding material. All disturbed areas should be compacted with a smooth-drum vibratory roller, in vibratory mode with a minimum of three passes, prior to placement of structural fill and/or 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 Jorgensen.

All excavations and foundation subgrades should be observed by a representative of Jorgensen 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.

### 6.4 Pavement Designs

Pavement designs for both flexible and rigid pavements have been analyzed and are presented below. Subgrade soils include un-engineered fill and stony alluvial deposits. These materials will likely provide a good quality roadbed. Pavement design were prepared using Chapter 4 of the AASHTO Guide for Pavement Structure, 1993.

#### 6.4.1 Flexible Pavement Design

Below is a summary of the flexible pavement design based on Chapter 4 of the AASHTO Guide for Pavement Structures, 1993.

**Table 6-2: AASHTO Pavement Design Parameters**

| Climate Region | Roadbed | Traffic Level | SN   |
|----------------|---------|---------------|------|
| VI             | Good    | Medium        | 3.2* |

\*Table 4.7 (AASHTO, 1993)

The designed section is based on the following relationship where the layer coefficient  $a_1$  (asphalt pavement) is equal to 0.33,  $a_2$  (base course) is equal to 0.12, and  $a_3$  (pit-run) is equal to 0.10:

$$SN = a_1 D_1 + a_2 D_2 + a_3 D_3$$

Two road prisms have been presented, one that includes both a base and subbase course, and one that only includes a base course. The flexible asphalt prism designs are summarized below in Table 6-3.

**Table 6-3: Pavement Design Section**

| Roadbed Quality | Asphalt Pavement<br>( $D_1$ ) inch | Base Course<br>( $D_2$ ) inch | Subbase<br>( $D_3$ ) inch |
|-----------------|------------------------------------|-------------------------------|---------------------------|
| Good            | 3                                  | 6                             | 14                        |
| Good            | 3                                  | 18                            | -                         |

Fill prisms used to bring the roadway alignment up to grade must be compacted in lifts during installation. Compaction procedures vary based on the fill material used. **It is not necessary to place sub-base in areas where the native gravel and cobble alluvium material are encountered in the roadway prism.**

#### 6.4.2 Rigid Pavement Design

Cement slab thickness is based on the following design parameters and for 75 % reliability:

Base Course - consisting of 4 to 6-inches of high-quality crushed gravel (i.e.  $\frac{3}{4}$ -inch crushed aggregate)

PCC modulus of rupture ( $S'_c$ ) 600 psi

PCC elastic modulus 5,000,000 psi

**Table 6-4: Rigid Pavement Design Thickness**

| Roadbed Quality | Load Transfer Devices | Edge Support | $S'_c$ (psi) | Slab Thickness (inches) |
|-----------------|-----------------------|--------------|--------------|-------------------------|
| Good            | No                    | Yes          | 600          | 6.5                     |
|                 |                       | No           | 600          | 7.25                    |
|                 | Yes                   | Yes          | 600          | 6.0                     |
|                 |                       | No           | 600          | 6.75                    |

Thickness will vary depending on use of load transfer at joints and with or without edge support.

#### 6.5 Interior Slabs-on-Grade

Interior slabs should be at least 4 inches thick, and any slabs bearing vehicles should be at least 6 inches thick, or as approved by a Structural Engineer. It is our understanding the interior slabs will



support heavy vehicles, therefore the performance of the slabs may be improved by over-excavation 6 to 12-inches of the fill and/or topsoil and replaced with a road mix gravel (e.g., WYDOT Grading W). Prior to the placement and compaction of the gravel, the surface of the exposed subgrade soils should be rolled and compacted. The gravel should be separated from the fill/topsoil soils using a non-woven separation fabric (e.g., Mirafi 140N). Minor floor cracking of slab-on-grade construction is difficult, if not impossible, to prevent. Such cracking is normal and should be expected to occur with time. Buildings are almost never free of cracks, and cracking is caused by many factors other than soil movement, such as concrete shrinkage or curling, or daily and seasonal variability in temperature and humidity.

An impermeable layer (usually plastic) is suggested beneath interior slabs, underlain by 4 inches of clean drain gravel that will act as a capillary break to reduce dampness. Two options to reduce the tendency for the concrete to crack or curl as it dries:

1. A blotter layer may be placed under the slab. In the past, loose sand has been used for this purpose, but is no longer recommended. A cover of 4 inches of trimmable, compactible, granular material (such as WYDOT Grading W) may be placed over the impermeable layer to receive the concrete slab. This material usually consists of "crusher run material", which varies in size from about 1.5-inch down to rock dust.
2. The blotter layer may be eliminated if the concrete is reinforced properly. If the contractor needs additional guidance on slab reinforcement, a Structural Engineer should provide it.

## **6.6 Exterior Slabs-on-Grade**

Exterior slabs (e.g., sidewalks, patios, driveways, hardscapes, etc.) typically sustain the greatest damage. Cracking is almost impossible to avoid, and freeze-thaw adds to the difficulty caused by soil movement. Performance of exterior slabs in areas underlain by clayey fill may be improved by over-excavation and replacement with 6 to 12-inches of road mix gravel (e.g., WYDOT Grading H). Prior to placement and compaction of the gravel, the surface of the sand should be rolled and compacted.

Exterior slabs should be at least 4 inches thick, 6 inches if supporting vehicles, or as approved by the Structural Engineer. Exterior slabs should not be tied to foundation walls. Any movement of exterior slabs may be transmitted to the foundation walls, resulting in damage. Posts for patios or other exterior columns should not bear on exterior slabs. If the slabs settle or rise, the movement can be transmitted to the post, resulting in damage to the structure. Expansion joints are recommended in all concrete flatwork.

## **6.7 Excavation and Cut Slope Stability**

OSHA regulations (29CFR1926) appear to classify the alluvium as Type C soil. Simple cut slopes should be no steeper than 1.5H:1V. The contractor shall ultimately be responsible for adherence to OSHA and other safety regulations based on conditions observed at the time of construction.

### **6.8 Final Backfilling and Grading**

Properly compacted backfill and site drainage are important. Stony fill (e.g., site-derived sandy gravel and cobble alluvium or imported “pit-run”) will compact into a dense, strong, well-draining engineered fill, and strict moisture control is usually not required, making it a preferred alternative for many contractors for exterior backfills, utility trenches, and subbase under interior and exterior slabs. However, compaction testing with a nuclear density gauge is usually problematic due to the presence of large stones. Therefore, we recommend compacting stony fills using the methods specification described in Section 6.2 and Table 6-1: Compaction Method Specification for Stony Materials.

### **6.9 Ventilation and Radon**

Evaluation of radon was beyond the scope of work; local codes should be followed and specialty contractors employed, if necessary. The building contractor is ultimately responsible for following local building codes. Ventilation to reduce moisture and potential accumulation of radon gas is required by code for habited and inhabited spaces below grade. A capillary break layer may also accommodate a radon vent pipe (see Section 6.5).

### **6.10 Reinforcing, Utilities Testing, and Concrete Considerations**

Footings, slabs, and foundation walls should be reinforced to resist differential movement. Consultation with a Structural Engineer to specify adequate reinforcement is suggested. Water and sewer lines should be pressure tested before backfilling. Exterior concrete should contain 5% to 7% entrained air.

### **6.11 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 Jorgensen 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 native stony alluvium has been reached and prepared in accordance with Sections 6.1 and 6.3,
2. During the placement of the first couple lifts of structural fill, if required, to observe compaction (i.e., develop a method specification, see Section 6.2), and
3. Once the site has been prepped to the bottom of footing elevation to witness a proof roll with the compactor.

## **7.0 LIMITATIONS**

This report has been prepared based on a limited amount of data. Actual site conditions may vary. The report is for single use and under no circumstances are the figures and text to be used



separately. 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.

## **8.0 REFERENCES**

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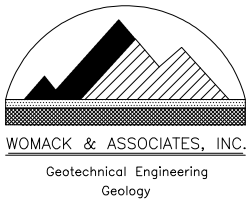
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## **APPENDIX A**

### **2010 and 2020 Test Pit Logs**





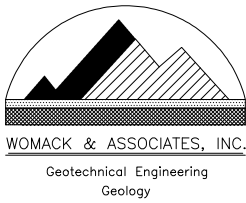
POB 12650  
Jackson, WY 83002  
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Fax:

# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                              |               |        |                        |                  |              |                                 | DATE: 6/10/10                                                                            |             |                               |                   |                   |                      |                 |  |
|-----------------------------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|------------------------------------------------------------------------------------------|-------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|--|
| PROJECT LOCATION: Jackson, Wyoming                                                                        |               |        |                        |                  |              |                                 | HOLE NO.: TP-1                                                                           |             |                               |                   |                   |                      |                 |  |
| TEST HOLE LOCATION: Southeast of project site, in Karns Meadow ~30' west of Flat Creek bend, see site map |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| ELEVATION G.S. (ft.): ~6168                                                                               |               |        | TOTAL DEPTH (ft.): 6.5 |                  |              | GROUNDWATER LEVEL (ft.): 5.0    |                                                                                          |             | MEASURED FROM: Ground Surface |                   |                   |                      |                 |  |
| DRILL TYPE: 580 Super L Backhoe                                                                           |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                                                                                          |             | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |  |
| DEPTH (ft.)                                                                                               | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION                                                                           | DESCRIPTION | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |
| 1                                                                                                         |               |        |                        |                  |              |                                 | 0.0-2.2ft SILT: Black, moist, soft, massive, abundant roots and organic matter [TOPSOIL] |             |                               |                   |                   |                      |                 |  |
| 2                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 3                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 4                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 5                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 6                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 7                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 8                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 9                                                                                                         |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 10                                                                                                        |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 11                                                                                                        |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 12                                                                                                        |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 13                                                                                                        |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |
| 14                                                                                                        |               |        |                        |                  |              |                                 |                                                                                          |             |                               |                   |                   |                      |                 |  |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



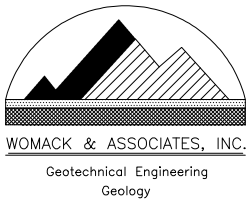
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 Jackson, WY 83002  
 Telephone: 3077337209  
 Fax:

# TEST HOLE LOG

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| PROJECT NAME: START Facility                                    |               |        |                        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                                                                                                                                 |                      |                   |                   |                      |                 |
|-----------------------------------------------------------------|---------------|--------|------------------------|------------------------|--------------|---------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                              |               |        |                        |                        |              |                                 |                | HOLE NO.: TP-10                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northeast end of project site, see site map |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                     |               |        |                        | TOTAL DEPTH (ft.): 9.1 |              | GROUNDWATER LEVEL (ft.): N/A    |                | MEASURED FROM: Ground Surface                                                                                                                                                                                                                                                                                                                 |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                 |               |        |                        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                                                                                                                                                                                                                 |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                     | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.       | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                                                                                                                   | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                               |               | D1     |                        |                        |              | 1.5-3.0                         |                | 0.0-2.0ft Sandy/gravelly CLAY and COBBLES: Tan to dark brown, slightly moist to moist, dense (matrix is stiff to very stiff), massive, ~30% sand and gravel, ~35% moderately plastic clay, ~35% angular to subangular limestone and sandstone cobbles up to 7 inches in diameter, heterogenous, undulating contact with alluvium below [FILL] |                      |                   |                   |                      |                 |
| 2                                                               |               |        |                        |                        |              |                                 |                | Note: Conducted pebble count in fill                                                                                                                                                                                                                                                                                                          |                      |                   |                   |                      |                 |
| 3                                                               |               |        |                        |                        |              |                                 |                | 2.0-9.1ft Sandy GRAVELS and COBBLES: Brown, dry to very slightly moist, loose to medium dense (some caving despite difficult digging), stratified, ~25-30% sand, ~30% cobbles up to 6 inches in diameter, ~35% gravel, trace (~5%) fines, layers dip gently (~10 degrees) to the east [ALLUVIUM]                                              |                      |                   |                   |                      |                 |
| 4                                                               |               |        |                        |                        |              |                                 |                | Note: No groundwater                                                                                                                                                                                                                                                                                                                          |                      |                   |                   |                      |                 |
| 5                                                               |               |        |                        |                        |              |                                 |                | Backfilled hole with spoils                                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 6                                                               |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 7                                                               |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 8                                                               |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 9                                                               |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 10                                                              |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 11                                                              |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 12                                                              |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 13                                                              |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 14                                                              |               |        |                        |                        |              |                                 |                |                                                                                                                                                                                                                                                                                                                                               |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



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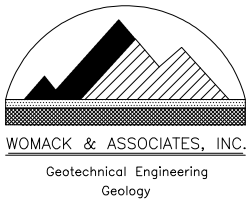
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                        |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      | DATE: 6/24/10                 |                   |                      |                 |  |
|-----------------------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------------|--------------|---------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------|-------------------|----------------------|-----------------|--|
| PROJECT LOCATION: Jackson, Wyoming                                                                  |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      | HOLE NO.: TP-11               |                   |                      |                 |  |
| TEST HOLE LOCATION: West end of project site, below overhead powerlines, west of berm, see site map |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| ELEVATION G.S. (ft.): ~6171                                                                         |               |        |                        | TOTAL DEPTH (ft.): 7.5 |              |                           | GROUNDWATER LEVEL (ft.): N/A    |                                                                                                                                                                                                                                                       |                      | MEASURED FROM: Ground Surface |                   |                      |                 |  |
| DRILL TYPE: 580 Super L Backhoe                                                                     |               |        |                        | HAMMER:                |              |                           | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                       |                      | DRILLER: Bill                 |                   | LOGGED BY: ds        |                 |  |
| DEPTH (ft.)                                                                                         | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.       | RECOVERY (%) | UNCONFINED STRENGTH (TSF) | CLASSIFICATION                  | DESCRIPTION                                                                                                                                                                                                                                           | MOISTURE CONTENT (%) | DRY DENSITY (PCF)             | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |
| 1                                                                                                   |               | D1     |                        |                        |              | 1.0                       |                                 | 0.0-3.5ft Gravelly CLAY: Dark gray to black, slightly moist to moist, medium stiff, massive, heterogenous, ~30% gravel up to 2 inches in diameter, ~70% clay [FILL]                                                                                   |                      |                               |                   |                      |                 |  |
| 2                                                                                                   |               |        |                        |                        |              |                           |                                 | 3.5-7.5ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, dense, stratified, ~40% medium-grained sand, ~60% angular to subround gravels and cobbles up to 5 inches in diameter, density increases with depth, coarsening downward [ALLUVIUM] |                      |                               |                   |                      |                 |  |
| 3                                                                                                   |               |        |                        |                        |              |                           |                                 | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                   |                      |                               |                   |                      |                 |  |
| 4                                                                                                   |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 5                                                                                                   |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 6                                                                                                   |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 7                                                                                                   |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 8                                                                                                   |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 9                                                                                                   |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 10                                                                                                  |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 11                                                                                                  |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 12                                                                                                  |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 13                                                                                                  |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |
| 14                                                                                                  |               |        |                        |                        |              |                           |                                 |                                                                                                                                                                                                                                                       |                      |                               |                   |                      |                 |  |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12





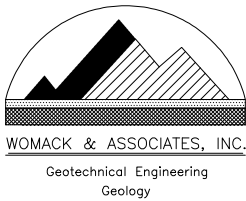
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                          |               |        |                        |                  |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                                                      |                               |                   |                   |                      |                 |  |
|---------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|--|
| PROJECT LOCATION: Jackson, Wyoming                                                    |               |        |                        |                  |              |                                 |                | HOLE NO.: TP-12                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| TEST HOLE LOCATION: West end of project site, below overhead powerlines, see site map |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| ELEVATION G.S. (ft.): ~6172                                                           |               |        | TOTAL DEPTH (ft.): 8.6 |                  |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                                                    | MEASURED FROM: Ground Surface |                   |                   |                      |                 |  |
| DRILL TYPE: 580 Super L Backhoe                                                       |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                                                    | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |  |
| DEPTH (ft.)                                                                           | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION<br>COMMENTS:                                                                                                                                                                                                                                           | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |
| 1                                                                                     |               | D1     |                        |                  |              | 2.0                             |                | 0.0-5.5ft Sandy clayey GRAVELS and COBBLES: Dark brown, slightly moist to moist, stiff to very stiff, massive, ~15% sand, ~35% low plastic clay, ~50% gravels and cobbles to 5 inches in diameter, heterogenous [FILL]<br><br>Note: Conducted pebble count in fill |                               |                   |                   |                      |                 |  |
| 2                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 3                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 4                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 5                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 6                                                                                     |               |        |                        |                  |              |                                 |                | 5.5-8.6ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, dense to very dense, stratified [ALLUVIUM]<br><br>Note: No groundwater<br>Backfilled hole with spoils                                                                                           |                               |                   |                   |                      |                 |  |
| 7                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 8                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 9                                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 10                                                                                    |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 11                                                                                    |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 12                                                                                    |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 13                                                                                    |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |
| 14                                                                                    |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                    |                               |                   |                   |                      |                 |  |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



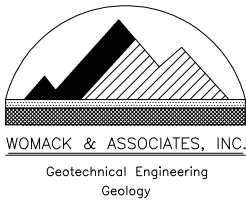
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                                            |               |        |                        |                        |              |                                 |                | DATE: 6/24/10                                                                                                                                                      |                      |                   |                   |                      |                 |
|-------------------------------------------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------------|--------------|---------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                                                      |               |        |                        |                        |              |                                 |                | HOLE NO.: TP-13                                                                                                                                                    |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Southwest portion of project site, below overhead powerlines, west of chainlink fence, see site map |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6171                                                                                             |               |        |                        | TOTAL DEPTH (ft.): 9.4 |              | GROUNDWATER LEVEL (ft.): N/A    |                | MEASURED FROM: Ground Surface                                                                                                                                      |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                                                         |               |        |                        | HAMMER:                |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                                      |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                                                                             | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.       | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                        | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                                                       |               | D1     |                        |                        |              |                                 |                | 0.0-4.5ft Sandy gravelly silty CLAY: Light brown, slightly moist, stiff, massive, ~15% sand, ~30% gravel and cobbles up to 4 inches in diameter, ~55% fines [FILL] |                      |                   |                   |                      |                 |
| 4.5-6.0ft Gravelly SILT: Black, moist, soft to medium stiff, massive [BURIED TOPSOIL]                                   |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 6.0-9.4ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, dense to very dense, stratified [ALLUVIUM]           |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 2                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 3                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 4                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 5                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 6                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 7                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 8                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 9                                                                                                                       |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 10                                                                                                                      |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 11                                                                                                                      |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 12                                                                                                                      |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 13                                                                                                                      |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |
| 14                                                                                                                      |               |        |                        |                        |              |                                 |                |                                                                                                                                                                    |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK GDT 5/10/12



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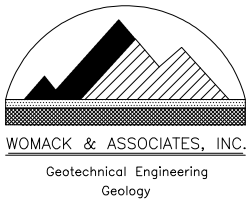
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                           |               |        |                        |                  |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                                                         |                               |                   |                   |                      |                 |
|------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                     |               |        |                        |                  |              |                                 |                | HOLE NO.: TP-14                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Against north side of buckrail fence, see site map |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6173                                            |               |        | TOTAL DEPTH (ft.): 9.2 |                  |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                                                       | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                        |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                                                       | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                            | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                                           | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                      |               |        |                        |                  |              | 2.5                             |                | 0.0-4.0ft Sandy clayey GRAVELS and COBBLES: Light to dark brown, moist, dense (matrix is very stiff), massive, ~15% sand, ~35% clay, ~50% angular to subround gravels and cobbles up to 6 inches in diameter, matrix-supported [FILL]                                 |                               |                   |                   |                      |                 |
| 2                                                                      |               |        |                        |                  |              |                                 |                | 4.0-5.5ft Sandy clayey GRAVELS and COBBLES: Black, moist, dense (matrix is medium stiff to stiff), massive, ~20% sand, ~35% moderately plastic clay, ~45% subround limestone gravel and cobbles up to 6 inches in diameter [BURIED TOPSOIL]                           |                               |                   |                   |                      |                 |
| 3                                                                      |               |        |                        |                  |              |                                 |                | 5.5-9.2ft Sandy GRAVELS and COBBLES: Brown, slightly moist to moist, very dense, stratified, ~10% clay, ~40% sand and gravel, ~50% angular to subround limestone cobbles up to 8 inches in diameter, lime coating on surface of cobbles, calcareous matrix [ALLUVIUM] |                               |                   |                   |                      |                 |
| 4                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 5                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 6                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 7                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 8                                                                      |               |        |                        |                  |              |                                 |                | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                                   |                               |                   |                   |                      |                 |
| 9                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 10                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 11                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 12                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 13                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |
| 14                                                                     |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                       |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12





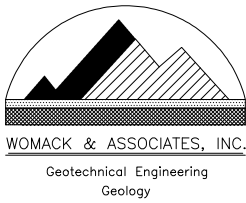
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                             |               |        |                        |                  |              |                                 | DATE: 6/24/10   |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
|------------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                       |               |        |                        |                  |              |                                 | HOLE NO.: TP-15 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Middle of driving roadway on east side of project site, see site map |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                                              |               |        | TOTAL DEPTH (ft.): 6.6 |                  |              | GROUNDWATER LEVEL (ft.): N/A    |                 |                                                                                                                                                                                               | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                          |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                 |                                                                                                                                                                                               | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                              | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION  | DESCRIPTION                                                                                                                                                                                   | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                        |               | D1     |                        |                  |              |                                 |                 | 0.0-2.3ft Sandy/clayey GRAVELS and COBBLES: Light brown, dry to slightly moist, very dense, massive, ~25% sand, ~25% clay, ~50% angular gravels and cobbles up to 7 inches in diameter [FILL] |                               |                   |                   |                      |                 |
| 2                                                                                        |               |        |                        |                  |              |                                 |                 | 1.8ft As above, clayey gravel, black                                                                                                                                                          |                               |                   |                   |                      |                 |
| 3                                                                                        |               |        |                        |                  |              |                                 |                 | 2.3-6.6ft Sandy GRAVELS and COBBLES: Light brown, dry, very dense (extremely hard digging), stratified [ALLUVIUM]                                                                             |                               |                   |                   |                      |                 |
| 4                                                                                        |               |        |                        |                  |              |                                 |                 | Note: Near refusal at bottom of hole<br>No groundwater<br>Backfilled hole with spoils                                                                                                         |                               |                   |                   |                      |                 |
| 5                                                                                        |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 6                                                                                        |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 7                                                                                        |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 8                                                                                        |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 9                                                                                        |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 10                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 11                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 12                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 13                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |
| 14                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                               |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



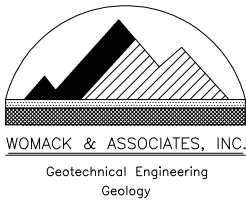
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# TEST HOLE LOG

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| PROJECT NAME: START Facility                                                                            |               |        |                        |                  |              |                                 | DATE: 6/24/10   |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
|---------------------------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                                                      |               |        |                        |                  |              |                                 | HOLE NO.: TP-16 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: In grassy area between access roads on southeast side of project site, see site map |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                                                             |               |        | TOTAL DEPTH (ft.): 7.7 |                  |              | GROUNDWATER LEVEL (ft.): N/A    |                 |                                                                                                                                                                                                           | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                                                         |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                 |                                                                                                                                                                                                           | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                                             | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION  | DESCRIPTION                                                                                                                                                                                               | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                                                       |               |        |                        |                  |              |                                 |                 | 0.0-1.6ft Gravelly CLAY and COBBLES: Light brown, dry, dense, massive, ~30% gravel, ~35% moderately plastic clay, ~35% angular cobbles up to 4 inches in diameter, matrix-supported [FILL]                |                               |                   |                   |                      |                 |
| 2                                                                                                       |               | D1     |                        |                  |              |                                 |                 | 1.6-2.4ft Sandy CLAY: Black, moist, stiff, massive [BURIED TOPSOIL]                                                                                                                                       |                               |                   |                   |                      |                 |
| 3                                                                                                       |               | U1     |                        |                  |              | 3.0                             |                 | 2.4-4.4ft Sandy CLAY: Pale gray, slightly moist, very stiff, massive, ~20% sand, ~80% clay, calcareous matrix, moderate pinhole voids [ALLUVIUM]                                                          |                               |                   |                   |                      |                 |
| 4                                                                                                       |               | D2     |                        |                  |              |                                 |                 | 4.4-7.7ft Clayey sandy GRAVELS and COBBLES: Yellow-brown, slightly moist to moist, very dense, stratified, ~10% clay, ~30% sand, ~30% gravel, ~30% subround cobbles up to 6 inches in diameter [ALLUVIUM] |                               |                   |                   |                      |                 |
| 5                                                                                                       |               |        |                        |                  |              |                                 |                 | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                       |                               |                   |                   |                      |                 |
| 6                                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 7                                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 8                                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 9                                                                                                       |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 10                                                                                                      |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 11                                                                                                      |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 12                                                                                                      |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 13                                                                                                      |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |
| 14                                                                                                      |               |        |                        |                  |              |                                 |                 |                                                                                                                                                                                                           |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



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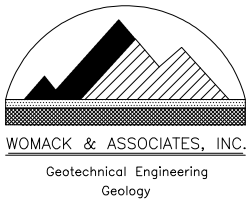
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                           |               |        |                        |                      |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
|------------------------------------------------------------------------|---------------|--------|------------------------|----------------------|--------------|---------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                     |               |        |                        |                      |              |                                 |                | HOLE NO.: TP-17                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Against east side of chainlink fence, see site map |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                            |               |        |                        | TOTAL DEPTH (ft.): 8 |              | GROUNDWATER LEVEL (ft.): N/A    |                | MEASURED FROM: Ground Surface                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                        |               |        |                        | HAMMER:              |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                                                                                                                                                                     |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                            | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.     | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                                                                       | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                      |               | D1     |                        |                      |              | 2.5                             |                | 0.0-4.0ft Sandy clayey GRAVELS and COBBLES: Light brown, dry to slightly moist, loose to medium dense (clay is very stiff), ~15% sand, ~25% clay, ~30% gravel, ~30% angular limestone and sandstone cobbles up to 6 inches in diameter, pockets of clay and sand ~1'x1' in size throughout [FILL] |                      |                   |                   |                      |                 |
| 2                                                                      |               |        |                        |                      |              |                                 |                | Note: Conducted pebble count in fill                                                                                                                                                                                                                                                              |                      |                   |                   |                      |                 |
| 3                                                                      |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 4                                                                      |               | U1     |                        |                      |              | 3.5                             |                | 4.0-6.0ft Sandy gravelly CLAY: Black, slightly moist, very stiff, massive, ~10% sand, ~20% rounded gravel up to 1/2 inch in diameter, ~70% clay [BURIED TOPSOIL]                                                                                                                                  |                      |                   |                   |                      |                 |
| 5                                                                      |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 6                                                                      |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 7                                                                      |               |        |                        |                      |              |                                 |                | 6.0-8.0ft Sandy GRAVELS and COBBLES: Light brown, dry, very dense, stratified, calcareous, cobbles are typically 7 inches in diameter and smaller, one 2-foot boulder pulled from hole [ALLUVIUM]                                                                                                 |                      |                   |                   |                      |                 |
| 8                                                                      |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 9                                                                      |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 10                                                                     |               |        |                        |                      |              |                                 |                | Note: At refusal at bottom of hole<br>No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                               |                      |                   |                   |                      |                 |
| 11                                                                     |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 12                                                                     |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 13                                                                     |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
| 14                                                                     |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |
|                                                                        |               |        |                        |                      |              |                                 |                |                                                                                                                                                                                                                                                                                                   |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12





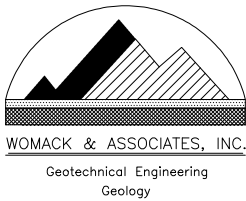
POB 12650  
Jackson, WY 83002  
Telephone: 3077337209  
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# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      | DATE: 6/24/10     |                   |                      |                 |  |
|------------------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|----------------------|-----------------|--|
| PROJECT LOCATION: Jackson, Wyoming                                                 |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      | HOLE NO.: TP-18   |                   |                      |                 |  |
| TEST HOLE LOCATION: South end of project site, in fill/rubble mounds, see site map |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| ELEVATION G.S. (ft.): ~6168                                                        |               |        | TOTAL DEPTH (ft.): 9   |                  |              | GROUNDWATER LEVEL (ft.): 6.9    |                |                                                                                                                                                                                                                                    | MEASURED FROM: Ground Surface                                                                                                                                                                                        |                   |                   |                      |                 |  |
| DRILL TYPE: 580 Super L Backhoe                                                    |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                    | DRILLER: Bill                                                                                                                                                                                                        |                   | LOGGED BY: ds     |                      |                 |  |
| DEPTH (ft.)                                                                        | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION<br>COMMENTS:                                                                                                                                                                                                           | MOISTURE CONTENT (%)                                                                                                                                                                                                 | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |
| 1                                                                                  |               |        |                        |                  |              |                                 |                | 0.0-1.8ft Clayey sandy GRAVELS and COBBLES: Dark brown, slightly moist, loose to medium dense, massive, cobbles typically 5 inches in diameter or smaller, one 1' concrete stone, fill encountered at north end of pit only [FILL] |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 2                                                                                  |               |        |                        |                  |              |                                 |                | 1.8-4.3ft Gravelly CLAY: Black, slightly moist, stiff, massive, ~20% gravel up to 1/4 inch in diameter, ~80% clay, encountered at ground surface at all sides of pit except for north (see above fill) [TOPSOIL]                   |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 3                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 4                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 5                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    | 4.3-5.3ft Sandy CLAY: Pale gray, slightly moist, very stiff, massive, ~20% sand, ~80% clay, calcareous matrix, moderate pinhole voids [ALLUVIUM]                                                                     |                   |                   |                      |                 |  |
| 6                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    | 5.3-9.0ft Clayey sandy GRAVELS and COBBLES: Yellow-brown, slightly moist to wet, very dense, stratified, ~10% clay, ~25% sand, ~65% subangular to subround gravels and cobbles up to 8 inches in diameter [ALLUVIUM] |                   |                   |                      |                 |  |
| 7                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 8                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    | Note: Encountered groundwater at 6.9 feet<br>Backfilled hole with spoils                                                                                                                                             |                   |                   |                      |                 |  |
| 9                                                                                  |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 10                                                                                 |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 11                                                                                 |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 12                                                                                 |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 13                                                                                 |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |
| 14                                                                                 |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                      |                   |                   |                      |                 |  |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK GDT 5/10/12



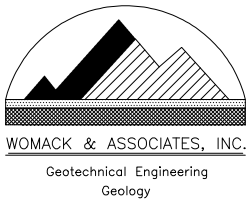
POB 12650  
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# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                               |               |        |                         |                  |                              |                                 | DATE: 6/10/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |  |
|------------------------------------------------------------|---------------|--------|-------------------------|------------------|------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|--|
| PROJECT LOCATION: Jackson, Wyoming                         |               |        |                         |                  |                              |                                 | HOLE NO.: TP-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |                      |                   |                   |                      |                 |  |
| TEST HOLE LOCATION: South of chainlink fence, see site map |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| ELEVATION G.S. (ft.): ~6173                                |               |        | TOTAL DEPTH (ft.): 10.3 |                  | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MEASURED FROM: Ground Surface |                      |                   |                   |                      |                 |  |
| DRILL TYPE: 580 Super L Backhoe                            |               |        | HAMMER:                 |                  |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DRILLER: Bill                 |                      | LOGGED BY: ds     |                   |                      |                 |  |
| DEPTH (ft.)                                                | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN.  | (N1)60 BLOWS/FT. | RECOVERY (%)                 | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | DESCRIPTION                   | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |
| 1                                                          |               |        |                         |                  |                              |                                 | 0.0-4.0ft Clayey/silty GRAVELS and COBBLES: Light to dark brown, slightly moist, dense, massive, 3 different fill events are differentiated in the pit each ~1.3' thick, wavy contacts between fill horizons, planar contact with underlying topsoil [FILL]                                                                                                                                                                                                                                                                                                                        |                               |                      |                   |                   |                      |                 |  |
| 2                                                          |               |        |                         |                  |                              |                                 | <p>4.0-6.0ft Gravelly SILT: Black, dry, stiff to very stiff, layered (from machinery passing over), contains organics [BURIED TOPSOIL]</p> <p>6.0-7.0ft Sandy CLAY: Pale gray, slightly moist to moist, medium stiff, massive [ALLUVIUM]</p> <p>7.0-10.3ft Sandy GRAVELS and COBBLES: Yellowish-brown, dry, dense to very dense, stratified, trace (&lt;5%) silt [ALLUVIUM]</p> <p>Note: No groundwater<br/>           Near refusal at bottom of hole<br/>           Installed 4" perforated PVC pipe to 10.3', stickup 1.5' (MW-2)<br/>           Backfilled hole with spoils</p> |                               |                      |                   |                   |                      |                 |  |
| 3                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 4                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 5                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 6                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 7                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 8                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 9                                                          |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 10                                                         |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 11                                                         |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 12                                                         |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 13                                                         |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |
| 14                                                         |               |        |                         |                  |                              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |                      |                   |                   |                      |                 |  |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



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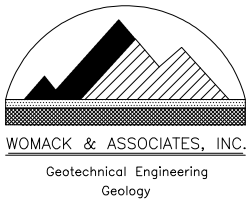
# TEST HOLE LOG

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| PROJECT NAME: START Facility                                        |               |        |                         |                  |                              |                                 | DATE: 6/10/10  |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
|---------------------------------------------------------------------|---------------|--------|-------------------------|------------------|------------------------------|---------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                  |               |        |                         |                  |                              |                                 | HOLE NO.: TP-3 |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Central west side of project site, see site map |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6173                                         |               |        | TOTAL DEPTH (ft.): 11.3 |                  | GROUNDWATER LEVEL (ft.): N/A |                                 |                | MEASURED FROM: Ground Surface                                                                                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                     |               |        | HAMMER:                 |                  |                              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                                                                                                                                                       |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                         | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN.  | (N1)60 BLOWS/FT. | RECOVERY (%)                 | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                                                         | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                   |               | D1     |                         |                  |                              |                                 |                | 0.0-3.6ft Clayey/silty/sandy GRAVELS and COBBLES: Dark brown, moist, dense, massive, heterogenous, ~25% fines, ~25% sand, ~50% angular sandstone and limestone gravels and cobbles up to 8" in diameter, pockets of sandy clay and fines [FILL]                                     |                      |                   |                   |                      |                 |
| 2                                                                   |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 3                                                                   |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 4                                                                   |               | D2     |                         |                  |                              |                                 |                | 3.6-11.3ft Sandy GRAVELS and COBBLES: Tannish-brown, moist, dense, stratified, ~40-45% sand, ~55-60% subangular to subround limestone and sandstone gravels and cobbles up to 5" in diameter, cobble size and density increase with depth, moisture decreases with depth [ALLUVIUM] |                      |                   |                   |                      |                 |
| 5                                                                   |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 6                                                                   |               |        |                         |                  |                              |                                 |                | Note: No groundwater<br>Installed 4" perforated PVC pipe to 11.3', stickup 2.5' (MW-3)<br>Backfilled hole with spoils                                                                                                                                                               |                      |                   |                   |                      |                 |
| 7                                                                   |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 8                                                                   |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 9                                                                   |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 10                                                                  |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 11                                                                  |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 12                                                                  |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 13                                                                  |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |
| 14                                                                  |               |        |                         |                  |                              |                                 |                |                                                                                                                                                                                                                                                                                     |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12





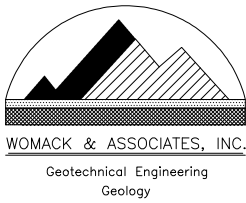
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# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                        |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DATE: 6/10/10                 |                      |                   |                   |                      |                 |
|---------------------------------------------------------------------|---------------|--------|------------------------|-----------------------|--------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                  |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | HOLE NO.: TP-4                |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northwest portion of project site, see site map |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                         |               |        |                        | TOTAL DEPTH (ft.): 13 |              | GROUNDWATER LEVEL (ft.): N/A    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MEASURED FROM: Ground Surface |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                     |               |        | HAMMER:                |                       |              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DRILLER: Bill                 |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                         | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.      | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DESCRIPTION                   | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                   |               | D1     |                        |                       |              |                                 | <p>0.0-2.5ft Silty GRAVELS and COBBLES: Very dark brown/black, moist, loose to dense, massive to layered, 3 different fill events are represented in the pit [FILL]</p> <p>1.3ft As above, ~20% sand and gravel, ~30% silt, ~50% angular volcanic and limestone cobbles</p> <p>2.5-13.0ft Sandy GRAVELS and COBBLES: Tan, dry to slightly moist, medium dense, stratified, ~30% sand, ~70% subround sandstone and limestone gravels and cobbles up to 8" in diameter, cobble size/density/moisture increase with depth [ALLUVIUM]</p> <p>Note: No groundwater<br/>Installed 4" perforated PVC pipe to 13.0', stickup 0.9' (MW-4)<br/>Pipe has a 75 degree angle to it (15 degrees from vertical)<br/>Backfilled hole with spoils</p> |                               |                      |                   |                   |                      |                 |
| 2                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 3                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 4                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 5                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 6                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 7                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 8                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 9                                                                   |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 10                                                                  |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 11                                                                  |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 12                                                                  |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 13                                                                  |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |
| 14                                                                  |               |        |                        |                       |              |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



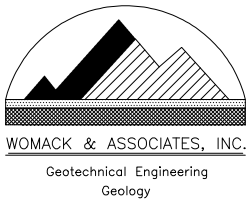
POB 12650  
Jackson, WY 83002  
Telephone: 3077337209  
Fax:

# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                            |               |        |                        |                  |              |                                 | DATE: 6/10/10  |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
|-------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                      |               |        |                        |                  |              |                                 | HOLE NO.: TP-5 |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: East of project site, in Karns Meadow, see site map |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6172                                             |               |        | TOTAL DEPTH (ft.): 9   |                  |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                                             | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                         |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                                             | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                             | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                                 | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                       |               |        |                        |                  |              |                                 |                | 0.0-2.0ft SILT: Black, moist, soft, massive, abundant roots and organic matter [TOPSOIL]                                                                                                                                                                    |                               |                   |                   |                      |                 |
| 2                                                                       |               |        |                        |                  |              |                                 |                | 2.0-9.0ft Clayey sandy GRAVELS and COBBLES: Tan, moist to wet, loose, stratified, moderately plastic clay ~15%, sand ~20-25%, subangular to subround limestone gravels and cobbles up to 1' diameter ~60-65%, abundant caving due to groundwater [ALLUVIUM] |                               |                   |                   |                      |                 |
| 3                                                                       |               |        |                        |                  |              |                                 |                | Note: No groundwater<br>Installed perforated 4" PVC pipe to 9.0', stickup 1.0' (MW-5)<br>Backfilled hole with spoils                                                                                                                                        |                               |                   |                   |                      |                 |
| 4                                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 5                                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 6                                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 7                                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 8                                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 9                                                                       |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 10                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 11                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 12                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 13                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |
| 14                                                                      |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                             |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



POB 12650  
 Jackson, WY 83002  
 Telephone: 3077337209  
 Fax:

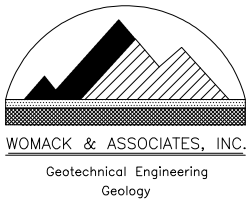
# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                |               |        |                        |                  |                              |                                 | DATE: 6/24/10                                                                                                                                                                                                                    |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
|-------------------------------------------------------------|---------------|--------|------------------------|------------------|------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                          |               |        |                        |                  |                              |                                 | HOLE NO.: TP-6                                                                                                                                                                                                                   |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northwest property corner, see site map |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6173                                 |               |        | TOTAL DEPTH (ft.): 7.1 |                  | GROUNDWATER LEVEL (ft.): N/A |                                 |                                                                                                                                                                                                                                  | MEASURED FROM: Ground Surface                                                                                                                                                         |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                             |               |        | HAMMER:                |                  |                              | DRILL CO: Fish Creek Excavation |                                                                                                                                                                                                                                  | DRILLER: Bill                                                                                                                                                                         |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                 | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%)                 | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION                                                                                                                                                                                                                   | DESCRIPTION                                                                                                                                                                           | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                           |               |        |                        |                  |                              | 2.75                            |                                                                                                                                                                                                                                  | 0.0-1.7ft Clayey/sandy GRAVELS and COBBLES: Dark brown, dry to slightly moist, medium dense, massive, consists of 2 fill events: upper has clay matrix, lower has sandy matrix [FILL] |                      |                   |                   |                      |                 |
| 2                                                           |               |        |                        |                  |                              |                                 | 1.7-7.1ft Gravelly SAND and COBBLES: Brown, slightly moist, dense, stratified, ~30% gravel, ~35% sand, ~35% subangular to subround limestone and sandstone cobbles up to 7 inches in diameter ~35%, trace (<5%) fines [ALLUVIUM] |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 3                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 4                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                   |                      |                   |                   |                      |                 |
| 5                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 6                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 7                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 8                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 9                                                           |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 10                                                          |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 11                                                          |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 12                                                          |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 13                                                          |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |
| 14                                                          |               |        |                        |                  |                              |                                 |                                                                                                                                                                                                                                  |                                                                                                                                                                                       |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12





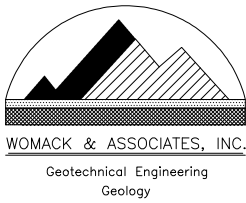
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Jackson, WY 83002  
Telephone: 3077337209  
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# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                                  |               |        |                        |                  |              |                                 |                | DATE: 6/24/10                                                                                                                                                                                                                                                                                                  |                               |                   |                   |                      |                 |
|-------------------------------------------------------------------------------|---------------|--------|------------------------|------------------|--------------|---------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                            |               |        |                        |                  |              |                                 |                | HOLE NO.: TP-7                                                                                                                                                                                                                                                                                                 |                               |                   |                   |                      |                 |
| TEST HOLE LOCATION: Northwest side of proposed facility housing, see site map |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6174                                                   |               |        | TOTAL DEPTH (ft.): 6.8 |                  |              | GROUNDWATER LEVEL (ft.): N/A    |                |                                                                                                                                                                                                                                                                                                                | MEASURED FROM: Ground Surface |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                               |               |        | HAMMER:                |                  |              | DRILL CO: Fish Creek Excavation |                |                                                                                                                                                                                                                                                                                                                | DRILLER: Bill                 |                   | LOGGED BY: ds     |                      |                 |
| DEPTH (ft.)                                                                   | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT. | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                                                                                                                                                                    | MOISTURE CONTENT (%)          | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                             |               | D1     |                        |                  |              | 2.0                             |                | 0.0-1.5ft Gravelly SILT: Black, slightly moist, stiff, massive, non-plastic, ~20% gravel, ~80% silt, abundant large roots [TOPSOIL]                                                                                                                                                                            |                               |                   |                   |                      |                 |
| 2                                                                             |               |        |                        |                  |              |                                 |                | 1.5-6.8ft Sandy GRAVELS and COBBLES: Brown, slightly moist, dense, stratified, ~25% sand, subangular to subround limestone and sandstone cobbles to 6 inches in diameter ~45%, ~30% gravel, calcareous matrix, some cobbles have lime coating on surface, ~1/2 inch-sized vugs in limestone cobbles [ALLUVIUM] |                               |                   |                   |                      |                 |
| 3                                                                             |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 4                                                                             |               |        |                        |                  |              |                                 |                | Note: No groundwater<br>Backfilled hole with spoils                                                                                                                                                                                                                                                            |                               |                   |                   |                      |                 |
| 5                                                                             |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 6                                                                             |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 7                                                                             |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 8                                                                             |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 9                                                                             |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 10                                                                            |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 11                                                                            |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 12                                                                            |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 13                                                                            |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |
| 14                                                                            |               |        |                        |                  |              |                                 |                |                                                                                                                                                                                                                                                                                                                |                               |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



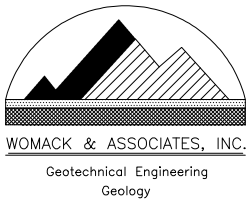
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# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                                  |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                | DATE: 6/24/10                                                                                                                                                   |                      |                   |                   |                      |                 |
|-------------------------------------------------------------------------------|---------------|--------|------------------------|----------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|
| PROJECT LOCATION: Jackson, Wyoming                                            |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                | HOLE NO.: TP-8                                                                                                                                                  |                      |                   |                   |                      |                 |
| TEST HOLE LOCATION: Southwest side of proposed facility housing, see site map |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| ELEVATION G.S. (ft.): ~6175                                                   |               |        |                        | TOTAL DEPTH (ft.): 7 |              | GROUNDWATER LEVEL (ft.): N/A                                                                                                                                                                                                                                                                |                | MEASURED FROM: Ground Surface                                                                                                                                   |                      |                   |                   |                      |                 |
| DRILL TYPE: 580 Super L Backhoe                                               |               |        |                        | HAMMER:              |              | DRILL CO: Fish Creek Excavation                                                                                                                                                                                                                                                             |                | DRILLER: Bill                                                                                                                                                   |                      | LOGGED BY: ds     |                   |                      |                 |
| DEPTH (ft.)                                                                   | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.     | RECOVERY (%) | UNCONFINED STRENGTH (TSF)                                                                                                                                                                                                                                                                   | CLASSIFICATION | DESCRIPTION                                                                                                                                                     | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |
| 1                                                                             |               |        |                        |                      |              | 2.0                                                                                                                                                                                                                                                                                         |                | 0.0-0.1ft Clayey/silty GRAVELS and COBBLES: Gray, dry, dense, massive [FILL]<br>0.1-1.8ft Gravelly SILT: Black, slightly moist, stiff, massive [BURIED TOPSOIL] |                      |                   |                   |                      |                 |
| 2                                                                             |               |        |                        |                      |              | 1.8-7.0ft Gravelly SAND and COBBLES: Brown, slightly moist, dense, stratified, ~30% gravel, ~35% sand, ~35% subangular to subround limestone and sandstone cobbles up to 7 inches in diameter ~35%, trace (<5%) fines [ALLUVIUM]<br><br>Note: No groundwater<br>Backfilled hole with spoils |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 3                                                                             |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 4                                                                             |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 5                                                                             |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 6                                                                             |               | D1     |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 7                                                                             |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 8                                                                             |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 9                                                                             |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 10                                                                            |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 11                                                                            |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 12                                                                            |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 13                                                                            |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |
| 14                                                                            |               |        |                        |                      |              |                                                                                                                                                                                                                                                                                             |                |                                                                                                                                                                 |                      |                   |                   |                      |                 |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



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Jackson, WY 83002  
Telephone: 3077337209  
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# TEST HOLE LOG

PAGE 1 OF 1

| PROJECT NAME: START Facility                                             |               |        |                        |                      |              |                                 |                | DATE: 6/24/10                                                                                                                                               |                      |                   |                   |                      |                 |  |
|--------------------------------------------------------------------------|---------------|--------|------------------------|----------------------|--------------|---------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|-------------------|----------------------|-----------------|--|
| PROJECT LOCATION: Jackson, Wyoming                                       |               |        |                        |                      |              |                                 |                | HOLE NO.: TP-9                                                                                                                                              |                      |                   |                   |                      |                 |  |
| TEST HOLE LOCATION: East side of proposed facility housing, see site map |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| ELEVATION G.S. (ft.): ~6176                                              |               |        |                        | TOTAL DEPTH (ft.): 5 |              | GROUNDWATER LEVEL (ft.): N/A    |                | MEASURED FROM: Ground Surface                                                                                                                               |                      |                   |                   |                      |                 |  |
| DRILL TYPE: 580 Super L Backhoe                                          |               |        |                        | HAMMER:              |              | DRILL CO: Fish Creek Excavation |                | DRILLER: Bill                                                                                                                                               |                      | LOGGED BY: ds     |                   |                      |                 |  |
| DEPTH (ft.)                                                              | GRAPHICAL LOG | SAMPLE | S.P.T. (N) BLOWS/6 IN. | (N1)60 BLOWS/FT.     | RECOVERY (%) | UNCONFINED STRENGTH (TSF)       | CLASSIFICATION | DESCRIPTION                                                                                                                                                 | MOISTURE CONTENT (%) | DRY DENSITY (PCF) | LIQUID LIMITS (%) | PLASTICITY INDEX (%) | WELL COMPLETION |  |
| 1                                                                        |               |        |                        |                      |              |                                 |                | 0.0-1.3ft Gravelly clayey SILT: Black, dry to slightly moist, stiff, massive [TOPSOIL]                                                                      |                      |                   |                   |                      |                 |  |
| 2                                                                        |               |        |                        |                      |              |                                 |                | 1.3-5.0ft Sandy GRAVELS and COBBLES: Brown, dry to slightly moist, very dense (extremely hard digging), stratified, at refusal at bottom of hole [ALLUVIUM] |                      |                   |                   |                      |                 |  |
| 3                                                                        |               |        |                        |                      |              |                                 |                | Note: No groundwater                                                                                                                                        |                      |                   |                   |                      |                 |  |
| 4                                                                        |               |        |                        |                      |              |                                 |                | Backfilled hole with spoils                                                                                                                                 |                      |                   |                   |                      |                 |  |
| 5                                                                        |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 6                                                                        |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 7                                                                        |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 8                                                                        |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 9                                                                        |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 10                                                                       |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 11                                                                       |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 12                                                                       |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 13                                                                       |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |
| 14                                                                       |               |        |                        |                      |              |                                 |                |                                                                                                                                                             |                      |                   |                   |                      |                 |  |

TEST\_HOLE\_LOG2 REVISED START FACILITY.GPJ WOMACK.GDT 5/10/12



**Project Name:** Core Services Vehicle Maintenance Facility

**Project Location:** Jackson, Wyoming

**Client:** Town of Jackson

**Logged By:** HC

**Checked By:** CHL

Project Number: 06013

**Latitude:** 43.473900

**Longitude:** -110.777190

**Elevation:**

**Date Started:** Jan 20 2020 **Completed:** Jan 20 2020

### Notes:

**Contractor:** Town of Jackson

|                   |          |
|-------------------|----------|
| <b>Equipment:</b> | CAT 420F |
|-------------------|----------|

[illegible]

**Project Name:** Core Services Vehicle Maintenance Facility

**Project Location:** Jackson, Wyoming

**Client:** Town of Jackson

**Logged By:** HC

**Checked By:** CHL

Project Number: 06013

**Latitude:** 43.473824

**Longitude:** -110.776449

Elevation:

**Date Started:** Jan 20 2020 **Completed:** Jan 20 2020

### Notes:

**Contractor:** Town of Jackson

|                   |          |
|-------------------|----------|
| <b>Equipment:</b> | CAT 420F |
|-------------------|----------|

[illegible]

**Project Name:** Core Services Vehicle Maintenance Facility

**Project Location:** Jackson, Wyoming

**Client:** Town of Jackson

**Logged By:** HC

**Checked By:** CHL

**Project Number:** 06013

**Latitude:** 43.474262

**Longitude:** -110.776669

**Elevation:**

**Date Started:** Jan 20 2020 **Completed:** Jan 20 2020

**Notes:**

**Contractor:** Town of Jackson

**Equipment:** CAT 420F

[illegible]



# Habitat Enhancement Plan

## CORE Maintenance Facility, 55 Karns Meadow Drive

MITIGATION FOR DEVELOPMENT IMPACTS

May 15, 2020

### PREPARED FOR:

Jorgenson Engineering  
P.O. Box 9550  
Jackson, WY 83002

### PREPARED BY:

Alder Environmental  
P.O. Box 6519  
Jackson, WY 83001  
(307) 733-5031

### PROPERTY SUMMARY:

22-41-16-33-2-00-025  
Teton County, WY

### INDEX:

Sheet 1 Cover Sheet  
Sheet 2 Development  
Impacts &  
Mitigation Areas  
Sheet 3 Methods &  
Specifications  
Sheet 4 Surety Bond

### PROJECT GOAL:

The goal of the habitat enhancement is to establish native trees and shrubs within Karns Meadow to replace lost wildlife habitat functions of the impacted cottonwood forest within the proposed maintenance facility expansion area and Karns Meadow Drive.

### OBJECTIVE:

Enhance existing agricultural meadows in Karns Meadow Park by planting 13,424 sf of narrowleaf cottonwood trees and native shrubs to create a corridor of high quality wildlife habitat along Flat Creek.

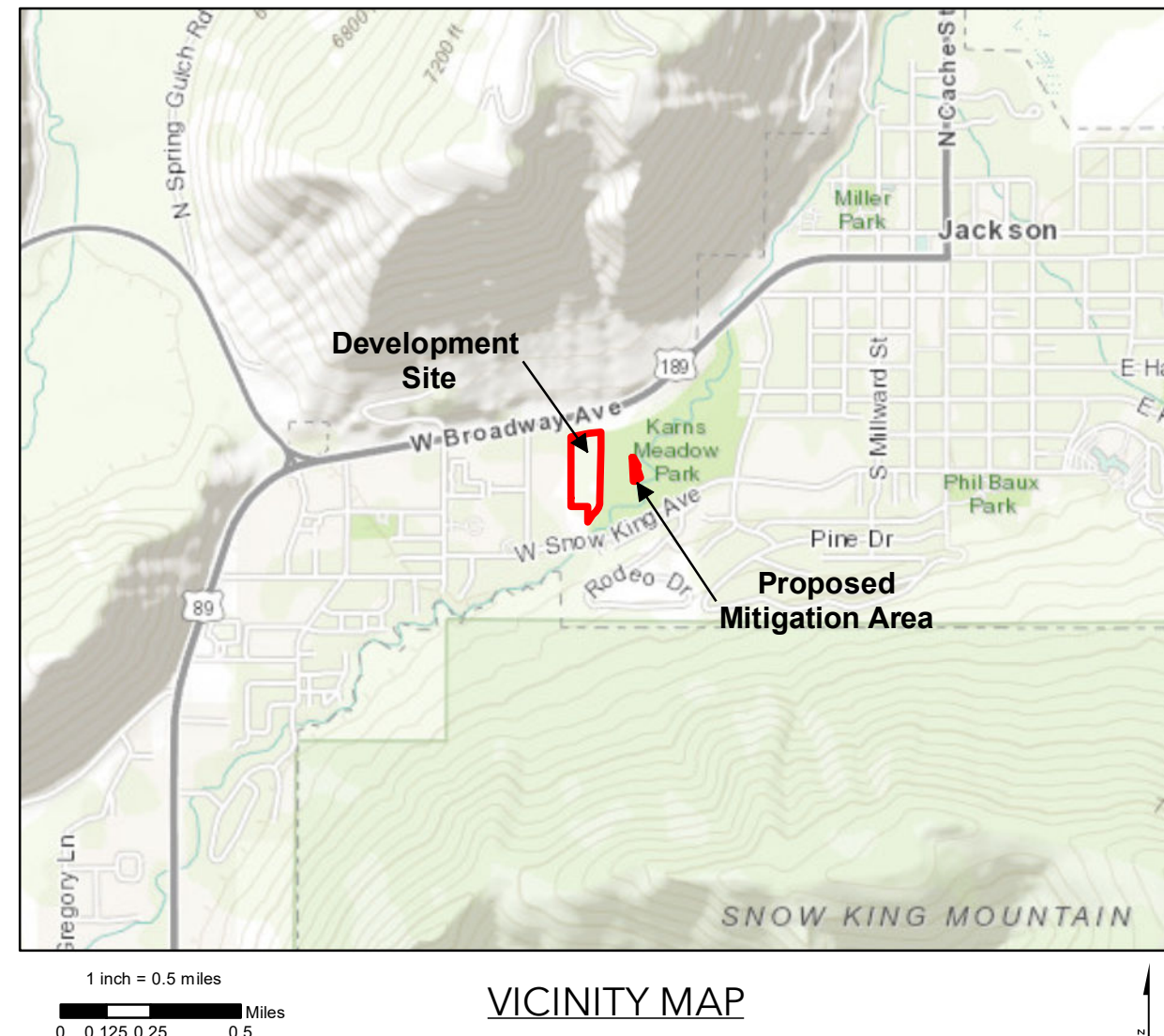
In accordance with Town of Jackson Land Development Regulation (LDR) Section 5.2.1.E, Impacting the NRO, a Habitat Enhancement Plan is proposed to mitigate for vegetative cover type impacts resulting from the development. LDR Section 5.2.1.E. states that development within the Natural Resources Overlay District (NRO) must avoid or minimize impacts to higher value habitats. When impacts cannot be avoided, mitigation and habitat enhancement for the lands impacted must be

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HABITAT ENHANCEMENT METHODS

An Off-site Out-of--kind habitat enhancement is proposed for development impacts to narrowleaf cottonwood (*Populus angustifolia*) stands (Sheet 2). Off-site mitigation is proposed because on-site mitigation would create isolated/low-functioning wildlife habitat and be impaired by the effects of the use and development on the maintenance facility property. The enhancements will be out-of-kind due to the shrub component that replaces cottonwood trees in the vicinity of the proposed future pathway alignment. Cottonwood trees are known to have extensive roots systems that are damaging to paved pathways.

Alder identified a high functioning habitat enhancement area on lands owned by the Town of Jackson and the Jackson Hole Land Trust that are adjacent to the project area. This proposed habitat enhancement area is located in Karns Meadow adjacent to Flat Creek and will provide winter and seasonal cover and food supply for mule deer and moose, Town of Jackson protected wildlife species. The proposed habitat enhancement area would be located adjacent to existing mitigation areas (JH Community Pathways Path 22) to create a corridor of high-quality riparian habitat for wildlife along Flat Creek. The proposed habitat enhancement area is currently characterized as agricultural meadow (ordinal ranking 2); the proposed habitat enhancements would increase the ordinal ranking in this area by planting narrowleaf cottonwood trees and native tall shrubs (ordinal ranking 6-8).

NATIVE TREE & SHRUB PLANTING (60 plants)

The USDA-NRCS native tree and shrub planting Technical Note 43 shall be consulted for planting methods and species selection (USDA-NRCS 2011). Narrowleaf cottonwood trees and native tall shrubs shall be planted in the late fall or early spring in the Proposed Mitigation Areas shown in Sheet 2. Nursery grown 3” caliper balled and burlap narrowleaf cottonwood saplings and 6-8’ tall native shrubs shall be planted a maximum of 15 foot on-center spacing (15’ O.C. spacing). Planting holes shall be 1.5 times the width and 9/10 of the depth of the rootball. Holes shall be backfilled with a 3:1 topsoil to sphagnum moss mix covered by mulch at the base of the plants. The trees will be planted with 15’ O.C. spacing as part of the proposed habitat enhancement efforts. Trees shall be planted on the east half of the mitigation area at least 30 feet from the proposed pathway alignment.

| Quantity | Size/Container                | Species                                                                                                                                                                         |
|----------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30       | 3” caliper balled and burlap  | Narrowleaf cottonwood ( <i>Populus angustifolia</i> )                                                                                                                           |
| 30       | 6 – 8’ tall balled and burlap | 10 qty. Saskatoon serviceberry ( <i>Amelanchier alnifolia</i> )<br>10 qty. Black hawthorn ( <i>Crataegus douglasii</i> )<br>10 qty. Red-osier dogwood ( <i>Cornus sericea</i> ) |

TEMPORARY IRRIGATION

Supplemental drip irrigation water shall be required for at least three years to establish the planted trees and shrubs. A drip irrigation line tied into the existing drip irrigation line used on adjacent mitigation areas in Karns Meadow can provide a water source. Soil moisture should be kept at or near “field capacity” and not oversaturated. A drip irrigation system around each tree and shrub shall be installed. Plants shall require daily water during the first 3 months of establishment, then less frequent watering thereafter. Irrigation water requirements shall be monitored carefully following planting.

PREDATION GUARDS

Use by ungulate species is present in the vicinity of the proposed habitat enhancement area. Therefore, the mitigation area shall have a fence erected around all plantings to temporarily guard against ungulate browse. Fencing shall be at least 8 feet tall and able to withstand snow loads and ungulate disturbances. This relief from ungulate browse pressure would allow the plantings to establish healthy and sustainable roots so they can withstand future browsing by ungulates. Predation guards and fence shall remain in place for 3-5 years or until plants are established.

WEED CONTROL

State listed noxious and invasive weeds shall be controlled through mechanical and chemical herbicide methods recommended by Teton County Weed and Pest District before enhancement activities and then for a minimum of 3 years following the plant material installation. Weed control shall take place during the summer growing season to eliminate flowering periods of weeds. Teton County Weed and Pest District shall be contacted during the first full growing season to conduct an inspection of the enhancement areas. Equipment used for the habitat enhancement implementation shall be thoroughly cleaned prior to delivery to the site. Noxious weed infestations shall be recorded using a GPS unit and revisited the following year.

MAINTENANCE & MONITORING

The habitat enhancement area shall be monitored, at a minimum, annually for three consecutive years in the late summer to evaluate the success. The first monitoring event shall occur the first late summer after implementation. Conditions (e.g. tree and shrub height, browse effects and branching success) and recommended adjustments shall be recorded and maintained internally. A monitoring report shall be prepared after the first and third years of monitoring and submitted to the Town of Jackson Planning Department. These reports shall include recommendations as to the success of the mitigation and whether further monitoring is necessary. The recommendations shall consider plant mortality, erosion, weeds and any other factors affecting, or likely to affect, the success of the project.

QUANTIFIABLE TARGET CONDITONS

Tree and shrub plantings

After 3 years, 80% survival rate shall be expected, and 20% tree or shrub mortality shall be considered acceptable success. Additional plantings or replacement of dead trees and shrubs shall be required if this survival rate is not achieved.



## SHEET 4: COST ESTIMATE & SURETY

Alder Environmental, LLC prepared the cost of implementing this Habitat Enhancement Plan based off previous mitigation implementation efforts and through inquiries to landscape installation companies located in Teton County (Table 1). The below estimates include labor, plants and supplies.

**Table 1. Cost Estimate for Habitat Enhancement Implementation**

| Habitat Enhancement Component                                                              | Estimated Cost |
|--------------------------------------------------------------------------------------------|----------------|
| 1) Tree plantings supplied and installed                                                   | \$1,080        |
| (30 narrowleaf cottonwood trees x \$36 per plant)                                          |                |
| 2) Shrub plantings supplied and installed                                                  | \$1,020        |
| (30 native tall shrubs x \$34 per plant)                                                   |                |
| 3) Drip irrigation to shrub & tree plantings                                               | \$1,650        |
| (30 trees x \$30 each & 30 shrubs x \$25 each; includes supply lines from domestic system) |                |
| 4) Fence materials and installation around tree and shrub plantings                        | \$1,240        |
| (0.31 acres x \$4,000/acre)                                                                |                |
| 5) Weed control                                                                            | \$450          |
| (3 years x \$150/year)                                                                     |                |
| 6) Monitoring (pre & post data collection and reports)                                     | \$1,800        |
| (3 years x \$600/year)                                                                     |                |
| <b>Habitat Enhancement Total</b>                                                           | <b>\$7,240</b> |
| <b>125% Surety Bond</b>                                                                    | <b>\$9,050</b> |

# ENVIRONMENTAL ANALYSIS

for the  
Teton County/Town of Jackson  
Transit and Maintenance Facility



NW¼ of Section 33, Township 41N, Range 116W  
Town of Jackson, Wyoming, PIDN 22-41-16-33-2-00-025 & 22-41-16-33-2-00-028

**December 21, 2012**

**Prepared for:**

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## **INTRODUCTION**

In May of 1994, Teton County and the Town of Jackson published the Jackson/Teton County Comprehensive Plan in order to responsibly plan for growth. In conjunction with the plan, they presented a map dividing the county and town into resource districts. These districts included the Natural Resource Overlay District (NRO), which was developed to preserve the town and county's wildlife resources for valley residents and visitors. The objective of the NRO is to protect habitat for wildlife species of special concern. Development shall be designed to protect the areas these wildlife need to survive; therefore, development within the NRO shall minimize impacts to protected wildlife habitats, as much as possible. All development proposals within the NRO, excluding those exemptions stated in Section 3130 of the Jackson Land Development Regulations (LDRs), and all proposed subdivisions are required to submit an Environmental Analysis (EA) in concurrence with the application for a development permit.

An EA describes the existing conditions of the land, the development proposal and rationale for the location of the proposed building site or subdivision plat, and a description of how the proposal meets all applicable standards and objectives presented in the Comprehensive Plan.

Resources protected by the EA process include: waterbodies; 10-year floodplains; wetlands; crucial elk winter habitat and migration routes; crucial mule deer winter habitat and migration routes; crucial moose winter habitat; trumpeter swan winter habitat and nesting areas; cutthroat trout spawning areas; and crucial winter habitat and nesting areas of bald eagles.

## **PROPERTY LOCATION**

An EA was conducted for the proposed Teton County/Town of Jackson Transit and Maintenance Facility (Facility) and access road located at 675 Snow King Avenue, Jackson, Wyoming (Figure 1). The project development area is approximately 7.42 acres and is located in the SE¼ of the NW¼ of Section 33, Township 41N, Range 116W in Teton County, Wyoming. The project area is bordered to the west and north by private lands with commercial uses (Figure 2). The property to the south is owned by Lower Valley Energy and is used as a power line transmission facility. The property to the east and southeast is known as "Karns Meadow" and is currently open space encumbered by a conservation easement held by the Jackson Hole Land Trust (JHLT). Access to the property is through a road easement that connects to Snow King Avenue and State Highway 89/Broadway.

## **METHODOLOGY**

For the purposes of this EA, the Town Planning Staff determined an "Analysis Area" during a January 4, 2010 pre-application conference. The Analysis Area is shown on Figure 2 and is described as the Development Areas and the Karns Meadow Parcels west of Flat Creek. The Analysis Area provides a more representative view of the project area

and immediate vicinity and will provide information necessary to determine protected resource setbacks.

Site visits were conducted on January 13<sup>th</sup> and 29<sup>th</sup> and October 15, 2010 to identify and map the conditions of the site including: human structures, slope, soils, hydrologic features, vegetative cover types, protected resources and habitats protected by the NRO. An additional site visits to verify conditions were conducted on August 30, 2011 and December 21, 2012.

Vegetative cover types were broken out into dominant plant communities found on the property according to Teton County LDRs, Section 3211. Plants within these communities were identified and verified using Vascular Plants of Wyoming (Dorn 1992). Protected resources and habitats were identified using historic maps, Wyoming Game & Fish GIS databases, published and non-published wildlife research reports and field observations. Habitats protected by the NRO were identified using the definitions from Section 3240 of the Town of Jackson LDRs. The *Natural Resources Inventory for the Karns Meadow Property* (JHLT 2003), *Karns Meadow Wetland Delineation Report* (IMA 2007), *Karns Meadow Vegetation Survey Report* (IMA 2009) and the *Preliminary Wetland Delineation Report – Karns Meadow West* (Alder 2010) provided additional information for identifying vegetation, hydrologic and wildlife resource in the Analysis Area.

## **HABITAT INVENTORY**

### **SITE CONDITIONS**

#### *Human Made*

Multiple uses of the Analysis Area were documented during site visits. These include earthen material stockpiling and processing, START Bus storage, vehicle impound storage and Karns Meadow Park parking (Figure 2). The Town of Jackson maintains and operates a water supply well and creek thaw well within the Analysis Area. The vehicle impound yard and well house are fenced with 6-foot tall chain link fences. Two abandoned irrigation supply ditches cross the Analysis Area and numerous laterals branch off these ditches. Historical infrared aerial photos from 1983 indicate this property was once a flood irrigated agricultural meadow (TCD 2010).

#### *Topography*

The Analysis Area is generally flat with a slight slope towards the east and Flat Creek.

### **VEGETATIVE COVER TYPES**

The vegetative cover types found in the Analysis Area are associated with landscape, soils, hydrologic features and disturbances (Figure 3). There are four dominant cover types in the Analysis Area: wetland scrub-shrub, narrowleaf cottonwood, agricultural meadow and disturbed grassland. These cover types are characterized as follows:

### *Wetland Scrub-Shrub Cover Type*

The wetland scrub-shrub vegetative community in the Analysis Area is associated with the Flat Creek riparian corridor. Shrub cover in this vegetative community is approximately 80 percent with emergent wetlands providing additional coverage. Dominant shrub species include geyer willow (*Salix geyeriana*) and booth willow (*Salix boothii*) with less dominant thinleaf alder (*Alnus incana* ssp. *tenuifolia*) and chokecherry (*Prunus virginianus*). The shrub understory is dominated by wood's rose (*Rosa woodsii*), reed canarygrass (*Phalaris arundinacea*), Nebraska sedge (*Carex nebrascensis*) and spreading bentgrass (*Agrostis stolonifera*). Table 1 provides a list of plant species identified on Karns Meadow during a 2007 vegetation survey and on the Analysis Area during the January 2010 site visit (IMA 2007).

The wetland scrub-shrub areas likely experience seasonal high ground water and flooding inundation from Flat Creek. The wetland scrub-shrub vegetative cover type has Priority 10 rank according to Teton County LDR Section 3221, Ordinal Ranking System. Priority 10 cover types have the highest wildlife habitat value in Teton County and are the lowest priority for development. A Priority 1 cover type has the lowest habitat value and is the first priority for development.

### *Medium Narrowleaf Cottonwood Cover Type*

Narrowleaf cottonwoods (*Populus angustifolia*) exist along the historic irrigation supply ditches within the Analysis Area. These cottonwoods are generally greater than 20 feet tall and have an understory consisting of wood's rose (*Rosa woodsii*) and immature quaking aspen (*Populus tremloides*). Despite the degraded condition of the cottonwood trees due to lack of a water supply, they provide cover for wildlife and nesting and perching habitat for avian. The medium narrowleaf cottonwood vegetative cover type has Priority 7 rank according to Teton County LDR Section 3221, Ordinal Ranking System.

### *Agricultural Meadow Cover Type*

Native and introduced herbaceous plants dominate the agricultural meadow cover type within the Analysis Area. These areas were historically flood irrigated and served as a pasture for horses. Common dominant grasses include meadow foxtail (*Alopecurus pratense*), smooth brome grass (*Bromus inermis*.) and orchardgrass (*Dactylus glomerata*). Less common plant species identified in the agricultural meadow cover type include meadow fescue (*Festuca pratensis*), spreading bentgrass (*Agrostis stolonifera*), baltic rush (*Juncus balticus*) and Kentucky bluegrass (*Poa pratensis*). Common forbs include common tansy (*Tanacetum vulgare*), dandelion (*Taraxacum officinale*), western aster (*Aster occidentalis*.) and salsify (*Tragopogon dubius*).

### *Disturbed Grassland Cover Type*

The disturbed grassland cover type identified within the Analysis Area was historically flood irrigated agricultural meadows that have been disturbed by human land uses. This cover type consists of a matrix of bare ground, relatively species poor vegetative communities and weedy plant species. Dominant species within this cover type include



meadow fescue (*Festuca pratensis*), dandelion (*Taraxacum officinale*, Canada thistle (*Cirsium arvense*) and gray rabbitbrush (*Chrysothamnus nauseosus*).

### *Non-native Species Identified*

Nonnative species appear to be most abundant in the agricultural meadow and disturbed vegetative cover types. According to a long-time resident in the neighborhood, the meadow once served as pasture for horses and had much more dandelion (*Taraxacum officinale*), an indicator of over-grazing, than currently present. There are also many nonnative forbs present including some state-listed noxious weeds. The most abundant of these is Canada thistle (*Cirsium arvense*), which is also fairly abundant in the wetland scrub-shrub and disturbed grassland cover types.

The other noxious weeds present within the Analysis Area and Karns Meadow including musk thistle (*Carduus nutans*), tansy (*Tanacetum vulgare*), quackgrass (*Elymus repens*), yellow toadflax (*Linaria vulgaris*), spotted knapweed (*Centaurea maculosa*), and houndstounge (*Cynoglossum officinale*) are present in low to moderate abundance. Other nonnative invasive species present include reed canarygrass (*Phalaris arundinacea*), bittersweet nightshade (*Solanum dulcamara*) and cheatgrass (*Bromus tectorum*). Reed canarygrass is moderately abundant along Flat Creek throughout the Analysis Area, bittersweet nightshade is sporadic within the wetland scrub-shrub cover type and cheatgrass is found in a couple patches within the disturbed grassland.

**TABLE 1. PLANT SPECIES IDENTIFIED ON THE KARNS MEADOW PROPERTY AND ANALYSIS AREA**

| COMMON NAME <sup>1</sup>                                                    | SCIENTIFIC NAME <sup>1</sup>        | RIPARIAN SHRUB | MEADOW | DISTURBED AREA |
|-----------------------------------------------------------------------------|-------------------------------------|----------------|--------|----------------|
| D = dominant; C = common; U = uncommon; T = trace; blank cell = not present |                                     |                |        |                |
| <b>TREES</b>                                                                |                                     |                |        |                |
| Narrowleaf cottonwood                                                       | <i>Populus angustifolia</i>         | U              |        |                |
| Chokecherry                                                                 | <i>Prunus virginianus</i>           | U              |        |                |
| <b>SHRUBS</b>                                                               |                                     |                |        |                |
| Thinleaf alder                                                              | <i>Alnus incana ssp. tenuifolia</i> | C              |        |                |
| Saskatoon                                                                   | <i>Amelanchier alnifolia</i>        | U              |        |                |
| Grey rabbit-brush                                                           | <i>Chrysothamnus nauseosus</i>      |                |        | U              |
| Red-osier dogwood                                                           | <i>Cornus sericea</i>               | U              |        |                |
| Black hawthorn                                                              | <i>Crataegus douglasii</i>          | U              |        |                |
| Black twinberry                                                             | <i>Lonicera involucrata</i>         | U              |        |                |
| Utah honeysuckle                                                            | <i>Lonicera utahensis</i>           | U              |        |                |
| Golden currant                                                              | <i>Ribes aureum</i>                 | U              |        |                |
| Black gooseberry                                                            | <i>Ribes lacustre</i>               | U              |        |                |
| Wood's rose                                                                 | <i>Rosa woodsii</i>                 | U              |        |                |
| Booth willow                                                                | <i>Salix boothii</i>                | D              |        |                |
| Coyote willow                                                               | <i>Salix exigua</i>                 | U              |        |                |

| COMMON NAME <sup>1</sup>                                                    | SCIENTIFIC NAME <sup>1</sup>       | RIPARIAN SHRUB | MEADOW | DISTURBED AREA |
|-----------------------------------------------------------------------------|------------------------------------|----------------|--------|----------------|
| D = dominant; C = common; U = uncommon; T = trace; blank cell = not present |                                    |                |        |                |
| Geyer willow                                                                | <i>Salix geyeriana</i>             | D              |        |                |
| Whiplash willow                                                             | <i>Salix lucida var. lasiandra</i> | C              |        |                |
| Sitka willow                                                                | <i>Salix sitchensis</i>            | C              |        |                |
| Spineless horsebrush                                                        | <i>Tetradymia canescens</i>        |                | U      |                |
| <b>FORBS</b>                                                                |                                    |                |        |                |
| Common yarrow                                                               | <i>Achillea millefolium</i>        |                | U      |                |
| Western aster                                                               | <i>Aster occidentalis</i>          |                | C      | U              |
| Musk thistle                                                                | <i>Carduus nutans</i>              |                | U      |                |
| Canada thistle                                                              | <i>Cirsium arvense</i>             | U              | C      | U              |
| Bull thistle                                                                | <i>Cirsium vulgare</i>             | U              | U      |                |
| Houndstongue                                                                | <i>Cynoglossum officinale</i>      |                | U      |                |
| Large-leaved avens                                                          | <i>Geum macrophyllum</i>           | U              |        |                |
| Yellow toadflax                                                             | <i>Linaria vulgaris</i>            |                | U      |                |
| Birdsfoot-trefoil                                                           | <i>Lotus corniculatus</i>          |                | T      |                |
| Field mint                                                                  | <i>Mentha arvense</i>              | U              |        |                |
| Common forget-me-not                                                        | <i>Myosotis scorpioides</i>        | C              |        |                |
| Common plantain                                                             | <i>Plantago major</i>              |                | U      | T              |
| Graceful cinquefoil                                                         | <i>Potentilla gracilis</i>         | T              | U      |                |
| Curly dock                                                                  | <i>Rumex crispus</i>               | U              | U      |                |
| Water ragwort                                                               | <i>Senecio hydrophilus</i>         | U              |        |                |
| False Solomon's seal                                                        | <i>Smilacina stellata</i>          | C              |        |                |
| Bittersweet nightshade                                                      | <i>Solanum dulcamara</i>           | U              |        |                |
| Canada goldenrod                                                            | <i>Solidago canadensis</i>         | C              |        |                |
| Lady's tresses                                                              | <i>Spiranthes romanzoffiana</i>    | T              |        |                |
| Common tansy                                                                | <i>Tanacetum vulgare</i>           | T              | C      |                |
| Dandelion                                                                   | <i>Taraxacum officinale</i>        | C              | C      | C              |
| Field pennycress                                                            | <i>Thlaspi arvense</i>             |                | U      |                |
| Salsify                                                                     | <i>Tragopogon dubius</i>           |                | C      |                |
| White clover                                                                | <i>Trifolium repens</i>            |                | U      |                |
| <b>GRASSES, GRAMINOIDS &amp; HORSETAILS</b>                                 |                                    |                |        |                |
| Spreading bentgrass                                                         | <i>Agrostis stolonifera</i>        | C              | U      |                |
| Meadow foxtail                                                              | <i>Alopecurus pratensis</i>        | U              | U      |                |
| Smooth brome                                                                | <i>Bromus inermis ssp.</i>         |                | U      | U              |
| Cheatgrass                                                                  | <i>Bromus tectorum</i>             |                |        | U              |
| Water sedge                                                                 | <i>Carex aquatilis</i>             | U              |        |                |
| Nebraska sedge                                                              | <i>Carex nebrascensis</i>          | C              | U      |                |
| Field sedge                                                                 | <i>Carex praeagracilis</i>         | U              |        |                |

| COMMON NAME <sup>1</sup>                                                    | SCIENTIFIC NAME <sup>1</sup>  | RIPARIAN SHRUB | MEADOW | DISTURBED AREA |
|-----------------------------------------------------------------------------|-------------------------------|----------------|--------|----------------|
| D = dominant; C = common; U = uncommon; T = trace; blank cell = not present |                               |                |        |                |
| Beaked sedge                                                                | <i>Carex utriculata</i>       | U              |        |                |
| Tufted hairgrass                                                            | <i>Deschampsia cespitosa</i>  |                | U      |                |
| Quackgrass                                                                  | <i>Elymus repens</i>          |                | U      | U              |
| Smooth scouring-rush                                                        | <i>Equisetum laevigatum</i>   | U              |        |                |
| Meadow fescue                                                               | <i>Festuca pratensis</i>      |                | C      | C              |
| Mannagrass                                                                  | <i>Glyceria sp.</i>           | U              |        |                |
| Meadow barley                                                               | <i>Hordeum brachyantherum</i> |                | T      |                |
| Baltic rush                                                                 | <i>Juncus balticus</i>        | U              | C      |                |
| Western wheatgrass                                                          | <i>Pascopyrum smithii</i>     |                | U      |                |
| Reed canarygrass                                                            | <i>Phalaris arundinacea</i>   | C              | U      |                |
| Timothy                                                                     | <i>Phleum pratense</i>        |                | U      | U              |
| Bulbous bluegrass                                                           | <i>Poa bulbosa</i>            |                |        | U              |
| Kentucky bluegrass                                                          | <i>Poa pratensis</i>          | U              | D      | U              |

<sup>1</sup> Common names and scientific names are primarily from *Flora of the Pacific Northwest* (Hitchcock and Cronquist, 1973) and from the USDA Natural Resources Conservation Service PLANTS Database <http://plants.usda.gov/index.html>

## VEGETATIVE COVER TYPE RANKING

The dominant vegetative cover types found on the Analysis Area are wetland scrub-shrub, medium narrowleaf cottonwood, agricultural meadow and disturbed grassland. Each vegetative cover type provides habitat for a variety of wildlife species. A priority ranking of each of these habitat types is listed below according to the “Ordinal Ranking System” (Teton County 1994, 2006). An ordinal ranking number is given for each vegetative cover type, 10 being the highest, most important, and 1 being the lowest, or least important and most appropriate location for development.

**TABLE 2. VEGETATIVE COVER TYPE ORDINAL RANKING**

| VEGETATIVE COVER TYPE        | ACRES        | ORDINAL RANKING/PRIORITY FOR DEVELOPMENT |
|------------------------------|--------------|------------------------------------------|
| Wetland Scrub-Shrub          | <b>2.20</b>  | <b>10</b>                                |
| Medium Narrowleaf cottonwood | <b>0.81</b>  | <b>7</b>                                 |
| Agricultural Meadow          | <b>8.37</b>  | <b>2</b>                                 |
| Disturbed Grassland          | <b>9.25</b>  | <b>1</b>                                 |
| <b>TOTAL</b>                 | <b>20.63</b> |                                          |



## **PROTECTED RESOURCES-WATERBODIES, TEN YEAR FLOODPLAINS & WETLANDS**

Protected resources found on the Analysis Area include Flat Creek, FEMA FIRM A/AE/AO flood zones and delineated wetlands (Figure 4).

Flat Creek meanders through the Analysis Area for an approximate stream length of 2,500 feet or just short of ½ mile. The streambed consists of mostly cobble with smaller gravels and silt in the slower moving and backwater areas. The record maximum flow was 295 cubic feet per second (cfs) on July 6, 2011, and the minimum recorded flow was 14 cfs on September 22, 2001. The average flow in June is 140 cfs and the minimum flows in September average 57 cfs (US Geological Service, 2011).

Flat Creek tends to form anchor ice (ice buildup on the bed of the creek) that causes winter over bank flooding. The Analysis Area is also subject to occasional flooding during spring snowmelt runoff at the headwaters of the creek within the Gros Ventre Mountain Range. Water diverted from the Gros Ventre River into South Park Ditch and Flat Creek affects the flood stage from May to September. The FEMA FIRM A/AE/AO flood zones that relate to the 10-Year Floodplain are shown on Figure 4 and extend minimally onto the road easement and Tract 5.

A wetland delineation of the Analysis Area was based of vegetative cover types, plant species and proximity/relative elevation to Flat Creek. A wetland delineation according to the 1987 Army Corps of Engineers Wetland Delineation Manual was conducted on an area within 100 feet of the road easement in the Analysis Area (Appendix C). At the time of this report preparation, the wetland delineation had not been verified by the Army Corps. A wetland delineation of the Karns Meadow property east of Flat Creek was conducted and verified by the Army Corps of Engineers (IMA 2007). Both wetland delineations were used as a reference for the wetland mapping conducted on the Analysis Area. Mapped wetlands do not exist on the Facility Property or Tract 5; only a narrow strip exists along Flat Creek and within the road easement.

## **WILDLIFE HABITAT PROTECTED BY THE NRO**

Teton County, Wyoming is known worldwide for its wildlife resources. In 1998, the area was home to approximately 15,000 elk, 3,100 moose, 350 antelope and a portion of the 26,000 mule deer of the Sublette County herd (Brimeyer per comm. 1998). There are 293 species of birds, 68 mammal species, 5 species of amphibians and 3 species of reptiles represented in the Jackson Hole area (Raynes 1984, Wile 1996). It is home to rare species like bison, bald eagles, peregrine falcons, trumpeter swans, great gray owls and great horned owls.

The Town of Jackson EA process protects 10 habitat types associated with 6 wildlife species in the valley. These highest value habitat types are protected from development, however disturbance may be permitted if it is unavoidable and appropriate mitigation plans are submitted that demonstrate enhancement of 2 acres of habitat for every 1 acre

of disturbance. The wildlife resources protected by the EA process, their presence or lack of presence on the Analysis Area and those identified by Wyoming Game and Fish Department (WGFD) and local scientific research are described below and shown in Figure 5 (WGFD 2004).

### *Elk Migration Routes*

Elk migration routes are used by elk to migrate from summer to winter ranges. The native elk winter range has been significantly impacted by development in the southern end of Jackson Hole. The WGFD and the National Elk Refuge together have 23 feed grounds in the southern end of Teton County (National Elk Refuge pers. comm. 1998). Each year, elk migrate from their summer winter range in the surrounding mountains to these feed areas and other natural ranges. Their migration routes center around the water ways in Jackson Hole which provide cover and food during migration (Teton County 1994).

*Elk migration routes currently do not exist on the Analysis Area or on the Property.*

However, the Analysis Area separates spring, summer, and fall habitat for elk to the north on East Gros Ventre Butte (EGVB) and Winter/Yearlong habitat to the south. No elk roadkills were recorded along Highway 89 near the Analysis Area by multiple organizations from 1990 and 2001 (BRCI 2003). Elk observations on the south slopes of EGVB are uncommon. However, if the elk feeding regimes on the National Elk Refuge were to change, if wolves displace elk, or when fire burns Snow King Mountain as it did in the 1930's, causing the aspen forest to rejuvenate, the Analysis Area is a likely route that elk would use to move between those important habitat areas.

### *Crucial Elk Winter Range*

Crucial elk winter range consists primarily of xeric and mesic sagebrush grasslands, mixed shrub, mesic and xeric open grassland and agricultural meadows that are used by elk 8 out of every 10 years (Jackson 1994). *The Analysis Area is not designated crucial elk winter range by WGFD and elk are not known to use this area or the Property.* However, the wetland scrub-shrub vegetative cover types on the Analysis Area and Karns Meadow do provide suitable food and cover habitat for wintering elk. The Property does not provide suitable food or cover for wintering elk.

### *Mule Deer Migration Routes*

Mule deer migration routes are used by mule deer to migrate from summer to winter ranges and between non-crucial and crucial winter ranges. Mule deer move between their ranges via watercourses that provide cover and forage during movement (Teton County 1994). *While the Analysis Area and Property is not designated a migration route by WGFD, the Analysis Area has been identified and documented as an important mule deer movement route and provides high value food and cover habitat for deer.* The areas of shrub and tree cover on the Analysis Area provide higher value movement routes than the disturbed grassland and agricultural meadow areas. The Analysis Area is currently a refuge for mule deer due to minimal night lighting, nighttime human activity or significant numbers of dogs.

WGFD designated crucial mule deer winter range is located just north of the property on EGVB and crucial mule deer winter/yearlong range exists south of the property on west Snow King Mountain and the west facing mountain slopes east of the South Park area (Figure 6, WGFD 2003). The wetland scrub-shrub vegetative cover type, particularly the willow component and open space associated with Karns Meadow, the Analysis Area and Property provide a secure movement corridor for mule deer to move between EGVB and Snow King Mountain. Mule deer tracks were documented on the Property and Analysis Area during the January 13, 2010 site visit. Local wildlife studies have also documented mule deer use of and movement through the Analysis Area and Karns Meadow (BRCI 1991). Figure 8 provides a general model of mule deer and other wildlife movement suitability from EGVB and Snow King Mountain through the Property and Karns Meadow.

The Northern Rockies Conservation Cooperative (NRCC) summarized mule deer ecology in Jackson Hole in their 2009 report *Mule deer and Development- Making Science Relevant to Planning -Integrating Science into Policy: A case study of Mule Deer in Jackson Hole* (NRCC 2009). The NRCC report summarized a study initiated by Biota Research and Consulting (BRCI) in 1979. The study documented winter mule deer use of the Gros Ventre Buttes and evaluated movement of mule deer within the vicinity of these buttes. The BRCI study documented deer movement between EGVB and Snow King Mountain, just east of the Virginian Lodge (Karns Meadow and the Analysis Area).

In 1994, the Jackson Hole Wildlife Foundation (JHWF) initiated a study to evaluate road killed wildlife and mitigation efforts to minimize road kill hot spots. A report of JHWF's efforts was prepared by BRCI (BRCI 2003). This summary report provides additional documentation of mule deer movement to and from Karns Meadow and the Analysis Area. Through the use of volunteers and data from governmental organizations, road killed mule deer were documented between 1991 and 2001, 162 mule deer vehicle collisions were documented in the 0.9 mile section of Highway 89/Broadway Powderhorn Lane and Flat Creek Drive (milepost 153.3-154) in the Town of Jackson, just north of the Analysis Area and Karns Meadow. Of the 22 wildlife-vehicle collision hotspots identified by the study, the Highway 89/Broadway section north of the Analysis Area was the shortest in length, but had the highest number of road killed mule deer. These data indicate both significant mule deer movement from EGVB and the Analysis Area and one of the most difficult sections of road for mule deer to cross. The suitability model is for visual interpretation only and is not supported by actual scientific data.

### *Crucial Mule Deer Winter Range*

Crucial mule deer winter range consists of xeric and mesic sagebrush-grasslands, mixed shrubs and shrub scrub-grasslands located at lower elevation and on south facing slopes that are used by mule deer 8 out of every 10 years (Jackson 1994). *The Analysis Area does not have mule deer crucial winter range.* However, mule deer are known to use the dense shrub areas in Karns Meadow for cover and forage during winter months.



### *Crucial Moose Winter Habitat*

Crucial moose winter habitat consists primarily of riparian and palustrine shrub-willow and cottonwood forests, highly mesic cottonwood/spruce forests, upland forest-subalpine fir habitat types, and secondarily xeric and mesic sagebrush-grasslands and mixed shrub types that are used by moose during the crucial winter months 8 out of every 10 years (Jackson 1994). *The Analysis Area is not designated as crucial moose winter habitat by WGFD, however the property does contain one of the most important winter habitats for moose, scrub-shrub wetlands dominated by dense willow.* Moose travel along the Flat Creek Corridor at the base of Snow King Mountain up through Karns Meadow and the Analysis Area.

### *Trumpeter Swan Nesting Habitat*

Trumpeter swan nesting habitat is found on wetland and aquatic sites that have adequate open water, forage and protection from predators. These locations typically are islands located in ponds and wetlands in the Snake River. *The Analysis Area does not have trumpeter swan nesting habitat.*

### *Trumpeter Swan Winter Habitat*

Trumpeter swan winter habitat consists of aquatic sites with abundant vegetation that stay open throughout the winter months. Trumpeter swan habitat is not available in most winters on Flat Creek due to a lack of open water (Patla pers. comm. 2003). *The Analysis Area does not have trumpeter swan winter habitat.*

### *Snake River Cutthroat Trout Spawning Habitat*

Snake River cutthroat trout spawning habitat is found in riffles along the Snake River and its tributaries. Inland cutthroat trout species are native to western rivers and streams and have been recognized as a significant species in Teton County (Jackson 1994). *Flat Creek flowing through the Analysis Area contains cutthroat trout spawning habitat.* Recent efforts by the Town of Jackson, Teton Conservation District, Jackson Hole Trout Unlimited and Jackson Hole One Fly Organizations to enhance Flat Creek have improved the natural sorting and abundance of gravels that support cutthroat trout spawning.

### *Bald Eagle Nesting Habitat*

Bald eagle nesting habitat is found along the riparian corridors of the Snake River and its larger tributaries. Prime habitat consists of multi-aged stands of riparian forest near watercourses or water bodies, which provide foraging opportunities (Jackson 1994). *The Analysis Area does not have bald eagle nesting habitat.*

### *Bald Eagle Crucial Winter Habitat*

Bald eagle crucial winter habitat is found in riparian areas near ungulate winter range and in bald eagle nesting areas. The bald eagle winter diet is comprised primarily of carrion from dead carcasses. The remainder of their diet is comprised of fish and waterfowl (Jackson 1994). *The Analysis Area may provide crucial winter habitat for bald eagle, but it is unlikely they would use this property due to its proximity to human activities.* Eagles may feed on wild ungulate carrion on the Analysis Area and supplement their winter food supply with fish from Flat Creek.

### *Protected Habitats Within ½ Mile Vicinity*

Within a 1/2 mile of the Property is designated crucial mule deer winter range on EGVB and crucial mule deer winter/yearlong range on Snow King Mountain (Figure 6). The Flat Creek Corridor at the base of Snow King Mountain and on Karns Meadow provides crucial moose winter habitat and cutthroat trout spawning habitat. A mule deer movement route connects EGVB with Snow King Mountain. The wetland scrub-shrub vegetative cover type and Flat Creek on Karns Meadow and the Analysis Area are the foundation of this movement route. The movement route is not necessarily a linear route as shown in Figure 6, but is likely the entire Karns Meadow and Analysis Area corridor, possibly extending into the adjacent developed areas.

### **HABITAT SUMMARY**

The Analysis Area and adjacent areas provide important habitat for a variety of wildlife activity. Table 3 provides a summary of the wildlife habitats protected by the NRO on the Analysis Area and within ½ mile vicinity.

**TABLE 3. WILDLIFE HABITATS PROTECTED BY THE NRO**

| <b>HABITAT TYPE</b>                          | <b>PRESENCE ON<br/>PROPERTY OR ½ MILE<br/>VICINITY</b> |
|----------------------------------------------|--------------------------------------------------------|
| Elk Migration Corridors                      | POTENTIAL                                              |
| Crucial Elk Winter Range                     | NO                                                     |
| Mule Deer Migration Corridors                | YES (Movement)                                         |
| Crucial Mule Deer Winter Range               | NO                                                     |
| Crucial Moose Winter Habitat                 | YES                                                    |
| Trumpeter Swan Nesting Habitat               | NO                                                     |
| Crucial Trumpeter Swan Winter Habitat        | NO                                                     |
| Snake River Cutthroat Trout Spawning Habitat | YES                                                    |
| Bald Eagle Nesting Habitat                   | NO                                                     |
| Crucial Bald Eagle Winter Habitat            | POTENTIAL                                              |

### **SETBACKS AND BUFFERS**

Setbacks and buffers exist to protect the most important natural resources found on the Property. Sections 3220 and 3270 of the Jackson LDRs define these setbacks and buffers. Protected habitats and resources on the Analysis Area include wetlands, Flat Creek, cutthroat trout spawning habitat and the 10-year floodplain. Figure 7 shows a 30' wetland, 50' Flat Creek and 150' cutthroat trout spawning habitat setbacks and the 10-year floodplain.

These setbacks should be maintained at all times, however due to access issues and the density of protected habitat types, the traversing of these setbacks may be necessary to facilitate access to development areas on the property. The 150' cutthroat trout setback

shall be observed unless the developer can demonstrate that the development will cause no water runoff to Flat Creek and have no detrimental effect on water quality of Flat Creek and cause no disturbance which would have detrimental impact on spawning, incubation, hatching or rearing of cutthroat trout.

### **ENDANGERED PLANT AND VERTEBRATE SPECIES**

There are 11 species classified as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS), which are also listed in the Wyoming Natural Diversity Database (WYNDD) and known to occur in the State of Wyoming. One would not expect to find any other threatened or endangered vertebrate species utilizing the Analysis Area or Property. One would not expect to find any other threatened or endangered plant species on the Analysis Area or Property.

#### **Vertebrates**

| <u>Status</u> | <u>Common Name</u>        | <u>Latin Name</u>                    |
|---------------|---------------------------|--------------------------------------|
| Endangered    | Kendall warm springs dace | <i>Rhinichthys osculus thermalis</i> |
| Endangered    | Black-footed ferret       | <i>Mustela nigripes</i>              |
| Endangered    | Razorback sucker          | <i>Xyrauchen texanus</i>             |
| Endangered    | Wyoming toad              | <i>Bufo hemiophrys baxteri</i>       |
| Threatened    | Grizzly bear              | <i>Ursus horribilus</i>              |
| Threatened    | Canada lynx               | <i>Lynx canadensis</i>               |

#### **Plants**

| <u>Status</u> | <u>Common Name</u>       | <u>Latin Name</u>            |
|---------------|--------------------------|------------------------------|
| Endangered    | Blowout penstemon        | <i>Penstemon haydenii</i>    |
| Threatened    | Colorado butterfly plant | <i>Gaura neomexicana c.</i>  |
| Threatened    | Ute ladie's tresses      | <i>Spiranthes diluvialis</i> |
| Threatened    | Desert yellowhead        | <i>Yermo xanthocephalus</i>  |

## **DEVELOPMENT IMPACT ASSESSMENT**

### **PROPOSED DEVELOPMENT**

The Town of Jackson and Teton County are proposing to develop a 7.4 acre development area to provide for a bus storage, maintenance and transit facility (Figure 9). The preferred development plan is to partially develop the road right of way and entire lot a plant vegetative screening to minimize impacts to wildlife and offsite habitat mitigation to compensate protected resource losses due to development impacts.

### **IMPACT ASSESSMENT**

Protected habitats and resources impacted by the proposed development include 519 ft<sup>2</sup> of wetlands and 6,712 ft<sup>2</sup> of cottonwood forest (Figure 9). Encroachments into the creek, cutthroat trout spawning and wetland setbacks and 10-year floodplain will occur as a result of the road and path, an "essential road crossing." Encroachment into the cutthroat trout spawning setback will occur by the Transit Parking Area, but this impact will be mitigated through the use of onsite stormwater treatment, detention and infiltration. The



Facility development area will likely be rendered unusable by protected species. Indirect impacts also include increased traffic in the road easement with the potential for vehicle-wildlife collisions.

Direct negative impacts to wildlife use patterns on the property and within the vicinity include displacement of wildlife due to human activities and lighting. While the area surrounding Karns Meadow is densely developed and human activities already exist, the proposed Transit and Maintenance Facility will be situated directly adjacent to and at the same topographic plain as Karns Meadow and Flat Creek. While the Property does not contain significant wildlife movement passages or high quality habitat, the proposed buildings, paved parking areas, human activity and lighting associated with the development and operation of the facility and transit center will likely displace mule deer, moose and other wildlife species that currently use the property to adjacent lands including the high quality habitat of the Karns Meadow/Flat Creek corridor.

The entire development area has the potential to negatively impact water quality in Flat Creek, its associated wetlands and cutthroat trout spawning habitat. Runoff from impervious surfaces in the Town of Jackson contain elevated levels of pollutants such as sediment, hydrocarbons and heavy metals (IMA 2005). Runoff from the proposed development will likely contain similar pollutants and if allowed to flow directly to Flat Creek, may contribute to water quality concerns.

#### **PROJECT VICINITY IMPACT ASSESSMENT**

Indirect negative impacts to protected wildlife habitat and water resources within a ½ mile vicinity of the proposed development will be minimal for the following reasons:

1. The proposed development is situated on highly disturbed properties adjacent to other densely developed properties within the Town of Jackson limits,
2. The location of the proposed development, south of Karns Meadow and clustered with other development, minimizes impacts to mule deer and other wildlife movement patterns between EGVB, Karns Meadow and Snow King Mountain, and
3. Surface water runoff from impervious surfaces resulting from the proposed development will likely be detained in constructed facilities and the quality improved prior to being discharged to Flat Creek, limiting the direct negative impacts to Flat Creek in the vicinity.

#### **DEVELOPMENT RECOMMENDATIONS**

In order to minimize impacts to protected wildlife habitat and water resources in the development area and within the vicinity, the following recommendations should be followed:

1. Impacts to protected habitats should be mitigated at two acres of mitigation/habitat enhancement for every one acre of land impact.

2. Activities associated with the operation of the proposed facility and transit parking area should be screened by dense vegetative cover on the east property boundary to minimize disturbances to wildlife that use Karns Meadow.
3. Artificial lighting on the developed areas and associated road easement should take into consideration wildlife movement patterns in Karns Meadow, a relatively dark area that provides security and cover for wildlife.
4. All watercourse and wetland crossings should minimize the placement of fill and span these protected resources or use pilings to the greatest extent possible.
5. Native plant species should be used in landscaping of open areas however, non-palatable species should be used adjacent to human structures to deter wildlife from these areas and reduce negative human and wildlife interactions.
6. All historic barbed wire should be removed from the property to prevent future wildlife injuries. Wildlife access should be maintained along the historic buck and rail fences with periodic downed rails. All future fences should be wildlife “friendly” and comply with Teton County and/or Wyoming Game and Fish Department wildlife friendly fencing standards.
7. Trash should be kept inside of buildings and in bear proof containers. The use of bird feeders should be avoided.
8. All human and pet contact with wildlife should be kept to a minimum. Many large mammals that are easily scared in the presence of humans and their pets utilize the Karns Meadow area. Dogs should be kept under control around wildlife particularly during winter months. Over-exertion of large mammals in the winter can be fatal and should be prevented.
9. Wildlife-vehicle collision mitigation measures should be considered along the proposed road associated with the development. This may include speed limit restrictions and maintaining open view to each side of the road.

## **MITIGATION**

In accordance with Section 3270.H of the Town of Jackson LDRs, “Where densities/intensities permitted by Table 2400, Schedule of Dimensional Limitations, cannot be achieved by locating development outside of the NRO, then lands protected by Section 3250, Establishment of Natural Resources Overlay (NRO) District, may be impacted pursuant to the standards of this Subsection.” The standards of the Subsection include:

1. The location of the proposed development minimizes wildlife impact to the maximum extent possible and
2. The developer provides mitigation and habitat enhancement for the land impacted.

The developer is proposing off-site mitigation and on-site vegetative screening to minimize impacts and provide compensation for lost habitat. Mitigation measures include habitat enhancements at a 2:1 acre ratio and vegetative screening of the facility and transit parking area.

### **MITIGATION DESCRIPTION**

Mitigation includes habitat enhancements for direct negative impacts to protected habitats and vegetative screening for indirect impacts caused by buildings, lighting and human activity.

The following list and Figure 10 summarize the mitigation:

- 7,231 ft<sup>2</sup> of protected habitat impacted
- 14,462 ft<sup>2</sup> of off-site dense wetland shrub and cottonwood enhancements (2 acres of mitigation for 1 acre of impacts ratio)
- 21,973 ft<sup>2</sup> of on-site vegetative screening

The on-site vegetative screening minimizes impacts from human activity and lighting on the property, provides meaningful mitigation of direct habitat losses on a conservation easement property (Karns Meadow) and allows near full development density of the property. The off-site habitat enhancements will provide additional cover and forage for mule deer, moose and other wildlife in the core of Karns Meadow, relatively secluded from the proposed development and existing development in the vicinity (Figure 10). The off-site habitat enhancements will likely require approval by the Town of Jackson and the Jackson Hole Land Trust.



## **MITIGATION PLAN**

The following is a description of the methods to be used for the 14,462 ft<sup>2</sup> mitigation site shown in Figure 10.

### Wetland Hydrology

The proposed habitat enhancement site is located adjacent to Flat Creek in a low depression. Sufficient wetland and riparian hydrology should be available to plant roots at the planting level below existing grade. The site should be evaluated prior to implementing the habitat enhancement to determine suitable hydrology and grading adjustments made as necessary to capture natural groundwater hydrology at the site.

### Plant Species

Native trees and shrubs proposed for the habitat enhancement include narrowleaf cottonwood (*Populus angustifolia*), Booth willow (*Salix boothii*), Geyers willow (*Salix geyerani*), thinleaf alder (*Alnus incana spp. tenuifolia*) and Douglas hawthorn (*Crataegus douglasii*).

### Plant Material & Spacing

Narrowleaf cottonwood – 30' on-center spacing, 36 trees, 15 gallon size pots

Shrubs - 10' on center spacing, 144 shrubs, 5 gallon size pots

### Exclosure Fence

An exclosure fence a minimum 8' tall shall be erected around the perimeter of the habitat enhancement area to prevent wildlife herbivory for at a minimum 3 growing seasons.

### Weed Control

Noxious and invasive weeds shall be controlled through mechanical and chemical herbicide methods for a minimum of 3 years following the plant material installation.

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## **APPENDIX A - FIGURES**

**FIGURE 1. LOCATION**

**FIGURE 2. ANALYSIS AREA & HUMANMADE CONDITIONS**

**FIGURE 3. VEGETATIVE COVER TYPES**

**FIGURE 4. PROTECTED RESOURCES: WATERBODIES, FLOODPLAINS AND WETLANDS**

**FIGURE 5. HABITATS PROTECTED BY THE NRO**

**FIGURE 6. PROTECTED HABITATS WITHIN ½ MILE VICINITY**

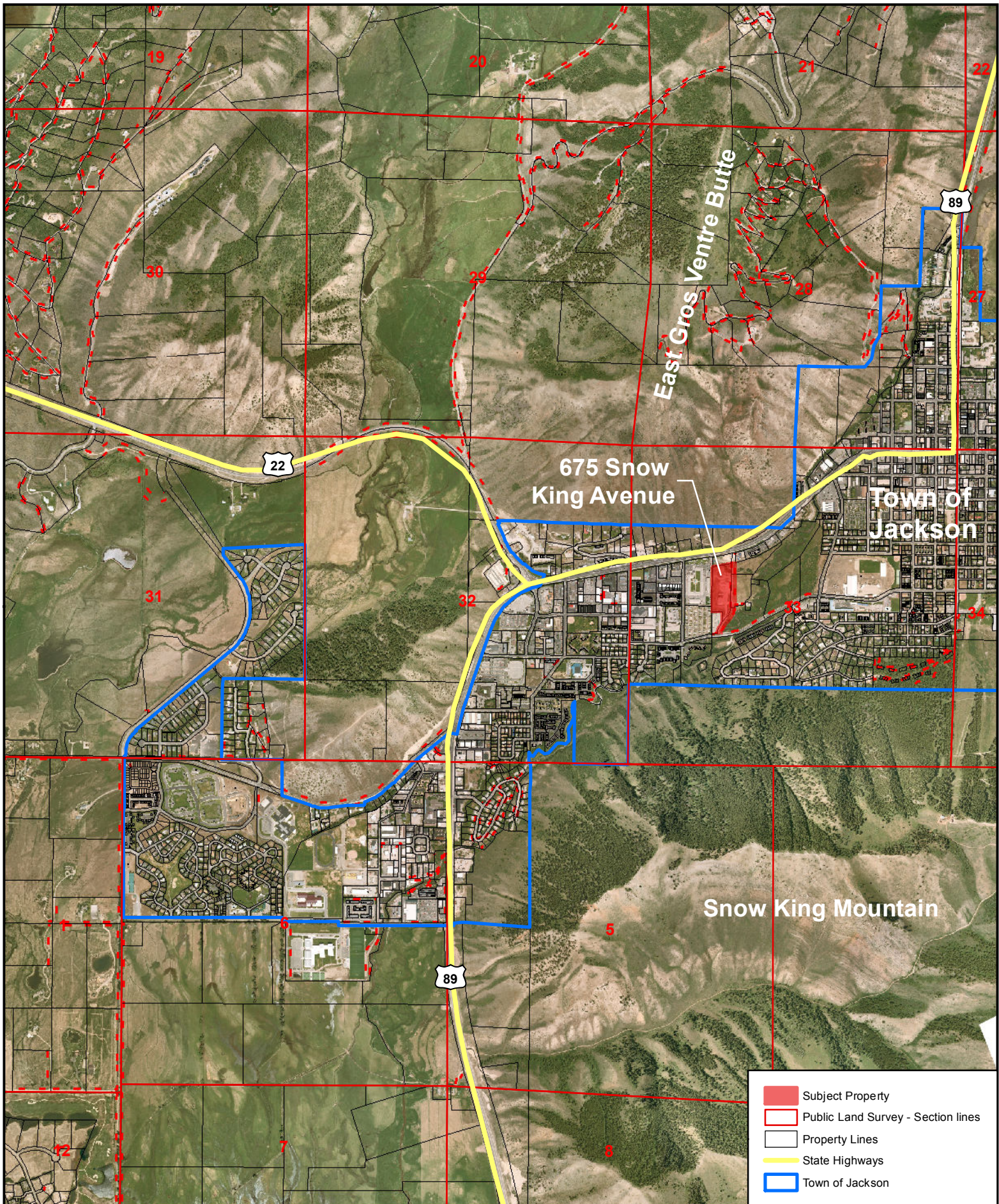
**FIGURE 7. SETBACKS AND BUFFERS**

**FIGURE 8. GENERAL MULE DEER MOVEMENT SUITABILITY**

**FIGURE 9. DEVELOPMENT IMPACTS**

**FIGURE 10. MITIGATION**





**FIGURE 1:**  
**Location**

December 21, 2012

## Environmental Analysis

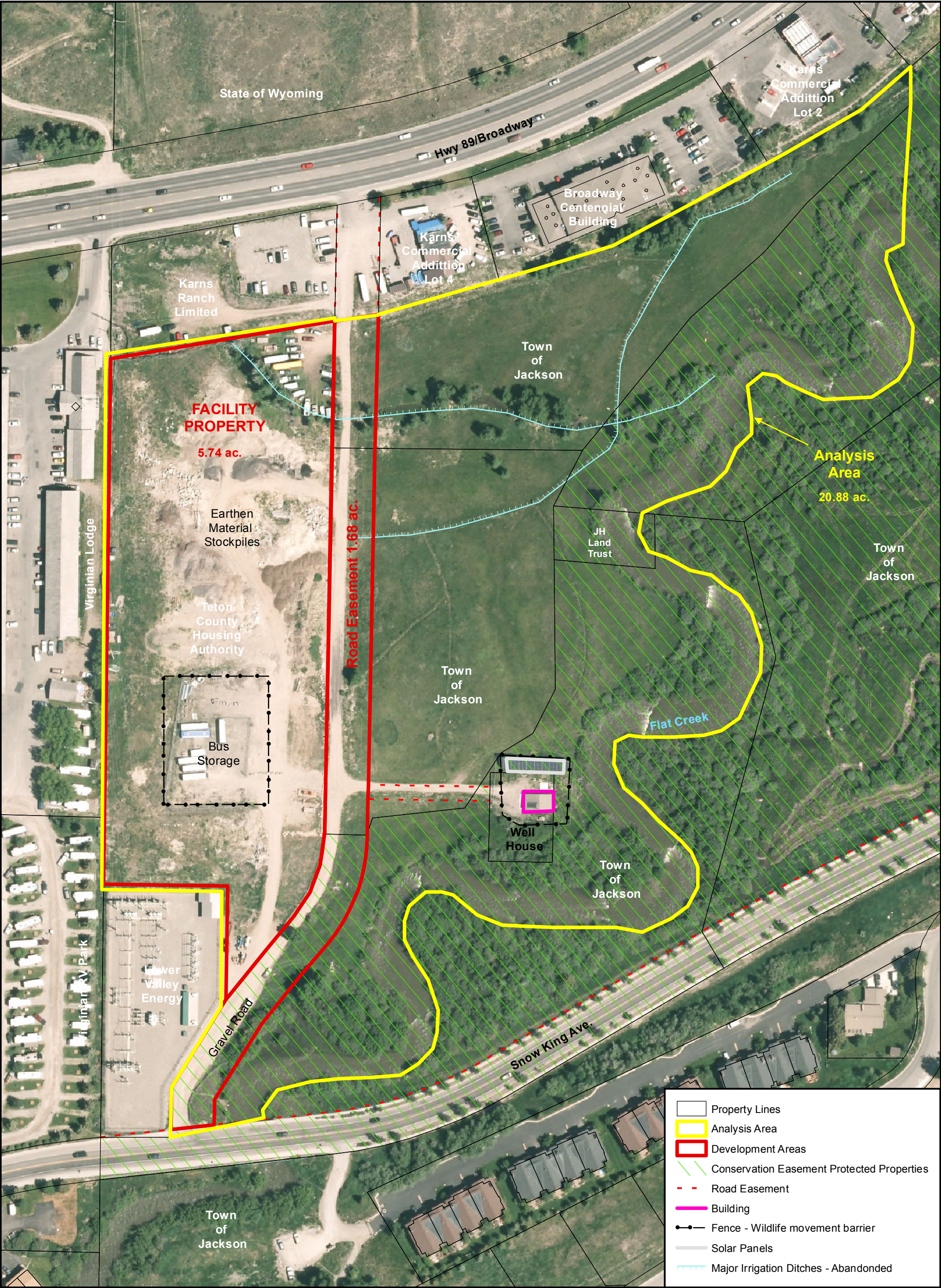
Teton County/Town of Jackson  
Transit and Maintenance Facility

1 inch = 2,000 feet  
0 500 1,000 2,000

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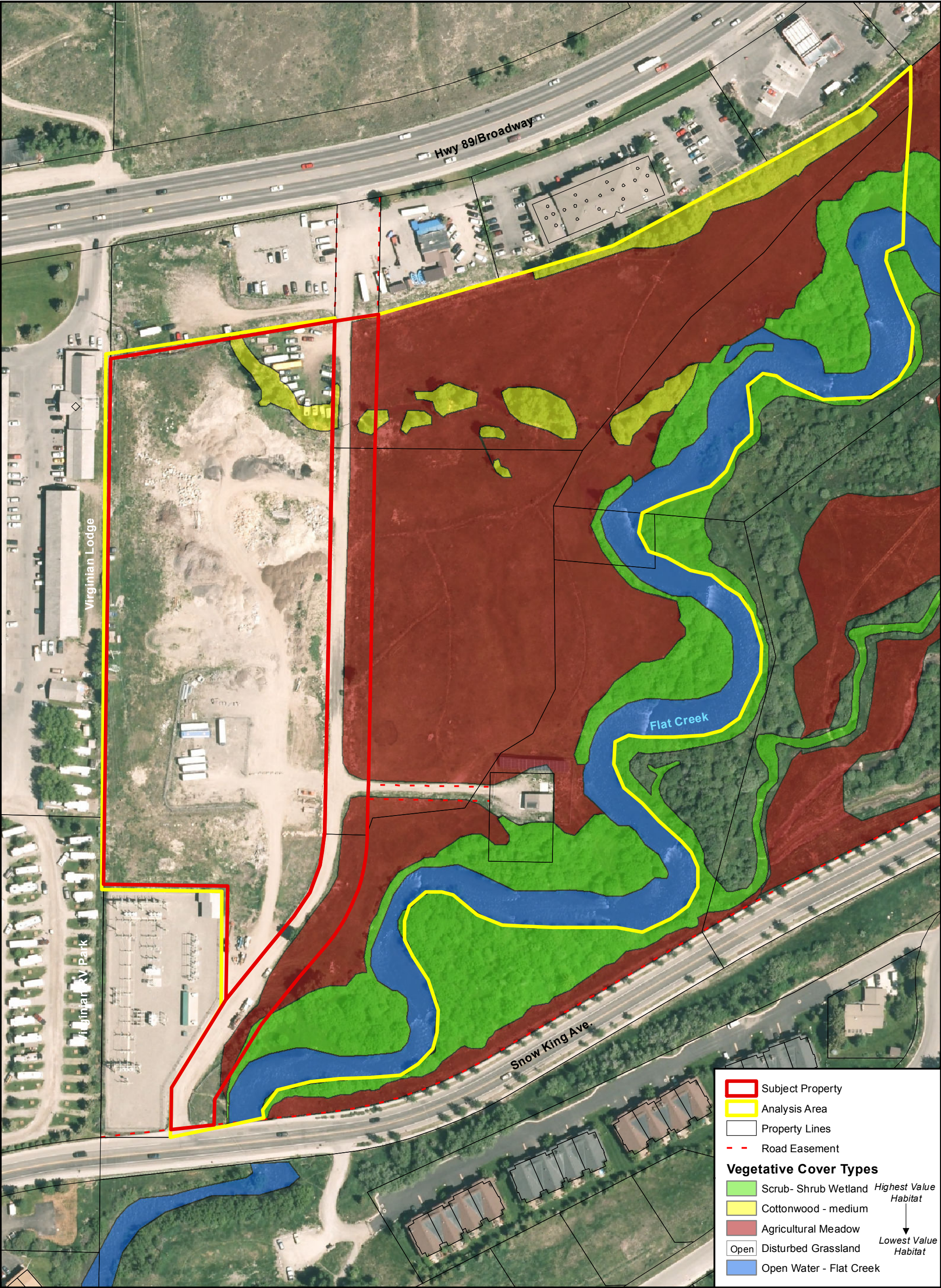




**FIGURE 2:**  
**Analysis Area & Humanmade Conditions**  
  
December 21, 2012

**Environmental Analysis**  
  
Teton County/Town of Jackson  
Transit and Maintenance Facility



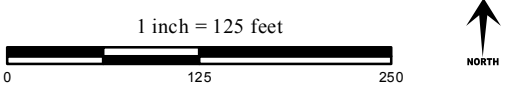


**FIGURE 3:**  
**Vegetative Cover Types**

December 21, 2012

**Environmental Analysis**

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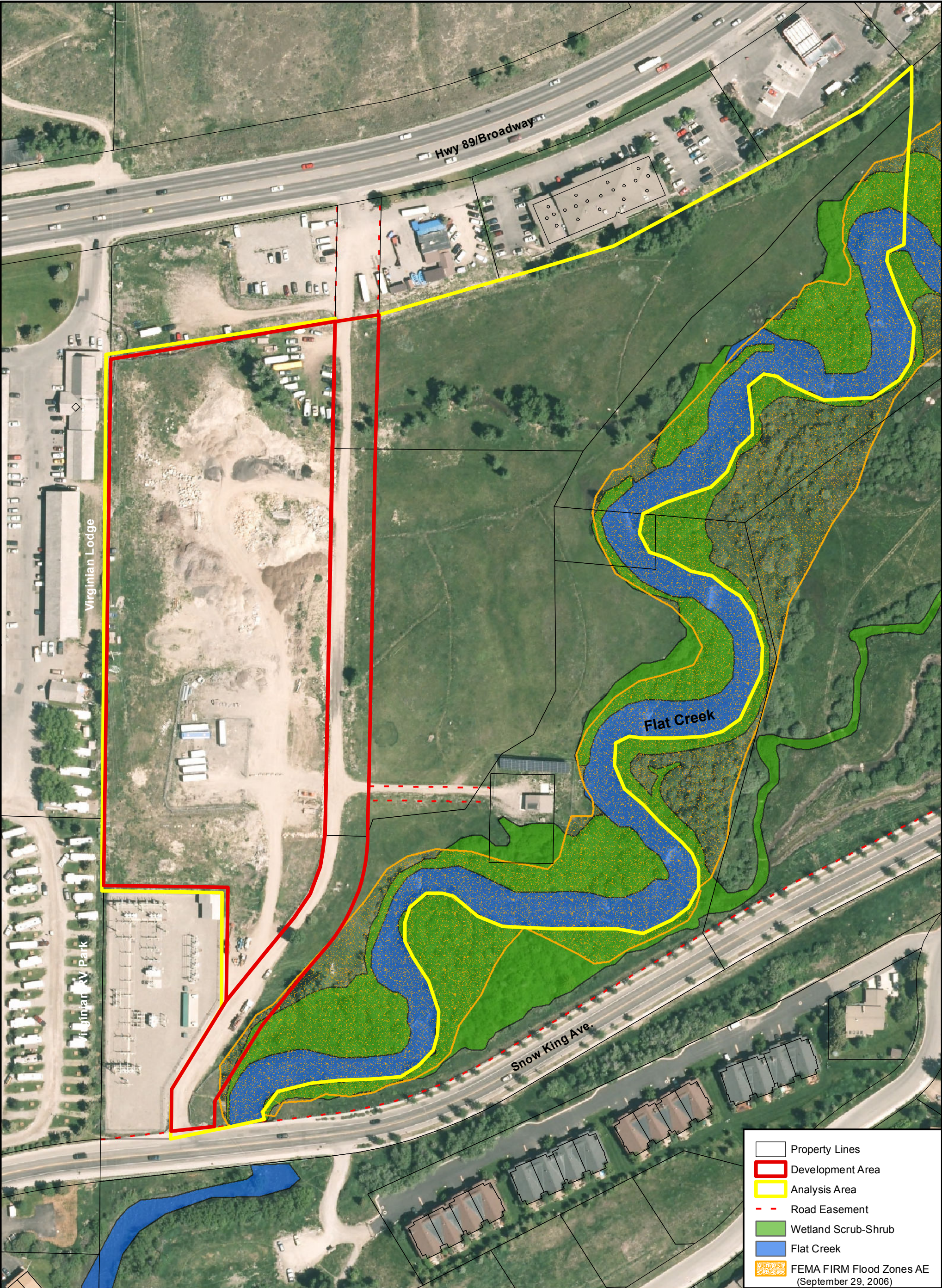


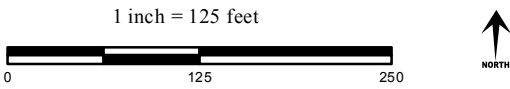
FIGURE 4:

Waterbodies, 10-year  
Floodplains & Wetlands

December 21, 2012

## Environmental Analysis

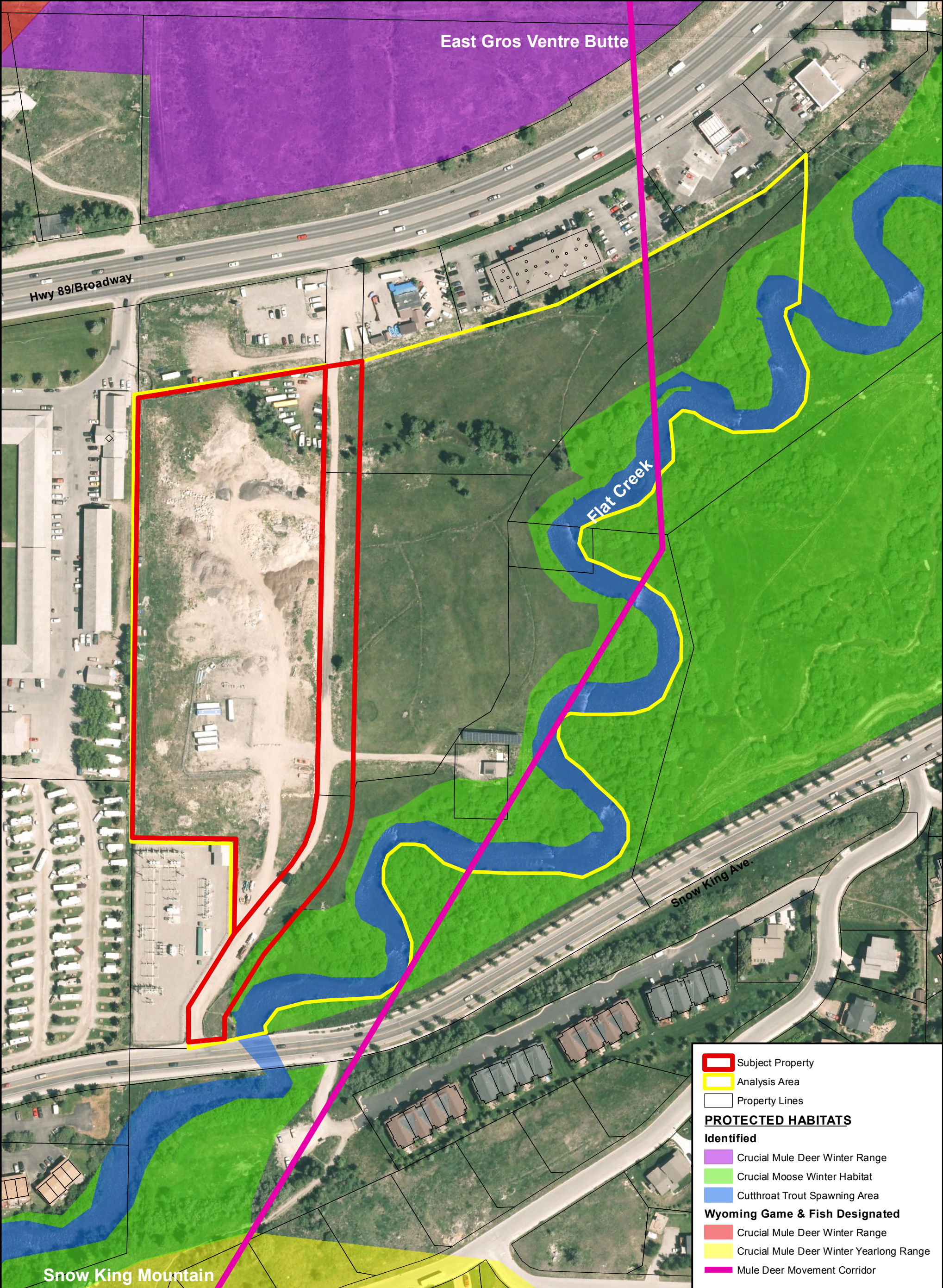
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**FIGURE 5:**

**Habitats Protected by the**

**NRO District**

December 21, 2012

**Environmental Analysis**

Teton County/Town of Jackson

Transit and Maintenance Facility

1 inch = 150 feet

0 125 250



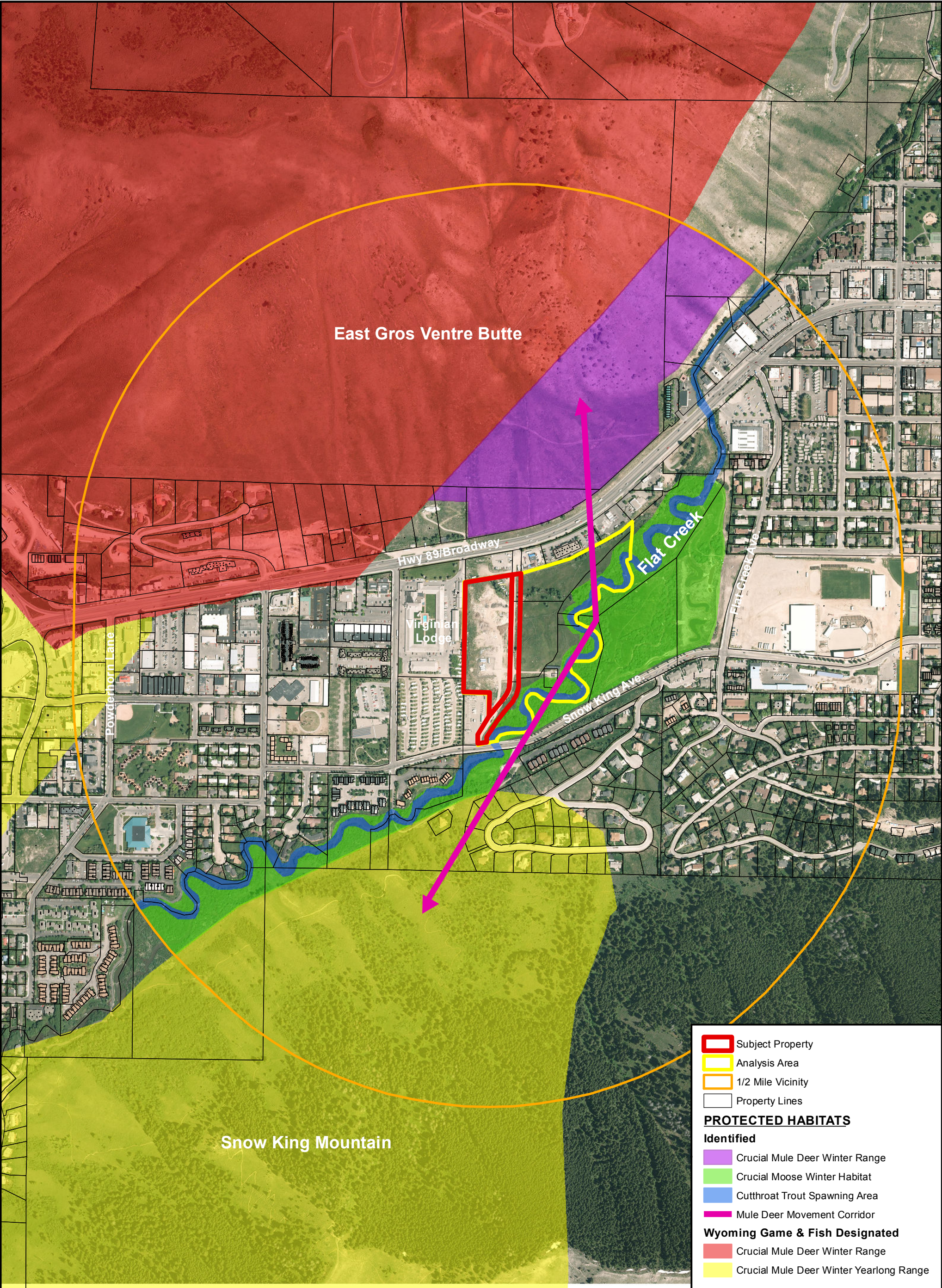
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**FIGURE 6:**  
**1/2 Mile Vicinity**

December 21, 2012

## Environmental Analysis

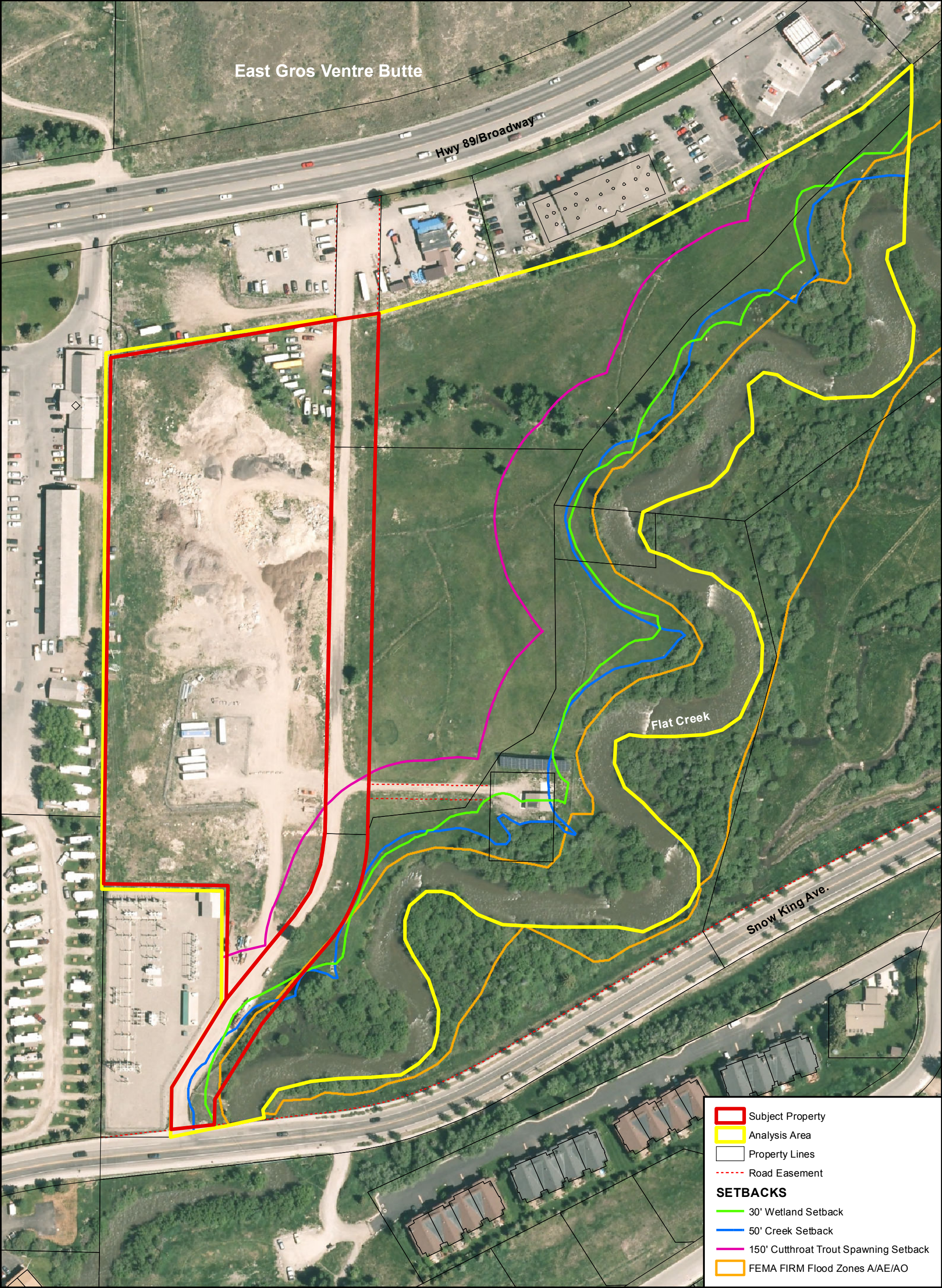
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**FIGURE 7:**

**Protected Resource**

**Setbacks/Buffers**

**Environmental Analysis**

Teton County/Town of Jackson

Transit and Maintenance Facility

1 inch = 125 feet

0 125 250

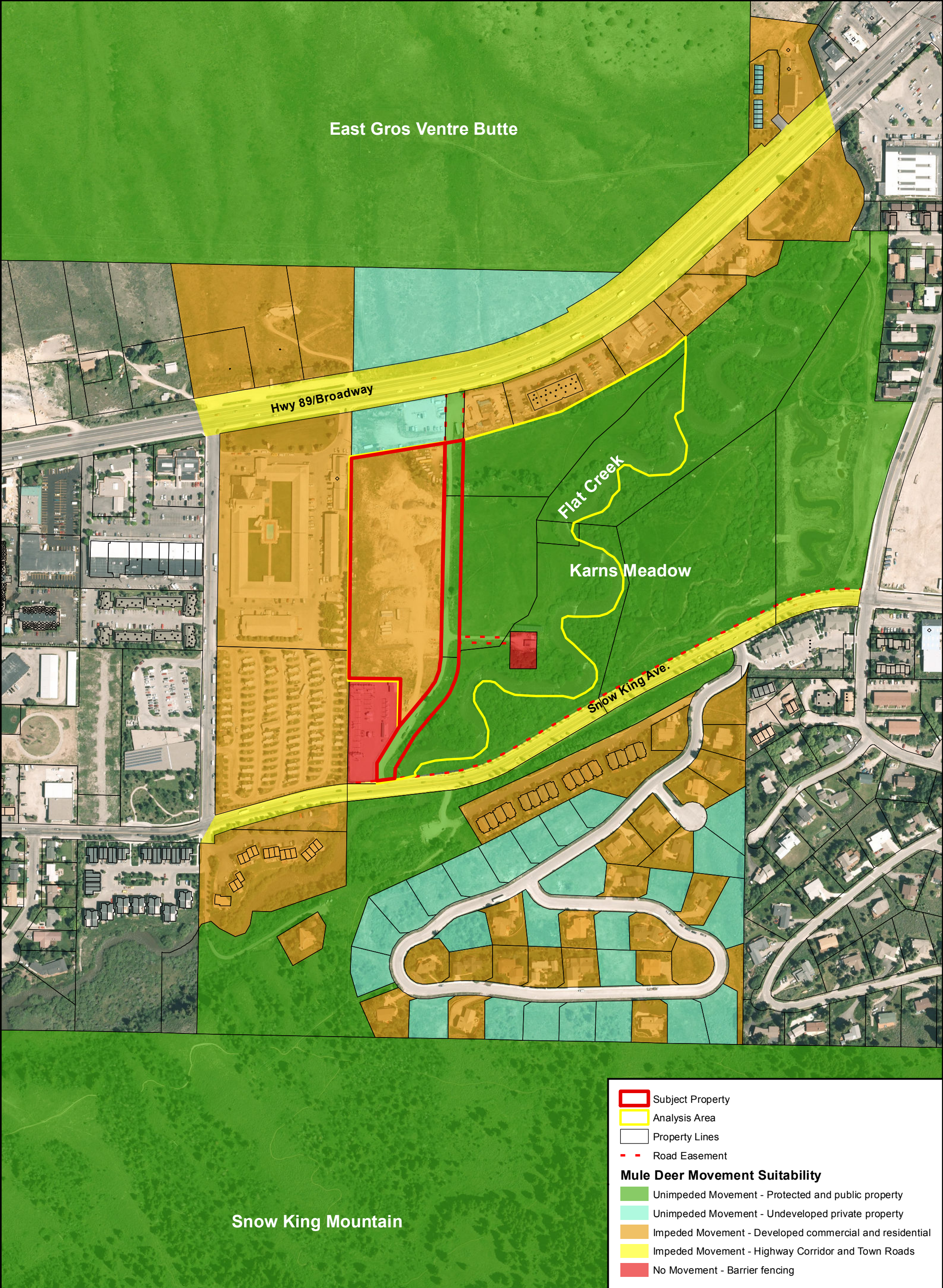
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**FIGURE 8:**

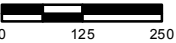
**General Mule Deer Movement Suitability**

December 21, 2012

**Environmental Analysis**

Teton County/Town of Jackson  
Transit and Maintenance Facility

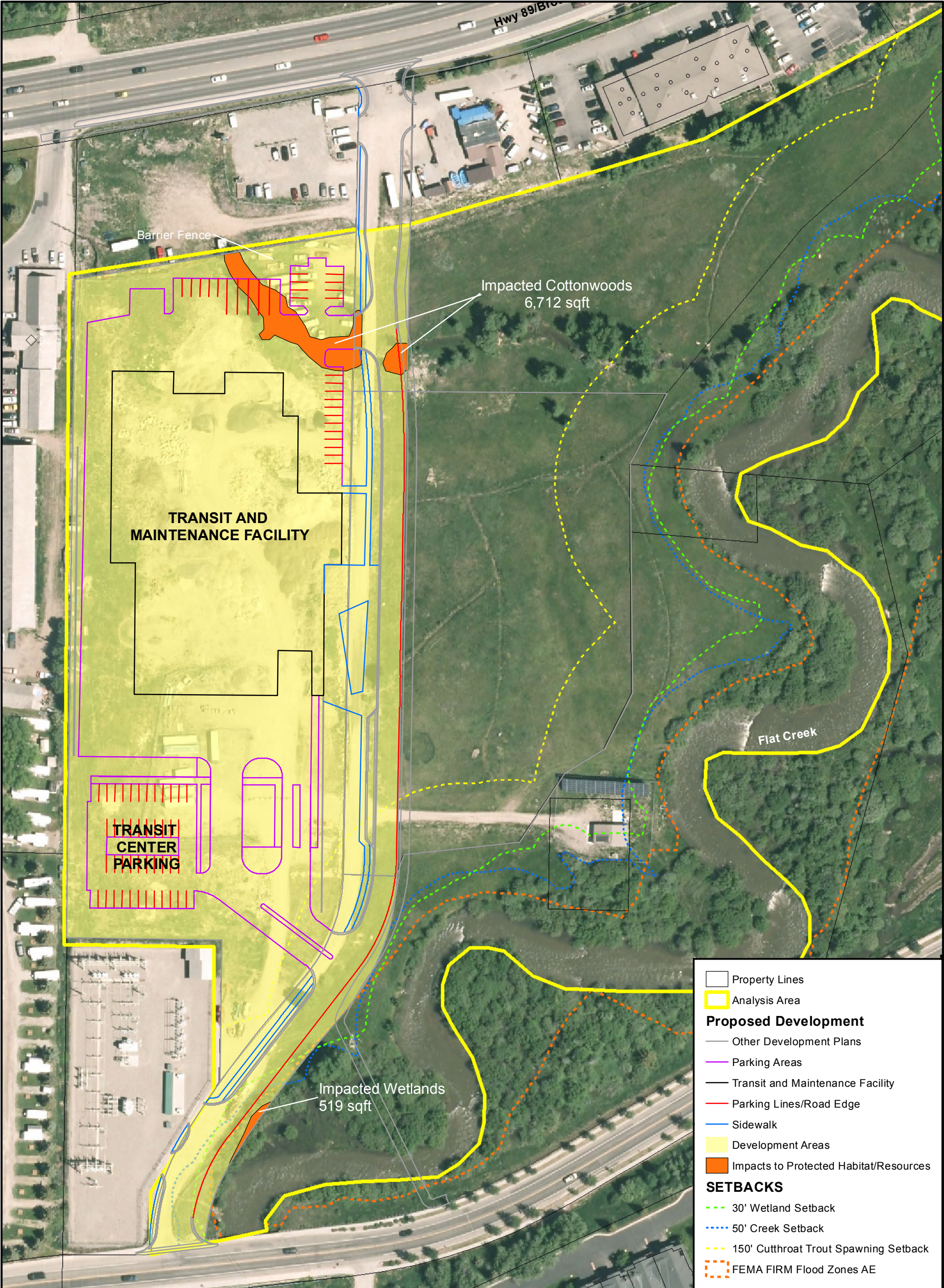
1 inch = 300 feet



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**FIGURE 9:**  
**Proposed Development & Impacts to Protected Habitats & Resources**

December 21, 2012

**Environmental Analysis**  
  
Teton County/Town of Jackson  
Transit and Maintenance Facility

1 in = 100 ft

0100200

N

**ALDER ENVIRONMENTAL,LLC**

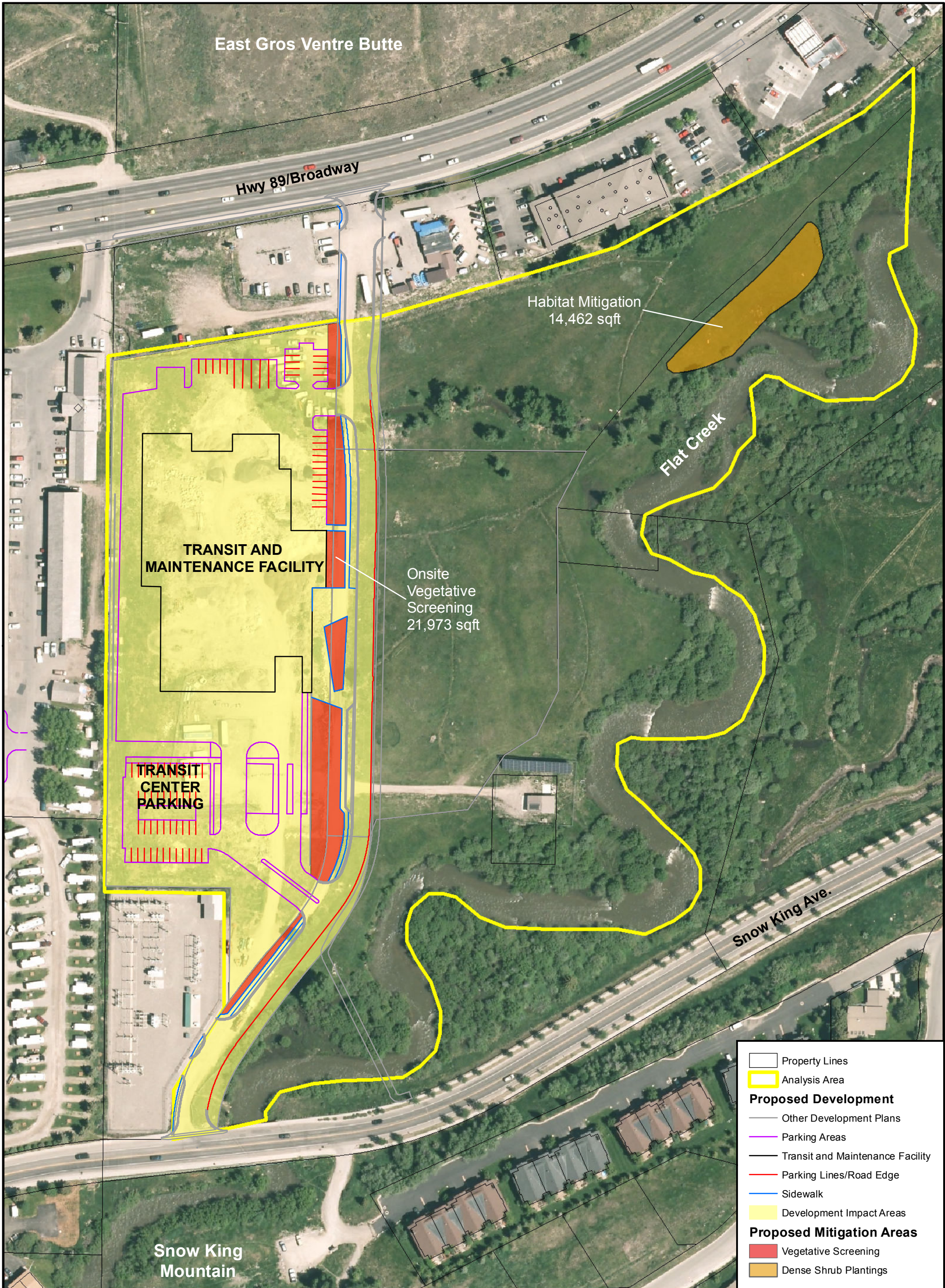
Land • Water • Wetlands Consulting

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## **APPENDIX B - PHOTOS**



**PHOTO 1** – Looking south of subject property at gravel road leading to Snow King Avenue and Snow King Mountain. Scrub-shrub willow community on left is associated with Flat Creek.



**PHOTO 2** – Looking east at Flat Creek scrub –shrub vegetative community near south entrance.





**PHOTO 3** – Looking northeast at grassed meadow between road and riparian corridor. East edge of road easement marked by survey stake with orange flag.



**PHOTO 4** – Looking northeast at Flat Creek. Creek is approximately 3 feet in elevation than upland meadow.



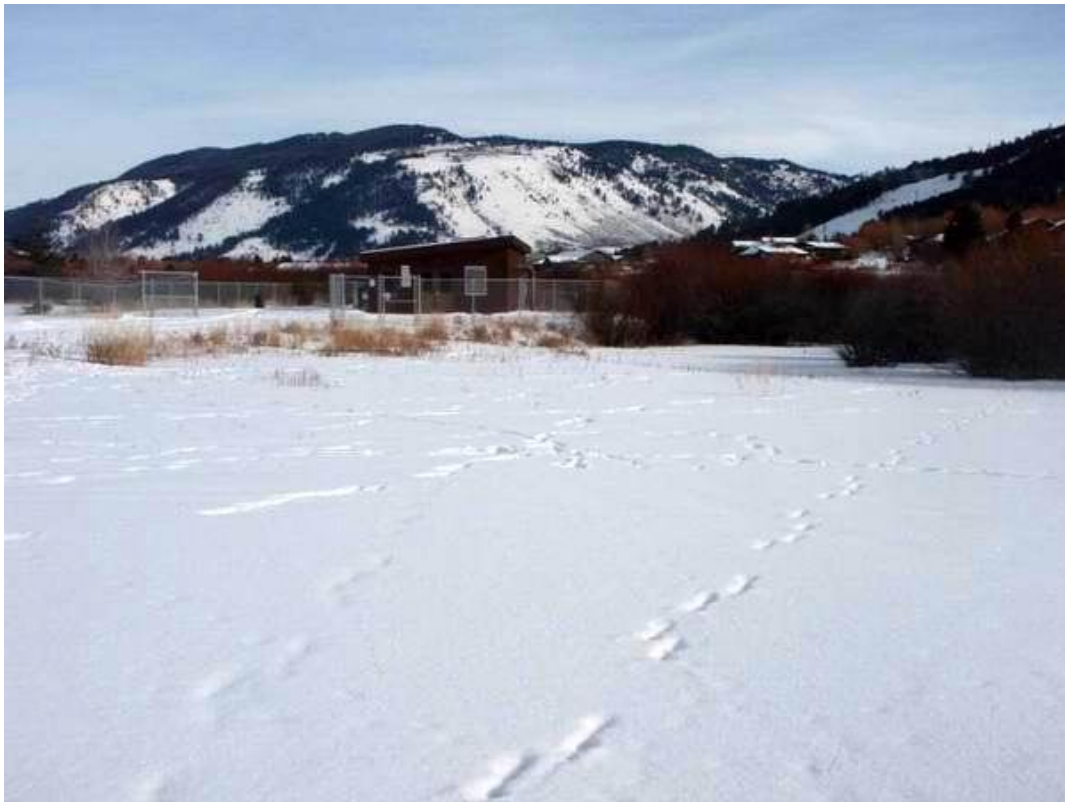


**PHOTO 5** – Looking west at existing gravel road and disturbed area with stockpiles.



**PHOTO 6** – Looking northwest at subject property. Existing gravel road and disturbed area with fenced vehicle impound yard and stockpiles shown.





**PHOTO 7** – Looking east Town well pumphouse and Flat Creek riparian corridor. Tracks likely belong to domestic dog.



**PHOTO 8** – Lone spruce and cottonwood (background) trees north of Town well pumphouse. Heavily browsed by deer and moose.



**PHOTO 9** – Looking north at agricultural meadow and East Gros Ventre butte mule deer crucial winter range.



**PHOTO 10** – Looking southwest at subject property. Disturbed ground in foreground and vehicle impound yard and bus storage in background





**PHOTO 11** – Looking north at subject property. Disturbed ground is being used to stockpile and screen earthen material.



**PHOTO 12** – Looking north at gravel road and road easement that leads to Broadway Avenue/HWY89. Mule deer crucial winter range on butte in background.



**PHOTO 13** – Looking southwest at subject property. Disturbed ground is being used to stockpile and screen earthen material.



**PHOTO 14** – Looking north at road easement with sewer manhole, agricultural meadow, cottonwoods along ditch and scrub-shrub community in background along Flat Creek.





**PHOTO 15** – Looking northwest at subject property. Mature cottonwoods and immature aspen along ditch.



**PHOTO 16** – Looking west at subject property. Disturbed area being used for vehicle and trailer storage. Miscellaneous debris and equipment dumped in ditch.





**PHOTO 17** – Looking west at subject property east property line. Multiple forms of fences create barrier to mule deer and other wildlife movement.



**PHOTO 18** – Looking northeast at subject property. Young aspen tree volunteers growing along ditch indicating dryer conditions than historic ditch use.





**PHOTO 19** – Looking north of subject property at wildlife barrier fencing and mule deer crucial winter range on south face of East Gros Ventre butte.



**PHOTO 20** – Looking north at subject properties north property line. Break in fence shows mule deer tracks migrating to and from East Gros Ventre butte.





**PHOTO 21** – Looking north at mule deer tracks leading to East Gros Ventre butte.



**PHOTO 22** – Looking north at Broadway/HWY89 and lower face of East Gros Ventre butte.



## **APPENDIX C – WETLAND DELINEATION**

PRELIMINARY  
**Wetland Delineation Report**

**Karns Meadow West Road Easement  
Jackson, Wyoming**

NE 1/4, Sec. 33, Twn. 41N, Rng. 116W, 6<sup>th</sup> P.M.  
Teton County, Wyoming

---

In accordance with  
Section 404 of the U.S. Clean Water Act

December 28, 2010

**Prepared for:**  
Town of Jackson, START Bus  
P.O. Box 1687  
Jackson, WY 83001

**Prepared by:**  
Brian Remlinger

**ALDER**  
**WATERSHED CONSULTING LLC**  
Water Resource & Environmental Services

1915 Cinnamon Teal, Jackson, Wyoming 83001  
(307) 690-3625



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## Introduction

A routine wetland delineation was conducted on a study area within the vicinity of the Karns Meadow West Road Easement located in the Town of Jackson, Wyoming. The delineation was performed to ensure compliance with Section 404 of the Federal Clean Water Act and to provide the necessary information to assist the U.S. Army Corps of Engineers (COE) in their determination of wetland presence, boundaries and jurisdiction on the property. The wetland delineation was conducted by Brian Remlinger, principal scientist for Alder Watershed Consulting LLC (Alder), at the request of Jorgensen Associates, P.C., agent for the Town of Jackson.

## Methods

The wetland delineation was conducted in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* and 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. Preliminary data (described below) was reviewed prior to the onsite inspection conducted on October 15, 2010. Eight (8) sample points were selected as necessary to assess various vegetative communities and topographic positions found in the Study Area. Digital photos were taken to document sampling points and vegetative communities. The COE *North American Digital Flora: National Wetland Plant List* website and the 1988 *National List of Plants that Occur in Wetlands: Northwest (Region 9)* were used as references for vegetation wetland indicator status. Maps were prepared using ArcGIS 10 in Wyoming stateplane, North American Datum 1983, west feet projection. A topographic land survey was conducted by Jorgensen Associates, P.C. in November of 2010. Wetland boundary flags and other site characteristics were surveyed at this time. The information from the onsite inspection and land survey was used to prepare the maps included in this report.

## Study Area Location

### Karns Meadow West Road Easement

The wetland delineation was completed on a 7.5 acre study area that contains the Karns Meadow West Road Easement. The Study Area is defined as the Road Easement shown in Map1 plus the area 100 foot from the outside edge of the road easement. The Study Area did not extend past Flat Creek's south and east water's edge. This area will be unaffected by development activities associated with the road easement.

### PLS Location

The Study Area is located within the East ½ of the Southwest 1/4 of Section 33, Township 41 North, Range 116 West, 6th Principal Meridian (Map 1).

### Directions to the Property

From the Jackson, Wyoming, Town Square (corner of Broadway and Cache Streets) head south on Cache St. for 0.4 miles. Turn right at Snow King Ave. and go 0.5 miles. After crossing the Flat Creek bridge, turn right onto a gravel road and into Karns Meadow and the Study Area.



## Preliminary Data Summary

### USGS Quadrangle Map

The *Jackson, Wyo. 1:24,000 scale USGS Quadrangle (1963)* was used to determine the properties legal description, topography and historic location of waterbodies, wet areas and land uses. Map 1 shows the boundaries and location of the Study Area overlaid on the quadrangle map.

### National Wetlands Inventory (NWI) Map

The NWI map, Jackson Quadrangle, was used to plan the onsite inspection and to assist in characterizing wetland classifications. Map 2 shows Palustrine forested, scrub/shrub and emergent wetland classifications within the Study Area. While scattered trees were observed in the Study Area, forested wetlands are not present within the Study Area.

### USDA-Natural Resources Conservation Service Soil Survey

The USDA-NRCS Web Soil Survey was utilized to prepare a custom Soil Resource Report for the project area from the Teton County, Wyoming, Grand Teton National Park Soil Survey (1982). There are two mapped soils located within the Study Area:

Map Unit 29 - *Newfork fine sandy loam*

Map Unit 61 - *Tineman gravelly loam, wet*

These soils generally consist of loam textures and become more gravelly deeper within the soil profile. These soils were formed from glaciofluvial deposits and alluvium material, are located in the mountain valley floodplains and are frequently associated with both uplands and wetlands. The *Newfork fine sandy loam* soil is associated with Flat Creek and its floodplain and is included in the USDA-NRCS 2010 *National Hydric Soils List*. The soil map unit boundaries are shown on Map 3.

### Aerial Photography

The 2007 Teton County 1 foot/pixel aerial photography was used to assist with onsite inspection planning and to delineate the wetland boundary (Maps 2-4). This imagery shows buildings, roads and Flat Creek in relation to vegetation and seasonally flooded areas. Additional aerial photography reviewed includes the following USDA products:

- 1945 Black & White
- 1978 Black & White
- 1984 Black & White
- 1999 Color
- 2001 Color Infrared
- 2005 Color

## Onsite Inspection Summary

### Vegetation

Wetland vegetation on the Study Area was dominated by sedges such as Nebraska and beaked sedge (*Carex nebrascensis* and *c. utriculata*). Grasses such as Kentucky bluegrass (*Poa pratensis*) and reed canary grass (*Phalaris arundinacea*) were also found in the herbaceous stratum. Willow such as Geyer's willow (*Salix geyerani*) and Booth willow (*Salix boothii*), were the dominant shrub species in shrub stratum. Trees included narrow-leaved cottonwood (*Populus angustifolia*) and water birch (*Betula occidentalis*).

Vegetated uplands on the Study Area were typified by historic agricultural meadows whose dominant grasses consisted of Kentucky bluegrass (*Poa pratensis*) and smooth brome (*Bromus inermis*), along with other less common grass species. Common dandelion (*Taraxacum officinale*) was also present in the herbaceous stratum.

### Soil

The two soil types mapped by the USDA-NRCS on the property were identified during the onsite inspection (Map 3). These soils generally consist of loam textures and become more gravelly deeper within the profile. The *Newfork fine sandy loam* soil was observed in sample pits located adjacent to Flat Creek and within the floodplain. Wetland soil indicators included redoximorphic soil features and depleted matrices.

Soil texture, color, and stratigraphy did not differ notably among sample points; the value of the predominant soil hue was 10YR. Upland soils were associated with *Tineman gravelly loam*, wet soil map unit and contained more gravel than the wetland soils. The “wet” modifier in the soil name probably described the historic flood irrigation conditions that were present during the initial NRCS soil survey mapping effort in the area. Wet conditions and wetland soil indicators were not observed in the *Tineman gravelly loam*, wet soil areas.

### Hydrology

The only surface water feature on the Study Area is Flat Creek, a tributary of the Snake River (Maps 2-4). Irrigation ditches present on the Study Area appear to have been abandoned and disconnected from Flat Creek decades earlier. These ditches no longer influence wetland hydrology of the Study Area.

Flat Creek is a natural waterway originating to the northeast. The creek receives water from precipitation runoff, springs, groundwater discharge and through an irrigation diversion from the Gros Ventre River. Peak streamflows occur in late May or June with the melting of mountain snowpack. Flows in Flat Creek from September through April are almost entirely from groundwater and spring sources. Cache Creek and upper Flat Creek provide minimal flows to lower Flat Creek during this time.

Snowmelt and rainfall runoff in the Town of Jackson is intensified by the high percentage of impervious surfaces from roads, buildings, parking lots and other paved paths. Snowmelt in the town is common even in the coldest months of the years. Rainfall and/or rain on snow events in the Town of Jackson may increase flows in Flat Creek approximately 30 –50 cfs for short, intense periods of time.

Hydrology indicators observed at sample points within wetlands included surface water, high water table, saturation, depleted and redoximorphic soil characteristics, geomorphic position, FAC-neutral testing of vegetation, and presence of a nationally listed hydric soil.



## Wetland Boundary

Field data collected during the onsite inspection confirmed that definitional wetlands were present on the Study Area. Map 4 shows the sample points and delineated wetlands on the Study Area.

### Rationale for Wetland Boundary Locations

Hydrologic and topographic gradients associated with Flat Creek and its floodplain dictated the locations of wetland boundaries. Wetland vegetation indicators including sedges and willows aided in the wetland boundary delineation.

### Wetlands Mapping Procedure

A topographic land survey was conducted by Jorgensen Associates, P.C. for the Study Area in November of 2010. Wetland boundaries were flagged at 15-30 foot intervals prior to the survey. The survey documented the flags and those survey points were used to prepare the wetland delineation boundaries shown in Map 4.

### Wetlands Inventory

| <b>Wetlands Inventory - Karns Meadow West Road Easement</b> |                    |              |
|-------------------------------------------------------------|--------------------|--------------|
| <b>WETLANDS</b> (recommended jurisdictional)                | <b>Square Feet</b> | <b>Acres</b> |
| Palustrine Emergent Wetlands (PEMC)                         | 3,991              | 0.09         |
| Palustrine Scrub -Shrub Wetlands (PSSC)                     | 16,695             | 0.38         |
| <b>Wetlands Total</b>                                       | <b>20,686</b>      | <b>0.47</b>  |
| <b>OPEN WATER</b> (recommended "Waters of the US")          |                    |              |
| Flat Creek                                                  | 25,700             | 0.59         |
| <b>Open Water Total</b>                                     | <b>25,700</b>      | <b>0.59</b>  |

## Jurisdictional Recommendation

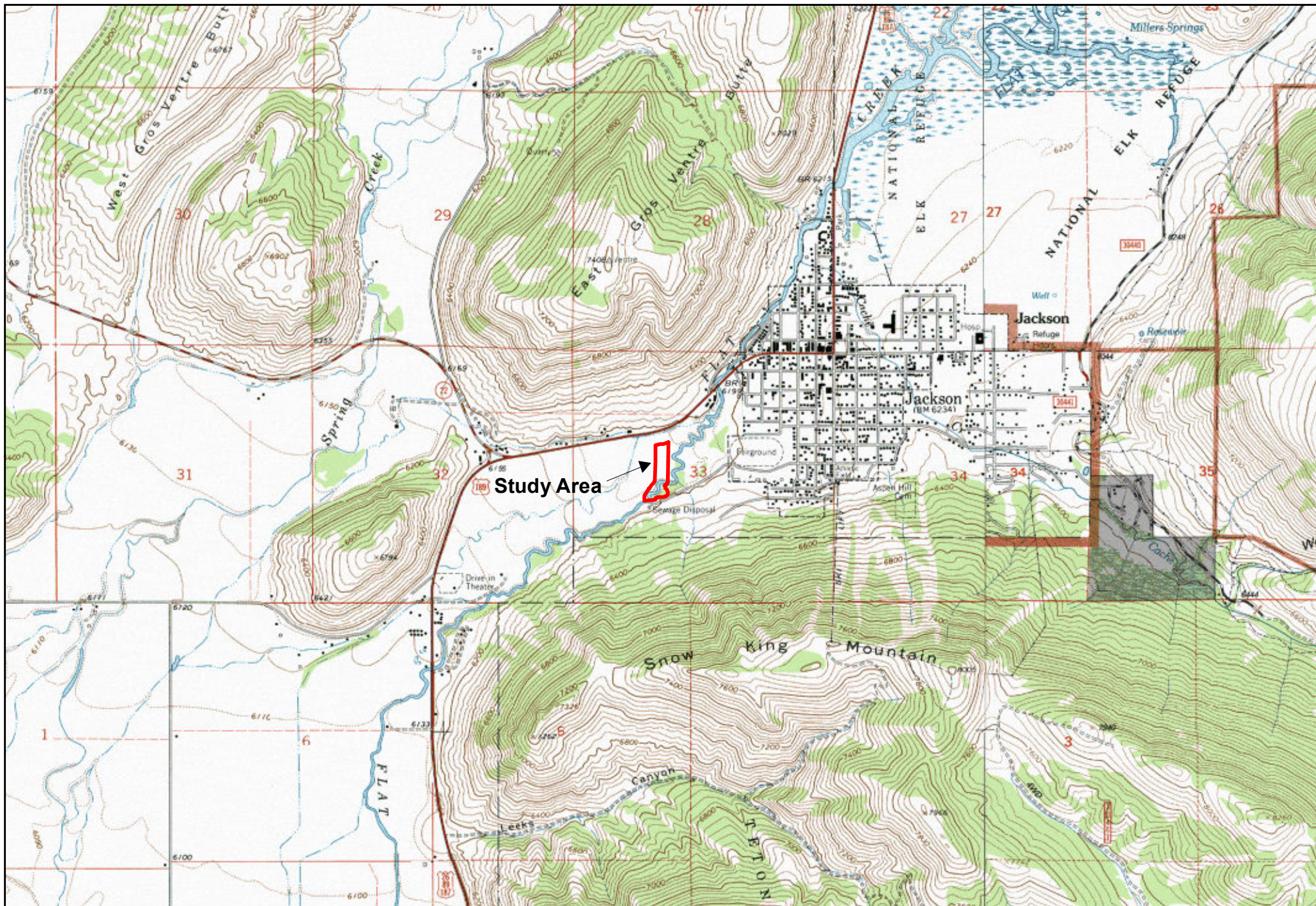
A total of 0.47 acres of definitional wetlands on the Study Area appear to be hydrologically supported by Flat Creek. All wetlands delineated in Map 4 are recommended as jurisdictional.

Approximately 0.59 acres on The Study Area are comprised of open water/active channel of Flat Creek, a tributary of the Snake River. Flat Creek is recommended as a "Waters of the US."

### **Attached Maps**

Map 1 - Project Location & USGS Quadrangle  
Map 2 - National Wetlands Inventory  
Map 3 - Mapped Soils  
Map 4 - Wetlands, Sample Points & Water





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WATERSHED CONSULTING**  
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1915 Cinnamon Teal Road, Jackson, Wyoming 83001

## WETLAND DELINEATION

**Karns Meadow West Road Easement  
Teton County, Wyoming**

## MAP 1

Project Location & USGS Quadrangle

December 23, 2010

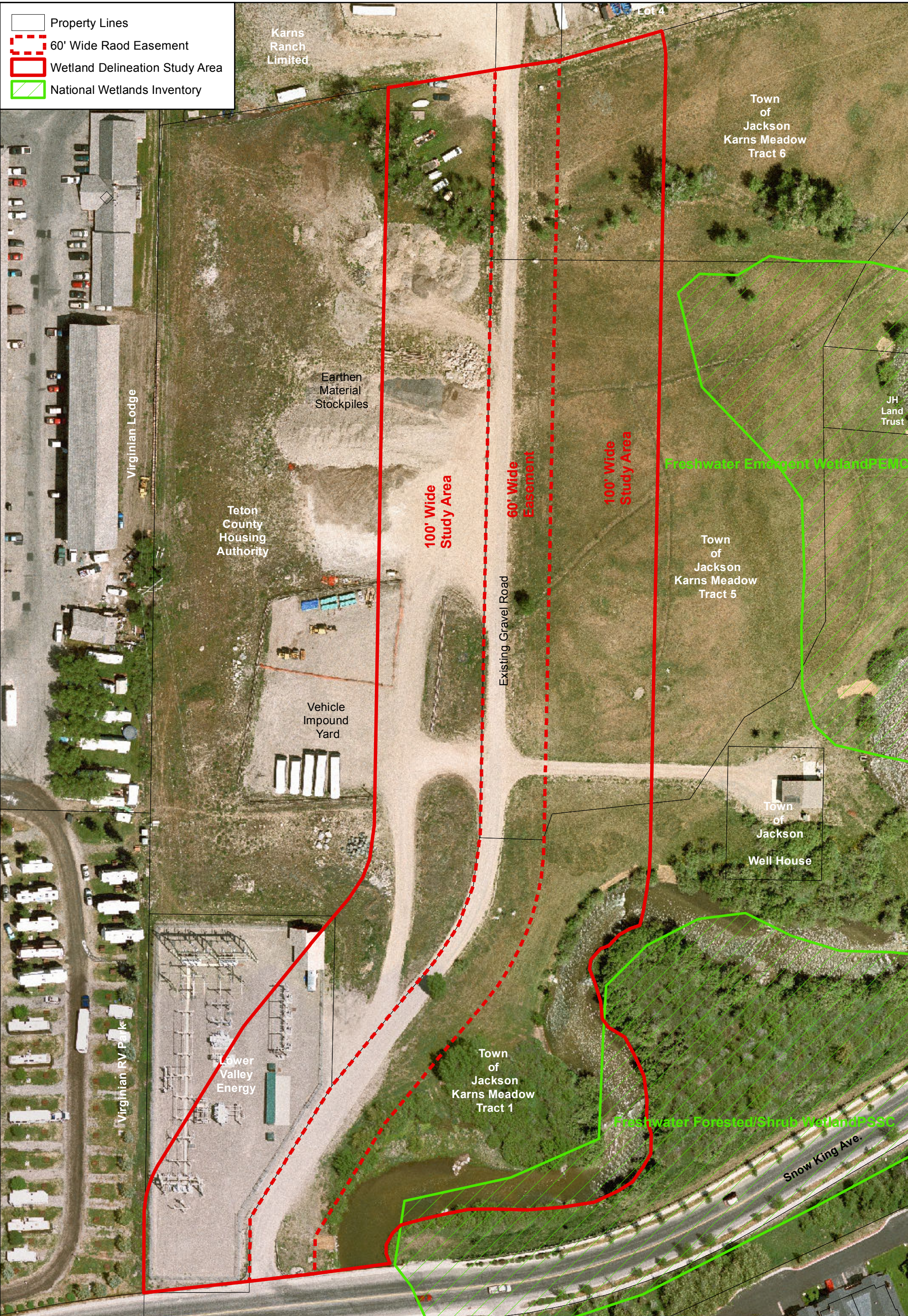
0 625 1,250 2,500  
Feet

1 inch = 2,500 feet

Jackson, Wyo. USGS Quadrangle  
Year 1963, 1:24,000 scale

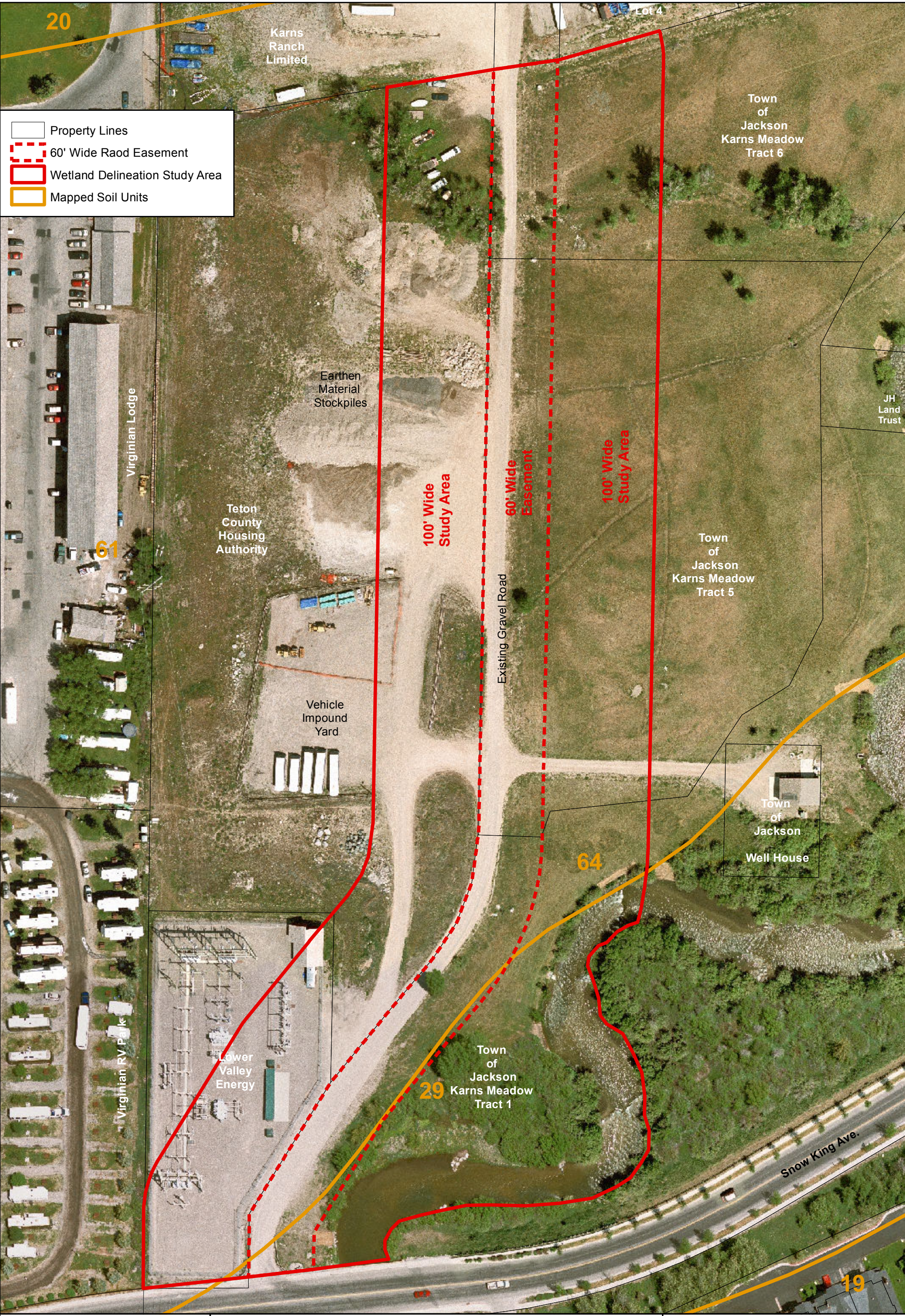




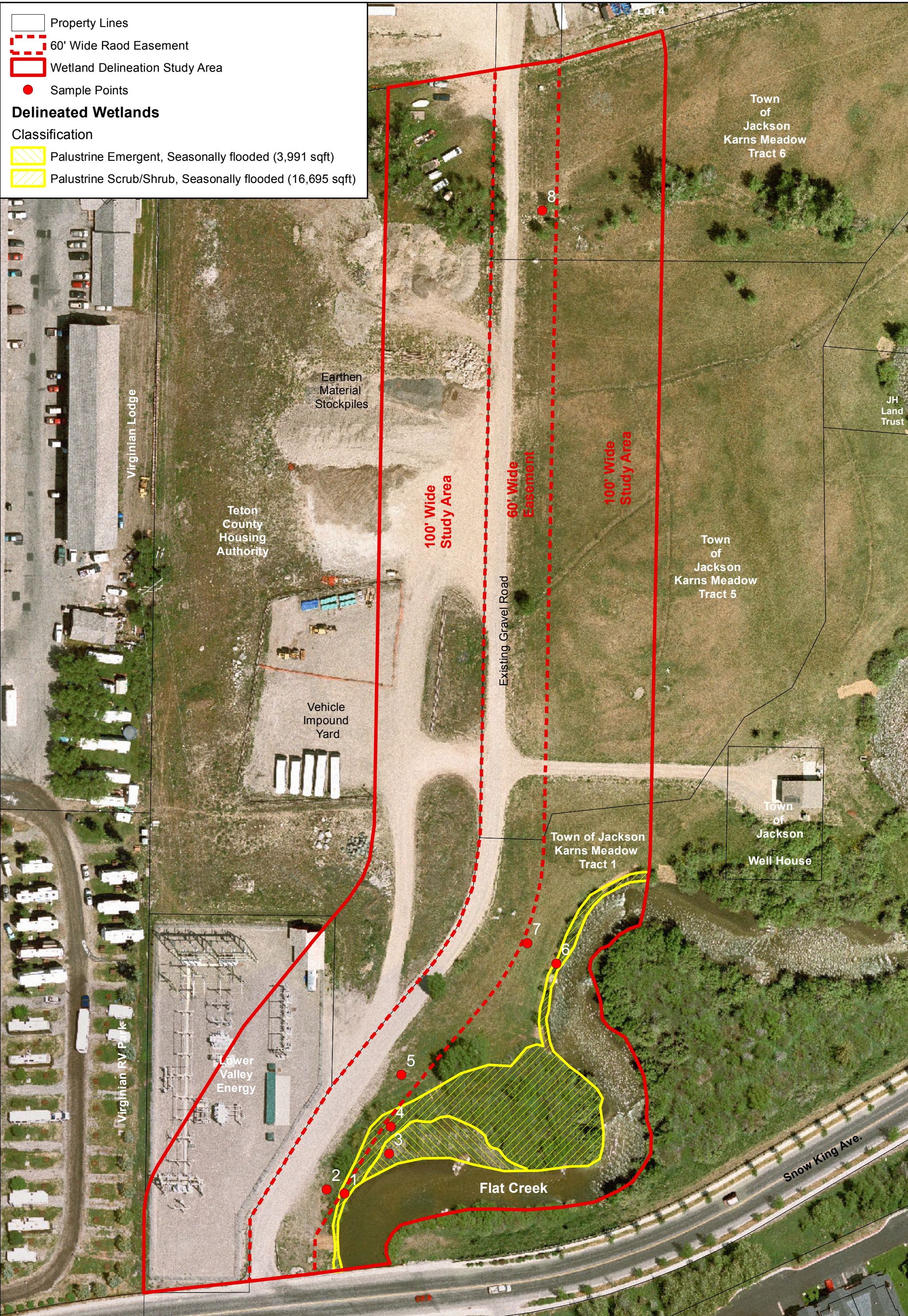


- Property Lines
- 60' Wide Road Easement
- Wetland Delineation Study Area
- National Wetlands Inventory











**Attached Data Forms**

SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP1  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 5  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'17.882"N Long: 110°46'36.201"W Datum: NAD 83  
 Soil Map Unit Name: 29—Newfork fine sandy loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                       |                                                                     |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present?            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |                                                                     |
| Wetland Hydrology Present?      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |                                                                     |
| Remarks:                        |                                                                     |                                       |                                                                     |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: 30'x30')          | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                                                       |                  |
|--------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. <u>Betula occidentalis</u>              | <u>20</u>        | <u>yes</u>        | <u>FACW</u>      | Number of Dominant Species That Are OBL, FACW, or FAC:                                                                          | <u>5</u> (A)     |
| 2. <u>Populus angustifolia</u>             | <u>20</u>        | <u>yes</u>        | <u>FACW</u>      | Total Number of Dominant Species Across All Strata:                                                                             | <u>5</u> (B)     |
| 3. _____                                   | _____            | _____             | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC:                                                                         | <u>100</u> (A/B) |
| 4. _____                                   | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = <u>20</u> , 20% = <u>8</u>           | <u>40</u>        | = Total Cover     |                  |                                                                                                                                 |                  |
| Sapling/Shrub Stratum (Plot size: 15'x15') |                  |                   |                  | Prevalence Index worksheet:                                                                                                     |                  |
| 1. <u>Salix boothii</u>                    | <u>60</u>        | <u>yes</u>        | <u>OBL</u>       | Total % Cover of:                                                                                                               | Multiply by:     |
| 2. <u>Salix geverani</u>                   | <u>20</u>        | <u>yes</u>        | <u>FACW</u>      | OBL species _____                                                                                                               | x1 = _____       |
| 3. _____                                   | _____            | _____             | _____            | FACW species _____                                                                                                              | x2 = _____       |
| 4. _____                                   | _____            | _____             | _____            | FAC species _____                                                                                                               | x3 = _____       |
| 5. _____                                   | _____            | _____             | _____            | FACU species _____                                                                                                              | x4 = _____       |
| 50% = <u>40</u> , 20% = <u>16</u>          | <u>80</u>        | = Total Cover     |                  | UPL species _____                                                                                                               | x5 = _____       |
| Herb Stratum (Plot size: 5'x5')            |                  |                   |                  | Column Totals: _____ (A)                                                                                                        | _____ (B)        |
| 1. <u>Phalaris arundinacea</u>             | <u>40</u>        | <u>yes</u>        | <u>FACW</u>      | Prevalence Index = B/A = _____                                                                                                  |                  |
| 2. _____                                   | _____            | _____             | _____            | Hydrophytic Vegetation Indicators:                                                                                              |                  |
| 3. _____                                   | _____            | _____             | _____            | <input checked="" type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation                                                   |                  |
| 4. _____                                   | _____            | _____             | _____            | <input checked="" type="checkbox"/> 2 - Dominance Test is >50%                                                                  |                  |
| 5. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>                                                              |                  |
| 6. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                  |
| 7. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>                                                           |                  |
| 8. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                              |                  |
| 9. _____                                   | _____            | _____             | _____            | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                  |                  |
| 10. _____                                  | _____            | _____             | _____            |                                                                                                                                 |                  |
| 11. _____                                  | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = <u>20</u> , 20% = <u>8</u>           | <u>40</u>        | = Total Cover     |                  |                                                                                                                                 |                  |
| Woody Vine Stratum (Plot size: _____)      |                  |                   |                  | Hydrophytic Vegetation Present?                                                                                                 |                  |
| 1. _____                                   | _____            | _____             | _____            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                             |                  |
| 2. _____                                   | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = _____, 20% = _____                   | _____            | = Total Cover     |                  |                                                                                                                                 |                  |
| % Bare Ground in Herb Stratum <u>20</u>    |                  |                   |                  |                                                                                                                                 |                  |

Remarks:



**SOIL**Sampling Point: SP1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix            |               | Redox Features    |               |                   |                  | Texture       | Remarks       |
|-------------------|-------------------|---------------|-------------------|---------------|-------------------|------------------|---------------|---------------|
|                   | Color (moist)     | %             | Color (moist)     | %             | Type <sup>1</sup> | Loc <sup>2</sup> |               |               |
| <u>0-6</u>        | <u>10YR 2/1</u>   | <u>60</u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>CBSiL</u>  | <u>      </u> |
| <u>6-12</u>       | <u>2.5Y 4.5/1</u> | <u>60</u>     | <u>7.55YR 5/6</u> | <u>3</u>      | <u>C</u>          | <u>PL/M</u>      | <u>GRSL</u>   | <u>      </u> |
| <u>      </u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3)                   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type:       Depth (inches):       **Hydric Soils Present?**

Yes

☒

No

☐

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                    |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )   |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches):       Water Table Present? Yes ☐ No ☒ Depth (inches):       Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 1**Wetland Hydrology Present?**

Yes

☒

No

☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Directly adjacent to Flat Creek

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP2  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 1-2  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'17.922"N Long: 110°46'36.391"W Datum: NAD 83  
 Soil Map Unit Name: 61 - Tineman gravelly loam, wet NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                                                                                                     |
| Wetland Hydrology Present?      | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                                                                                                     |
| Remarks:                        |                                                                     |                                                                                                                     |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: _____)                 | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
|-------------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|-------------------|------------|--------------------|------------|-------------------|------------|--------------------|------------|-------------------|------------|--------------------------|-----------|--------------------------------|--|
| 1. _____                                        | _____            | _____             | _____            | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 2. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 3. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 4. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 50% = _____, 20% = _____                        | _____            | = Total Cover     |                  | <b>Prevalence Index worksheet:</b><br><table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>                                                  | Total % Cover of: | Multiply by: | OBL species _____ | x1 = _____ | FACW species _____ | x2 = _____ | FAC species _____ | x3 = _____ | FACU species _____ | x4 = _____ | UPL species _____ | x5 = _____ | Column Totals: _____ (A) | _____ (B) | Prevalence Index = B/A = _____ |  |
| Total % Cover of:                               | Multiply by:     |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| OBL species _____                               | x1 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| FACW species _____                              | x2 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| FAC species _____                               | x3 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| FACU species _____                              | x4 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| UPL species _____                               | x5 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| Column Totals: _____ (A)                        | _____ (B)        |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| Prevalence Index = B/A = _____                  |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| <u>Sapling/Shrub Stratum</u> (Plot size: _____) |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 1. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 2. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 3. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 4. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 5. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 50% = _____, 20% = _____                        | _____            | = Total Cover     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| <u>Herb Stratum</u> (Plot size: 5'x5')          |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 1. <u>Bromus inermis</u>                        | <u>40</u>        | <u>yes</u>        | <u>FAC</u>       | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup><br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 2. <u>Poa pratensis</u>                         | <u>10</u>        | <u>yes</u>        | <u>FAC</u>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 3. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 4. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 5. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 6. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 7. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 8. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 9. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 10. _____                                       | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 11. _____                                       | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 50% = <u>25</u> , 20% = <u>10</u>               | <u>50</u>        | = Total Cover     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| <u>Woody Vine Stratum</u> (Plot size: _____)    |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 1. _____                                        | _____            | _____             | _____            | <b>Hydrophytic Vegetation Present?</b><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 2. _____                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 50% = _____, 20% = _____                        | _____            | = Total Cover     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| % Bare Ground in Herb Stratum <u>30</u>         |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |

Remarks:



**SOIL**Sampling Point: SP2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |           | Redox Features |       |                   |                  | Texture      | Remarks |
|-------------------|-----------------|-----------|----------------|-------|-------------------|------------------|--------------|---------|
|                   | Color (moist)   | %         | Color (moist)  | %     | Type <sup>1</sup> | Loc <sup>2</sup> |              |         |
| <u>0-12</u>       | <u>10YR 3/2</u> | <u>50</u> | _____          | _____ | _____             | _____            | <u>GRSiS</u> | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____        | _____   |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                              |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soils Present?**

Yes

☐

No

☒

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                    |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )   |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_**Wetland Hydrology Present?**

Yes

☐

No

☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP3  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'18.26"N Long: 110°46'35.595"W Datum: NAD 83  
 Soil Map Unit Name: 29—Newfork fine sandy loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                       |                                                                     |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present?            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |                                                                     |
| Wetland Hydrology Present?      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |                                                                     |
| Remarks:                        |                                                                     |                                       |                                                                     |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: _____)                    | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                                                       |                  |
|----------------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. _____                                           | _____            | _____             | _____            | Number of Dominant Species That Are OBL, FACW, or FAC:                                                                          | <u>5</u> (A)     |
| 2. _____                                           | _____            | _____             | _____            | Total Number of Dominant Species Across All Strata:                                                                             | <u>5</u> (B)     |
| 3. _____                                           | _____            | _____             | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC:                                                                         | <u>100</u> (A/B) |
| 4. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = _____, 20% = _____                           | _____            | = Total Cover     |                  |                                                                                                                                 |                  |
| Sapling/Shrub Stratum (Plot size: <u>15'x15'</u> ) |                  |                   |                  | Prevalence Index worksheet:                                                                                                     |                  |
| 1. <u>Salix boothii</u>                            | <u>10</u>        | <u>yes</u>        | <u>OBL</u>       | Total % Cover of:                                                                                                               | Multiply by:     |
| 2. <u>Populus angustifolia</u>                     | <u>10</u>        | <u>yes</u>        | <u>FACW</u>      | OBL species _____                                                                                                               | x1 = _____       |
| 3. _____                                           | _____            | _____             | _____            | FACW species _____                                                                                                              | x2 = _____       |
| 4. _____                                           | _____            | _____             | _____            | FAC species _____                                                                                                               | x3 = _____       |
| 5. _____                                           | _____            | _____             | _____            | FACU species _____                                                                                                              | x4 = _____       |
| 50% = <u>10</u> , 20% = <u>4</u>                   | <u>20</u>        | = Total Cover     |                  | UPL species _____                                                                                                               | x5 = _____       |
| Herb Stratum (Plot size: <u>5'x5'</u> )            |                  |                   |                  | Column Totals: _____ (A)                                                                                                        | _____ (B)        |
| 1. <u>Carex utriculata</u>                         | <u>40</u>        | <u>yes</u>        | <u>OBL</u>       | Prevalence Index = B/A = _____                                                                                                  |                  |
| 2. <u>Carex nebrascensis</u>                       | <u>20</u>        | <u>yes</u>        | <u>OBL</u>       |                                                                                                                                 |                  |
| 3. <u>Phalaris arundinacea</u>                     | <u>20</u>        | <u>yes</u>        | <u>FACW</u>      |                                                                                                                                 |                  |
| 4. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 5. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 6. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 7. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 8. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 9. _____                                           | _____            | _____             | _____            |                                                                                                                                 |                  |
| 10. _____                                          | _____            | _____             | _____            |                                                                                                                                 |                  |
| 11. _____                                          | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = <u>40</u> , 20% = <u>16</u>                  | <u>80</u>        | = Total Cover     |                  |                                                                                                                                 |                  |
| Woody Vine Stratum (Plot size: _____)              |                  |                   |                  | Hydrophytic Vegetation Indicators:                                                                                              |                  |
| 1. _____                                           | _____            | _____             | _____            | <input checked="" type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation                                                   |                  |
| 2. _____                                           | _____            | _____             | _____            | <input checked="" type="checkbox"/> 2 - Dominance Test is >50%                                                                  |                  |
| 50% = _____, 20% = _____                           | _____            | = Total Cover     |                  | <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>                                                              |                  |
| % Bare Ground in Herb Stratum <u>0</u>             |                  |                   |                  | <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                  |
| Remarks:                                           |                  |                   |                  | <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>                                                           |                  |
|                                                    |                  |                   |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                              |                  |
|                                                    |                  |                   |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                  |                  |
|                                                    |                  |                   |                  | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                             |                  |



**SOIL**Sampling Point: SP3**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |               | Redox Features    |               |                   |                  | Texture       | Remarks       |
|-------------------|-----------------|---------------|-------------------|---------------|-------------------|------------------|---------------|---------------|
|                   | Color (moist)   | %             | Color (moist)     | %             | Type <sup>1</sup> | Loc <sup>2</sup> |               |               |
| <u>0-5</u>        | <u>10YR 3/2</u> | <u>90</u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>CL</u>     | <u>      </u> |
| <u>5-12</u>       | <u>10YR 3/2</u> | <u>60</u>     | <u>7.5YR 5/6</u>  | <u>5</u>      | <u>C</u>          | <u>PL/M</u>      | <u>CL</u>     | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>2.5Y 4.5/1</u> | <u>20</u>     | <u>D</u>          | <u>M</u>         | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3)                   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type:       Depth (inches):       **Hydric Soils Present?****Yes**☒**No**☐

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                    |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input checked="" type="checkbox"/> Dry-Season Water Table (C2)    |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )   |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches):       Water Table Present? Yes ☐ No ☒ Depth (inches):       Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):       **Wetland Hydrology Present?****Yes**☒**No**☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Directly adjacent to Flat Creek, 10 year floodplain

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP4  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 1-2  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'18.511"N Long: 110°46'35.581"W Datum: NAD 83  
 Soil Map Unit Name: 29—Newfork fine sandy loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                       |                                                                     |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Hydric Soil Present?            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |                                                                     |
| Wetland Hydrology Present?      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                       |                                                                     |
| Remarks:                        |                                                                     |                                       |                                                                     |

## VEGETATION – Use scientific names of plants

| <u>Tree Stratum</u> (Plot size: _____)                    | <u>Absolute % Cover</u> | <u>Dominant Species?</u> | <u>Indicator Status</u> | <b>Dominance Test Worksheet:</b>                                                                                                |                     |
|-----------------------------------------------------------|-------------------------|--------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1. _____                                                  | _____                   | _____                    | _____                   | Number of Dominant Species That Are OBL, FACW, or FAC:                                                                          | <u>4</u> (A)        |
| 2. _____                                                  | _____                   | _____                    | _____                   | Total Number of Dominant Species Across All Strata:                                                                             | <u>4</u> (B)        |
| 3. _____                                                  | _____                   | _____                    | _____                   | Percent of Dominant Species That Are OBL, FACW, or FAC:                                                                         | <u>100</u> (A/B)    |
| 4. _____                                                  | _____                   | _____                    | _____                   |                                                                                                                                 |                     |
| 50% = _____, 20% = _____                                  | _____                   | = Total Cover            |                         |                                                                                                                                 |                     |
| <u>Sapling/Shrub Stratum</u> (Plot size: <u>15'x15'</u> ) |                         |                          |                         | <b>Prevalence Index worksheet:</b>                                                                                              |                     |
| 1. <u>Salix geyerani</u>                                  | <u>40</u>               | <u>yes</u>               | <u>FACW</u>             | <u>Total % Cover of:</u>                                                                                                        | <u>Multiply by:</u> |
| 2. <u>Salix boothii</u>                                   | <u>30</u>               | <u>yes</u>               | <u>OBL</u>              | OBL species _____                                                                                                               | x1 = _____          |
| 3. <u>Salix exigua</u>                                    | <u>20</u>               | <u>yes</u>               | <u>OBL</u>              | FACW species _____                                                                                                              | x2 = _____          |
| 4. _____                                                  | _____                   | _____                    | _____                   | FAC species _____                                                                                                               | x3 = _____          |
| 5. _____                                                  | _____                   | _____                    | _____                   | FACU species _____                                                                                                              | x4 = _____          |
| 50% = <u>45</u> , 20% = <u>18</u>                         | <u>90</u>               | = Total Cover            |                         | UPL species _____                                                                                                               | x5 = _____          |
| <u>Herb Stratum</u> (Plot size: <u>5'x5'</u> )            |                         |                          |                         | Column Totals: _____ (A)                                                                                                        | _____ (B)           |
| 1. _____                                                  | _____                   | _____                    | _____                   | Prevalence Index = B/A = _____                                                                                                  |                     |
| 2. _____                                                  | _____                   | _____                    | _____                   | <b>Hydrophytic Vegetation Indicators:</b>                                                                                       |                     |
| 3. _____                                                  | _____                   | _____                    | _____                   | <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation                                                              |                     |
| 4. _____                                                  | _____                   | _____                    | _____                   | <input checked="" type="checkbox"/> 2 - Dominance Test is >50%                                                                  |                     |
| 5. _____                                                  | _____                   | _____                    | _____                   | <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>                                                              |                     |
| 6. _____                                                  | _____                   | _____                    | _____                   | <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                     |
| 7. _____                                                  | _____                   | _____                    | _____                   | <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>                                                           |                     |
| 8. _____                                                  | _____                   | _____                    | _____                   | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                              |                     |
| 9. _____                                                  | _____                   | _____                    | _____                   | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                  |                     |
| 10. _____                                                 | _____                   | _____                    | _____                   |                                                                                                                                 |                     |
| 11. _____                                                 | _____                   | _____                    | _____                   |                                                                                                                                 |                     |
| 50% = _____, 20% = _____                                  | _____                   | = Total Cover            |                         |                                                                                                                                 |                     |
| <u>Woody Vine Stratum</u> (Plot size: <u>5'x5'</u> )      |                         |                          |                         | <b>Hydrophytic Vegetation Present?</b>                                                                                          |                     |
| 1. <u>Clematis ligusticifolia</u>                         | <u>10</u>               | <u>yes</u>               | <u>FAC</u>              | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                             |                     |
| 2. _____                                                  | _____                   | _____                    | _____                   |                                                                                                                                 |                     |
| 50% = <u>5</u> , 20% = <u>2</u>                           | <u>10</u>               | = Total Cover            |                         |                                                                                                                                 |                     |
| % Bare Ground in Herb Stratum <u>90</u>                   |                         |                          |                         |                                                                                                                                 |                     |

Remarks:



**SOIL**Sampling Point: SP4**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |               | Redox Features    |               |                   |                  | Texture       | Remarks       |
|-------------------|-----------------|---------------|-------------------|---------------|-------------------|------------------|---------------|---------------|
|                   | Color (moist)   | %             | Color (moist)     | %             | Type <sup>1</sup> | Loc <sup>2</sup> |               |               |
| <u>0-3</u>        | <u>10YR 3/2</u> | <u>60</u>     | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>CL</u>     | <u>      </u> |
| <u>3-10</u>       | <u>10YR 3/2</u> | <u>50</u>     | <u>7.5YR 5/6</u>  | <u>5</u>      | <u>C</u>          | <u>PL</u>        | <u>VGRCL</u>  | <u>      </u> |
| <u>1-14</u>       | <u>10YR 3/1</u> | <u>50</u>     | <u>2.5Y 4.5/1</u> | <u>20</u>     | <u>D</u>          | <u>M</u>         | <u>GRCL</u>   | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>     | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3)                   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type:       Depth (inches):       **Hydric Soils Present?**

Yes

☒

No

☐

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                               |
|-------------------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                            |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                                |
| <input type="checkbox"/> Drainage Patterns (B10)                              |
| <input type="checkbox"/> Dry-Season Water Table (C2)                          |
| <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                                |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )              |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                            |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches):       Water Table Present? Yes ☐ No ☒ Depth (inches):       Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches):       **Wetland Hydrology Present?**

Yes

☒

No

☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Directly adjacent to Flat Creek, floodplain

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP5  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 0-1  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'18.994"N Long: 110°46'35.453"W Datum: NAD 83  
 Soil Map Unit Name: 61 - Tineman gravelly loam, wet NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                       |                                                                     |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                       |                                                                     |
| Wetland Hydrology Present?      | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                       |                                                                     |
| Remarks:                        |                                                                     |                                       |                                                                     |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: _____)            | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                                                       |                  |
|--------------------------------------------|------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. _____                                   | _____            | _____             | _____            | Number of Dominant Species That Are OBL, FACW, or FAC:                                                                          | <u>2</u> (A)     |
| 2. _____                                   | _____            | _____             | _____            | Total Number of Dominant Species Across All Strata:                                                                             | <u>2</u> (B)     |
| 3. _____                                   | _____            | _____             | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC:                                                                         | <u>100</u> (A/B) |
| 4. _____                                   | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = _____, 20% = _____                   | _____            | = Total Cover     |                  |                                                                                                                                 |                  |
| Sapling/Shrub Stratum (Plot size: 15'x15') |                  |                   |                  | Prevalence Index worksheet:                                                                                                     |                  |
| 1. _____                                   | _____            | _____             | _____            | Total % Cover of:                                                                                                               | Multiply by:     |
| 2. _____                                   | _____            | _____             | _____            | OBL species _____                                                                                                               | x1 = _____       |
| 3. _____                                   | _____            | _____             | _____            | FACW species _____                                                                                                              | x2 = _____       |
| 4. _____                                   | _____            | _____             | _____            | FAC species _____                                                                                                               | x3 = _____       |
| 5. _____                                   | _____            | _____             | _____            | FACU species _____                                                                                                              | x4 = _____       |
| 50% = _____, 20% = _____                   | _____            | = Total Cover     |                  | UPL species _____                                                                                                               | x5 = _____       |
| Herb Stratum (Plot size: 5'x5')            |                  |                   |                  | Column Totals: _____ (A)                                                                                                        | _____ (B)        |
| 1. <u>Bromus inermis</u>                   | <u>60</u>        | <u>yes</u>        | <u>FAC</u>       | Prevalence Index = B/A = _____                                                                                                  |                  |
| 2. <u>Poa pratensis</u>                    | <u>20</u>        | <u>yes</u>        | <u>FAC</u>       |                                                                                                                                 |                  |
| 3. _____                                   | _____            | _____             | _____            | Hydrophytic Vegetation Indicators:                                                                                              |                  |
| 4. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation                                                              |                  |
| 5. _____                                   | _____            | _____             | _____            | <input checked="" type="checkbox"/> 2 - Dominance Test is >50%                                                                  |                  |
| 6. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>                                                              |                  |
| 7. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |                  |
| 8. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>                                                           |                  |
| 9. _____                                   | _____            | _____             | _____            | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                              |                  |
| 10. _____                                  | _____            | _____             | _____            | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                  |                  |
| 11. _____                                  | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = <u>40</u> , 20% = <u>16</u>          | <u>80</u>        | = Total Cover     |                  | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                             |                  |
| Woody Vine Stratum (Plot size: 5'x5')      |                  |                   |                  |                                                                                                                                 |                  |
| 1. _____                                   | _____            | _____             | _____            |                                                                                                                                 |                  |
| 2. _____                                   | _____            | _____             | _____            |                                                                                                                                 |                  |
| 50% = _____, 20% = _____                   | _____            | = Total Cover     |                  |                                                                                                                                 |                  |
| % Bare Ground in Herb Stratum _____        |                  |                   |                  |                                                                                                                                 |                  |

Remarks:



**SOIL**Sampling Point: SP5**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |           | Redox Features |       |                   |                  | Texture       | Remarks |
|-------------------|-----------------|-----------|----------------|-------|-------------------|------------------|---------------|---------|
|                   | Color (moist)   | %         | Color (moist)  | %     | Type <sup>1</sup> | Loc <sup>2</sup> |               |         |
| <u>0-3</u>        | <u>10YR 3/2</u> | <u>90</u> | _____          | _____ | _____             | _____            | <u>SiL</u>    | _____   |
| <u>3-12</u>       | <u>10YR 3/2</u> | <u>60</u> | _____          | _____ | _____             | _____            | <u>VGRSiL</u> | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____         | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____         | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____         | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____         | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____         | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____         | _____   |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                              |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soils Present?**

Yes

☐

No

☒

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                    |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )   |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_**Wetland Hydrology Present?**

Yes

☐

No

☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP6  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 5  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'20.034"N Long: 110°46'33.487"W Datum: NAD 83  
 Soil Map Unit Name: 29—Newfork fine sandy loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                                                                                                                                               |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br><br><div style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></div> |
| Hydric Soil Present?            | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                                                                                                                                               |
| Wetland Hydrology Present?      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                                                                                                                                               |
| Remarks:                        |                                                                     |                                                                                                                                                               |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: _____)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _____            | _____             | _____            | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>5</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)                                                                                                                                                                               |
| 2. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                           |
| 50% = _____, 20% = _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _____            | = Total Cover     |                  | <b>Prevalence Index worksheet:</b><br><div style="display: flex; justify-content: space-between;"> <span>Total % Cover of:</span> <span>Multiply by:</span> </div> OBL species _____ x1 = _____<br>FACW species _____ x2 = _____<br>FAC species _____ x3 = _____<br>FACU species _____ x4 = _____<br>UPL species _____ x5 = _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____ |
| <b>Sapling/Shrub Stratum (Plot size: 15'x15')</b><br>1. <u>Salix boothii</u> <u>30</u> <u>yes</u> <u>OBL</u><br>2. <u>Amelanchier alnifolia</u> <u>20</u> <u>yes</u> <u>FACU</u><br>3. <u>Rosa woodsii</u> <u>10</u> <u>no</u> <u>FACU</u><br>4. _____<br>5. _____<br>50% = <u>30</u> , 20% = <u>12</u><br><u>60</u> = Total Cover                                                                                                                                                                                                                                                                                                                                              |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Herb Stratum (Plot size: 5'x5')</b><br>1. <u>Carex utriculata</u> <u>30</u> <u>yes</u> <u>OBL</u><br>2. <u>Carex nebrascensis</u> <u>30</u> <u>yes</u> <u>OBL</u><br>3. <u>Poa pratensis</u> <u>20</u> <u>yes</u> <u>FACW</u><br>4. _____<br>5. _____<br>6. _____<br>7. _____<br>8. _____<br>9. _____<br>10. _____<br>11. _____<br>50% = <u>40</u> , 20% = <u>16</u><br><u>80</u> = Total Cover                                                                                                                                                                                                                                                                              |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Woody Vine Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>50% = _____, 20% = _____<br>_____ = Total Cover<br>% Bare Ground in Herb Stratum <u>0</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation<br><input checked="" type="checkbox"/> 2 - Dominance Test is >50%<br><input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup><br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                           |

Remarks: Steep streambank leads to significant stratification of vegetation indicators in the shrub strata



**SOIL**Sampling Point: SP6**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |               | Redox Features   |               |                   |                  | Texture       | Remarks       |
|-------------------|-----------------|---------------|------------------|---------------|-------------------|------------------|---------------|---------------|
|                   | Color (moist)   | %             | Color (moist)    | %             | Type <sup>1</sup> | Loc <sup>2</sup> |               |               |
| <u>0-8</u>        | <u>10YR 3/2</u> | <u>90</u>     | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>CL</u>     | <u>      </u> |
| <u>8-12</u>       | <u>10YR 5/1</u> | <u>50</u>     | <u>7.5YR 4/4</u> | <u>5</u>      | <u>C</u>          | <u>M</u>         | <u>CL</u>     | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |
| <u>      </u>     | <u>      </u>   | <u>      </u> | <u>      </u>    | <u>      </u> | <u>      </u>     | <u>      </u>    | <u>      </u> | <u>      </u> |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3)                   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type:       Depth (inches):       **Hydric Soils Present?**

Yes

☒

No

☐

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                               |
|-------------------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                            |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                                |
| <input type="checkbox"/> Drainage Patterns (B10)                              |
| <input checked="" type="checkbox"/> Dry-Season Water Table (C2)               |
| <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                                |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )              |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                            |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches):       Water Table Present? Yes ☐ No ☒ Depth (inches):       Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 8**Wetland Hydrology Present?**

Yes

☒

No

☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Directly adjacent to Flat Creek, 10 year floodplain

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP7  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 0-1  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'20.231"N Long: 110°46'33.862"W Datum: NAD 83  
 Soil Map Unit Name: 61 - Tineman gravelly loam, wet NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                 |                                                                     |                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                                                                                                     |
| Wetland Hydrology Present?      | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                                                                                                     |
| Remarks:                        |                                                                     |                                                                                                                     |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: _____)                                                                                                                                                                                                                                                                                                                                                                    | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|-------------------|------------|--------------------|------------|-------------------|------------|--------------------|------------|-------------------|------------|--------------------------|-----------|--------------------------------|--|
| 1. _____                                                                                                                                                                                                                                                                                                                                                                                           | _____            | _____             | _____            | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)                                                                                                                                                                                                                                                                                                                                                                                                    |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 2. _____                                                                                                                                                                                                                                                                                                                                                                                           | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 3. _____                                                                                                                                                                                                                                                                                                                                                                                           | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 4. _____                                                                                                                                                                                                                                                                                                                                                                                           | _____            | _____             | _____            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| 50% = _____, 20% = _____                                                                                                                                                                                                                                                                                                                                                                           | _____            | = Total Cover     |                  | <b>Prevalence Index worksheet:</b><br><table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species _____ | x1 = _____ | FACW species _____ | x2 = _____ | FAC species _____ | x3 = _____ | FACU species _____ | x4 = _____ | UPL species _____ | x5 = _____ | Column Totals: _____ (A) | _____ (B) | Prevalence Index = B/A = _____ |  |
| Total % Cover of:                                                                                                                                                                                                                                                                                                                                                                                  | Multiply by:     |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| OBL species _____                                                                                                                                                                                                                                                                                                                                                                                  | x1 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| FACW species _____                                                                                                                                                                                                                                                                                                                                                                                 | x2 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| FAC species _____                                                                                                                                                                                                                                                                                                                                                                                  | x3 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| FACU species _____                                                                                                                                                                                                                                                                                                                                                                                 | x4 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| UPL species _____                                                                                                                                                                                                                                                                                                                                                                                  | x5 = _____       |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| Column Totals: _____ (A)                                                                                                                                                                                                                                                                                                                                                                           | _____ (B)        |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| Prevalence Index = B/A = _____                                                                                                                                                                                                                                                                                                                                                                     |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| <b>Sapling/Shrub Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>3. _____<br>4. _____<br>5. _____<br>50% = _____, 20% = _____<br>_____ = Total Cover                                                                                                                                                                                                                                     |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| <b>Herb Stratum (Plot size: 5'x5')</b><br>1. <u>Poa pratensis</u> <u>60</u> <u>yes</u> <u>FAC</u><br>2. <u>Taraxacum officinale</u> <u>10</u> <u>no</u> <u>FACU</u><br>3. <u>Bromus inermis</u> <u>10</u> <u>no</u> <u>FAC</u><br>4. _____<br>5. _____<br>6. _____<br>7. _____<br>8. _____<br>9. _____<br>10. _____<br>11. _____<br>50% = <u>35</u> , 20% = <u>17.5</u><br><u>70</u> = Total Cover |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |
| <b>Woody Vine Stratum (Plot size: _____)</b><br>1. _____<br>2. _____<br>50% = _____, 20% = _____<br>_____ = Total Cover<br>% Bare Ground in Herb Stratum <u>10</u>                                                                                                                                                                                                                                 |                  |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |              |                   |            |                    |            |                   |            |                    |            |                   |            |                          |           |                                |  |

- Hydrophytic Vegetation Indicators:**
- ☐ 1 – Rapid Test for Hydrophytic Vegetation
  - ☒ 2 - Dominance Test is >50%
  - ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - ☐ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - ☐ 5 - Wetland Non-Vascular Plants<sup>1</sup>
  - ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks:



**SOIL**Sampling Point: SP7**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |           | Redox Features |       |                   |                  | Texture    | Remarks |
|-------------------|-----------------|-----------|----------------|-------|-------------------|------------------|------------|---------|
|                   | Color (moist)   | %         | Color (moist)  | %     | Type <sup>1</sup> | Loc <sup>2</sup> |            |         |
| <u>0-12</u>       | <u>10YR 3/2</u> | <u>70</u> | _____          | _____ | _____             | _____            | <u>GRL</u> | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                              |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soils Present?**

Yes

☐

No

☒

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                    |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )   |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_**Wetland Hydrology Present?**

Yes

☐

No

☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project Site: Karns Meadows Road Easement City/County: Jackson/Teton Sampling Date: 10/15/10  
 Applicant/Owner: Town of Jackson State: WY Sampling Point: SP8  
 Investigator(s): Brian Remlinger, Alder Watershed Consulting LLC Section, Township, Range: SEC 33, TWN 41N, RNG 116W  
 Landform (hillslope, terrace, etc.): floodplain, historic irrigation ditch Local relief (concave, convex, none): none Slope (%): 0-1  
 Subregion (LRR): E. Rocky Mtn. Lat: 43°28'27.034"N Long: 110°46'33.751"W Datum: NAD 83  
 Soil Map Unit Name: 61 - Tineman gravelly loam, wet NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

|                                                                   |                                                                     |                                       |                                                                     |
|-------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------|
| Hydrophytic Vegetation Present?                                   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Hydric Soil Present?                                              | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                       |                                                                     |
| Wetland Hydrology Present?                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                       |                                                                     |
| Remarks: <u>Abandoned irrigation supply ditch from Flat Creek</u> |                                                                     |                                       |                                                                     |

## VEGETATION – Use scientific names of plants

| Tree Stratum (Plot size: <u>30'x30'</u> )          | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet:                                                                           |                                                                                                                                 |
|----------------------------------------------------|------------------|-------------------|------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1. <u>Populus angustifolia</u>                     | <u>30</u>        | <u>yes</u>        | <u>FACW</u>      |                                                                                                     | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)                                                             |
| 2. _____                                           | _____            | _____             | _____            | Total Number of Dominant Species Across All Strata: <u>4</u> (B)                                    |                                                                                                                                 |
| 3. _____                                           | _____            | _____             | _____            |                                                                                                     |                                                                                                                                 |
| 4. _____                                           | _____            | _____             | _____            | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)                            |                                                                                                                                 |
| 50% = <u>15</u> , 20% = <u>6</u>                   | <u>30</u>        | = Total Cover     |                  |                                                                                                     |                                                                                                                                 |
| Sapling/Shrub Stratum (Plot size: <u>15'x15'</u> ) |                  |                   |                  | Prevalence Index worksheet:                                                                         |                                                                                                                                 |
| 1. <u>Ribes aureum</u>                             | <u>30</u>        | <u>yes</u>        | <u>FAC</u>       |                                                                                                     |                                                                                                                                 |
| 2. _____                                           | _____            | _____             | _____            | Total % Cover of: _____ Multiply by: _____                                                          |                                                                                                                                 |
| 3. _____                                           | _____            | _____             | _____            | OBL species _____ x1 = _____                                                                        |                                                                                                                                 |
| 4. _____                                           | _____            | _____             | _____            | FACW species _____ x2 = _____                                                                       |                                                                                                                                 |
| 5. _____                                           | _____            | _____             | _____            | FAC species _____ x3 = _____                                                                        |                                                                                                                                 |
| 50% = <u>15</u> , 20% = <u>6</u>                   | <u>30</u>        | = Total Cover     |                  | FACU species _____ x4 = _____                                                                       |                                                                                                                                 |
| Herb Stratum (Plot size: <u>5'x5'</u> )            |                  |                   |                  | UPL species _____ x5 = _____                                                                        |                                                                                                                                 |
| 1. <u>Poa pratensis</u>                            | <u>40</u>        | <u>yes</u>        | <u>FAC</u>       | Column Totals: _____ (A) _____ (B)                                                                  |                                                                                                                                 |
| 2. <u>Bromus inermis</u>                           | <u>20</u>        | <u>yes</u>        | <u>FAC</u>       | Prevalence Index = B/A = _____                                                                      |                                                                                                                                 |
| 3. <u>Taraxacum officinale</u>                     | <u>10</u>        | <u>no</u>         | <u>FACU</u>      | Hydrophytic Vegetation Indicators:                                                                  |                                                                                                                                 |
| 4. _____                                           | _____            | _____             | _____            |                                                                                                     | <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation                                                              |
| 5. _____                                           | _____            | _____             | _____            |                                                                                                     | <input checked="" type="checkbox"/> 2 - Dominance Test is >50%                                                                  |
| 6. _____                                           | _____            | _____             | _____            |                                                                                                     | <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>                                                              |
| 7. _____                                           | _____            | _____             | _____            |                                                                                                     | <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) |
| 8. _____                                           | _____            | _____             | _____            |                                                                                                     | <input type="checkbox"/> 5 - Wetland Non-Vascular Plants <sup>1</sup>                                                           |
| 9. _____                                           | _____            | _____             | _____            |                                                                                                     | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)                                              |
| 10. _____                                          | _____            | _____             | _____            |                                                                                                     | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                  |
| 11. _____                                          | _____            | _____             | _____            |                                                                                                     |                                                                                                                                 |
| 50% = <u>35</u> , 20% = <u>17.5</u>                | <u>70</u>        | = Total Cover     |                  |                                                                                                     |                                                                                                                                 |
| Woody Vine Stratum (Plot size: _____)              |                  |                   |                  | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                                                                                                                                 |
| 1. _____                                           | _____            | _____             | _____            |                                                                                                     |                                                                                                                                 |
| 2. _____                                           | _____            | _____             | _____            |                                                                                                     |                                                                                                                                 |
| 50% = _____, 20% = _____                           | _____            | = Total Cover     |                  |                                                                                                     |                                                                                                                                 |
| % Bare Ground in Herb Stratum <u>5</u>             |                  |                   |                  |                                                                                                     |                                                                                                                                 |

Remarks:



**SOIL**Sampling Point: SP8**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth<br>(inches) | Matrix          |           | Redox Features |       |                   |                  | Texture    | Remarks |
|-------------------|-----------------|-----------|----------------|-------|-------------------|------------------|------------|---------|
|                   | Color (moist)   | %         | Color (moist)  | %     | Type <sup>1</sup> | Loc <sup>2</sup> |            |         |
| <u>0-12</u>       | <u>10YR 4/3</u> | <u>60</u> | _____          | _____ | _____             | _____            | <u>GRL</u> | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |
| _____             | _____           | _____     | _____          | _____ | _____             | _____            | _____      | _____   |

<sup>1</sup>Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |                                                            |                                                                            |
|------------------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                  |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                              |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> ) |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                              |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                           |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                        |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                            |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |                                                           |
|-----------------------------------------------------------|
| <input type="checkbox"/> 2 cm Muck (A10)                  |
| <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soils Present?**

Yes

☐

No

☒

Remarks:

**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |                                                                    |                                                                           |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                        |
| <input type="checkbox"/> High Water Table (A2)                     | <b>(except MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Salt Crust (B11)                                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Aquatic Invertebrates (B13)                      |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                       |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)                    |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)       |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Stunted or Stresses Plants (D1) ( <b>LRR A</b> ) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                       |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |                                                                           |

Secondary Indicators (2 or more required)

- |                                                                    |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |
| <b>(MLRA 1, 2, 4A, and 4B)</b>                                     |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )   |
| <input type="checkbox"/> Frost-Heave Hummocks (D7)                 |

**Field Observations:**Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): \_\_\_\_\_**Wetland Hydrology Present?**

Yes

☐

No

☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

### **Attached Photos**

Flat Creek, Study Area and Road Easement,  
SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8





Study Area looking north from Snow King Ave. entrance.



Gravel road and road easement looking north from area of Sample Point 1.



Study Area looking north from Sample Point 7.



Study Area looking south from point near Sample Point 8.





SP1 (Flat Creek)



SP1





SP2



SP2





SP3 (Flat Creek)



SP3





SP4



SP4





SP5



SP5





SP6 (Flat Creek)



SP6





SP7



SP7





SP8



SP8



**Attached USDA – NRCS Soil Survey Report**



United States  
Department of  
Agriculture



NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Teton County, Wyoming, Grand Teton National Park Area

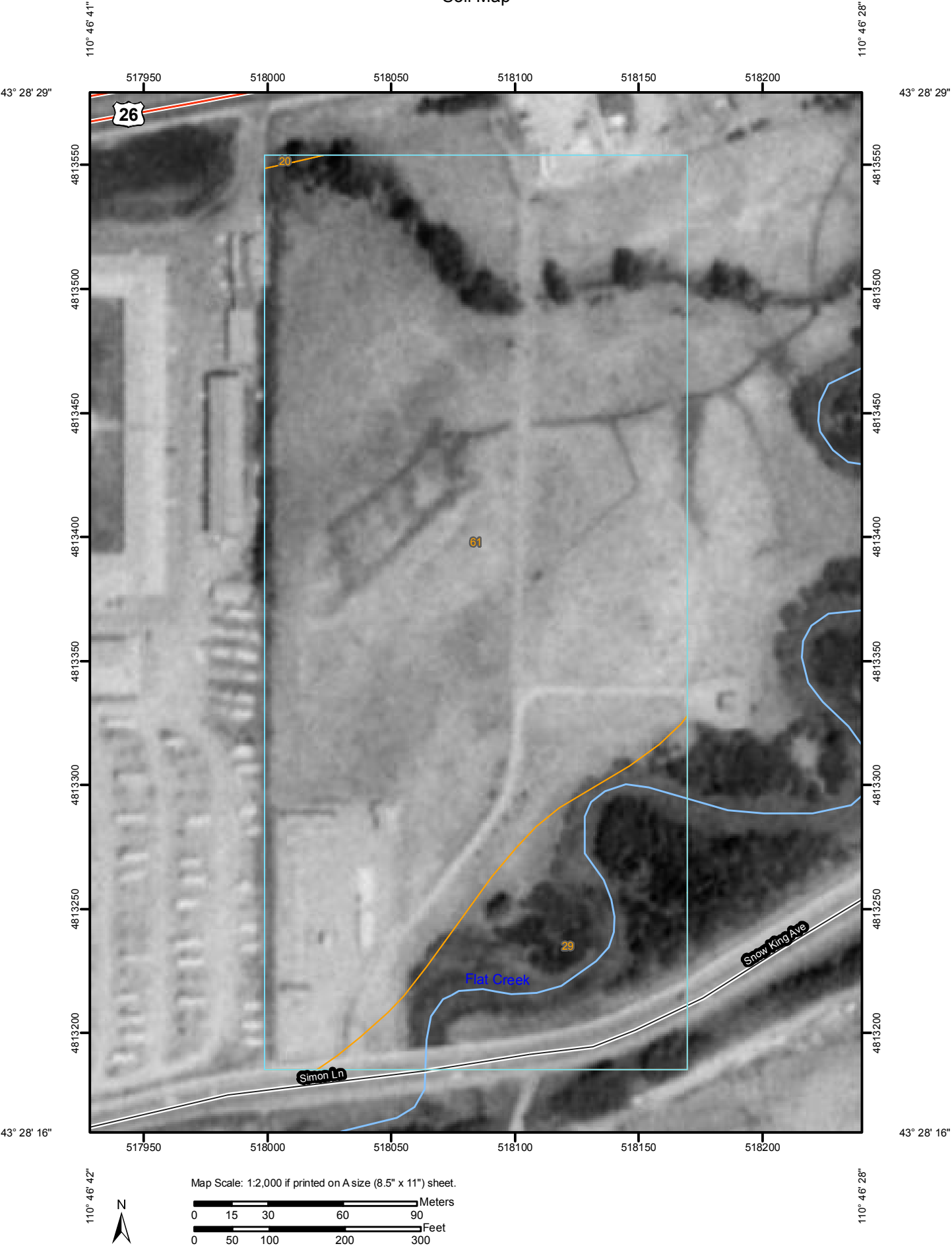
## START Bus Facility - Karns Meadow



December 19, 2010



Custom Soil Resource Report  
Soil Map



## Custom Soil Resource Report

### MAP LEGEND

#### Area of Interest (AOI)

 Area of Interest (AOI)

#### Soils

 Soil Map Units

#### Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other

#### Special Line Features

-  Gully
-  Short Steep Slope
-  Other

#### Political Features

-  Cities

#### Water Features

-  Oceans
-  Streams and Canals

#### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### MAP INFORMATION

Map Scale: 1:2,000 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: UTM Zone 12N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Teton County, Wyoming, Grand Teton National Park Area  
Survey Area Data: Version 6, Jun 30, 2008

Date(s) aerial images were photographed: 6/27/1994

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

| Teton County, Wyoming, Grand Teton National Park Area (WY666) |                                                    |              |                |
|---------------------------------------------------------------|----------------------------------------------------|--------------|----------------|
| Map Unit Symbol                                               | Map Unit Name                                      | Acres in AOI | Percent of AOI |
| 20                                                            | Greyback-Thayne complex, 20 to 30 percent slopes * | 0.0          | 0.1%           |
| 29                                                            | Newfork fine sandy loam                            | 2.8          | 17.8%          |
| 61                                                            | Tineman gravelly loam, wet                         | 12.8         | 82.1%          |
| <b>Totals for Area of Interest</b>                            |                                                    | <b>15.6</b>  | <b>100.0%</b>  |

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If

intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.



## Teton County, Wyoming, Grand Teton National Park Area

### 20—Greyback-Thayne complex, 20 to 30 percent slopes \*

#### Map Unit Setting

*Elevation:* 5,300 to 7,500 feet

*Mean annual precipitation:* 13 to 21 inches

*Mean annual air temperature:* 30 to 45 degrees F

*Frost-free period:* 60 to 90 days

#### Map Unit Composition

*Greyback and similar soils:* 60 percent

*Tetonia and similar soils:* 15 percent

*Thayne and similar soils:* 15 percent

*Minor components:* 10 percent

#### Description of Greyback

##### Setting

*Landform:* Mountain slopes

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Alluvium derived from igneous, metamorphic and sedimentary rock and/or glaciofluvial deposits derived from igneous, metamorphic and sedimentary rock

##### Properties and qualities

*Slope:* 20 to 30 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 14 percent

*Gypsum, maximum content:* 5 percent

*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 5.0

*Available water capacity:* Low (about 3.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 6e

*Land capability (nonirrigated):* 6e

*Ecological site:* GRAVELLY (15-19W) (R043XY212WY)

##### Typical profile

*0 to 5 inches:* Gravelly loam

*5 to 13 inches:* Gravelly loam

*13 to 30 inches:* Very gravelly sandy loam

*30 to 60 inches:* Very gravelly loamy sand

## Description of Thayne

### Setting

*Landform:* Mountain slopes

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Gravelly alluvium derived from igneous, metamorphic and sedimentary rock

### Properties and qualities

*Slope:* 20 to 30 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 12 percent

*Gypsum, maximum content:* 5 percent

*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 5.0

*Available water capacity:* Moderate (about 6.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* 6e

*Land capability (nonirrigated):* 6e

*Ecological site:* LOAMY (15-19W) (R043XY222WY)

### Typical profile

*0 to 6 inches:* Gravelly loam

*6 to 34 inches:* Gravelly loam

*34 to 60 inches:* Very gravelly sandy loam

## Description of Tetonia

### Setting

*Landform:* Mountain slopes

*Landform position (three-dimensional):* Mountainflank

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Loess

### Properties and qualities

*Slope:* 20 to 30 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 30 percent

*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 5.0



## Custom Soil Resource Report

*Available water capacity:* High (about 12.0 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 6e

*Land capability (nonirrigated):* 6e

*Ecological site:* LOAMY (15-19W) (R043XY222WY)

### **Typical profile**

*0 to 8 inches:* Silt loam

*8 to 30 inches:* Silt loam

*30 to 60 inches:* Silt loam

### **Minor Components**

#### **Crow creek**

*Percent of map unit:* 2 percent

#### **Lantonía**

*Percent of map unit:* 2 percent

#### **Robana**

*Percent of map unit:* 2 percent

#### **Willow creek**

*Percent of map unit:* 2 percent

#### **Unnamed 1**

*Percent of map unit:* 1 percent

#### **Unnamed 2**

*Percent of map unit:* 1 percent

## **29—Newfork fine sandy loam**

### **Map Unit Setting**

*Elevation:* 5,500 to 10,500 feet

*Mean annual precipitation:* 12 to 18 inches

*Mean annual air temperature:* 36 to 37 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Newfork and similar soils:* 85 percent

*Minor components:* 15 percent

### **Description of Newfork**

#### **Setting**

*Landform:* Flood plains

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from igneous, metamorphic and sedimentary rock

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)  
*Depth to water table:* About 6 to 48 inches  
*Frequency of flooding:* Occasional  
*Frequency of ponding:* None  
*Available water capacity:* Low (about 3.8 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 5w  
*Land capability (nonirrigated):* 5w  
*Ecological site:* WETLAND (15-19W) (R043XY278WY)

**Typical profile**

*0 to 10 inches:* Gravelly fine sandy loam  
*10 to 16 inches:* Gravelly fine sandy loam  
*16 to 60 inches:* Very gravelly loamy sand

**Minor Components**

**Tetonville**

*Percent of map unit:* 8 percent

**Wilsonville**

*Percent of map unit:* 7 percent

**61—Tineman gravelly loam, wet**

**Map Unit Setting**

*Elevation:* 6,000 to 7,000 feet  
*Mean annual precipitation:* 15 to 21 inches  
*Mean annual air temperature:* 39 to 41 degrees F  
*Frost-free period:* 60 to 90 days

**Map Unit Composition**

*Tineman, wet, and similar soils:* 80 percent  
*Minor components:* 20 percent

**Description of Tineman, Wet**

**Setting**

*Landform:* Mountain slopes  
*Landform position (three-dimensional):* Mountainflank  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Gravelly glaciofluvial deposits

**Properties and qualities**

*Slope:* 0 to 3 percent



## Custom Soil Resource Report

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 36 to 48 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Low (about 3.1 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 4w

*Land capability (nonirrigated):* 4w

*Ecological site:* SUBIRRIGATED (15-19W) (R043XY274WY)

### **Typical profile**

*0 to 7 inches:* Gravelly loam

*7 to 15 inches:* Gravelly loam

*15 to 27 inches:* Very gravelly sandy loam

*27 to 60 inches:* Very gravelly sand

### **Minor Components**

#### **Tineman**

*Percent of map unit:* 7 percent

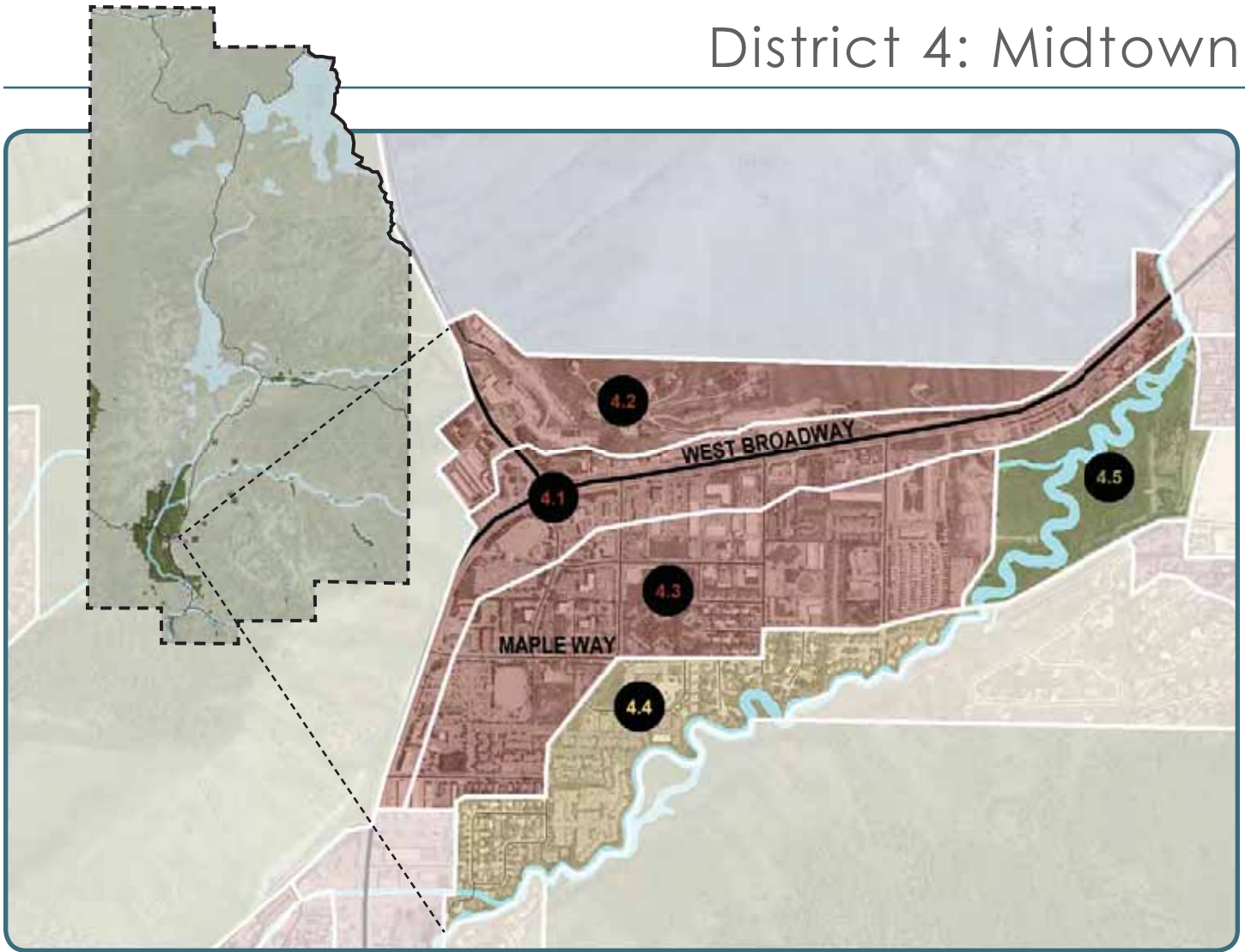
#### **Wilsonville**

*Percent of map unit:* 7 percent

#### **Tetonville**

*Percent of map unit:* 6 percent

# District 4: Midtown

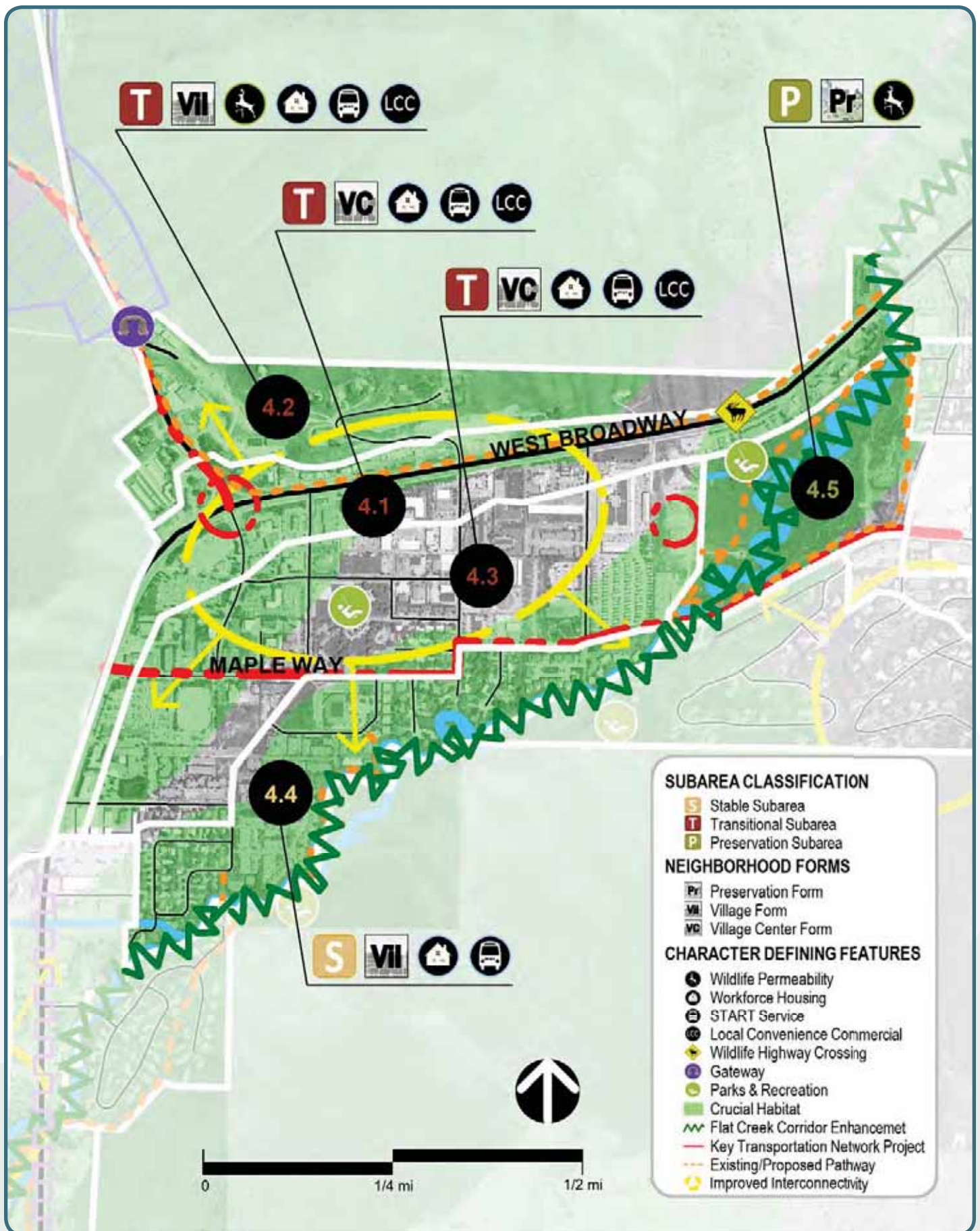


## Complete Neighborhood + Rural Area Chart

| DEFINITION            |                                                   | EXST. | FUTURE |                                                                              |
|-----------------------|---------------------------------------------------|-------|--------|------------------------------------------------------------------------------|
| COMPLETE NEIGHBORHOOD | Defined Character/High Quality Design             |       |        | 2-3 stories, vibrant pedestrian mixed use, street wall with landscape buffer |
|                       | Public Utilities                                  |       |        | Water, sewer, storm sewer                                                    |
|                       | Quality Public Space                              |       |        | Powderhorn Park, Karns Meadow and Garaman Park Pathway                       |
|                       | Variety of Housing Types                          |       |        | Single family, duplex, condominiums, townhomes, apartments, multifamily      |
|                       | Walkable Schools, Commercial + Recreation         |       |        | Post office, START, limited convenience commercial, schools, parks, pathways |
|                       | Connection by Complete Streets                    |       |        | Alternative transportation a priority                                        |
|                       |                                                   |       |        |                                                                              |
| RURAL                 | Viable Wildlife Habitat + Connectivity            |       |        | Flat Creek enhancement, wildlife crossings                                   |
|                       | Natural Scenic Vistas                             |       |        |                                                                              |
|                       | Agricultural + Undeveloped Open Space             |       |        | Karns Meadow                                                                 |
|                       | Abundance of Landscape over Built Form            |       |        |                                                                              |
|                       | Limited, Detached, Single family Res. Development |       |        |                                                                              |
|                       | Minimal Nonresidential Development                |       |        |                                                                              |

Legend: Generally Present; Partially Present; Generally absent





## Existing + Future Desired Characteristics

Midtown is one of the most Complete Neighborhoods in the community. It contains many of the service, office and retail establishments that meet Teton County residents' daily needs. It also contains a significant amount of workforce housing in a variety of housing types, including single family, duplex and multifamily structures. Another important characteristic of the district is the "Y", the intersection of the community's two main highways, U.S. 89 and Wyoming 22. Midtown is a highly visible district that is experienced on a daily basis by most residents. Today, the land use pattern is automobile-oriented and made up of large blocks containing low intensity single-use structures (both residential and non-residential) surrounded by significant surface parking, with little connectivity between blocks and lots. It is also the location of a significant amount of existing lodging uses developed prior to the Lodging Overlay that will be allowed to continue in the future. Flat Creek and the Karns Meadow are significant natural features in this district.

The future vision is to create a walkable mixed use district with improved connectivity and increased residential population. Key to achieving this vision will be the creation of a concentrated and connected land use pattern. To support this goal, future land uses will continue to include a variety of non-residential uses serving the needs of the local community and a variety of residential types focusing on workforce housing in multifamily and mixed use structures, specifically including deed-restricted rental units.

Mixed use, non-residential and multifamily residential buildings should be two to three stories in height and oriented to the street. Four story structures may be considered when adjacent to a natural land form. In the future, a landscape buffer between buildings and the street with well-designed green space and/or hardscape will be important to create an attractive pedestrian environment becoming of a desirable, walkable, mixed use district. Parking areas should be predominantly located behind buildings or screened from view. The creation of complete streets will be critical to increase connectivity between uses and between blocks and lots by all modes of travel. It is also important to recognize Snow King Avenue as a primary transportation corridor that will need to be maintained and improved in order to support regional transportation goals.

Despite the intensity of human activity within the district, Midtown contains or is adjacent to prominent natural resource lands such as the Karns Meadow, Flat Creek, East Gros Ventre Butte, High School Butte and the northwestern foot of Snow King Mountain. A key characteristic of this area is the mule deer movement corridor between East Gros Ventre Butte and Karns Meadow, and consequently, the high rate of wildlife vehicle collisions along West Broadway Avenue. The natural resources found in or adjacent to this district should be considered in the course of future planning, with development being located in a way that protects wildlife habitat and facilitates wildlife movement through the district. Future enhancements and redevelopment should seek to incorporate Flat Creek as a recreational and ecological amenity for the entire community.

Whether it is enhancing the gateway to Town at the Y intersection, redeveloping under-utilized properties with mixed use structures, improving alternative transportation infrastructure and connectivity, or enhancements to Flat Creek - change in this district is desirable.





# Policy Objectives

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## *Common Value 1: Ecosystem Stewardship*

1.1.c: Design for wildlife permeability

---

## *Common Value 2: Growth Management*

4.1.b: Emphasize a variety of housing types, including deed-restricted housing

4.1.d: Maintain Jackson as the economic center of the region

4.2.c: Create vibrant walkable mixed use subareas

4.3.a: Preserve and enhance stable subareas

4.3.b: Create and develop transitional subareas

4.4.b Enhance Jackson gateways

4.4.d: Enhance natural features in the built environment

---

## *Common Value 3: Quality of Life*

5.2.d: Encourage deed-restricted rental units

5.3.b: Preserve existing workforce housing stock

6.2.b: Support businesses located in the community because of our lifestyle

6.2.c: Encourage local entrepreneurial opportunities

7.1.c: Increase the capacity for use of alternative transportation modes

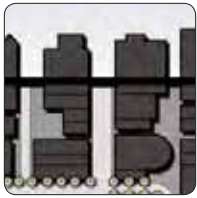
7.2.d: Complete key Transportation Network Projects to improve connectivity

7.3.b: Reduce wildlife and natural and scenic resource transportation impacts



# Character Defining Features

## 4.1: Midtown Highway Corridor



Village Center  
Form

This mixed use, TRANSITIONAL Subarea is dominated by West Broadway Avenue, Highway 22 and the Y intersection.

Development intensity should be oriented towards these roadways and configured in two to three story mixed use buildings with adequate setbacks and screening proportional to these busy highway

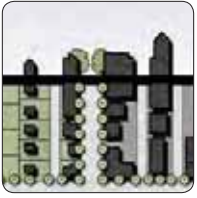
corridors and intersections. Along the north side of West Broadway four stories buildings will be allowed when they are built into and used to screen the adjacent hillside. All building designs should incorporate techniques to mitigate height such as stepping back upper floors from the streetscape. Parking areas should be predominantly in the rear or screened from view. The lower levels of buildings should contain a variety of non-residential uses including retail, service and office uses catering to locals, while residential uses should be located predominantly on the upper levels of mixed use buildings or to the rear of a site and away from the highway. Future structures will be predominantly mixed use, while multifamily will be allowed if it properly addresses the street. It will be important to successfully integrate the land uses and patterns in this area with adjacent subareas.

A goal of the subarea will be to implement complete street amenities, balancing the needs of vehicle and alternative transportation users. Pedestrian connectivity across West Broadway Avenue will be needed to ensure access to the neighborhood amenities located in the southern portion of the district. Some single use and auto-oriented uses (e.g. gas stations and auto dealers) will still be needed in the future. These uses should follow the desired building form and pattern as much as possible, including providing connectivity by all travel modes to adjacent lots. A key challenge in this area will be to identify a solution to accommodate a wildlife crossing along West Broadway Avenue.





## 4.2: Northern Hillside

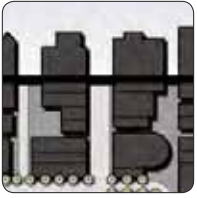


*Village Form*

This TRANSITIONAL Subarea must strike a delicate balance between allowing some mixed use and residential development while maintaining wildlife permeability and the natural form of the undeveloped hillsides. A key to successful future development will be to sensitively place development in harmony with the existing terrain in order to minimize land disturbance. Development intensity in this subarea should be less than that found within the adjacent Midtown Highway Corridor (Subarea 4.1). Structures will be allowed up to two stories and may be configured in a variety of layouts with attached and detached units blending into the natural surroundings. Smaller building footprints will be encouraged in order to provide adequate open and/or landscaped areas. A variety of residential types, including live/work, multifamily, and duplexes, may be appropriate in this area depending on the specific characteristics of a site and its existing topography. Low density single family housing may continue to be appropriate at the edges of this area, particularly when adjacent to existing undisturbed hillsides. Future development should address wildlife permeability and assist in guiding wildlife movement to future roadway crossings.



### 4.3: Central Midtown



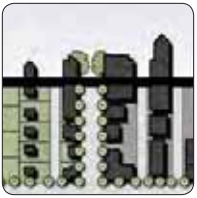
*Village Center  
Form*

This TRANSITIONAL Subarea in the core of the district will be critical in achieving the overall goal of transforming the area into a walkable mixed use district. Opportunities should be taken to expand the currently limited street network in order to break up large existing blocks and increase connectivity for all transportation modes. Key to this transition will be the addition of increased residential intensity in a variety of types and forms to take advantage of the Complete Neighborhood amenities in the area. Mixed use structures will be encouraged with non-residential uses located predominantly on the street level and residential units on upper levels. Multifamily structures in a variety of forms will also be desirable. Mixed use and multifamily residential buildings should be a combination of two and three story structures oriented to the street, though a buffer should be placed between buildings and the street with green space and/or hardscaping. Parking areas should be predominantly located behind buildings or screened from view. Live-work housing opportunities will be encouraged, as well as any other opportunities to promote local entrepreneurship. Single family residential units are not envisioned for this area. Particular care and attention will need to be given to ensure a successful transition between this mixed use subarea to the adjacent Midtown Residential (Subarea 4.3). The location of buildings and parking, types of uses and overall intensity of use should be considered to ensure a successful blend of these two subareas.



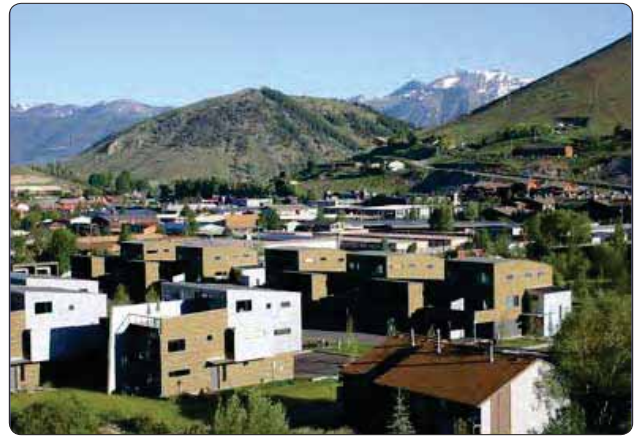


#### 4.4: Midtown Residential

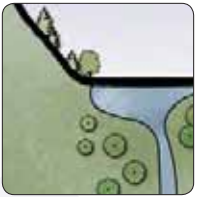


*Village Form*

This residential, STABLE Subarea should continue as a single family and multifamily residential neighborhood with a mix of ownership and rental units in close proximity to Complete Neighborhood amenities. Pedestrian and bicycle connections should be enhanced, both in terms of internal destinations and those beyond, particularly to schools in other districts. Portions of this subarea also function as a wildlife movement corridor. In the future, wildlife permeability to and from Flat Creek will be maintained and enhanced. Development should also occur in a manner that is sensitive to hillsides, and smaller building footprints should be encouraged in order to provide open and/or landscaped areas. Future improvements to Flat Creek and the adjacent pathway and park system will be needed to support the health of this natural feature for wildlife and residents.



#### 4.5: Karns Meadow



*Preservation Form*

This PRESERVATION Subarea should continue to serve as wildlife habitat and a key wildlife movement corridor in the future. Moving forward wildlife needs will need to be carefully balanced with providing the recreational and other amenities envisioned in the original land owners 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.



## Why Illustrate Our Vision?

Realizing our Vision requires proactively planning for what we want - rural open spaces and high quality Complete Neighborhoods - by identifying where we want them and what we want them to look like. Our Vision is that development be designed to enhance our community character and located in suitable areas in order to preserve and protect the ecosystem and western, rural character. The Illustration of Our Vision defines the type of preservation or development in each area of the community that will allow us to realize our Vision. In areas suitable for development, the Illustration of Our Vision describes how we will protect the character we love while ensuring that development enhances our Quality of Life. In all other areas, the Illustration of Our Vision describes how we will preserve and enhance wildlife habitat, wildlife connectivity, scenic vistas, and open space.

Defining desired character for all areas of the community provides predictability in planning and development, which has been absent in the past. Incremental, site-specific determinations of policy applicability that are emotionally, politically

and legally tied to a specific development plan are no longer the community's growth management principle. The Illustration of Our Vision bridges the gap between our Vision and the development of an individual site so that all community members can understand how an individual preservation or development project should contribute to the achievement of our Vision. The Illustration of Our Vision will inform land development regulations that ensure no policy of this Plan is forgotten and that all policies are implemented within the proper context.

The Illustration of Our Vision also provides accountability and measurability. By defining the existing and desired character of each area of the community, we can quantify our progress toward achieving our Common Values of Community Character. With this information we can determine what policies and strategies are appropriate in which locations. The Illustration of Our Vision will enable the rigorous analysis needed to continually adapt our implementation strategies to ensure that preservation and development occur in the desired amount, location and type.





# How is the Vision Illustrated?

The Illustration of Our Vision depicts the policies of the community's three Common Values of Community Character through four levels of character classification.

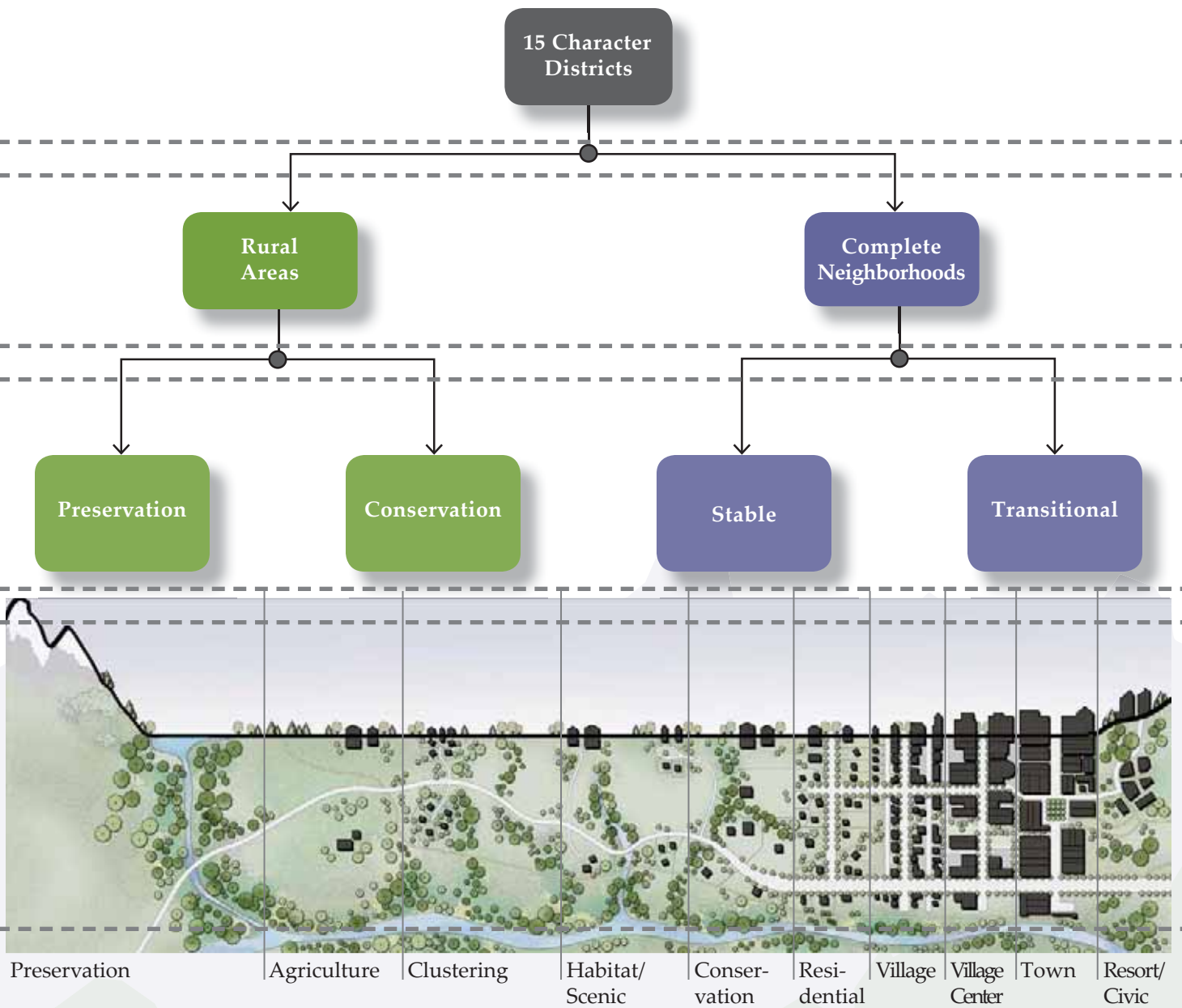
At the highest level, the private lands of the community are divided into Character Districts – areas with common natural, visual, cultural and physical attributes, shared values and social interaction. Character District boundaries are based on a layering of the best available quantitative and qualitative data for each of the three Common Values of Community Character (Ecosystem Stewardship, Growth Management, Quality of Life) in order to identify areas that share similar characteristics (see Appendix B Framework Maps).

While our community's 15 Character Districts share Common Values, each has a unique identity, based upon the presence or absence of specific characteristics, each Character District is classified as either a Rural Area focused on ecosystem stewardship or a Complete Neighborhood focused on enhancing Quality of Life. The map on pages IV-4 and IV-5 shows the Character District boundaries, defines Complete Neighborhood and Rural Area characteristics and identifies the classification of each Character District.

At the next level, each Character District is divided into subareas. Each subarea is categorized as Stable, Transitional, Preservation or Conservation based upon the existing character of the subarea and the desired future character for the entire Character District. Stable and Transitional Subareas are the most suitable locations for people to live, work and play. Subareas focused on Ecosystem Stewardship are designated as Preservation or Conservation. The map on pages IV-6 and IV-7 shows the subareas and defines the subarea classifications.

Finally, for each subarea, Character Defining Features are described to ensure the desired character is illustrated. The Character Defining Features provide the greatest level of site specific detail; however the characteristics are still conceptual and will inform specific regulations, incentives and programs. The characteristics valued by the community within a subarea are mapped, described and illustrated. On pages IV-8 and IV-9 is a legend that describes the symbols and graphics used on the Character Defining Features Maps. An appropriate Neighborhood Form(s) is also identified for each subarea. A Neighborhood Form identifies the general pattern and intensity of development that meets the desired character. On pages IV-10 and IV-11 is a transect that depicts the continuum of Neighborhood Forms that make up our community and shows the relationship between the various patterns and intensities.





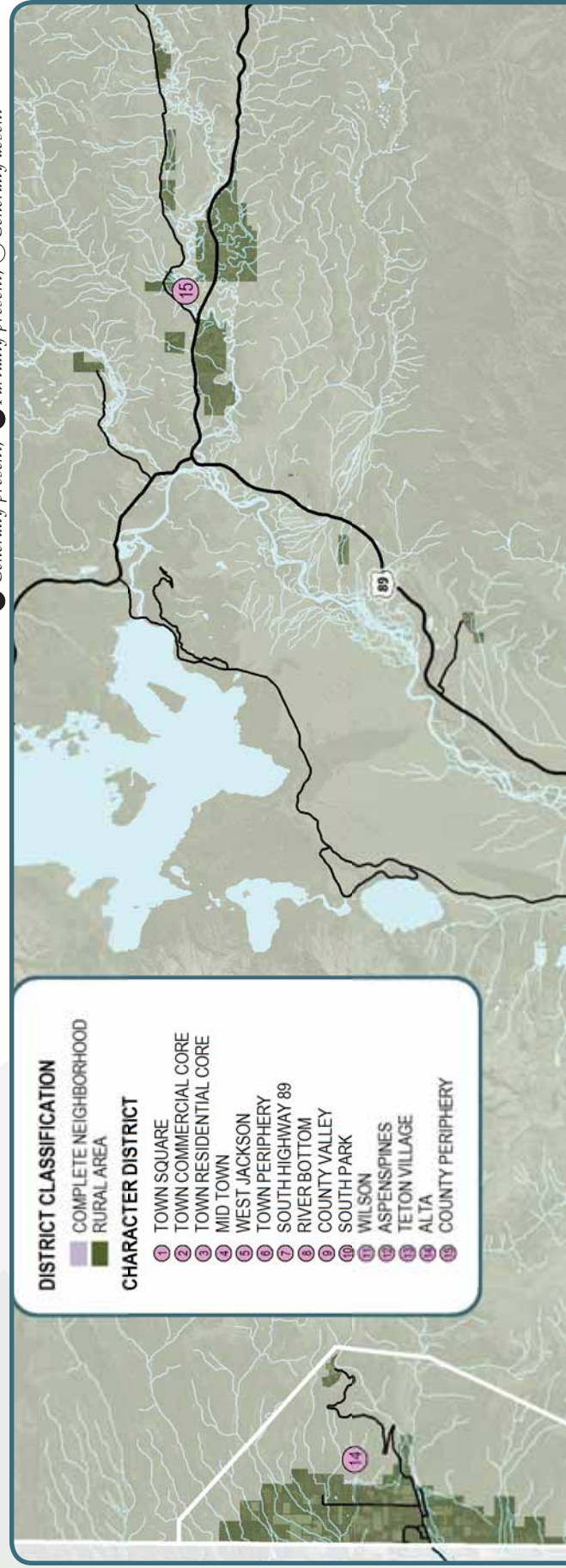


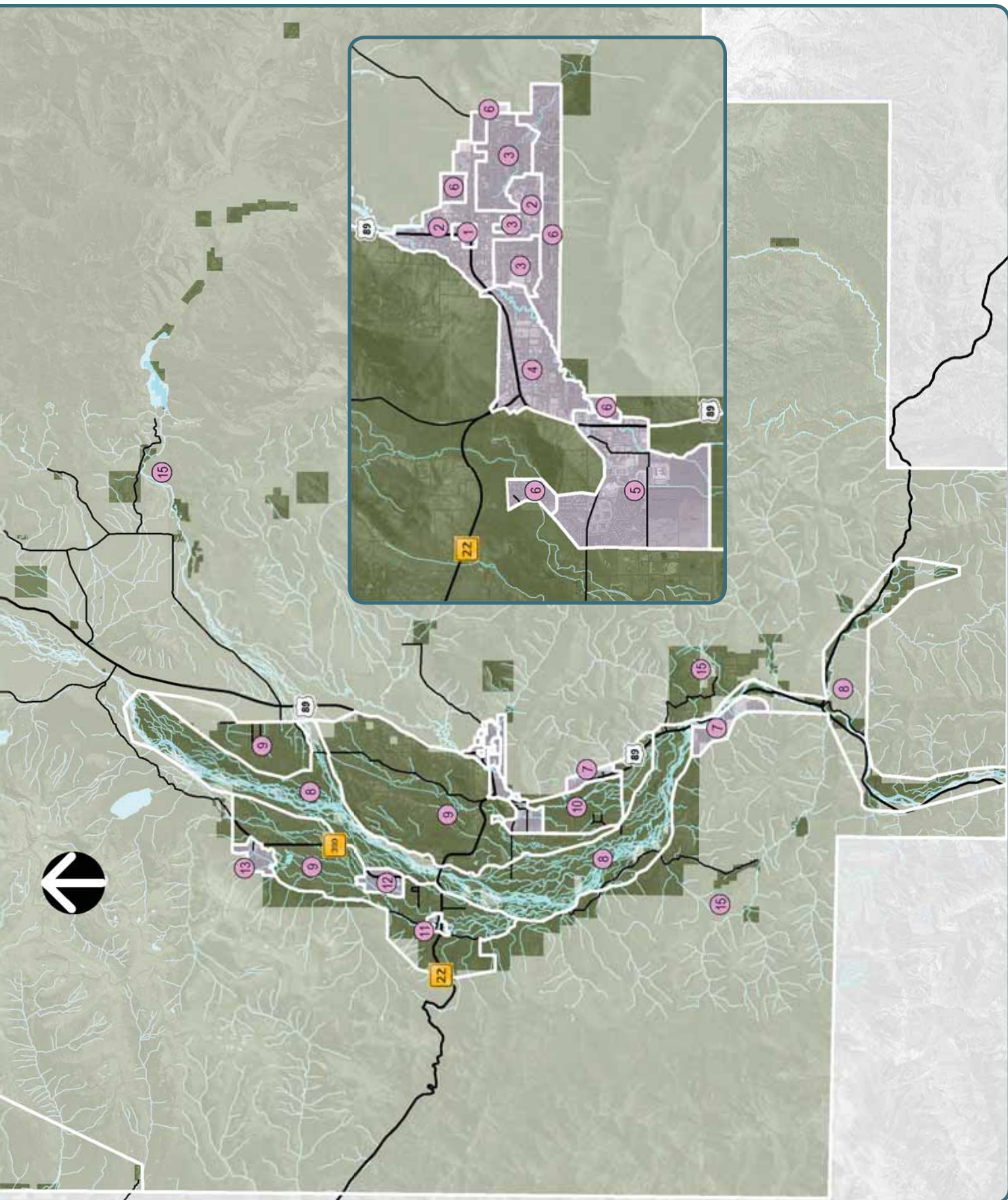
# Complete Neighborhoods + Rural Areas

Character Districts

|                                                                                                                         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| Defined character and high-quality design                                                                               | ● |   |   |   |   |   |   |   |   |    | ●  | ●  | ●  |    |    |
| Public utilities (water, sewer, and storm sewer)                                                                        | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  |    |    |
| Quality public spaces                                                                                                   | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |    |
| A variety of housing types                                                                                              |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |    |
| Schools, childcare, commercial, recreation, and other amenities within walking distance (1/4 to 1/2 mile) of residences | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |    |
| Connection by complete streets that are safe for all modes of travel                                                    | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |    |
| Viable wildlife habitat and connections between wildlife habitat                                                        |   |   | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  | ●  |
| Natural scenic vistas                                                                                                   |   |   |   | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  | ●  |
| Agricultural and undeveloped open space                                                                                 |   |   |   | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  | ●  |
| Abundance of landscape over built form                                                                                  |   |   |   |   |   | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  | ●  |
| Limited, detached single family residential development                                                                 |   |   |   |   |   | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  | ●  |
| Minimal additional nonresidential development                                                                           |   |   | ● |   |   | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  | ●  |

● Generally present; ● Partially present; ○ Generally absent







# Stable, Transitional, Preservation + Conservation Subareas

## Stable Subarea

- Subareas in which no change to the existing character is necessary
- Development will be infill that maintains the existing identity or vitality
- The subarea may benefit from strategic infill or development of non-existing Complete Neighborhood amenities

## Transitional Subarea

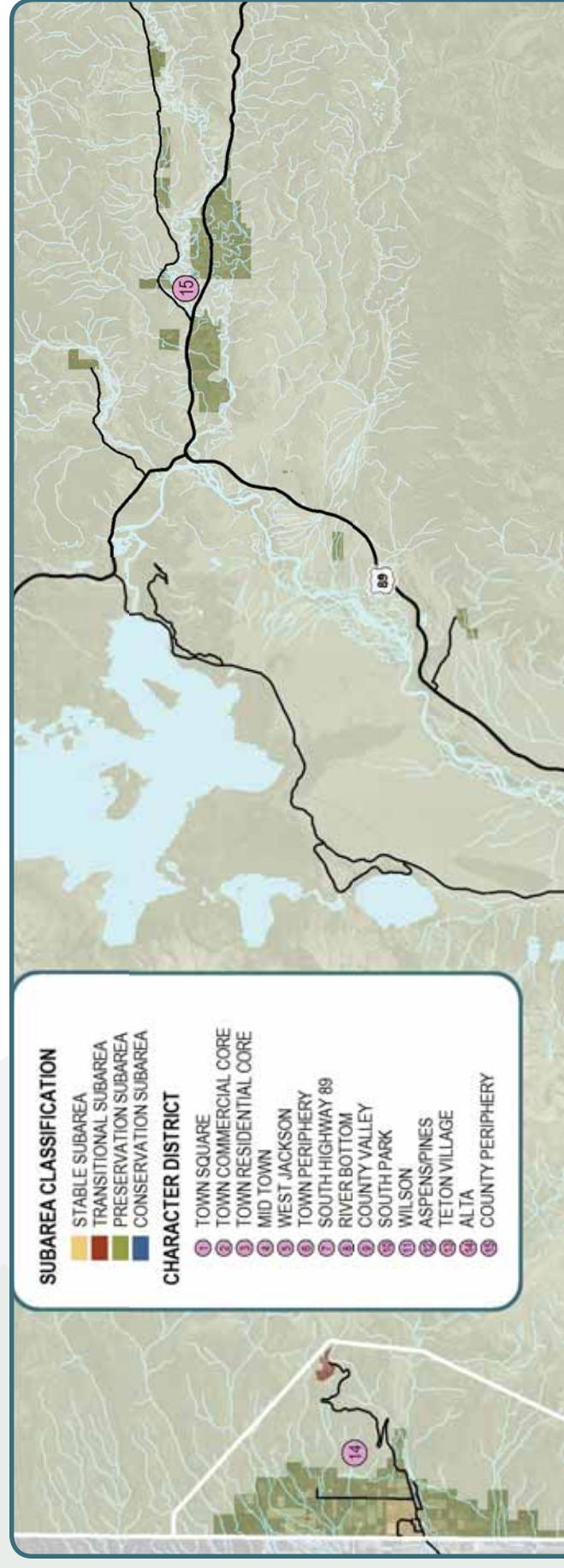
- Subareas where most of the community would agree that development/redevelopment or a change in character would be beneficial
- Subareas that would benefit from reinvestment and revitalization
- Goals for development include improving access to jobs, housing and services and reducing reliance on single-occupancy trips

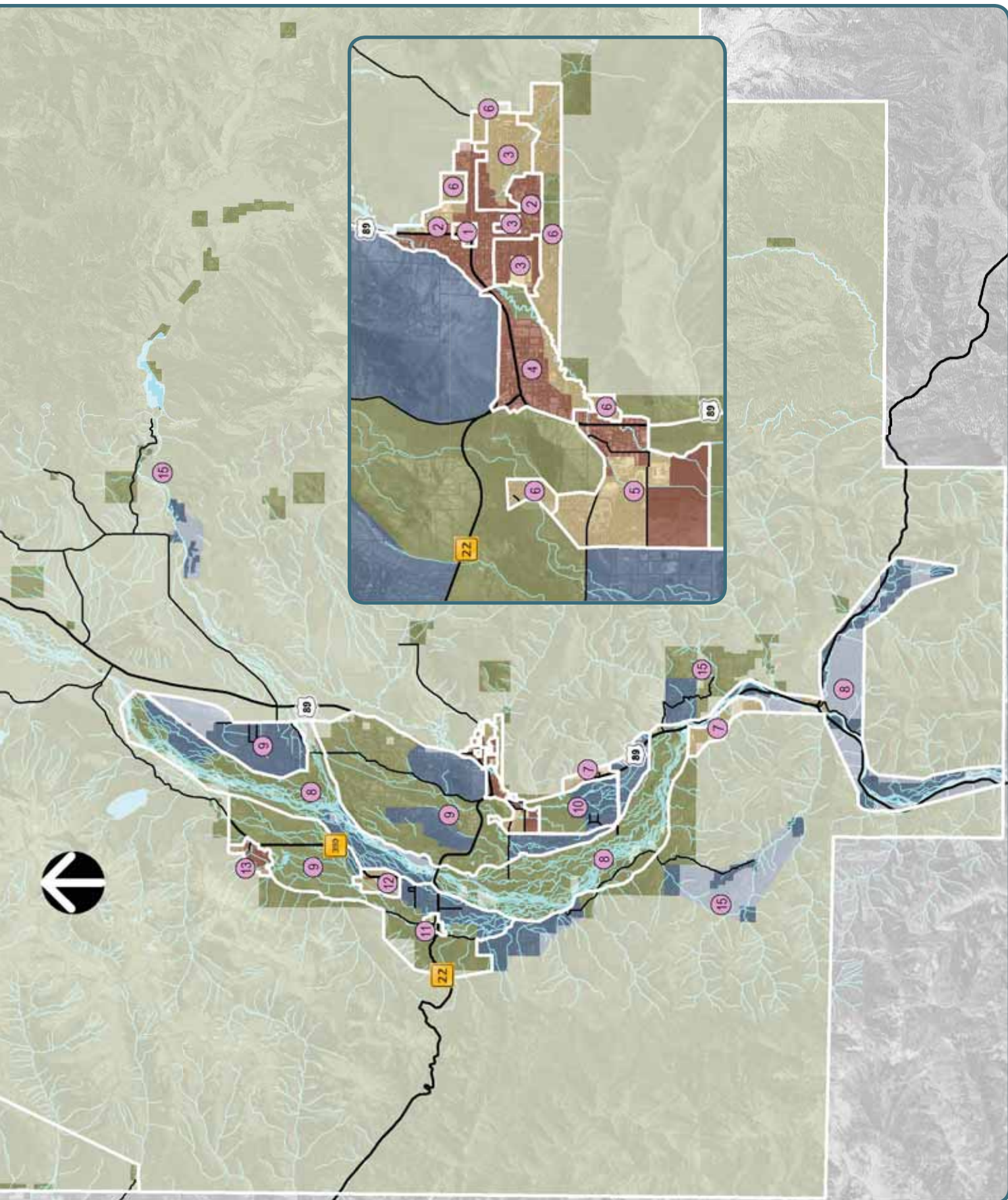
## Preservation Subarea

- Subareas in which no change to the existing undeveloped character of the scenic resources and wildlife habitat is necessary
- Additional amenities and infrastructure are inappropriate
- May benefit from some clustered residential development that improves the overall preservation of open space

## Conservation Subarea

- Areas of existing development and platted neighborhoods with high wildlife values, where development/redevelopment should focus on improved conservation
- Areas that benefit from an increase in open space, scenic resources, and habitat enhancement
- Goals include balancing existing developed wildlife permeability and scenic enhancements.







# Character Defining Features - Map Symbols

The Character Defining Features Maps depict the characteristics that define each district and subarea. Below is a list of symbols and map attributes that are used on the maps. Characteristics that are locational are shown on the map using colored symbols or map attributes. Other characteristics depicted using black symbols, apply generally to a subarea, but are not location specific. All mapped features are illustrative of the character of an area and do not imply desired regulatory boundaries or specific locations for certain attributes.

## *Common Value 1 – Ecosystem Stewardship*



Wildlife Permeability: Design for wildlife permeability should be a characteristic of the subarea.



Agriculture: Agricultural use should be characteristic of the subarea.



Wildlife Highway Crossing: Wildlife-vehicle collision mitigation emphasis site as identified by the Western Transportation Institute and Montana State University College of Engineering in 2012.



Crucial Habitat: Bald eagle, trumpeter swan, mule deer, elk, and/or moose crucial winter habitat; mule deer and/or elk migration corridor; and/or bald eagle and trumpeter swan nesting area; and/or cutthroat trout spawning area as identified by the Conservation Research Center of Teton Science Schools in 2008.



Scenic Corridor/Vista: Scenic highway corridors and vistas as identified on 1994 Community Issues Maps.

## *Common Value 2 – Growth Management*



Gateway: A gateway into the community.



Public Parking: Existing parking provided by the Town of Jackson.



Road Corridor Enhancement: A roadway corridor that will be characterized in the future by enhanced pedestrian and commercial vitality.



Creek Corridor Enhancement: A creek within a Complete Neighborhood that will be characterized in the future by enhanced recreational opportunities and ecological value.

---

### *Common Value 3 – Quality of Life*



Workforce Housing: Housing occupied by the workforce should be a characteristic of the subarea.



START Service: START service should be a characteristic of the subarea.



Local Convenience Commercial: Local convenience commercial should be located within the subarea.



Industrial: Light industrial and heavy retail use should occur in the subarea.



Parks and Recreation: Existing parks and recreation facilities.



School: Existing schools.



Key Transportation Network Project: Transportation network projects identified in Policy 7.2.d.



Existing/Proposed Pathways: Existing and proposed pathways identified in the Pathways Master Plan (2007).



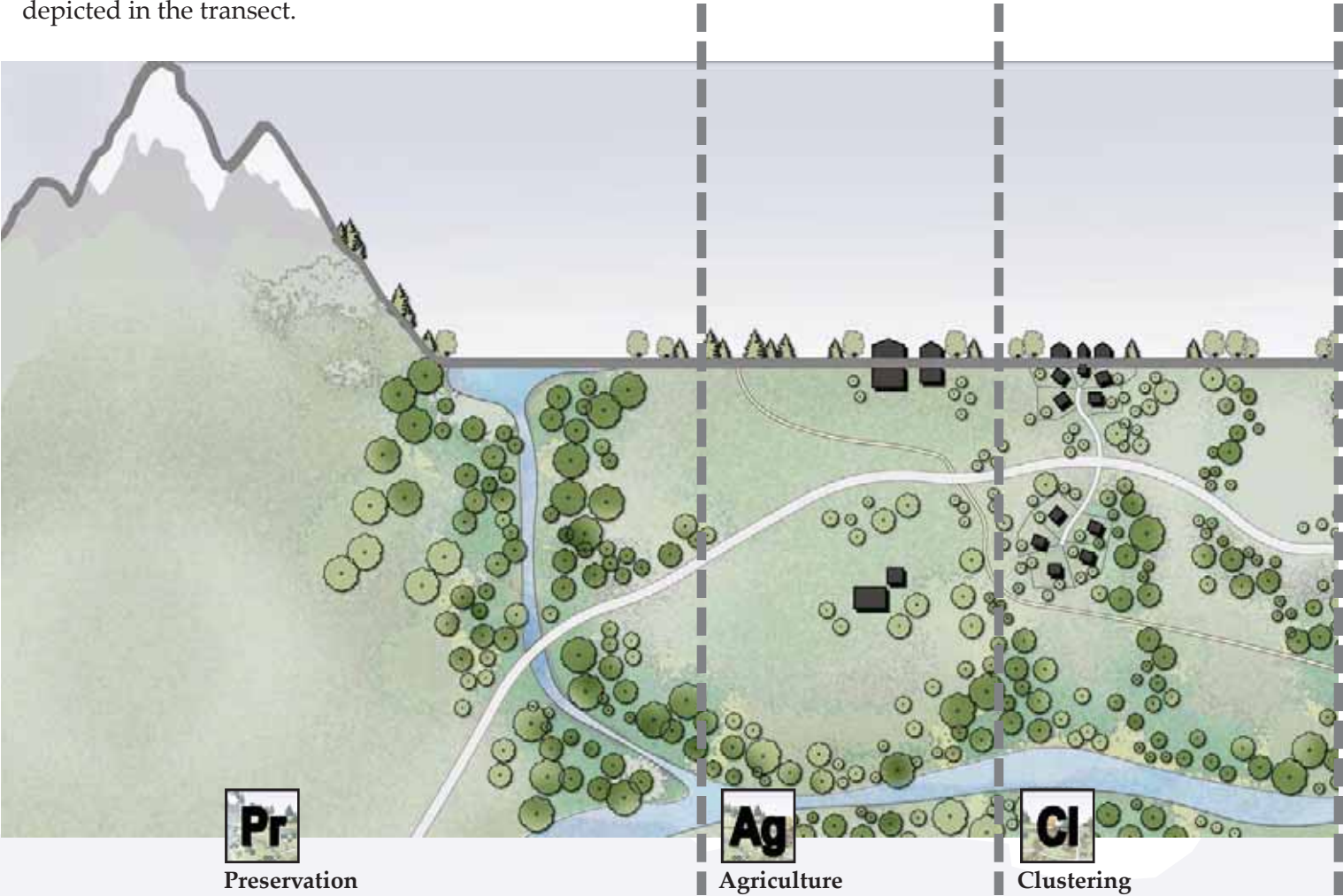
Improved Interconnectivity: An area that will be characterized in the future by increased interconnectivity.

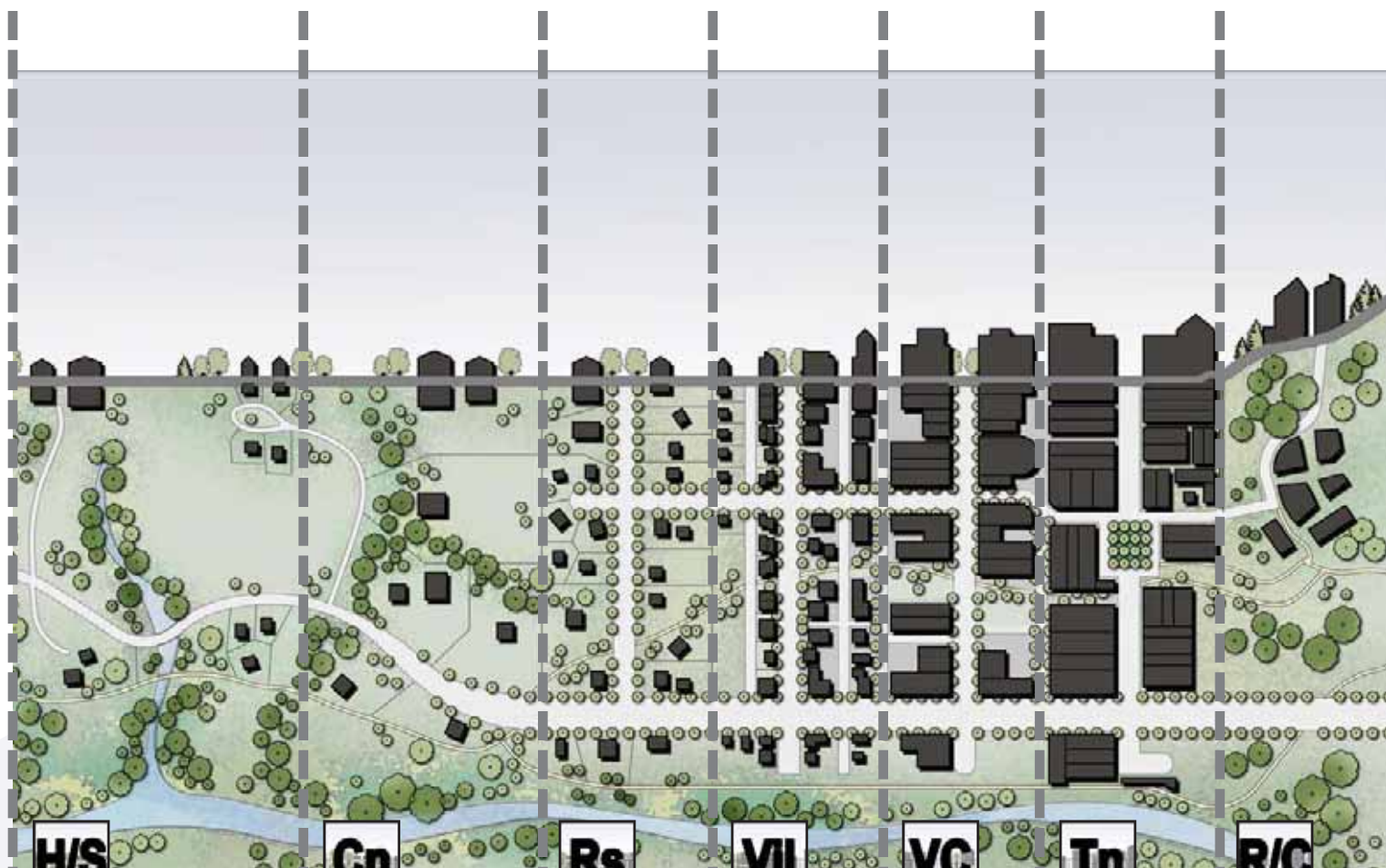




# Character Defining Features - Neighborhood Form Continuum

A Neighborhood Form identifies the general pattern and intensity of development representative of a certain character. One or more Neighborhood Forms are associated with each subarea. Below is a transect that depicts the continuum of Neighborhood Forms that make up our community and shows the relationship between the various patterns and intensities that define our character. The table below the transect describes characteristic acreages, heights, uses, and special considerations for each Neighborhood Form. These general characteristics are not prescriptive and are only meant to help describe the general pattern and intensity depicted in the transect.





**H/S**

**Habitat/Scenic**

+/- 35

2 story

Residential, Conservation

Design for wildlife and/or scenery, scale of historic agricultural compounds

**Cn**

**Conservation**

1-5

2 story

Residential

Design for wildlife and/or scenery, predominance of landscape over built form

**Rs**

**Residential**

± 1

2 story

Residential

Design for wildlife and/or scenery, predominance of landscape over built form

**Vl**

**Village**

n/a

2 story

Residential, Local Convenience Commercial, Civic  
Variety of housing types, complete streets, workforce housing

**VC**

**Village Center**

n/a

2-3 story

Residential, Commercial, Industrial, Civic

Mixed use, pedestrian oriented, complete streets, workforce housing

**Tn**

**Town**

n/a

2-3 story

Residential, Commercial, Civic

Pedestrian oriented, public spaces, complete streets, workforce housing, employment center

**R/C**

**Resort/Civic**

n/a

n/a

Resort, Civic

Master Planned, more intense development, public, semi-public facilities

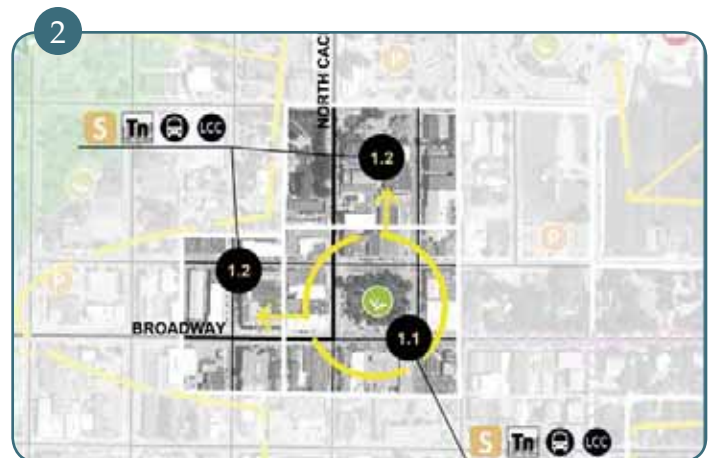
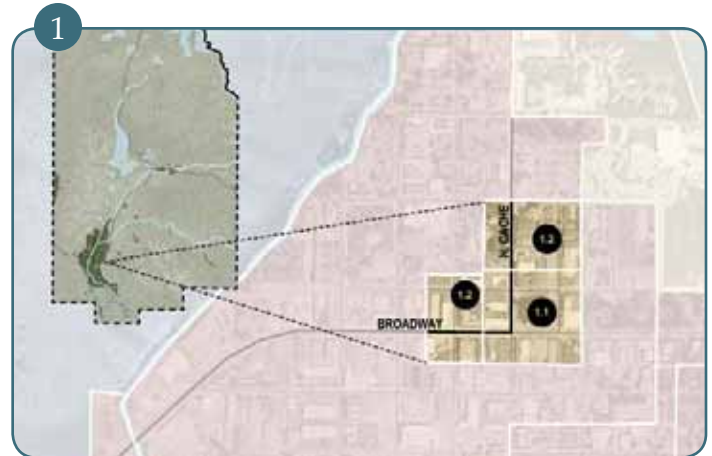


# What Does the Illustration of the Vision Address?

Our community's Vision is illustrated in 15 Character Districts. Each Character District has unique issues, opportunities and objectives. Each Character District contributes to the overall implementation of the Comprehensive Plan and will ensure that preservation and development occur in the desired amount, location and type throughout the community.

Each Character District is composed of 6 parts:

1. The Vicinity Map identifies the district boundaries and the size of the district in relation to the entire community. It also depicts the boundaries of the district subareas and their Stable, Transitional, Preservation, or Conservation classification.
2. The Character Defining Features Map depicts the characteristics that define each district and subarea. Characteristics are described through mapping or shown symbolically. Mapped features are illustrative of the character of an area and do not imply desired regulatory boundaries or specific locations of attributes. A complete list of symbols used on the maps can be found on pages IV-8 and IV-9.
3. The Complete Neighborhood/Rural Area Table indicates whether the district currently has the characteristics of a Complete Neighborhood or a Rural Area. It also indicates whether those characteristics will be maintained or enhanced in the future. This table serves to explain the classification of the district and identify the district's broad focus, basic issues, and opportunities.



3

Complete Neighborhood + Rural Area Chart

| DEFINITION                                        | EXISTING | FUTURE |                                                                   |
|---------------------------------------------------|----------|--------|-------------------------------------------------------------------|
| <b>COMPLETE NEIGHBORHOOD</b>                      |          |        |                                                                   |
| Diverse Character/High Quality Design             | ●        | ●      | 1-3 story, western character, vibrant pedestrian use, street wall |
| Public Utilities                                  | ●        | ●      | Water, sewer, electric service                                    |
| Quality Public Space                              | ●        | ●      | George Washington Memorial Park                                   |
| Variety of Housing Types                          | ●        | ●      | Condominiums, lofts, apartments                                   |
| Walkable Schools, Commercial + Recreation         | ●        | ●      | Post Office, START, limited commercial, schools, parks            |
| Connection by Complete Streets                    | ●        | ●      | Alternative transportation a priority                             |
| <b>RURAL</b>                                      |          |        |                                                                   |
| Viable Wildlife Habitat + Connectivity            | ○        | ○      |                                                                   |
| Natural Scenic Views                              | ○        | ○      |                                                                   |
| Agricultural + Undeveloped Open Space             | ○        | ○      |                                                                   |
| Abundance of Landscape over Built Form            | ○        | ○      |                                                                   |
| Limited, Detached, Single Family Res. Development | ○        | ○      |                                                                   |
| Minimal Intermediated Development                 | ○        | ○      |                                                                   |

Legend: ● Generally Present, ○ Partially Present, ○ Generally Absent

IV-14

4. Existing + Future Characteristics describe in words the existing and future character of the district, focusing on the elements of character that should be preserved or enhanced. This section provides the overall goals and vision for the district.

4

#### Existing + Future Desired Characteristics

The Town Square District is the historic center of Jackson Hole and the central gathering space for residents and visitors alike. The district is home to iconic buildings and public spaces, including the Cowboy Bar, George Washington Memorial Park (the "Town Square"), and the sawtooth building profiles surrounding the Town Square. Preserving the existing western character and heritage found in the buildings and public spaces in this district will be key to maintaining the existing character. The district is the center of the visitor experience in Town and plays an important role in defining our community's western heritage and overall community identity.

A future goal of the district is to have visitors and residents visit the area more often and stay longer, increasing the vitality of the area and supporting the local economy. To support this goal, commercial uses that create an active and engaging pedestrian experience, will be located on the first and second floors of buildings. Examples of these uses include restaurants, bars, a variety of retail shops and commercial amusement. In the future, the district will be the center of a Downtown Retail Shopping District, and office, residential and lodging uses will be predominantly located on upper floors.

Future community reinvestment in the district will create great public spaces and amenities for residents and visitors alike. This investment will not only create a positive visitor experience that supports our local economy, but will also continue the tradition of the Town Square as the gathering place for our community. The district will continue to be the center of community life, hosting a variety of events and community celebrations for residents and visitors. The temporary closure of streets, parking lots, parks and other public spaces will be encouraged to support such events. In addition, the community should consider the temporary and permanent closure of some streets to vehicles in order to create a vibrant pedestrian environment. Moving forward, the community will take great care and consideration in all future planning and redevelopment.

5. The Policy Objectives are policies from the Common Values of Community Character chapters of the Comprehensive Plan that are particularly relevant and should be implemented in the district. There may be other policies that apply to the district, but these are the key objectives to be met in the district in order for the community to achieve our Vision.

5

#### Policy Objectives

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Common Value 1:<br><i>Ecosystem Stewardship</i> | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Common Value 2:<br><i>Growth Management</i>     | <p>4.1.d: Maintain Jackson as the economic center of the region</p> <p>4.2.c: Create vibrant walkable mixed-use subareas</p> <p>4.2.d: Create a Downtown Retail Shopping District</p> <p>4.2.e: Protect the image and function of Town Square</p> <p>4.2.f: Maintain lodging as a key component in the downtown</p> <p>4.4.a: Maintain and improve public spaces</p> <p>4.4.c: Continue traditions and community events</p> <p>4.5.a: Identify and preserve historically significant structures and sites</p> |
| Common Value 3:<br><i>Quality of Life</i>       | <p>6.2.a: Enhance tourism as the basis of the economy</p> <p>6.3.a: Ensure year-round economic viability</p> <p>7.1.c: Increase the capacity for use of alternative transportation modes</p>                                                                                                                                                                                                                                                                                                                  |

6. The Character Defining Features describe each subarea through text, Neighborhood Forms, and photos and/or drawings. The focus of the description is the character priorities that will allow for the desired character of the district, and consequently the community Vision, to be achieved. The Neighborhood Form(s) depict the general pattern and intensity of development that meets the desired character; while the illustrations and/or photos provide a more detailed illustration of the desired built form. The entire continuum of Neighborhood Forms can be found on pages IV-8 and IV-9.

6

#### Character Defining Features

##### 1.1: Inner Square



Town Form

This STABLE Subarea will focus on maintaining western character by retaining or replicating the existing built environment. Building heights directly fronting the Town Square should not exceed two stories. Buildings should be located near the street to create an attractive street front. A desired western architectural style and approach will be defined. The continuation of covered wooden boardwalks is vital to maintaining the desired western character. Parking will be provided predominantly in public lots, underground, and on street to create a vibrant, walkable area oriented to pedestrians.





## **SECTION 5 – APPLICATION MATERIALS**

- 5.1 Application
- 5.2 Warranty Deed
- 5.3 Pre-application Conference Checklist



**PLANNING PERMIT APPLICATION**  
**Planning & Building Department**

150 E Pearl Ave. | ph: (307) 733-0440  
P.O. Box 1687 | [www.townofjackson.com](http://www.townofjackson.com)  
Jackson, WY 83001

**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: Core Services Vehicle Maintenance Facility  
Physical Address: 55 Karns Meadow Drive  
Lot, Subdivision: \_\_\_\_\_ PIDN: 22-41-16-33-2-00-025

**PROPERTY OWNER.**

Name: Town of Jackson Phone: 307-733-3932  
Mailing Address: PO Box 1687, Jackson, Wyoming ZIP: 83001  
E-mail: lpardee@ci.jackson.wy.us

**APPLICANT/AGENT.**

Name: Town of Jackson Phone: 307-733-3932  
Mailing Address: PO Box 1687, Jackson, Wyoming ZIP: 83001  
E-mail: lpardee@ci.jackson.wy.us

**DESIGNATED PRIMARY CONTACT.**

\_\_\_\_\_ Property Owner ☒ Applicant/Agent

**TYPE OF APPLICATION.** Please check all that apply; review the type of application at [www.townofjackson/200/Planning](http://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)  
\_\_\_\_\_ 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](http://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 #: P19-289 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](http://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](http://www.townofjackson.com/200/Planning) and select the relevant application type for the fees.

n/a **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 [www.townofjackson.com/DocumentCenter/View/102/Town-Fee-Schedule-PDF](http://www.townofjackson.com/DocumentCenter/View/102/Town-Fee-Schedule-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](http://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.

\_\_\_\_\_  
Signature of Property Owner or Authorized Applicant/Agent

Larry Pardee

\_\_\_\_\_  
Name Printed

\_\_\_\_\_  
Date

Town Manager

\_\_\_\_\_  
Title



# WARRANTY DEED

*First American Title  
Insurance Company*

Teton County Housing Authority, a duly constituted Housing Authority established by Teton County, Wyoming pursuant to W.S. § 15-10-116 as amended GRANTOR, of Teton County, Wyoming, for and in consideration of TEN DOLLARS (\$10.00) and other good and valuable consideration, in hand paid, receipt of which is hereby acknowledged, CONVEYS AND WARRANTS to Town of Jackson, Wyoming, a Wyoming municipal corporation of the State of Wyoming, GRANTEE, whose address is Post Office Box 1687, Jackson, Wyoming 83001, the following described real estate, situate in the County of Teton, State of Wyoming, hereby waiving and releasing all rights under and by virtue of the homestead exemption laws of the State of Wyoming, to-wit:

See attached Exhibit A.

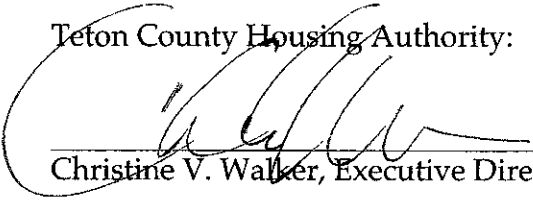
PIN #22-41-16-33-2-00-025

Together with and including all improvements thereon and all appurtenances and hereditaments thereunto belonging. Subject to all covenants, conditions, restrictions, easements, reservations, and rights-of-way of sight and/or record.

WITNESS my hand this 17<sup>th</sup> day of August, 2011.

|            |                                     |
|------------|-------------------------------------|
| RELEASED   | <input type="checkbox"/>            |
| INDEXED    | <input checked="" type="checkbox"/> |
| ABSTRACTED | <input checked="" type="checkbox"/> |
| SCANNED    | <input checked="" type="checkbox"/> |

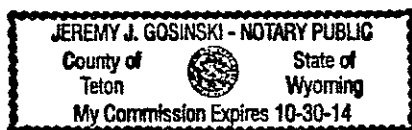
Teton County Housing Authority:

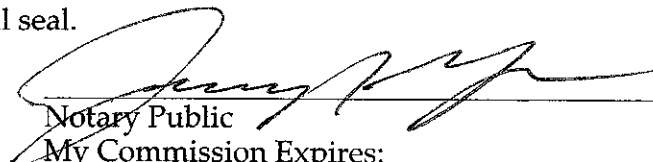
  
Christine V. Walker, Executive Director

STATE OF WYOMING       )  
                                      )  
COUNTY OF TETON       )

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day of August, 2011 by Christine V. Walker as Executive Director of the Teton County Housing Authority.

WITNESS my hand and official seal.



  
Notary Public  
My Commission Expires: \_\_\_\_\_

GRANTOR: TETON COUNTY HOUSING AUTHORITY  
GRANTEE: TOWN OF JACKSON WYOMING  
Doc 0799665 bk 787 pg 741-742 Filed At 13:12 ON 08/18/11  
Sherry L. Daigle Teton County Clerk fees: 11.00  
By Kassie Hansen Deputy



Exhibit A

A Tract of Land located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$  and the NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 33, Township 41 North, Range 116 West, 6th P.M., Town of Jackson, Teton County, Wyoming, being more particularly described as follows:

BEGINNING at the Southwest Corner of Said SE $\frac{1}{4}$ NW $\frac{1}{4}$ , the center-west one-sixteenth corner of Said Section 33;

THENCE along the west line of Said SE $\frac{1}{4}$ NW $\frac{1}{4}$ , N00°12'25"E, 660.83 feet;

THENCE N79°53'10"E, 321.32 feet, more or less, to the intersection with the west line of that easement for ingress and egress granted to Lower Valley Power and Light, Inc. as described in that instrument of record in Book 50 of Photo, pages 21 to 23, records of Teton County;

THENCE along the westerly line of said easement through the following courses and distances:

S00°38'59"W, 727.63 feet to a horizontal, circular curve to the right;

Thence along said curve, having a radius of 180.00 feet, a chord of 119.60 feet bearing S20°03'15"W, through a central angle of 38°48'27", an arc distance of 121.92 feet;

Thence S39°27'30"W, 61.85 feet;

Thence S38°49'10"W, 89.67 feet to a point on the easterly boundary line of that parcel conveyed to Lower Valley Power and Light, Inc. in said instrument of record in Book 50 of Photo, pages 21 to 23, records of Teton County;

THENCE departing said westerly line of said easement and proceeding along the easterly and northerly lines of said parcel in Book 50 of Photo through the following courses and distances:

N00°15'38"E, 160.00 feet to the northeast corner of said parcel;

N89°44'23"W, 175.00 feet to the northwest corner of said parcel, a point on the west line of Said NE $\frac{1}{4}$ SW $\frac{1}{4}$ ;

THENCE departing said boundary and proceeding along said west line, NE $\frac{1}{4}$ SW $\frac{1}{4}$ , N00°15'37"E, 79.51 feet to the CORNER OF BEGINNING.



## **PRE-APPLICATION CONFERENCE SUMMARY**

### **Planning & Development Department Planning Division**

150 E Pearl Ave. | ph: (307) 733-0440  
P.O. Box 687 | fax: (307) 734-3563  
Jackson, WY 83001 | www.townofjackson.com

*This Summary will be prepared by Planning Staff. The applicant, or the applicant's agent, shall receive a copy of this summary for their reference in submitting a sufficient application.*

**Staff may request additional materials during review as needed to determine compliance with the LDRs.**

#### **PRE-APPLICATION MEETING GENERAL INFORMATION.**

PAP#: P19-289  
Date of Conference: 1/30/20  
Planning Staff: Tyler Valentine

#### **PROJECT.**

Name/Description: Preapplication for Core Maintenance Facility Future Phases  
Physical Address: 55 Karns Meadow Drive  
Lot, Subdivision: PT. SW1/4NE1/4 & PT. SE1/4NW1/4 SEC. 33, TWP. 41, PIDN: 22-41-16-33-2-00-025  
RNG. 116  
Zoning District(s): Public/Semi-Public (P/SP)  
Overlay(s): Natural Resource Overlay (NRO)

#### **STAKEHOLDERS.**

Applicant: Jorgensen Associates – Brendan Schulte  
Owner: Town of Jackson – Larry Pardee (Town Manager)  
Agent:

#### **REQUIRED APPLICATIONS. This project will require the following applications:**

| Application                   | Reason                                                                                                | Fee    |
|-------------------------------|-------------------------------------------------------------------------------------------------------|--------|
| Development Plan              | Required for all future phases of the Core Maintenance Facility per the original Sketch Plan and CUP. | No fee |
| Design Review Committee (DRC) | Design review required for all nonresidential development, unless exempted by Planning Director       | No fee |
| Grading Pre-application       | Required for disturbing more than 3,000 sf of site area                                               | No fee |
| Building Permit               | Required for physical development                                                                     | TBD    |

#### **MEETING ATTENDEES:**

| Name            | Company              | Phone/Email    |
|-----------------|----------------------|----------------|
| Brendan Schulte | Jorgensen Associates | (307) 733-5150 |



|                 |                                 |                      |
|-----------------|---------------------------------|----------------------|
| Reed Armijo     | Jorgensen Associates            | (307) 733-5150       |
| Jeff Bates      | Jorgensen Associates            | (307) 733-5150       |
| Brian Lenz      | Town Engineer                   | (307) 733-3079 x1410 |
| Kevin Meagher   | Town Facilities Manager         | (307) 733-3079       |
| Johnny Ziem     | Assistant Public Works Director | (307) 733-3079       |
| Tyler Valentine | Town Senior Planner             | (307) 733-0440 x1305 |

**TIMELINES.** This table is intended to provide general information regarding the review process and timing of decisions. See Article 8 for a complete explanation of the review process.

The following timelines are generally applicable:

| Application Types:            | Sufficiency | Decision-Maker | Timeline                         |
|-------------------------------|-------------|----------------|----------------------------------|
| Development Plan              | 14 days     | Council        | 150 days from sufficiency        |
| Design Review Committee (DRC) | n/a         | DRC            | Concurrent with Development Plan |

#### Checklist Key.

✓ **Required.** Applicant must demonstrate compliance with this requirement.

N/A **Not Applicable.** Review requirement is not applicable to this project.

#### General Information

#### Requirement

#### Notes

- ✓ **Planning Permit Application.** The application should list all pertinent permits (use, physical development, interpretation, relief from the LDRs, Development Option/Subdivisions, Amendments to the LDRs) for which you are applying.
- ✓ **Notarized Letter of Authorization.** See "Permit and Applications" section on Planning Department website for copy of form.
- N/A **Application Fees.** Fees are cumulative. Applications for multiple types of permits, or for multiple permits of the same type, require multiple fees. See the currently adopted Fee Schedule in the Administrative Manual for more information.
- ✓ **Review fees.** The applicant is responsible for paying any review fees and expenses from consulting services necessitated by the review of the application by the County Surveyor, Town Engineer, Title Company and any other required consultant. Such fees shall be paid prior to approval of the permit.
- ✓ **Mailed Notice fee.** See Section 8.2.14.C.2 for notice requirements. If mailed notices are required, the applicant is responsible for paying for any mailing in excess of 25 notices.
- ✓ **Digital Format.** All applications submitted to the Town Planning Department must be submitted in digital format.

Upon submittal, only a digital copy is required. Hard copies will be required at a later date prior to the first public hearing.

|            |                                                                                                                                                                                                                                                                                                                                                                             |                                                                                             |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <u>✓</u>   | <b>Response to Submittal Checklist.</b> All applications require response to applicable review standards. For applications where a pre-application conference is required, applicable standards are identified below. If a pre-application conference is optional, see the submittal checklist for the relevant application type, established in the Administrative Manual. |                                                                                             |
| <u>N/A</u> | <b>Title Report.</b> A title report, title certificate or record document guarantee prepared within the last six months that includes evidence of ownership and all encumbrances on the subject property. Copies of the documents referenced in the report should not be submitted unless requested by the planner during review.                                           |                                                                                             |
| <u>✓</u>   | <b>Narrative description of the proposed development.</b> Describe in detail the existing condition of the property and the proposed development, use, or subdivision for which you are seeking approval.                                                                                                                                                                   | This should include an update on outstanding environmental mitigation requirements, if any. |
| <u>✓</u>   | <b>Findings for approval.</b> Include in your narrative a response to the findings for approval found in LDR Div 8.5, as applicable.                                                                                                                                                                                                                                        |                                                                                             |
| <u>✓</u>   | <b>Proposed Development Program.</b> Provide a table that summarizes the projects compliance with the primary development standards (setbacks, heights, FAR, LSR, etc.). An example is found in the Administrative Manual.                                                                                                                                                  |                                                                                             |
| <u>✓</u>   | <b>Site Plan.</b> Provide a detailed site plan of the proposed project. A list of minimum standards for a site plan are established in the Administrative Manual.                                                                                                                                                                                                           |                                                                                             |
| <u>✓</u>   | <b>Floor Plans.</b> Include floor plans for any existing buildings that will be occupied by a proposed use. If changes to existing buildings are proposed, indicate those on the floor plans.                                                                                                                                                                               |                                                                                             |
| <u>N/A</u> | <b>Neighborhood Meeting Summary.</b> See Section 8.2.3 for Neighborhood Meeting requirements.                                                                                                                                                                                                                                                                               | Optional.                                                                                   |
| <u>✓</u>   | <b>Posted Notice.</b> See Section 8.2.14.C.4 for Posted Notice requirements for all public hearings.                                                                                                                                                                                                                                                                        |                                                                                             |

#### ARTICLES 2 (COMPLETE NEIGHBORHOODS), 3 (RURAL AREA ZONES), and 4 (SPECIAL PURPOSE ZONES).

Applicable Zone: Public/Semi-Public

Applicable LDR Section: Section 4.2.1.

#### PHYSICAL DEVELOPMENT. *Please see Subsection B in applicable Zone District for specific standards.*

| Requirement                                                                   | Notes                                                                   |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <u>✓</u> <b>Structure Location and Mass</b> (setbacks, height, FAR, etc.)     |                                                                         |
| <u>N/A</u> <b>Maximum Scale of Development</b> (individual building size)     |                                                                         |
| <u>✓</u> <b>Design Review</b> (Design Guidelines and Design Review Committee) | Required.                                                               |
| <u>✓</u> <b>Site Development</b> (Driveway and Access limits)                 |                                                                         |
| <u>✓</u> <b>Landscaping</b> (see Div. 5.5 for more information)               | How many plant units provided? Sketch Plan mentions native plant types. |
| <u>✓</u> <b>Fencing</b> (see Sec. 5.1.2 for more information)                 |                                                                         |



|            |                                                                                                                                                                                                                                                           |                                                                                                                                      |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <u>✓</u>   | <b>Environmental Standards (see Div. 5.1 and 5.2 for more information)</b> <ul style="list-style-type: none"> <li>• Natural Resource Buffers</li> <li>• Irrigation Ditch Setback</li> <li>• Natural Resource Overlay Standards</li> </ul>                 | Please provide an update as to the original EA requirements (Alternative #2), what has been implemented and what obligations remain. |
| <u>✓</u>   | <b>Scenic Standards (see Div. 5.3 for more information)</b> <ul style="list-style-type: none"> <li>• Exterior Lighting</li> <li>• Scenic Resource Overlay (SRO) Standards</li> </ul>                                                                      | All lighting must comply with the exterior lighting standards in Section 5.3.1.                                                      |
| <u>✓</u>   | <b>Natural Hazards to Avoid (see Div. 5.4 for more information)</b> <ul style="list-style-type: none"> <li>• Steep Slopes</li> <li>• Areas of Unstable Soils</li> <li>• Fault Areas</li> <li>• Floodplains</li> <li>• Wildland Urban Interface</li> </ul> | Not in Wildland Urban Interface<br>No steep slopes<br>May be in flood plain.                                                         |
| <u>N/A</u> | <b>Signs (see Div. 5.6 for more information)</b>                                                                                                                                                                                                          |                                                                                                                                      |
| <u>✓</u>   | <b>Grading, Erosion Control, Stormwater (see Div. 5.7 for more information)</b> <ul style="list-style-type: none"> <li>• Grading</li> <li>• Erosion Control</li> <li>• Stormwater Management</li> </ul>                                                   |                                                                                                                                      |

**USE STANDARDS.** Please see Subsection C in applicable Zone District for specific standards.

| Requirement                                                                                                                                                                                                                                                                                                                                        | Notes                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <u>✓</u> <b>Allowed Uses (see Div. 6.1 for more information)</b>                                                                                                                                                                                                                                                                                   |                               |
| <u>✓</u> <b>Parking (see Div. 6.2 for more information)</b>                                                                                                                                                                                                                                                                                        | How many spaces are required? |
| <u>✓</u> <b>Employee Housing (see Div. 6.3 for more information)</b>                                                                                                                                                                                                                                                                               |                               |
| <u>N/A</u> <b>Maximum Scale of Use</b>                                                                                                                                                                                                                                                                                                             |                               |
| <u>✓</u> <b>Operational Standards (see Div. 6.4 for more information)</b> <ul style="list-style-type: none"> <li>• Outside Storage</li> <li>• Refuse and Recycling</li> <li>• Noise</li> <li>• Vibration</li> <li>• Electrical Disturbances</li> <li>• Fire and Explosive Hazards</li> <li>• Heat and Humidity</li> <li>• Radioactivity</li> </ul> |                               |

**DEVELOPMENT OPTIONS.** Please see Subsection D in applicable Zone District for specific standards.

| Requirement | Notes |
|-------------|-------|
|-------------|-------|

|          |                                                                                                                                                                                                      |                                                                                                 |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <u>✓</u> | <b>Allowed Subdivision and Development Options</b> (see Div. 7.1 and 7.2 for more information)                                                                                                       |                                                                                                 |
| <u>✓</u> | <b>Residential Subdivision Requirements</b> (see Div. 7.4 and 7.5 for more information) <ul style="list-style-type: none"> <li>• Affordable Housing</li> <li>• School and Parks Exactions</li> </ul> | Housing is approved in the final phase which appears to be excluded from this Development Plan. |
| <u>✓</u> | <b>Infrastructure</b> (see Div. 7.6 and 7.7 for more information) <ul style="list-style-type: none"> <li>• Transportation Facilities</li> <li>• Required Utilities</li> </ul>                        |                                                                                                 |

#### OTHER APPLICABLE LDR STANDARDS

| Requirement                                              | Notes: |
|----------------------------------------------------------|--------|
| <u>N/A</u> <b>Division 1.9, Nonconformities</b>          |        |
| 1.9.2 Nonconforming Physical Development                 |        |
| 1.9.3 Nonconforming Uses                                 |        |
| 1.9.4 Nonconforming Development Options and Subdivisions |        |
| 1.9.5 Nonconforming Signs                                |        |
| <u>N/A</u> <b>Division 7.3, Open Space Standards</b>     |        |
| 7.3.3 Configuration and Location of Required Open Space  |        |
| 7.3.4 Use of Open Space                                  |        |
| 7.3.5 Physical Development Permitted in Open Space       |        |
| 7.3.6 Record of Restriction                              |        |
| 7.3.7 Ownership of Open Space                            |        |

#### ADDITIONAL COMMENTS

- Applicant needs to demonstrate compliance with the Environmental Analysis, specifically with regard to the off-site mitigation in Karns Meadow. Alternative #2 was approved and needs to be completed with this proposed Development Plan. It appears that some of the off-site mitigation may have been related to the parking lot in Karns Meadow which is no longer in this proposal. If this is the case, the applicant will need to demonstrate whether that is the case and if so, the applicant needs to provide justification as to the new adjusted amount and location of off-site mitigation.
- At the meeting it was stated that the Building Permit can be submitted any time. However Planning will not accept a Building Permit until Council approval is received. There may be a possibility of submitting a Building Permit after Planning Commission and before Council, but this would need to be discussed with the Town Planning Director, Paul Anthony.
- At time the project would likely go back to the DRC based on the north elevation changes. However DRC may be waived if it is determined by the Planning Director that the changes are negligible.
- In the Development Plan narrative, the applicant needs to provide a detailed history of events starting from the original approval to the current date. The narrative should also highlight all changes from previous approvals including the solar panels that are proposed to replace the green roof.
- Applicant should consider the potential for an east-west road/pedestrian connection through the START site to connect to the adjacent Virginian property if the Virginian site is redeveloped with high density housing/commercial. This new road would connect Virginian Lane to Karns Meadow Lane. The Comprehensive Plan has goals to increase multi-modal connectivity in Mid Town Jackson by breaking up some of the 'super blocks' with new connections where appropriate to reduce congestion on the existing road network, such as the intersection of Snow King Ave and Viginian Lane. To minimize inconvenience to the START site, we would propose that any such road connection would be located on the southern edge of the site and to the north of the LVP&L transformer station. More discussion will be needed to make sure any connection would not compromise the function of the START facility.



**PLAN REVIEW COMMITTEE.** *The Plan Review Committee consists of the following listed agencies. Planning Staff will transmit pertinent portions of the application to each agency. **Other agencies and individuals not checked off on this list may be added to the PRC if necessary.***

|                                     | Agency                                                                            | Required for: |
|-------------------------------------|-----------------------------------------------------------------------------------|---------------|
| <input checked="" type="checkbox"/> | Building Official                                                                 |               |
| <input checked="" type="checkbox"/> | Town Attorney                                                                     |               |
| <input checked="" type="checkbox"/> | Town Engineer                                                                     |               |
| <input type="checkbox"/>            | Title Company – for subdivision plat                                              |               |
| <input type="checkbox"/>            | County Surveyor – for subdivision plat                                            |               |
| <input checked="" type="checkbox"/> | Jackson Hole Fire EMS                                                             |               |
| <input checked="" type="checkbox"/> | Housing Authority                                                                 |               |
| <input type="checkbox"/>            | Integrated Solid Waste & Recycling                                                |               |
| <input type="checkbox"/>            | National Park Service                                                             |               |
| <input checked="" type="checkbox"/> | Parks and Recreation Department                                                   |               |
| <input checked="" type="checkbox"/> | Pathways Coordinator                                                              |               |
| <input type="checkbox"/>            | Public and Environmental Health                                                   |               |
| <input checked="" type="checkbox"/> | Police Department                                                                 |               |
| <input type="checkbox"/>            | Teton Conservation District                                                       |               |
| <input type="checkbox"/>            | Teton County School District                                                      |               |
| <input type="checkbox"/>            | Teton County (required when subdividing land within one mile of the Teton County) |               |
| <input type="checkbox"/>            | U.S. Forest Service (if adjacent to or accessing through forest service lands)    |               |
| <input type="checkbox"/>            | Wyoming Department of Environmental Quality                                       |               |
| <input type="checkbox"/>            | Wyoming Department of Game & Fish                                                 |               |
| <input type="checkbox"/>            | Other                                                                             |               |

## PLANNING

**Project Number** P19-289 **Applied** 12/24/2019 **STOL**  
**Project Name** Pre-App - Core Maintenance Facility **Approved**  
**Type** PREAPPLICATION **Closed**  
**Subtype** DEVELOPMENT PLAN **Expired**  
**Status** STAFF REVIEW **Status**

**Applicant** **Owner** TOWN OF JACKSON, WYOMING

**Site Address** **City** **State** **Zip**  
 55 Karns Meadow Drive JACKSON WY 83001

**Subdivision** **Parcel No** **General Plan**  
 22411633200025

| Type of Review                                             | Status   | Dates    |           |          | Remarks |
|------------------------------------------------------------|----------|----------|-----------|----------|---------|
|                                                            |          | Sent     | Due       | Received |         |
| <b>Contact</b><br><b>Notes</b><br>Building<br>Kelly Sluder | APPROVED | 1/2/2020 | 1/23/2020 | 1/3/2020 |         |

Fire APPROVED W/CONDITI 1/2/2020 1/23/2020 1/27/2020 see notes  
 Kathy Clay  
 (1/27/2020 10:41 AM CLAY)  
 TO: Tyler Valentine

FROM: Kathy Clay

DATE: January 27, 2020

SUBJECT: Pre-Application START  
 555 W Snow King Ave  
 P19-289

This office has received the request for pre-application review at the above location. The 2018 edition of the International Fire Code (IFC) and the most current edition of the National Electric Code (NEC) shall be used for building design.

Staff will review the construction documents for specific code concerns when construction documents are submitted. Please pay special attention to requirements for repair garages.

Please feel free to contact me if you have any further questions at 307-733-4732.

|                                                              |                    |          |           |          |           |
|--------------------------------------------------------------|--------------------|----------|-----------|----------|-----------|
| Joint Housing Dept<br>Stacy Stoker<br>(1/7/2020 1:58 PM SAS) | APPROVED W/CONDITI | 1/2/2020 | 1/23/2020 | 1/7/2020 | See Notes |
|--------------------------------------------------------------|--------------------|----------|-----------|----------|-----------|

A Housing Mitigation Plan must be submitted with all future applications.

|                         |            |          |           |           |                          |
|-------------------------|------------|----------|-----------|-----------|--------------------------|
| Legal<br>Lea Colasuonno | NO COMMENT | 1/2/2020 | 1/23/2020 | 1/23/2020 | No comment at this time. |
|-------------------------|------------|----------|-----------|-----------|--------------------------|



| Type of Review<br>Contact<br>Notes                                                                       | Status             | Dates    |           |           | Remarks |
|----------------------------------------------------------------------------------------------------------|--------------------|----------|-----------|-----------|---------|
|                                                                                                          |                    | Sent     | Due       | Received  |         |
| Parks and Rec<br>Steve Ashworth<br>(1/24/2020 10:12 AM STOL)<br>No comments from P&R related to P19-289. | NO COMMENT         | 1/2/2020 | 1/23/2020 | 1/23/2020 |         |
| Andy                                                                                                     |                    |          |           |           |         |
| Pathways<br>Brian Schilling<br>(1/24/2020 10:11 AM STOL)<br>No comments from Pathways.<br>Brian          | NO COMMENT         | 1/2/2020 | 1/23/2020 | 1/23/2020 |         |
| Planning<br>Tyler Valentine<br>(1/30/2020 11:33 AM TV)<br>Please see checklist.                          | APPROVED W/CONDITI | 1/2/2020 | 1/23/2020 | 2/7/2020  |         |
| Police<br>Todd Smith                                                                                     |                    | 1/2/2020 | 1/23/2020 |           |         |
| Public Works<br>Brian Lenz                                                                               | APPROVED           | 1/2/2020 | 1/23/2020 | 1/23/2020 |         |

| Type of Review                                                | Status | Dates |     |          |         |
|---------------------------------------------------------------|--------|-------|-----|----------|---------|
|                                                               |        | Sent  | Due | Received | Remarks |
| <b>Contact</b>                                                |        |       |     |          |         |
| <b>Notes</b>                                                  |        |       |     |          |         |
| (1/23/2020 3:53 PM BTL)                                       |        |       |     |          |         |
| Pre-Ap Comments                                               |        |       |     |          |         |
| P19-289                                                       |        |       |     |          |         |
| ADDRESS: 55 Karns Meadow Drive                                |        |       |     |          |         |
| OWNER: Town of Jackson; Larry Pardee Town Manager             |        |       |     |          |         |
| APPLICANT: Jorgensen Associates                               |        |       |     |          |         |
| 1/23/2020                                                     |        |       |     |          |         |
| Brian Lenz, 733-3079                                          |        |       |     |          |         |
| DATE OF SUBMITTAL: 1/2/2020                                   |        |       |     |          |         |
| DATE OF MATERIALS: Phasing, 12/20/2019; Architectural No Date |        |       |     |          |         |
| REVISION NO.: 00                                              |        |       |     |          |         |

The engineering division has reviewed your application for a DEVELOPMENT PLAN AMENDMENT PRE-APPLICATION submitted on and with application materials as dated above.

\*The following comments are being provided for use in preparation of future applications.

It is our understanding that the project has received approval and that there are only minor proposed changes to the application. Plans for the development not included with the application were used for the review.

#### PROJECT SPECIFIC COMMENTS

1. Development coordination between the Town and the 660 West Broadway developer agreed that as part of their project, they could grade over their south property line and onto the subject property. Coordination and alteration of the design of the proposed retaining wall around the parking lot is necessary.

#### TOJ CODE

A construction-staging narrative shall be submitted for review and approval with the Development Plan application.

#### LAND DEVELOPMENT REGULATIONS

Development shall comply with the physical development standards for its zoning.

#### 5.4 NATURAL HAZARDS PROTECTION STANDARDS

5.4.2 Unstable Soils: Identify any unstable soils and show compliance with this section.

5.4.3 Faults: Identify any unstable soils and show compliance with this section.

5.4.4 Floodplains: Identify and floodplains or floodways and show compliance with the municipal code and / or the LDRs.

#### 5.7 GRADING, EROSION CONTROL, AND STORMWATER

5.7.1 Grading Permit Required: Provide information on how the application will comply with this section, including the Geotechnical Report.

5.7.2 Grading Standards: Provide a grading plan that shows compliance with this section. Plan shall include existing and proposed site contours with elevation labels, spot elevations, high and low points, grade breaks. Provide easements for grading proposed on adjacent properties.

5.7.3 Erosion Control Standards: Provide an erosion control plan that shows compliance with this section.

5.7.4 Stormwater Management Standards: Provide an erosion control plan that shows compliance with this section. Stormwater discharges shall have sand/oil separation pre-treatment.

#### 6.4 OPERATIONAL STANDARDS

6.4.1 Outside Storage: Provide a Construction Management Plan / Narrative, for any offsite storage address compliance with this section.

6.4.3 Noise: Provide a statement to address compliance with this section.

6.4.4 Vibration: Provide a statement to address compliance with this section.

#### 7.7 – REQUIRED UTILITIES



| Type of Review                                                                                                                                                                                                                                                                 | Status | Dates    |           |          |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|-----------|----------|---------|
|                                                                                                                                                                                                                                                                                |        | Sent     | Due       | Received | Remarks |
| Contact                                                                                                                                                                                                                                                                        |        |          |           |          |         |
| Notes                                                                                                                                                                                                                                                                          |        |          |           |          |         |
| 7.7.2 Potable Water Supply:                                                                                                                                                                                                                                                    |        |          |           |          |         |
| 1. Show compliance with local and 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.                                  |        |          |           |          |         |
| 7.7.3 Sanitary Sewer System:                                                                                                                                                                                                                                                   |        |          |           |          |         |
| 1. Show compliance with local state regulations, construction standards, maximum allowable infiltration, connections for lots of record, provisions for system expansion.                                                                                                      |        |          |           |          |         |
| 7.7.5 Other Utilities:                                                                                                                                                                                                                                                         |        |          |           |          |         |
| Provide a plan for all other utilities, such as telephone, cable TV, electric, fiber, gas. All utilities shall be installed underground. Provide right-of-way or easements as required. Show that private utilities can be located on private properties, e.g. transformers.   |        |          |           |          |         |
| 7.7.6 Fuel Storage Tanks:                                                                                                                                                                                                                                                      |        |          |           |          |         |
| Provide a plan showing any buried fuel storage tanks. All fuel storage tanks shall be underground. All fuel tanks shall meet setbacks for accessory structures in the applicable zone, and no fuel may be buried within 50 feet from any stream, excluding irrigation ditches. |        |          |           |          |         |
| START                                                                                                                                                                                                                                                                          |        | 1/2/2020 | 1/23/2020 |          |         |
| Darren Brugmann                                                                                                                                                                                                                                                                |        |          |           |          |         |

# STAFF REPORT



**MEETING DATE & TITLE:** Oct. 5, 2020, Regular Meeting

**SUBMITTING DEPARTMENT:** Planning

**PRESENTER:** Paul Anthony/Andrew Bowen

**SUBJECT:** P20-142 Teton Village Master Plan AMD for dormitories **PUBLIC COMMENT:** Yes

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## **PURPOSE & POLICY CONSIDERATIONS:**

JHMR is requesting to amend the Teton Village Master Plan under the Teton County Land Development regulations (LDRs) to allow 'dormitory-style' housing units to be used to satisfy employee housing mitigation requirements for non-residential development in Area One of Teton Village. The Town Council is providing 'courtesy' review of a County resort under Section 4.3.1.E.4 Joint Review by Town and County.

## **REQUESTED ACTION:**

JHMR is requesting to amend the Teton Village Master Plan to allow 'dormitory-style' housing units to be used to satisfy employee housing mitigation requirements for non-residential development in Area One of Teton Village. This request is a modified version of a previous request made by the applicant in 2019.

## **RECOMMENDATION:**

Town staff has no formal recommendation because this is a 'courtesy' review under Section 4.3.1.E.4 Joint Review by Town and County. County Planning staff have a recommendation as provided in the attached staff report.

## **BACKGROUND:**

JHMR is requesting to amend the Teton Village Master Plan to allow 'dormitory-style' housing units to be used to satisfy employee housing mitigation requirements for non-residential development in Area One of Teton Village. This request is a modified and simplified version of the amendment request the applicant made and the Planning Commission heard on November 11, 2019.

In the County Land Development Regulations (LDRs), a "dormitory" is defined as a housing unit that allows four or more unrelated people to live in the same housing unit. This type of housing avoids the limitation imposed on all other residential unit types that are limited to 'single-family' uses only, which are defined as having not more than three unrelated people living in the same residential unit.

The need for this amendment stems from the fact that the County (and Town) adopted revised affordable workforce housing mitigation requirements in 2018 that now prohibit the use of dormitories to meet housing mitigation requirements. This change has particular impact on the applicant because they have already obtained approval for and partially built a large, dormitory housing PUD project located on Powderhorn Lane in the Town of Jackson. Consequently, the applicant became concerned that their dormitory units at Powderhorn (especially the unbuilt Phase 2 dorms units) might not be allowed to be used as mitigation units for future development at Teton Village as intended. The proposed amendment is thus intended to allow dormitories to meet up to 60% of the employee housing mitigation for non-residential development in Area One of Teton Village.

Please see the County Planning staff report and applicant's submittal for more detail on the proposal.



Staff and the applicant will provide a brief presentation and opportunity for questions at the meeting.

#### ANALYSIS:

According to Sec. 4.3.1.E.4 of the Teton County LDRs, each jurisdiction shall receive and consider recommendations from the other jurisdiction when a Planned Resort application is submitted for review or amendment. The text of Sec. 4.3.1.E.4 is as follows:

4. **Joint Review by Town and County.** The County Planning Commission and the Board of County Commissioners shall receive and consider recommendations from the Town Planning Commission and Town Council regarding any Planned Resort master plan application in the County. For the same purpose, The County Planning Commission and Board of County Commissioners shall make recommendations to the Town Planning Commission and Town Council regarding any Planned Resort master plan application within the Town of Jackson.
  - a. **Purpose.** The purpose of the County's and Town's review of any Planned Resort in the other jurisdiction is to recognize the impact of resorts on neighboring jurisdictions and to provide an opportunity for cooperation in planning and mitigation of potential impacts.
  - b. **Intent.** The intent of review is for the Town Planning Commission and Town Council to have an opportunity for review and comment on a proposed Master Plan. The Town's role is advisory only and does not include a voting participation in review of the Planned Resort master plan.

The County Planning Staff are recommending that the Teton Village Master Plan Section VII.A. Provision of Employee Housing be amended to allow dormitories to satisfy no more than 25% (not 60% as requested) of the required housing mitigation for future development within Teton Village Area One. County planning staff provide two reasons for its recommendation: 1) the requested 60% would be inconsistent with the recent decision by the County to shift to providing housing for year-round workers instead of seasonal workers, and 2) the Town just approved a 25% maximum on dormitory housing for mitigation for Snow King Resort and consistency between the two resort areas would seem fair and reasonable.

In coming to its recommendation, County Planning Staff identified and addressed the following Key Issue:

*Does Jackson Hole Mountain Resort's unique employee housing characteristic, which is comprised of a majority of seasonal workers, necessitate a shift in housing policy for Teton Village Area One from an emphasis on year-round employees to seasonal employees?*

In response, County staff found that its proposed recommendation and condition recognize a legitimate need of the applicant to provide some level of seasonal housing but that the primary need should still be for year-round, deed-restricted housing.

Town staff generally concur with the reasoning and conclusions of the County staff. Please see the County staff report for more detail this key issue.

Town staff further conclude that the proposed amendments should not have any significant adverse impacts on the Town of Jackson.

**ALTERNATIVES (Optional):**

No alternatives provided. Please see attached staff report from the County planning staff.

**COMPREHENSIVE PLAN & PRIORITY ALIGNMENT:**

Please see attached staff report from the County planning staff.

**FISCAL IMPACT:**

There will be no significant fiscal impact to the Town.

**STAFF IMPACT:**

There will be no significant staff impact to the Town.

**ATTACHMENTS OR LINKS:**

- County Staff Report
- Applicant Submittal

**SUGGESTED MOTION:**

The LDRs state that the Council does not have a 'voting participation' in the review of a Resort Master Plan amendment, thus no motion is intended. However, the Town Planning Commission is expected to provide any recommendations and comments as appropriate.



## **Planning Commission - Staff Report**

**Subject:** Teton Village Master Plan Area One PUD Text Amendment (Dormitories)

**Agent:** Bill Collins

**Applicant:** Jackson Hole Mountain Resort (JHMR)

**Property Owner:** This amendment is not tied to a single property

**Presenter:** Andrew Bowen, *Senior Planner*

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### **REQUESTED ACTION SUMMARIES**

JHMR seeks to amend the Teton Village Master Plan (TVMP) pursuant to Sections 8.7.3 and 4.3.1.D of the Teton County Land Development Regulations (LDRs), to allow dormitories to partially satisfy housing mitigation requirements.

### **PROPOSED AMENDMENT**

- A. Provision of Employee Housing. Employee Housing shall be provided in conjunction with all non-residential development in ~~at~~ Teton Village Area 1 in accordance with ~~the~~ all applicable Teton County Land Development Regulations and the Jackson/Teton County Affordable Housing Department's Rules and Regulations, consistent with the following modifications and conditions: ~~Article IV, Section 49600, Employee Housing Standards for Planned Unit Development (PUD) District for Planned Resort~~

1. Unit Types Allowed. A required affordable or workforce housing unit shall be a detached single-family unit (LDR 6.1.4.B.), attached single-family unit (LDR 6.1.4.C.), apartment (LDR 6.1.4.D.), accessory residential unit (LDR 6.1.11.B.), or dormitory meeting the requirements mandated below:
  - A. Each lavatory shall be shared between a maximum of four bedrooms.
  - B. Each bedroom shall have individual lock off ability and be occupied by one individual.
  - C. Each dwelling shall have access to a kitchen area located on the same floor as the dwelling.
  - D. Dorm units shall not be fractioned (an entire dorm unit must be used to meet a housing requirement that is a fraction of a unit).
2. No more than 60% of the total required Housing Mitigation created by development in Teton Village Area may be satisfied through the use of dormitory units.
3. Dormitory units, including those serving as Housing Mitigation units, may be occupied by individuals who are not a "qualified household" as defined by the Jackson / Teton County Housing Authority Rules and Regulations.

As seen in the language above, JHMR is requesting that 60% of all mitigation requirements generated in Teton Village Area One can be offset with dormitory style housing. Staff is recommending that 25% of any new housing mitigation requirements generated by development in Teton Village Area One be allowed to be offset by dormitory style housing. Staff is recommending this condition for two reasons.



First, while the Board has legislative discretion to allow either 25% or 60% mitigation, setting the amount of allowed dormitory mitigation at 60% would be inconsistent with prior LDR text amendments that removed dormitories as acceptable mitigation units.

Second, a 60% mitigation allowance exceeds the recently approved amendments to the Snow King Resort Master Plan. Snow King was recently granted the ability to mitigate 25% of their housing requirements with dormitories, and the Board has previously expressed a desire to treat Planned Resort Developments similarly across the town and county. (See hyperlink for details on Snow King) <https://www.jacksonwy.gov/466/Snow-King-Engagement---Phase-2>

This change would be an amendment Teton Village Master Plan **Section VII. A: Provision of Employee Housing**. This amendment will only alter the mitigation requirements of employee housing projects required by physical development within Teton Village Area One. Per the TVMP, 20% of all housing mitigation must occur within Area One, but the other 80% of required mitigation can occur throughout Teton County and the Town of Jackson. There are no proposed LDR changes as part of this amendment.

### **BACKGROUND/DESCRIPTION**

JHMR is requesting this amendment to the TVMP as a result of a July 2018 change to the Teton County LDRs (AMD2017-0004). Prior to July 2018, the LDRs allowed dormitories to be used to be used for housing mitigation, but a July 2018 text amendment removed that option.

In speaking with Stacy Stoker, Housing Manager with the Jackson/Teton County Affordable Housing Department, the employee housing standards were changed in July of 2018 for the purpose of ensuring that the development of affordable housing units within the county facilitated a quality of life for residents seeking to live here long-term. In doing so, the development of traditional single-family dwellings and apartments was prioritized. This change to affordable housing policy occurred during a county-wide visioning program that included all resorts including JHMR.

Prior to this LDR text amendment, however, JHMR had constructed Powderhorn Phase I, a dormitory style building which could be used to satisfy JHMR employee housing requirements. JHMR was also planning to construct Powderhorn Phase II which would provide additional dormitory style employee housing.

JHMR was concerned that due to the change in the LDRs, units within the Powderhorn Phase II project would no longer be able to be used for affordable housing mitigation. The Planning Department attempted to address this concern by issuing a Planning Director Interpretation. INT2019-0001 stated that JHMR had, in good faith, fulfilled their obligations for Phase I and in doing so had vested the right to construct Phase II under the same LDR standards.

While this interpretation grants JHMR the right to construct Powderhorn Phase II for the purposes of employee housing provision, JHMR has requested a text amendment to add an additional element of finality and formality before beginning additional construction.

JHMR originally proposed the following text amendment to the TVMP:

**A. Provision of Employee Housing.** Employee Housing shall be provided in conjunction with all non-residential development ~~in at~~ Teton Village **Area 1**. In accordance with the Teton County Land Development Regulations in effect at the time an development application for such development

~~permit is deemed sufficient by the Planning Department, Article IV, Section 49600. Employee Housing Standards for Planned Unit Development (PUD) District for Planned Resort. Notwithstanding the Teton County Land Regulations then in effect, employee housing requirements imposed these Standards and Conditions may be satisfied by the provision of housing units defined or referred to as dormitory units or dorms dormitory-style residential units consisting of lock-off bedrooms, bathrooms and a shared kitchen, whether such units are located in the Town of Jackson, Wyoming or Teton County, Wyoming, such units can be occupied by multiple unrelated individuals, and such units comply with the Jackson/Teton Housing Department Rules and Regulations in effect at the time such units are constructed. The Powderhorn Phase I and Phase II dormitory-style units constructed by the Jackson Hole Mountain Resort Corporation ("JHMR") in the Town of Jackson, Wyoming may specifically used by JHMR (or their assignee or designee) to satisfy employee housing obligations arising out of this standards and conditions document.~~

### *EARLY AMENDMENT ANALYSIS*

In reviewing the amendment as submitted by the applicant (above), a staff report was created that outlined several recommended conditions of approval. Upon further consideration and discussion with the applicant, Planning Staff recommended to that a new document be drafted that better addressed Area One as a whole and eliminated the need for conditions. Thus, the Powderhorn specific language was removed.

This proposed language was presented to Plan Review Committee (PRC) and Town and County Planning Commissions. At their regularly scheduled meeting on October 28, the Planning Commission (PC) reviewed a staff report, heard from both planning staff and the applicant and deliberated upon PUD2019-0001. During this discussion, the PC spoke at length about whether dormitory-style dwellings should be allowed in the fulfillment of employee housing requirements. The primary discussion centered around whether this amendment would contradict the housing policies of the County's LDRs. While all could agree that resorts certainly had unique employment constraints, there was not consensus among the PC that resorts should be credited for housing seasonal workers, as this negated the community's policy shift made in 2018. Upon ending their discussion, the PC voted 2-to-1 to recommend the approval of the amendment, but asked planning staff to start a full review of resort housing policy for the County. The Town of Jackson Planning Commission also recommended approval.

When the application was brought to the Jackson Town Council, Tyler Sinclair, Town of Jackson Community Development Director posed a question about how the amendment would address non-qualifying residents per the Affordable Housing Rules and Regulations living within the dorms.

This question is important because under the Affordable Housing Rules and Regulations, an individual only qualifies for workforce housing if that individual "[w]orks for a local business within Teton County for 1560 hours a year (30 hours a week/annually)," and "[o]ccupies their rental unit for a minimum of 80% of a lease term, with a minimum lease term of 6 months" among other requirements.

These requirements would potentially make it difficult to rent these units to JHMR employees who only worked the winter season at JHMR. After discussing this issue with the applicant, the amendment was postponed to a date uncertain, to allow for further review and alternative exploration. The current proposed amendments are designed to address that issue.

## **STAFF ANALYSIS**

Granting this amendment as conditioned will provide a greater palette of housing mitigation options for JHMR to choose from. This will allow JHMR the opportunity to develop housing that best suits their employees at all classification levels, including seasonal workers. It is for this reason that staff finds this amendment (as conditioned) as an appropriate and pragmatic alteration to the TVMP.

While staff does agree that JHMR has unique employee housing needs, staff does not believe that allowing 60% of Teton Village Area One's mitigation to occur through dormitories is consistent with prior policy directives from the Board of County Commissioners. Specifically, allowing the majority of mitigation would contravene the policy direction of limiting dormitory mitigation represented the in July 2018 amendments to the LDRs and treat Teton Village differently the Snow King.

JHMR has pointed out, however, that “[w]ithin the commercial core area of Teton Village over 72 employees are currently housed in required employee housing units. The majority of these employees live in units that are **now** classified as dormitory units. Including these existing housing units in computing the 25% calculation would immediately consume the 25% allotment of dormitory style units. Snow King is basically starting from a blank page with most of the development in that resort yet to occur.”

In acknowledgement of this point, staff has revised its suggested condition of approval to state: “No more than 25% of the total required Housing Mitigation created by **future** development in Teton Village Area may be satisfied through the use of dormitory units.”

Staff believes this approach accurately reflects the current policies of the Board of County Commissioners, and treats different planned resorts equally. The Board of County Commissioners does, however, have the discretion to set whatever dormitory mitigation rate it believes is appropriate.

## **KEY ISSUE**

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*KEY ISSUE 1: Does Jackson Hole Mountain Resort's unique employee housing characteristic, which is comprised of a majority of seasonal workers, necessitate a shift in housing policy for Teton Village Area One from an emphasis on year-round employees to seasonal employees?*

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As mentioned within the Staff Analysis (page 4.), in granting this amendment as conditioned, JHMR will be provided flexibility in meeting housing mitigation requirements. Due to JHMR's labor characteristics, Staff finds that this amendment to the TVMP Area One will allow JHMR the opportunity to develop housing that best suits their employees. Insomuch, this amendment as conditioned, allows an appropriate adjustment to Teton Village Area One's localized housing policy, without conflicting with the overall goals of the County.

## **STAKEHOLDER ANALYSIS**

Please see the attached correspondence  
Stacy Stoker, Jackson/Teton Affordable Housing Department  
Kathy Clay, Teton County Fire Marshal

## **LEGAL REVIEW**

Graham



## **RECOMMENDATIONS**

### *PLANNING DIRECTOR RECOMMENDATION*

The Planning Director recommends that the Planning Commission recommend **APPROVAL** to the Board of County Commissioners of **PUD2019-0001** for an amendment to the Teton Village Master Plan (Area One) to allow for the usage of dormitories to satisfy housing mitigation requirements dated July 19, 2019 being able to make all nine findings of Section 8.7.3 of the Teton County Land Development Regulations with the following two conditions.

1. Section VII.A.2 of the applicants proposed amendment be replaced with the following: **“No more than 25% of the total required Housing Mitigation created by future development in Teton Village Area may be satisfied through the use of dormitory units”**
2. A Section VII.A.3 will be added to applicants proposed amendment stating **“Dormitory units, including those serving as Housing Mitigation units, may be occupied by individuals who are not a “qualified household” as defined by the Jackson / Teton County Housing Authority Rules and Regulations.”**

### *PLANNING DIRECTOR RECOMMENDED FINDINGS*

Per Section LDR 8.7.3 Prior to approving a text amendment to the TVMP, the following findings shall be made:

1. The extent to which the PUD enhances the implementation of the desired future character for the land of the proposal beyond what could be achieved by base zoning; **CAN BE MADE**

In allowing higher flexibility of housing types within Teton Village Area One, the County can ensure that a housing stock can be generated that suits the uniqueness of JHMR.

2. The findings for the applicable PUD option found in Article 4.:
  1. Consistency with Comprehensive Plan. **CAN BE MADE**

The amendment as proposed is consistent with the goals and objectives of the Jackson/Teton County Comprehensive Plan (District 13 Teton Village).

The TVMP is currently approved and this proposed amendment is minor in scope and will not cause the Plan to fall out of compliance with the Comprehensive Plan. Tangentially, the proposed amendment may facilitate completion of the Powderhorn Employee Housing development which aids to establish a varied standard for compliance with the Comprehensive Plan. Upon completion, the Powderhorn Development will be a privately funded employee housing development which offers tenants a range of options from traditional apartments to dormitories. Said units help to create a complete neighborhood by achieving appropriate parcel densification, while being close to commerce, transit and bike/pedestrian facilities.

2. Consistency with Purpose and Intent. The Planned Resort master plan is substantially consistent with the purpose and intent of this Section, as set forth in 4.3.1.A. **CAN BE MADE**

Section 4.3.1.A of the LDR establishes a list of “purpose and intent statements” for a resort master plan. The nature and limited scope of this proposed amendment does not conflict with any of these statements and the TVMP, as amended, will remain in full compliance with the purpose and intent statements.

3. Affordable Workforce Housing. The Planned Resort master plan ensures a supply of affordable workforce housing that is in accordance with the requirements for housing created by development within the Planned Resort. **CAN BE MADE**

The proposed amendment aligns with Finding #3 and would restore for JHMR the assurance needed for the company to continue constructing employee housing that best suits their employees.

4. Design Guidelines. The Planned Resort master plan must contain design guidelines that a) establish standards for buildings, spaces, etc., b) promote design concepts set forth in the regulations, and c) establish a method of consistent implementation. **NOT APPLICABLE**

5. Transportation Element. The planned resort master plan must contain a traffic impact analysis and traffic demand management plan. **NOT APPLICABLE**

6. Capital Improvements Plan. The Planned Resort master plan must contain a capital improvements plan that ensures infrastructure and essential services will be provided. **NOT APPLICABLE**

7. Land Use Element. The Planned Resort master plan must promote land uses that support and maintain the character of the resort. **CAN BE MADE**

The proposed amendment adds variety in the types of residential development, including types of workforce housing, that are allowed in Teton Village. Furthermore, workforce housing is an essential land use for the operation of the resort. This amendment is consistent with land development regulations that state that residential land uses and other uses that are necessary in the operation of the resort shall be permitted.

8. Phasing Plan. The Planned Resort master plan must contain a phasing plan that ensures development, including amenities and public facilities, occur in a logical sequence. **NOT APPLICABLE**

9. Character Element. The Planned Resort master plan ensures the resort’s development will be in keeping with the community’s character and the planned character of the resort. **NOT APPLICABLE**

3. The applicable findings for the amendment of an existing PUD or other special project found in 8.2.13.D.; **CAN BE MADE**, see findings 4 and 5 below

4 and 5 Findings as required by LDR Sections 8.7.1. and 8.7.2

1. Is consistent with the purposes and organization of the LDRs; **CAN BE MADE**

This amendment is consistent with land development regulations that state that residential land uses and other uses that are necessary in the operation of the resort shall be permitted.

2. Improves the consistency of the LDRs with other provisions of the LDRs; **NOT APPLICABLE**
3. Provides flexibility for landowners within standards that clearly define desired character; **CAN BE MADE**

Granting this amendment as conditioned will provide a greater palette of housing mitigation options for JHMR to choose from. This will allow JHMR the opportunity to develop housing that best suits their employees at all classification levels, including seasonal workers.

4. Is necessary to address changing conditions, public necessity, and/or state or federal legislation; **NOT APPLICABLE**
5. Improves implementation of the Comprehensive Plan; and **CAN BE MADE**

This amendment offers a pragmatic approach to providing employee housing within resorts that both meets needs of the employer and the employee by offering greater flexibility of housing type.

6. Is consistent with other adopted County Resolutions. **NOT APPLICABLE**

### **ATTACHMENTS AND LINKS**

#### **Jackson Hole Mountain Resort's Application for a PUD Amendment**

<https://tetoncountywy.sharepoint.com/sites/TetonCountyArchive/PermitDocuments/PUD2019-0001,%20Application.pdf>

#### **INT2019-001**

[https://tetoncountywy.sharepoint.com/sites/TetonCountyArchive/PermitDocuments/INT2019-0001\\_Decision\\_ltr.pdf](https://tetoncountywy.sharepoint.com/sites/TetonCountyArchive/PermitDocuments/INT2019-0001_Decision_ltr.pdf)

#### **Department Comments**

### **SUGGESTED MOTION**

I move to recommend to the Board of County Commissioners **APPROVAL** of **PUD2019-0001** for an amendment to the Teton Village Master Plan (Area One) to allow for the usage of dormitories to satisfy housing mitigation requirements dated July 19, 2019 being able to make all nine (9) findings of Section 8.7.3 of the Teton County Land Development Regulations with the following (two) 2 conditions:

1. Section VII.A.2 of the applicants proposed amendment be replaced with the following: **"No more than 25% of the total required Housing Mitigation created by development in Teton Village Area may be satisfied through the use of dormitory units"**
2. A Section VII.A.3 will be added to applicants proposed amendment stating **"Dormitory units, including those serving as Housing Mitigation units, may be occupied by individuals who are not a "qualified household" as defined by the Jackson / Teton County Housing Authority Rules and Regulations."**



## DEPARTMENTAL REVIEWS

### Response from Stacy Stoker



## MEMORANDUM

To: Andrew Bowen  
*Senior Planner, Teton County Planning and Building*

From: Stacy Stoker  
*Housing Manager, Teton County Housing Department*

Re: Amendment to Teton Village Master Plan  
PUD2019-0001

Date: October 9, 2019

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The applicant is requesting an amendment to the Teton Village Planned Unit Development Master Plan. Jackson/Teton County Affordable Housing Department (Housing Dept.) staff's review is based on the Jackson/Teton County Housing Department Rules and Regulations.

The applicant is requesting to be allowed to use dormitories to satisfy their future housing requirements. The proposed language states, *"The Powderhorn Phase 1 and Phase II dormitory-style units constructed by the Jackson Hole Mountain Resort Corporation ("JHMR") in the Town of Jackson, Wyoming may specifically be used by JHMR (or their assignee or designee) to satisfy employee housing obligations arising out of this standards and conditions document."* The language should include that any *assignees or designees* that wish to satisfy their housing requirement using the dorms must do so within fifteen (15) years of Certificate of Occupancy. After fifteen (15) years, only JHMR may use the units to satisfy their requirement. The language should also include that the dorm units may not be fractioned. An entire unit must be used at a time.

Thank you for the opportunity to review this application. Please contact me with any questions.

### Response from Kathy Clay

Hi Andrew: As time is of the essence, I will cut to the chase and omit the form letter!  
Dorms will be required to follow the most current version of the IFC and NEC.  
That will be good for the initial comments. Nothing further at this time.

Kathy Clay  
Battalion Chief Fire Marshal  
Jackson Hole Fire/EMS  
Desk 307-732-8506  
[kclay@tetoncountwy.gov](mailto:kclay@tetoncountwy.gov)

# STAFF REPORT



|                               |                                          |                        |                      |
|-------------------------------|------------------------------------------|------------------------|----------------------|
| <b>Meeting Date:</b>          | September 8, 2020                        | <b>Meeting Title:</b>  | Town Council Regular |
| <b>Submitting Department:</b> | Administration                           | <b>Presenter:</b>      | Roxanne Robinson     |
| <b>Agenda Item:</b>           | Appointment of Alternate Municipal Judge | <b>Public Comment:</b> | No                   |

## **Purpose & Policy Considerations.**

The Mayor appoints Alternate Municipal Judges with the advice and consent of the Town Council.

## **Requested Action.**

Municipal Judge Melissa Owens, is requesting appointment by the Mayor of Rick Manning. The appointment requires the consent of the Town Council.

## **Recommendations.**

Staff recommends the Mayor appoint Rick Manning as an alternate Municipal Judge and that the Council consent to the appointment.

## **Background.**

The Mayor makes the appointment of any Alternate Municipal Judge with the advice and consent of the Town Council.

Currently, Chris Leigh and Alex Freeburg serve as Alternate Municipal Judges with Chris Leigh handling most of the work due to availability. In the past, we had two additional alternates, Nate Rectanus and Jim Lubing but they have since moved out of the area and are no longer qualified electors of Teton County Wyoming. Judge Owens has requested an additional alternate to serve when there are conflicts. The Mayor has met with Rick Manning to discuss his interest and qualifications in serving as Alternate Municipal Judge and staff understands that the Mayor is ready to appoint him to the position. The Town Council has been given the opportunity to reach out to Mr. Manning as well. Staff has confirmed that Rick Manning is a qualified elector of Teton County as required by Municipal Code.

### **1.16.010 Office created--Jurisdiction--Compensation--Qualifications.**

The office of Municipal Judge is created in the Town and said officer shall have the jurisdiction to fine, enter judgment, sentence, imprison, and hear and determine all cases arising under the ordinances of the Town, and the practice before such judge, in all cases shall conform to the provisions of the Wyoming Rules of Civil Procedure and Wyoming Rules of Criminal Procedure, and as near as may be to the provisions of the Municipal Court Judge administrative rules, all as promulgated by the Supreme Court of the state. Such Municipal Judge shall be entitled to such compensation as may be provided from time to time of the Town Council. The Mayor, with the advice and consent of the Town Council, shall have the authority to appoint a Municipal Judge and alternative judge or justices and all such Municipal Judges or alternate Municipal Judges shall be qualified electors of Teton County, Wyoming. (Ord. 870 § 1, 2008; Ord. 526 § 1, 1996; Ord. 300 § 1, 1983; Ord. 18 § 1, 1926.)

## **Analysis.**

Should the appointment be made and consent provided, the oath of office would be administered by Judge Owens.

## **Comprehensive Plan & Priority Alignment.**

Not applicable.

## **Fiscal Impact.**

Funding is already approved in the budget to pay alternate municipal judges for actual time worked.

**Staff Impact.**

Staff impact is positive in that it allows alternates to serve when there is a conflict and to assist the Municipal Judge with overall workload. Coordination of the letter of interest, coordination of meetings with the Mayor and Council, staff report preparation and administering the oath of office results in a total combined 3 hours of staff time.

**Attachments or Links.**

None.

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

Mayor: I hereby appoint Rick Manning as an Alternate Municipal Judge.

Council: I move to consent to the appointment of Rick Manning as an Alternate Municipal Judge.



## MEMORANDUM

TO: Mayor and Town Council

FR: Larry Pardee, Town Manager

DT: October 5, 2020

RE: Town Manager's Report

### Diversity Equity and Inclusion Training from Nova Collective

Staff is working with the Nova Collective to arrange for some virtual foundational training for the Town of Jackson organization. Elected Officials and appointed boardmembers will also be invited to participate in the training. We do not have the exact dates finalized but the training will be in mid November or early December. The Town will also be following up this training with e-learning opportunities for all staff in order to deepen our understanding of the issues, increase awareness, and continually improve the culture of the organization. Once the dates are finalized, information will be provided to everyone for participation.