

Addendum #2



Project Information

Project Name: Terry Ranch Land Board Drilling

Bid Number: F23-01-001

Date: February 21, 2023

**Project
Manager:**

Addendum Purpose

The purpose for this Addendum is to solidify the remaining schedule of events for this solicitation. Below is the revised RFP with the final dates listed.



CITY OF GREELEY
Purchasing

Request for Proposal
RFP #F23-01-010

TERRY RANCHSTATE LAND BOARD WELL DRILLING

for

WATER AND SEWER DEPARTMENT

REQUEST FOR PROPOSALS (RFP)
RFP #F23-01-010

Procurement Contact: Alex Adame
Email Address: Purchasing@greeleygov.com
Telephone Number: 970-350-9325

Proposals must be received no later than the date indicated in the Schedule of Events below.

Proposals received after this date and time will not be considered for award.

ONLY ELECTRONIC RFP RESPONSES WILL BE ACCEPTED DURING THE COVID-19 EVENT

Email your RFP Response to purchasing@greeleygov.com. Only emails sent to purchasing@greeleygov.com will be considered as responsive to the request for proposals. **DO NOT** submit your RFP Response to multiple email addresses. Emails sent to other City emails may be considered as non-responsive and may not be reviewed.

Proposals shall be submitted in a single Microsoft Word or PDF file under 20MB. The Proposal must not exceed 20 total pages, excluding cover letter, index or table of contents, front and back covers, and title pages/separation tabs. Pages shall be 8 ½ x 11 inch except for up to four (4) pages of 11 x 17 inches. Eleven-point font or larger must be used for the proposal and appendices. Resumes included as an appendix are not considered part of the 20 pages.

The RFP number and Project name must be noted in the subject line, otherwise the proposal may be considered as non-responsive to the RFP.

Electronic submittals will be held, un-opened, until the time and date noted in the RFP documents or posted addenda.

Schedule of Events (subject to change)	All times are MST
RFP Issued	January 13, 2023
Mandatory Pre-Proposal Conference/Site Visit. Click link below for location https://goo.gl/maps/YTvkLKyv7CjXA7T96).	March 10, 2023 from 8:30AM – 4:00PM
Inquiry Deadline	March 17, 2023 before 4:00 PM
Final Addendum Issued	March 24, 2023
Proposal Due Date	April 7, 2023 before 4:00 PM
Interviews (tentative)	TBD
Notice of Award (tentative)	TBD

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ATTACHMENTS

Exhibit	Title
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B	Greeley State Land Board Well Specifications
C	Proposed Typical PVC and Steel Well Design for Greeley

“Public Viewing Copy: *The City is a governmental entity subject to the Colorado Open Records Act, C.R.S. §§ 24-72-200.1 et seq. (“CORA”). Any proposals submitted hereunder are subject to public disclosure by the City pursuant to CORA and City ordinances. Vendors may submit one (1) additional complete proposal clearly marked “FOR PUBLIC VIEWING.” In this version of the proposal, the Vendor may redact text and/or data that it deems confidential or proprietary pursuant to CORA. Such statement does not necessarily exempt such documentation from public disclosure if required by CORA, by order of a court of appropriate jurisdiction, or other applicable law. Generally, under CORA trade secrets, confidential commercial and financial data information is not required to be disclosed by the City. Proposals may not be marked “Confidential” or ‘Proprietary’ in their entirety. All provisions of any contract resulting from this request for proposal will be public information.”*

SECTION I. BACKGROUND, OVERVIEW, AND GOALS

A. Background

In 2021, the City of Greeley "City", acquired the rights to 1.2 million acre-feet of nontributary groundwater within the Upper Laramie Aquifer under parcels owned by the Terry Grazing Association also known as Terry Ranch located north of Carr, Colorado. As part of the transaction, the City also acquired a lease to additional undecreeded nontributary groundwater rights from 16 neighboring parcels owned by the Colorado State Land Board "SLB". The City and SLB desire to apply for a Water Court decree to perfect groundwater rights underlying SLB-owned properties. To do so, the City will need to drill, develop, test, and monitor water wells on the SLB land.

B. Overview

The City of Greeley Water and Sewer Department is requesting proposals for the construction and testing of 16 gravel packed monitoring wells that will be completed to production water well specifications. with the intent to convert the monitoring wells to production wells in the future. The 16 monitoring wells will be completed within the Upper Laramie Aquifer under Colorado State Land Board lands, which are interspersed in a checkerboard pattern with Terry Ranch, near Carr, Colorado (see the attached Figure 1 – Location Map of Proposed State Land Board Wells). This project has been designed by Martin & Wood Water Consultants, Inc., hereinafter referred to as "Consultant." The bid will be awarded to, and the contract will be signed by the "Contractor."

Potential bidders that express interest in the project will be required to attend a mandatory pre-bid site visit to familiarize themselves with the site. The site visit will be held on **March 10th**. If the site is fully or partially inaccessible due to weather, road conditions, or activity on Terry Ranch and State Land Board lands during that time, the site visit will be rescheduled. An additional site visit will occur sometime after the contract is executed and before the start of work, whereby Greeley will brief the Contractor on details and expectations.

At completion of the proposal evaluation process, the City will enter negotiations with the selected contractor or may name a short list of respondents to conduct interviews with the project team. This Request for Proposals (RFP) is subject to revision after the date of issuance via addenda. Any such addenda will be posted on the bid-net. Addenda will not be distributed directly to potential respondents. It is each respondent's responsibility to obtain all addenda prior to submitting.

Bids will be received on a unit price basis as described in the Bidding Documents. Completion of the work is required as specified in the Bid Form.

Work at the site is expected to be commenced as soon as possible after the Notice to Proceed is issued, but within a timeframe that is agreeable to both parties of the Contract. Once work begins the chosen contractor has a maximum of six months to complete the project from first mobilization. **Note that no work can be done on the east side of the railroad tracks during the bison's calving season (April through June).**

Both the Ranch and SLB lands are leased by a free-range bison grazing operation and the bison herds are periodically moved from one pasture to the next. All well sites will be accessed through these lands and at times the bison herds will be grazing around the work sites. The Contractor will be expected to work around the bison and to disrupt the grazing operation as little as possible. **Note that no work can be done on the east side of the railroad tracks during the bison's calving season (April through June).**

C. Goals

The main goal of the project is to drill and test 16 monitoring wells in the Upper Laramie Aquifer under the Colorado State Land Board lands. The contractor is expected to work closely with the consultant and City.

The City's objectives for delivery of the Project are as follows (in alphabetical order):

- **Maintain project scheduling:** meet the project schedule by working closely with the City and consultants on completing the on-ground work to stay on schedule
- **Meet all design specification and reporting requirements for the 16 wells:** this includes working with the City and Consultant on punch lists, final walk-throughs, and as-builts.

- **Minimize impacts to ranch and resort operations:** create as few disturbances as possible to all buildings, roads, ranch staff, resort patrons, and bison herds.
- **Minimize risk for change orders:** achieve an optimal balance of risk allocation through extensive design review and site assessment to manage the risk and reduce the likelihood of change orders
- **Project cost:** construction of the project is within the City's budget.
- **Quality:** provide 16 wells that meet or exceed all standards and construction services
- **Restoration and revegetation:** all well sites and access roads are to be restored, as close as possible, to their original condition.
- **Safety:** implement an effective safety program incorporating best industry practices that provide safe working conditions for the team during construction, as well as long term operational safety.

SECTION II. STATEMENT OF WORK

A. Scope of Services

Important Notice: The CITY reserves the right to amend the Scope of Services to stay within the budget.

SECTION 1 SUMMARY OF WORK

1.1 Description of Work

This contract provides for the construction of sixteen (16) water wells as herein specified. The wells are designated as **SLB-1 through SLB-16**, to be located in Weld County, Colorado. Preliminary locations of the well, which shall be field verified, are presented in Figure 1. **Note that while ultimate locations of wells may be substantially different than those illustrated due to undetermined site constraints, one well per SLB parcel (16 total) are required.**

The completion method, depth, casing and screen material, screen length and specifications of each well will be completed in accordance with specifications in Table 1 – Greeley State Land Board Well Specifications. All wells will undergo aquifer testing consisting of an 8-hour step-test, an 8-hour constant rate test, and water quality sampling. Wells will be completed based on lithologic logging, and geophysical logging at wells as specified below. All wells will be completed and screened in the Upper Laramie aquifer. The methods of well completion, logging and testing for the 16 wells are as follows:

SLB-1, SLB-2, SLB-6, SLB-12, SLB-13, and SLB-16:

The above wells will be partially drilled and completed in the upper portion of the Upper Laramie aquifer. The CONTRACTOR will drill the above wells, 5.5-inch nominal diameter wells to the well completion depth specified in Table 1, unless the CONSULTANT's geologist in the field directs the CONTRACTOR otherwise. The CONSULTANT will determine the placement of the screened intervals within 4 hours after the completion of drilling for each well. The anticipated length of screen for each well is shown in Table 1. The CONSULTANT reserves the right to modify the length of screen based on drilling observations and lithologic characterizations made in the field. The CONSULTANT will install temporary transducers in the above wells after completion and prior to conducting step-tests and constant rate tests and obtain water quality samples during testing. The CONTRACTOR will install temporary 1-inch PVC with slotted screen above the test pump to house the temporary transducer.

SLB-8, SLB-14, and SLB-15:

The above wells will be partially drilled and completed in the upper portion of the Upper Laramie aquifer. The CONTRACTOR will drill the above wells, 5.5-inch nominal diameter wells to the well completion depth specified in Table 1, unless the CONSULTANT's geologist in the field directs the CONTRACTOR otherwise. The CONSULTANT will determine the placement of the screened intervals within 4 hours after the completion of drilling for each well. The anticipated length of screen for each well is shown in Table 1. The CONSULTANT reserves the right to modify the length of screen based on drilling observations and lithologic characterizations made in the field. The CONSULTANT will install temporary

transducers in the above wells after completion and prior to conducting step-tests and constant rate tests, and obtain water quality samples during testing. In addition, the CONTRACTOR will assist the CONSULTANT with transducer installations in nearby monitoring wells indicated in Table 1 prior to testing the above wells. The CONTRACTOR will install temporary 1-inch PVC with slotted screen above the test pump to house the temporary transducer.

SLB-7, SLB-10, and SLB-11:

The above wells will be partially drilled and completed in the upper portion of the Upper Laramie aquifer or fully drilled and completed in the upper portion of the Upper Laramie aquifer as shown in Table 1. The CONTRACTOR will drill the above wells, 5.5-inch nominal diameter wells to the borehole depth specified in Table 1, unless the CONSULTANT's geologist in the field directs the CONTRACTOR otherwise. Upon completion of drilling, the above wells will be logged with borehole geophysical tools, and the holes will be backfilled to the completion depths indicated in Table 1. The CONSULTANT will determine the placement of the screened intervals within 4 hours after the completion of geophysical logging. The anticipated length of screen for each well is shown in Table 1. The CONSULTANT reserves the right to modify the length of screen based on drilling observations and lithologic characterizations made in the field and results of geophysical logging. The CONSULTANT will install temporary transducers in the above wells after completion and prior to conducting step-tests and constant rate tests, and obtain water quality samples during testing. In addition, the CONTRACTOR will assist the CONSULTANT with transducer installations in nearby monitoring wells indicated in Table 1 prior to testing the above wells, except for when testing SLB-11. SLB-11 will be tested as a single-well aquifer test. The CONTRACTOR will install temporary 1-inch PVC with slotted screen above the test pump to house the temporary transducer.

SLB-3, SLB-5, and SLB-9:

The above wells will be fully drilled into and completed in the upper portion of the Upper Laramie aquifer. The CONTRACTOR will drill the above wells, 5.5-inch nominal diameter wells to the well completion depth specified in Table 1, unless the CONSULTANT's geologist in the field directs the CONTRACTOR otherwise. The CONSULTANT will determine the placement of the screened intervals within 4 hours after the completion of drilling for each well. The anticipated length of screen for each well is shown in Table 1. The CONSULTANT reserves the right to modify the length of screen based on drilling observations and lithologic characterizations made in the field. The CONSULTANT will install temporary transducers in the above wells after completion and prior to conducting step-tests and constant rate tests, and obtain water quality samples during testing. In addition, the CONTRACTOR will assist the CONSULTANT with transducer installations in nearby monitoring wells indicated in Table 1 prior to testing the above wells. The CONTRACTOR will install temporary 1-inch PVC with slotted screen above the test pump to house the temporary transducer.

SLB-4:

The above well will be fully drilled into and completed to the base of the Upper Laramie aquifer. The CONTRACTOR will drill the above well, 5.5-inch nominal diameter wells to the well completion depth specified in Table 1, unless the CONSULTANT's geologist in the field directs the CONTRACTOR otherwise. The CONSULTANT will determine the placement of the screened intervals within 4 hours after the completion of drilling for each well. The anticipated length of screen for each well is shown in Table 1. The CONSULTANT reserves the right to modify the length of screen based on drilling observations and lithologic characterizations made in the field. The CONSULTANT will install temporary transducers in the above wells after completion and prior to conducting step-tests and constant rate tests, and obtain water quality samples during testing. In addition, the CONTRACTOR will assist the CONSULTANT with transducer installations in the nearby monitoring well EB-2 indicated in Table 1 prior to testing the above well. The CONTRACTOR will install temporary 1-inch PVC with slotted screen above the test pump to house the temporary transducer.

1.2 Work Sequence

- A. The time schedule for completion and testing of the well is important. Production and aquifer testing of the wells shall immediately follow the completion and development of the wells, except when additional wells need to be completed to use as monitoring wells. Wells that need additional wells completed to

serve as observation wells will be tested when the corresponding monitoring wells are completed and available for monitoring. The wells will be completed in an order that allows those at sites with the most difficult access or seasonal access to be completed first. The CONTRACTOR shall have sufficient equipment and manpower so that when the wells are completed, the drilling rig can be moved off the site and a pumping unit can be set up at the completed well for development, water quality testing, and production and aquifer testing.

- B. The CONTRACTOR will keep the CITY and CONSULTANT notified of on-site schedule of personnel and equipment. This is necessary to avoid interfering with the activities of the OWNER.**

BID SCHEDULE

Construction of Water Wells and Testing of Water Wells on Greeley-State Land Board Lands

NO.	ITEM	ESTIMATED QUANTITY AND UNIT	UNIT PRICE \$	TOTAL \$
1	MOBILIZATION & DEMOBILIZATION	LUMP SUM	_____	_____
2	CONDUCTOR BORE & CASING 14-INCH MINIMUM DIAMETER	800 L.F.	_____	_____
3	DRILL 6.25-INCH TEST BORE TO BORE HOLE DEPTH	9,580 L.F.	_____	_____
4	STANDBY FOR GEOPHYSICAL LOGGING	LUMP SUM	_____	_____
5	TOTAL BACKFILL GROUT DEPTH	930 L.F.	_____	_____
6	FINAL WELL COMPLETION DEPTHS REAMED TO 10- INCHES OR SIMILAR	8,650 L.F.	_____	_____
7	FURNISH & INSTALL 5.5-INCH O.D. SDR 17 PVC CASING	3,760 L.F.	_____	_____
8	FURNISH & INSTALL 5.5-INCH O.D. SCHEDULE 40 A53B STEEL CASING	1,670 L.F.	_____	_____
9	FURNISH & INSTALL 5.5-INCH O.D. SDR 17 PVC SCREEN	1,820 L.F.	_____	_____
10	FURNISH & INSTALL 5-INCH O.D. FACTORY SLOTTED STEEL SCREEN	850 L.F.	_____	_____
11	FURNISH & INSTALL GRAVEL PACK	3,160 L.F.	_____	_____
12	FURNISH & INSTALL 10-FOOT BENTONITE SEAL	160 L.F.	_____	_____
13	FURNISH & INSTALL CEMENT SEAL	5,330 L.F.	_____	_____
14	FURNISH & INSTALL 21-FOOT, 5.5-INCH STEEL TOP PIECES	336 L.F.	_____	_____
15	WELL DEVELOPMENT BY SWABBING	196 HRS.	_____	_____
16	WELL DEVELOPMENT BY AIRLIFT PUMPING	128 HRS.	_____	_____
17	PUMP INSTALLATION & REMOVAL	LUMP SUM	_____	_____
18	WELL DEVELOPMENT BY SURGE PUMPING	64 HRS.	_____	_____
19	VIDEO LOGGING OF COMPLETED WELL	LUMP SUM	_____	_____
20	PRODUCTION AND AQUIFER TESTING	224 HRS.	_____	_____
21	CLEANING, DISINFECTING & CAPPING WELLS	LUMP SUM	_____	_____

22	SITE RESTORATION, MATCH GRADE AND REVEGETATION	LUMP SUM	_____	_____
23	STANDBY TIME	320 HRS.	_____	_____
	TOTAL FOR WELLS SLB-1 THROUGH SLB-16 USING 5.5-INCH O.D. CASING AND SCREEN			_____

SECTION 2 ABBREVIATIONS

1.1 Wherever used in these specifications the following abbreviations shall have the meanings indicated:

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of State Highway & Transportation Officials
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
FS	Federal Specifications
MSL	Mean Sea Level
NEMA	National Electrical Manufacturer's Association
NPT	National Pipe Thread
RPM	Revolutions per minute

SECTION 3 MEASUREMENT AND PAYMENT

1.1 General

- A. This section covers methods of measurement and payment for items of work under this contract.
- B. The total Proposal Price for each section of the contract shall cover all Work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the work, shall be included in the unit and lump sum prices proposed. All work not specifically set forth as a pay item in the Proposal Form shall be considered a subsidiary obligation of CONTRACTOR and all costs in connection therewith shall be included in the prices quoted.
- 1.2 Estimated Quantities All estimated quantities stipulated in the Proposal Form or other Contract Documents are approximate and are only to be used for the purpose of preparing a proposal for the work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. Contractor agrees that he will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts therefore.
- 1.3 Mobilization and Demobilization Mobilization and demobilization for drilling shall include preparing the site for drilling, moving onto the site, assembling into working condition and disassembling and removing from the site all machinery, equipment and supplies necessary to perform the required drilling operations. Payment for the above-described work will be made at the lump sum prices specified in the schedules of quantities for the work.
- The lump sum price indicated in the schedule of quantities shall be paid only once regardless of the number of times the equipment is moved and assembled or reassembled during the work at any one of the sites, and shall consist of complete mobilization and demobilization, including the cost of moving onto the site during the progress of the work, any additional equipment that may be required to perform the drilling and completion operations.
- 1.4 Conductor Bore and Casing The conductor bore and casing shall include drilling the borehole, furnishing, setting, and cementing the permanent surface casing for each well. Payment will be made on a linear-foot basis at the price listed in the schedules of quantities. Measurement will be made from the bottom of the casing as set to the ground surface.
- 1.5 Borehole The drilling of the borehole shall include the drilling of the initial test borehole and all work incidental to the completion of the reamed final size hole. Payment will be made on a linear-foot basis at the price bid in the bid schedules. Measurement in each well will be made from the bottom of the surface casing as set to the bottom of the hole, the depth of which will be as directed by the CONSULTANT. The total bore depth indicated on the geophysical logs for each well where applicable, or the measured bottom for all other wells shall be the final determinant as to total depth drilled.
- 1.6 Geophysical Logging The CONTRACTOR shall provide a geophysical logging contractor to run geophysical logs in the test borehole. The CONTRACTOR will work and coordinate with the geophysical logging contractor on when to arrive on site, to use the drilling rig to lower the logging tools down the hole, and assist with the geophysical logging. The logs run shall be as specified in Section 10, Paragraph 3.6. It shall also include the required conditioning of the holes and any assistance required by the logging contractor for successful completion of the logging operations. Payment for the above-described work will be made at the lump sum prices specified in the schedules of quantities for the work.
- 1.7 Well Casing The CONTRACTOR shall furnish and install well casing in each well as specified. The work shall include furnishing, installing and joining the casing and all other work incidental to the completion of the casing installation. Payment shall be made on a linear-foot basis at the price bid in the schedule of quantities. Measurement for each well shall be from 18 inches above the ground surface to the top of the uppermost screened interval and shall also include any other blank casing installed below the screen or between screened intervals.
- 1.8 Well Screen The CONTRACTOR shall furnish and install the well screens for each well as specified.

The work shall include furnishing, installing and welding the screen and all other work incidental to the completion of the screen installation. Payment shall be made on a linear-foot basis per foot of screen length at the price listed in the schedule of quantities.

- 1.9.1 Gravel Pack The CONTRACTOR shall furnish and install a graded gravel pack for each well between the well screen and the borehole. The work shall include furnishing and installing the gravel pack and include all equipment necessary for placing the gravel pack in the specified manner. Payment shall be made on a linear-foot basis at the price listed in the schedule of quantities. Measurement will be from the bottom of the borehole to the top of the placed gravel pack including the sand-bentonite seal. The sand-bentonite seal shall be 10-feet in length and is intended to act as a barrier to prevent the cement from the cement seal from infiltrating into the gravel pack.
- 1.10 Cement Seal The CONTRACTOR shall grout each well casing as specified. The work shall include all work associated with the grouting operation including providing the sand-bentonite layer. Payment shall be made on a linear-foot basis at the price indicated in the schedule of quantities. Measurement will be from the top of the sand-bentonite seal to the ground surface.
- 1.11 Well Development by Airlift Pumping and Surging. The CONTRACTOR shall develop wells by airlift pumping and surging as specified. The work shall include providing all equipment and labor required to develop the wells to the maximum extent possible. Payment shall be made on an hourly basis at the price listed in the schedule of quantities for the **actual airlift pumping time**. Downtime for any reason, will not be included in this item.
- 1.12 Well Development by Swabbing The CONTRACTOR shall develop the wells by swabbing as specified. The work shall include providing all equipment and labor to the maximum extent possible to develop the wells. Payment shall be made on an hourly basis at the bid price on the bid schedule of quantities for the **actual swabbing time**.
- 1.13 Test Pump Installation and Removal The CONTRACTOR shall furnish, install and remove a pump as specified, capable of pumping each well at the specified pumping rate. The pump will be installed with both a totalizing and instantaneous read flow meter. The work shall include all equipment and labor necessary to provide a fully operational test pumping unit. Payment shall be made on a lump sum basis for the wells unless additional payment is specifically allowed by the CITY at his sole discretion.
- 1.14 Well Development by Pumping The CONTRACTOR shall furnish all labor and equipment necessary for surge pumping of the wells as specified. Payment shall be made on an hourly basis at the price listed in the schedule of quantities for the actual time spent pumping, including the recovery time between surge pumping intervals at each well.
- 1.15 Production and Aquifer Testing The CONTRACTOR shall furnish all labor and equipment necessary for production and aquifer testing of each well. Payment shall be made on an hourly basis at the price listed in the schedule of quantities. If the pumping test is interrupted due to failure of the pump or other CONTRACTOR-supplied equipment during the test, no payment shall be made for any pumping time during the interrupted test. In the case of production and aquifer testing interruption, the well will be allowed to sit for a minimum of 24-hours before re-starting the production and aquifer testing.
- 1.16 Cleaning, Disinfection and Capping Well The CONTRACTOR shall clean, disinfect and cap each well as specified. Payment will be made on a lump sum basis at the price listed in the schedule of quantities. The work shall include cleaning, disinfecting and capping the wells.
- 1.17 Video Logging Well The CONTRACTOR shall have a color video log run on the well after completion of the production and aquifer testing work. Payment will be made on a lump sum basis for the well at the price listed in the schedule of quantities for a video log acceptable to the CONSULTANT. The CONTRACTOR will not be paid for any video log rejected by the CONSULTANT for reasons of poor picture quality or inability to discern details of screen placement, etc., due to excessive turbidity or other conditions in the well.
- 1.18 Standby Time Delays in development and testing due to direction by the CONSULTANT or CITY will be

designated as standby time. Payment shall be made on an hourly basis at the price bid in the bid schedule, for such time as the CONTRACTOR is prevented from proceeding with the work due to directives of the CONSULTANT or CITY. Standby time will be agreed to at the site as to the time it starts and stops by the CONTRACTOR and the CONSULTANT. The times shall be entered into driller's log and initialed by the CONSULTANT.

- 1.19 **Cuttings and Fluids Hauling and Disposal** The CONTRACTOR shall be responsible for containing and managing, on-site, all drill cuttings and contaminated and/or turbid development fluids. The CITY and SLB have assumed that cuttings can be spread on-site and that water produced during drilling and testing can be land-applied. Turbid development and well discharge fluids may NOT be discharged to the surface without the CITY, SLB and CONSULTANT approval. Fluids shall NOT be discharged toward any streams or drainages.

SECTION 4 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.1 Temporary Controls

A. Site Access

1. CONTRACTOR will keep the CITY and CONSULTANT informed when they will be on and off the work site
2. **Pending a decision from the TERRY RANCH the CONTRACTORS may be required to access the site from the South and not through the Terry Bison Ranch Resort (This will be decided before the project starts)**

B. Ranching and Agricultural Controls

1. All drilling sites will be on, and accessed through, an active free-range bison grazing operation and the bison herds are periodically moved from one pasture to the next. The CONTRACTOR will do everything within their power to minimize disruptions to ranch and resort activities.
2. **There is to be no construction activity east of the Railroad tracks between the months of April and June. This is when the Bison are calving, and heavy activity could negatively impact the herd.**
3. The CONTRACTOR is advised that bison are present on parts of Terry Ranch may react to the sight of white vehicles or work activity. The CONTRACTOR shall be mindful of the bison's behavior, including keeping a safe distance, and taking necessary safety precautions to provide for the safety of the Contractor's crew and the bison.
4. The CONTRACTORS will have temporary fencing available at the drill sites to be placed around equipment, if needed, to prevent the bison from causing damage.
5. **If CONTRACTOR is given permission to access drill sites through the Terry Bison Ranch Resort.** The CONTRACTOR will make sure that all employees yield to resort and ranch staff as well as visitors.
6. The CONTRACTOR shall always ensure gates to the ranch from the TERRY RANCH and SLB properties remain closed, and fence lines around and inside the property remain intact and shall remain unmodified unless granted permission by the TERRY RANCH or SLB. The CONTRACTOR will be responsible for closing gates, restoring gates and fence lines to their previous condition. All instances of violations, either by the CONTRACTOR or its subcontractors, are subject to a fine for each observed instance, the amount of which will be **\$2,000**. All fines will be paid to the TERRY RANCH.
7. When passing through ranch gates with equipment in the presence of bison the CONTRACTOR will have two employees at the gates: one to open and close the gate while the other drives through.

C. Noise Control

CONTRACTOR will equip all construction machinery and vehicles with the maximum practical sound and muffling devices and operate in a manner to minimize noise consistent with efficient performance of the work.

D. Dust Control

1. Take reasonable measures to prevent unnecessary dust.
2. Cover dusty material in transit when necessary to prevent blowing.

E. Pollution Control

1. Prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, drilling mud and other substances resulting from construction activities.
2. Retain all spent oils, hydraulic fluids and other petroleum fluids in containers for disposal off the site.
3. Do not perform equipment maintenance or fueling within 50 feet of any water course.

F. Erosion Control

1. Take such measures as are necessary to prevent erosion of soil on the site and adjacent properties that might result from construction activities.
2. Provide temporary materials such as hay bales, sandbags, plastic sheets, chain link fencing fabric, rip-rap or culverts to prevent the erosion of banks or excavation where runoff may be increased or concentrated due to construction activities.

G. Environmental Considerations

1. No trees or bushes shall be removed without the written approval of the CONSULTANT and TERRY RANCH or SLB the . Trees and bushes removed without written permission shall be replaced by the TERRY RANCH or SLB at the CONTRACTOR'S expense. Value of damaged or destroyed trees and bushes will be determined by the CONSULTANT or CITY at their sole discretion.
2. The CONTRACTOR will, at all times, keep the construction site clean and free from accumulation of waste materials or rubbish caused by its operations. At the completion of the work the Contractor shall remove all of its waste materials and rubbish from and about the work site as well as its tools, construction equipment, machinery and surplus materials.
3. After all work is completed at the site, disturbed areas or any smaller excavated/leveled areas shall be backfilled and compacted as directed by the CONSULTANT. The site shall be graded to that existing prior to the start of work

1.2 Traffic Regulation

- A. The CONTRACTOR shall keep traffic areas free of excavated material, construction equipment, pipe, and other materials and equipment unless otherwise stipulated and conduct operations in a manner to avoid unnecessary interference with public roads.

1. **If CONTRACTOR is given permission to use resort entrance**, under no circumstance is the CONTRACTOR to stage any equipment or unload equipment in the Terry Bison Ranch Resort parking lot or road near the resort entrance. All equipment must be brought straight through to the drill sites without stopping, if accessing through the resort.

- B. When on the ranch, the CONTRACTOR shall keep vehicles and equipment on designated access roads

1. CONTRACTOR is not to create new roads without the CITY, and TERRY RANCH or SLB approval.
 2. If the CONTRACTOR, or any subcontractor employed by the CONTRACTOR, creates a new road without permission and damages grazing land, then the CONTRACTOR is responsible for the cost of, reclamation, and reseeding of the damaged area.
- C. The CONTRACTOR shall furnish properly equipped flagmen where necessary to provide for public safety, or where required by jurisdictional authorities.
- D. Warning Signs and Lights
- The CONTRACTOR shall:
1. Provide barricades and warning signs for open excavations, parked equipment, and soil stockpiles.
 2. Illuminate by means of warning lights all barricades and obstructions from sunset to sunrise.
 3. Comply with "Manual on Uniform Traffic Control Devices," U.S. Department of Transportation, or applicable statutory requirements of State Highway Department.
- E. Provide suitable parking areas for the use of all construction workers and others performing work in furnishing services in connection with the Project so as to avoid interference with construction and OWNER activities.

SECTION 5

CONSTRUCTION OF WATER WELLS SLB-1 THROUGH SLB-16

PART 1 GENERAL

1.1 Description

- A. This section covers the construction, completion, developing and testing of water wells.

1.2 Quality Assurance

A. Driller's Qualifications

1. The CONTRACTOR shall have completed a minimum of three gravel packed wells of the size and type herein specified, completed in a sedimentary rock aquifer, or similar geologic environment in the past three years, and shall be a licensed water well driller in the State of Colorado. If the CONTRACTOR intends to install the test pumping equipment in each completed well, he shall also be a Licensed Pump Installer in the State of Colorado. If a subcontractor is utilized for the testing portion, the subcontractor shall be a Licensed Pump Installer in the State of Colorado.

1.3 Submittals For The Wells

The CONTRACTOR shall:

- A. Submit the required specified information for the well casing, screen and gravel pack.
- B. Submit detailed driller's log of all materials encountered during drilling and all geophysical logs required.
- C. Submit all forms and information required by the Colorado State Engineer's Office as directed by the CONSULTANT or CITY.

1.4 Well Design

- A. The general well design shown on the well design figure (Figure 2) is based on general information of the aquifer in the area of the proposed wells and is therefore approximate only. Final design of each well will be provided to the CONTRACTOR within 4 hours of achieving total depth or upon the completion

of the geophysical logging for wells that will be geophysically logged.

- B. PVC casing and screen shall be used to construct each well whenever technically feasible. However, steel casing and screen shall be used to construct wells where the completion depths are greater than 700 feet below ground surface. The CITY or CONSULTANT reserves the right to modify the minimum completion depth in which steel casing and screen may be used to construct a well.
- C. The CONTRACTOR shall review the final design of the wells and, if in his opinion, the sand content requirement of Section 3.14 "sand content testing", cannot be met using the final design developed by the CONSULTANT, he shall notify the CONSULTANT in writing within 24 hours of his receipt of the final design. He shall also submit an alternate design based on his observations. If the CONTRACTOR and CONSULTANT agree upon a final design, then the provisions of the above-referenced section shall be in force. If no agreement can be reached, the final design shall be based on the CONSULTANT'S and CITY'S recommendation and the CONTRACTOR shall not assume any responsibility or liability for the well design.

1.5 Compliance

- A. All work shall conform to "Rules and Regulations for Water Well Construction, Pump Installation, Cistern Installation, and Monitoring and Observation Hole/Well Construction" (2 CCR 402-2) State of Colorado; effective September 1, 2016.

PART 2 PRODUCTS

2.1 Drilling Fluid

- A. Any drilling fluids or additives used shall be specifically manufactured and approved for use in water wells.
- B. All water used in each well construction and development shall be fresh water and shall be transported to the site by approved methods.

2.2 Well Casings - PVC

- A. The well casing utilized in each well shall be all newly-manufactured casing and shall be manufactured in accordance with ASTM-D1784, ASTM F-477, and ASTM F-480. Documentation provided with and or markings on the pipes and fittings should verify as such.

Written documentation shall be provided to the CONSULTANT confirming the manufactured specifications of casing being utilized prior to installation of the casing in each well.

2.3 Well Casing – Steel

- A. The well casing utilized shall be all newly manufactured, low carbon, mild steel casing and shall be manufactured in accordance to the appropriate ASTM or API standards, shall be welded or otherwise joined to form a water-tight connection, and the specifications shall be clearly stamped on the pipe.

Written documentation shall be provided to the CONSULTANT confirming the grade of casing being utilized prior to installation of the casing in the well.

2.4 Well Screens - PVC

- A. General The well screens for each well shall be of the continuous slot, mill-slot design in order to provide maximum inlet area consistent with strength requirements. It shall be fabricated by cutting regular, horizontal slots into the PVC body, conforming to standards ASTM D-1784 and

ASTM F-480. The screens readily will be able to attach to PVC blanks, through threads, pins, or splines.

- B. Material and Fittings The well screen and attached end fittings shall be newly-fabricated PVC with sufficient strength to withstand depths down to 700 feet. The ends of the blank screen should be fabricated with joining mechanisms to form water-tight seals with blank PVC and screened PVC
- C. Slot Size The screen slot size shall be 0.035 inches. A tolerance of 0.002 inch greater or 0.005 inch under the specific slot size is acceptable.
- D. Manufacturer The well screen manufacturer for the wells shall be Johnson Screens or equivalent as approved by the CONSULTANT. The CONTRACTOR shall include his planned choice of screen manufacturer in his bid package.

2.5 Well Screen – Mild Steel

- A. General The well screen for the well shall be factory-slotted, mild steel to provide maximum inlet area consistent with strength requirements. It shall be fabricated in a manner that the screen will be non-clogging. End fittings will be welded to the screen body.
- B. Material and Fittings The well screen and attached end fittings shall be fabricated from factory-slotted mild steel. The ends of the screen and blank sections shall be beveled for welding.

The CONTRACTOR is responsible for ensuring that the materials utilized will be adequate for the actual conditions encountered. For bidding purposes, however, the screen section provided must meet the minimum requirements shown on the steel well design in Figure 2.

- C. Slot Size The screen slot size shall be 0.035 inches. A tolerance of 0.002 inch greater or 0.005 inch under the specific slot size is acceptable.
- D. Manufacturer The well screen manufacturer for the wells shall be a manufacturer that produces high-quality, mild steel screen products as approved by the CONSULTANT. The CONTRACTOR shall include his planned choice of screen manufacturer in his bid package.

2.4 Gravel Pack

- A. The gravel pack shall consist of clean, well-rounded grains that are smooth and uniform. The gravel pack shall be siliceous with a limit of 5 percent by weight of calcareous material. The gravel pack should be obtained from a source approved by the CONSULTANT and shall consist of hard, rounded particles with an average specific gravity of not less than 2.5. Not more than 1 percent by weight of the material should have a specific gravity of 2.25 or less. The gravel pack shall contain not more than 2 percent by weight of thin, flat or elongated pieces (pieces in which the largest dimensions exceeds three times the smallest dimension) determined by hand picking; and shall be free of shale, mica, clay, sand, dirt, loam and organic impurities of any kind and shall contain no iron or manganese in a form or quantity that will adversely affect the water quality.
- B. The size and gradation of the gravel pack for each well shall be 8 x 12 gravel pack or similar, as presented on Figure 2. It is imperative that the CONTRACTOR arrange for delivery of gravel pack meeting the size specified for each well. The CONSULTANT retains the right to reject any gravel pack delivered to the site not meeting the specified gradation.
- C. Gravel pack shall be delivered to the site in bags or super sacks with the gravel size clearly stamped on each bag. Bulk delivery will not be acceptable. Delivery slips identifying the gravel pack and gradation delivered will be made available to the CONSULTANT prior to commencement of gravel packing operations.
- D. The CONTRACTOR is required to supply a suitable calibratable probe for tagging the gravel during gravel packing operations. One acceptable method would be as follows: a wireline probe will be calibrated by tagging the bottom of the casing sump immediately after installation and calibrated to depth and the wireline marked in 50 or 100-foot intervals as it is removed from the wells.

The CONTRACTOR is required to include his planned method for this operation with his bid package, and the method must be approved by the CONSULTANT. The CONSULTANT reserves the right to take exception to the proposed methodology, and to require the CONTRACTOR to submit an acceptable alternative.

2.5 Cement Grout

- A. It shall be the responsibility of the CONTRACTOR to devise a grouting mix and grouting program suitable for the conditions encountered down hole in each well. The planned grout mix and grout program for each well shall be provided to the CONSULTANT in writing a minimum of 72 hours prior to casing grouting and must be in compliance with all applicable provisions of "Rules and Regulations for Water Well Construction, Pump Installation, Cistern Installation, and Monitoring and Observation Hole/Well Construction" (2 CCR 402-2) State of Colorado; effective September 1, 2016
- B. The CONSULTANT shall approve the composition of the grout and any additives used prior to installation of said grout and additives in any of the wells.

PART 3 EXECUTION

3.1 General

- A. The CONTRACTOR shall provide, whenever possible, for continuous operations from the time drilling is started to the completion of the cement grouting operation.
- B. The equipment furnished by the CONTRACTOR shall be of adequate size and type for the work proposed. The CONTRACTOR shall provide with his bid a description of the equipment he proposes to use. The description shall include, but not be limited to:
 - 1. Description of drilling rig, including maximum safe working capacities; and
 - 2. Type of development pump proposed.

3.2 Conductor Bore and Casing

- A. The holes for the wells shall be drilled to a minimum depth of 20 feet below the ground surface to provide for the installation of the temporary conductor casing.
- B. The conductor casing for the wells shall be steel pipe having a wall thickness of not less than 1/4-inch and a length of not less than 20 feet. Conductor casing shall be manufactured in accordance with ASTM Designation: A 53. If a conductor casing extending above the finished grade of the well sites is provided by the CONTRACTOR for his convenience in the drilling of a well, it shall be cut off, if so directed by the CONSULTANT, without extra cost to the CITY. The CONTRACTOR shall be responsible for selecting the conductor casing to ensure that it will be adequate in all respects to successfully complete each well.
- C. All joints in the conductor casings shall be securely welded and shall be watertight. Field joints shall be either collared or butt-welded. Centering guides shall be welded to the conductor casings with a minimum of two sets of guides, equally spaced circumferentially.
- D. After the conductor casings have been installed in the wells, it shall be sealed by filling the annular space between the hole and the conductor casing with cement grout. Upon completion of grouting the wells, cement grout shall be visible above the surface of the ground outside the conductor casing. After cementing operations are completed, the grout shall be left undisturbed for a period of not less than twenty-four (24) hours before drilling is resumed regardless of any curing additives that might be added to speed setting of the grout.
- E. The quantity of grout for the wells shall be not less than the volume of the annulus plus 20 percent allowance for hole oversize.

3.3 Drilling Water

- A. Source of Water for Drilling Water for drilling the wells will can be made available by the CITY at no cost to the CONTRACTOR. The water source is the seven (7) existing WWR and EB wells presented in Figure 1. The wells do not have pumps and there is no power to run a pump. In the alternative, CONTRACTOR will have to provide water from off-site for drilling and other operations. The CONTRACTOR shall, however, furnish and install any equipment, power sources, or facilities required to transport water from the site provided by the CITY to his drilling operation. The CONTRACTOR shall also be required to meter and report any water used from the existing wells for the purposes of well construction. The CONTRACTOR shall assume full responsibility for any losses or damage of any kind resulting from his using this water supply. **It is the CONTRACTOR's responsibility to assess the location of available water prior to submitting his bid and shall include all costs necessary in this bid item.**

3.4 Well Logs and Records

- A. The CONTRACTOR shall keep, for each well, an accurate log and record of all material passed through and the depths at which the changes in the formation occur for each well. The logs of the wells shall show all material penetrated and full descriptive notes shall be made of everything found by the drilling and of all difficulties or unusual conditions met in drilling. All water bearing strata shall be described in special detail as to whether the material is loose or compact, its color, and if gravel, the size and whether it is water worn or angular. The presence of clay shall be noted.
- B. The logs for the completed wells shall show: diameter, wall thickness, depths and quantities of casings and screen installed; type, aperture size, and pattern of perforations; borehole diameters; cemented sections; gradation of gravel envelope; quantity of gravel initially installed; and all other pertinent details.

In addition to the above information, the CONTRACTOR shall keep records providing the following information for each well:

1. Well development and test records maintained on an hourly basis, showing production rate, static water level, pumping level, drawdown, production of sand, and all other pertinent information concerning method of development.
- C. **All measurements for depths shall be referenced to existing ground surface at the well sites.**

3.5 Pilot Borehole Drilling

- A. The pilot boreholes shall be drilled to the bore hole depths presented in Table 1 and as directed by the CONSULTANT.
- B. Samples of the formation cuttings will be collected by the CONTRACTOR at 10-foot intervals or at the direction of the CONSULTANT, beginning at the base of the surface casing and continuing to total depth. The samples will be laid out on the ground for inspection and logging, as directed by the CONSULTANT, shall be provided. It will be the responsibility of the CONTRACTOR to protect the laid-out samples until they are no longer required by the CONSULTANT.
- C. The pilot boreholes shall be drilled at a 6.25-inch diameter to the bottom of the well or to greater or lesser depth as directed by the CONSULTANT. The driller shall carefully maintain the air/water circulation during drilling phases, especially while drilling in the production aquifer of each well. The CONSULTANT reserves the right to order the CONTRACTOR to slow the drilling or even stop the drilling if, in his opinion, the rate of drilling is having a potentially harmful effect on the target aquifer due to increased fluid infiltration into the formation, etc. The time required to remedy the air/water circulation system to acceptable levels will not be considered as standby time.

3.6 Geophysical Logging

- A. Subsequent to the termination of the drilling of the pilot boreholes, the CONTRACTOR shall assist with

a geophysical survey of the boring. The CONTRACTOR shall employ a geophysical logging sub-contractor and the CONTRACTOR shall provide support assistance for the geophysical sub-contractor.

- B. Prior to running geophysical surveys, the CONTRACTOR shall cease drilling and circulate drilling fluids into the borehole at a rate sufficient to keep the hole filled throughout the logging operations. The drill string shall be removed from the hole and logging devices run into the hole. The CONTRACTOR shall also provide the necessary assistance in attaching and elevating logging sheave wheel on the drilling rig. The CONTRACTOR shall be responsible for the overall coordination of the geophysical logging.
- C. The logs run in the wells will be by a conventional logging contractor such as COLOG or another reputable geophysical logging company and will consist of a dual induction resistivity (to include short guard along with intermediate and deep induction with SP and natural gamma ray), and caliper. All logs will be run from total depth to the base of the surface casing in the well.

3.7 Overbore Drilling

- A. If necessary, the boreholes shall be reamed to the base of the target aquifer formation and as directed by the CONSULTANT.
- B. **The boreholes shall be reamed at the diameter shown on the well construction diagram to the bottom of the well or to greater or lesser depth as directed by the CONSULTANT. The driller shall carefully maintain the air/water circulation during drilling phases, especially while drilling in the production aquifer of the well. The CONSULTANT reserves the right to order the CONTRACTOR to slow the drilling or even stop the drilling if, in his opinion, the rate of drilling is having a potentially harmful effect on the target aquifer due to increased fluid infiltration into the formation, etc. The time required to remedy the air/water circulation system to acceptable levels will not be considered as standby time.**

3.8 Installing Casing and Screen

- A. The casing for each well shall be placed in the borehole by approved methods in a manner that will insure no damage to the casing or screen during installation. The fabrication and assembly of the well casings shall be such that, excepting the well screen portion, the casing will be completely watertight throughout.
- B. **Positive type centering guides in sets of 3 or 4 shall be installed on the casing and screen at 50-foot maximum intervals equally spaced circumferentially.** The purpose of the guides is to maintain the casing and screen in the center of the drilled hole during cementing and installation of the gravel pack. The type of centering guides and their positions shall be approved by the CONSULTANT prior to assembly and placement of the casing and screen.
- C. The casings shall be supported from the top by means of a clamp or other device approved by the CONSULTANT which will adequately support the entire weight of the casings. The bottom of the casings shall be a sufficient distance above the bottom of the drilled holes to ensure that none of the casings' weight will be supported from below. Special care shall be exercised to ensure that the casings is installed straight and true.
- D. When the well is completed, its casing shall extend at least 18 inches above the ground surface.

3.9 Gravel Packing

- A. Upon completion of the installation of the permanent screens and casing strings, gravel pack shall be placed in the annulus between the casings and borehole walls. The gravel pack shall be placed to a depth specified by the CONSULTANT and utilizing the following method or an alternate method approved by the CONSULTANT.
- B. Tremie pipe shall be placed in the annulus between the casings and borehole walls. The bottom open end of the tremie pipe shall be placed as closely as possible opposite the bottom of the casing sumps.

Circulation shall be established and the CONTRACTOR shall begin pumping a water-gravel slurry down the tremie pipe. From this point until completion of gravel packing, sufficient time shall be allowed between gravel pumping cycles for gravel to settle out and accurate tags of top of gravel pack to be made. 15 to 20 minutes settling time is generally sufficient, but the CONSULTANT shall have final authority in this determination. **Before the final cycle of gravel packing, at least 2 successive tags no less than 30 minutes apart shall be made to accurately establish the gravel pack level. Following this last tag, the gravel pack shall be brought up to the final elevation and 2 more successive tags, no less than 30 minutes apart, shall be made to confirm final gravel elevation.** In the case of overfilling, the excess gravel shall be removed by circulating out the overage. The CONTRACTOR shall be paid only for the final lineal footage of gravel pack as accepted by the CONSULTANT.

The volume of gravel placed in each well shall fill the annulus which for estimating purposes shall be the calculated volume of the annular space plus 20 percent to account for borehole oversize.

- C. The well casings and screens will be supported from the top while gravel packing is in progress. In no case shall they rest on the bottom of the holes prior to or during gravel packing. The assemblies shall be free in the holes; no bending, warping, driving, or jacking to force the assemblies into the holes will be permitted.

3.10 Welding

- A. All welding shall be a full, continuous, running weld and shall conform to the American Welding Society or American Petroleum Institute specifications.

Welding procedures shall be the responsibility of the CONTRACTOR and shall be adequate for the conditions encountered.

Care should be taken, especially while welding in inclement weather, to ensure that no damage is done to the conductor casings. All damage shall be immediately reported to the CONSULTANT for inspection. Any damaged section will be repaired or replaced at the discretion of the CONSULTANT at no additional cost to the CITY. Failure to report any such damage to the CONSULTANT will be cause for rejection of the well by the CITY.

3.11 Cementing Casing

- A. After the gravel envelopes have been placed, ten feet of a fine sand and powdered bentonite mixture shall be placed in each well through the tremie pipe above the gravel filter to prevent the cement grout from infiltrating into the gravel pack. Then the CONTRACTOR shall fill the annular space between the casings and the walls of the reamed hole with cement.
- B. Grout placing shall be done in such a manner as to introduce cement first at the lower end of the cement zones, with water being displaced from the top of each well as the cementing proceeds. The cement shall be placed by pumping through a tremie pipe or pipes having the discharge end at the lower level of the zones to be cemented. As the level of the cement rises, the slurry feed pipe shall be gradually withdrawn, the process being continued until the entire reach from the top of the sand layer has been filled completely with the cement slurry. The cementing shall be completed in one continuous operation unless the CONTRACTOR determines that the pressure of grouting in one continuous operation will provide a risk of collapsing the casing. It shall be the responsibility of the CONTRACTOR to determine if grouting in one operation is safe and if deemed necessary shall make arrangements to grout the well in two or more subsequent grouting operations. The CONTRACTOR shall have final responsibility for ensuring that the method of grout placement does not endanger the integrity of the well casing and that the well casings will not collapse during grouting operations. Cementing casing by pumping grout down the casing and back up the annular space through holes in the casing will not be allowed.
- C. The placing of grout shall be done in such a manner as to completely fill the cavity and to completely seal off the upper portion of each well from infiltration of water. **Upon completion of the grouting operation, the well casings and the grout seals shall be left undisturbed for a period of not less**

than 24 hours regardless of the addition of accelerants or other additives designed to shorten curing time.

3.12 Development

A. General

1. The wells shall be developed by mechanical methods as provided herein and in such a manner as is approved by the CONSULTANT. The CONTRACTOR shall furnish all necessary pumps and other needed equipment and shall develop each well to produce the maximum yield of water per foot of drawdown and extract from the water-bearing formation the maximum practical quantity of silt and sand possible so as to prevent, during the life of the well, such material from being drawn through the screen when the well is pumped under maximum conditions of drawdown. Development shall begin within five days from the end of the curing period for cementing the casing for the well. Weather or equipment failure delays will extend the timeline by the length of the delay.
2. Measurements of discharges and of the static and pumping water levels shall be made periodically, as required by the CONSULTANT to determine the specific capacities during pump development and to evaluate the progress being made by the development operations. All development and test work shall be performed in the presence of a representative of the CONSULTANT or as directed by the CONSULTANT.

B. Method and Equipment

1. The development shall consist of three procedures. The first shall consist of agitating the formation and gravel pack by swabbing each well with a swabbing tool that will be of a sufficient diameter to fit tight enough in the well to effectively agitate the gravel pack, to remove fines from the bottom of the well and to begin the movement of water into the well from the formation. The swabbing tool should have perforated pipe between the upper and lower swabbing discs to allow for the pumping of water from the swabbing interval. Swabbing shall commence at the uppermost screen section and proceed downward as each interval is removed of fines. Following swabbing, each well shall be airlifted to remove fines from the wells. The airlifting shall commence at the uppermost screen sections and proceed downward opposite the screened zones of each well unless otherwise directed by the CONSULTANT. Upon reaching the lowermost screen sections of each well, airlifting shall continue from that point until such time as the CONSULTANT deems the process to be completed. The CONTRACTOR will be responsible for ensuring that a compressor of sufficient size will be available for swabbing and airlifting each well from the bottom.
2. The last phase of development shall consist of surge pumping the well after the test pump has been set. Table 1 presents the specific performance and setting estimates (for bidding purposes; subject to change based on actual well performance) for the well. The well will be developed by interrupted pumping at the rates in Table 1 or as directed by the CONSULTANT. It is required that a check valve be installed immediately above the pump to prevent back surging. The method of development shall be fully described by the CONTRACTOR in his bid. This description shall include, but not be limited to, the type of equipment to be used, pumping rates, description of sketches of proposed tools and any other information that will aid the CONSULTANT and CITY in evaluating the effectiveness of the proposed methods or equipment.

3.13 Production and Aquifer Testing

- A. The CONTRACTOR shall test each well by pumping. Multiple tests in the well will be made by the CONTRACTOR at the direction of the CONSULTANT. These tests will include but not be limited to: (1) step tests to determine the drawdown curve or the maximum capacities of each well, whichever is less; (2) continuous drawdown tests to determine well efficiency and aquifer parameters; and (3) well recovery tests. The **estimated** static and pumping water levels and pumping rates for each well for bidding purposes are presented on Table 1.

- B. The CONTRACTOR shall perform these tests at the direction of the CONSULTANT. The CONTRACTOR shall be responsible for providing a test pump capable of delivering the required flow rate and maintaining a constant rate of discharge at the specific flow rate for the duration of each test.
- C. For each well, the CONTRACTOR shall install a flow meter at the end of the discharge pipe, prior to testing the temporary pump, and prior to starting any aquifer tests. The CONTRACTOR shall keep records of all water withdrawn from test wells during well construction and testing phase of the project and will provide copies of these records to the CITY before the completion of the work as described in Section 3.4.

The following tests are anticipated, however, the flow rates and times presented on Table 1 are **estimates** for bidding purposes, and subject to change at the discretion of the CONSULTANT should site conditions merit.

1. Step Test

- a. Duration: 4 steps; 2 hrs. per step

Anticipated Rates: As per Table 1

- b. Recovery

Following the step test and prior to the constant discharge test, the well shall be allowed to recover fully. It is estimated that this recovery shall take approximately 12 hours. This recovery period does not require water level monitoring and does not constitute a pay item.

2. Constant Rate Test

Duration: 8 to 24 hrs. As per Table 1

Rate: as per **estimates** presented on Table 1 or the maximum pumping rate of the well at which the pumping rate can be sustained for the test period, whichever is less.

The CONTRACTOR shall take readings of water level, pumping rate, pump motor amperage, hertz and voltage and sand content during the tests at intervals as specified by the CONSULTANT.

- b. Recovery

Duration: 8-24 hrs.

The CONTRACTOR shall take readings of water level during this recovery phase.

The CONTRACTOR shall provide all the labor, equipment and materials necessary to complete the production tests at the direction of the CONSULTANT. This shall include a 1-inch diameter PVC pipe installed with the pump for measuring water levels with a downhole transducer with datalogger to be provided by CONSULTANT. The CONTRACTOR will supply an "M-Scope" with sufficient length to provide water level measurements during all pumping tests. After the final test on the well, the CONTRACTOR shall remove the pump and clean the well of silt and sand unless otherwise directed by the CONSULTANT.

- C. The CONTRACTOR shall furnish as part of the development, aquifer testing and production testing for the well a portable discharge pipe assembly complete with fittings, valves and supports, complete with all accessories, in accordance with the requirements of these specifications.

The discharge pipe assembly shall include a flowmeter and calibrated orifice plate, which shall measure within plus or minus 3 percent of the true water flow. The flowmeter shall have a rate of flow indicator which reads directly in gallons per minute, shall have a totalizer counter reading in total gallons delivered,

and shall have a fast moving pointer to permit timing with a watch for determining the rate of flow. All discharge piping and related equipment must be placed only on designated easements or lands owned by SLB for the duration of the testing work.

The flowmeter shall be installed so that it is at least 5 pipe diameters downstream from any valves, fittings, or other pipe obstructions which would interrupt the flow pattern.

A valve shall be provided downstream of the measuring device which will be capable of throttling the discharge. It will be used for at least partial throttling of the discharge to induce enough head to stabilize the pumping rate at a constant value if any difficulties are encountered doing so without its use.

The location of any groundwater discharge to the surface is subject to the CITY, SLB and CONSULTANT approval. The CONTRACTOR shall discharge groundwater from pump and aquifer testing in a manner directed by the CONSULTANT, or SLB when and where applicable. **Fluids shall NOT be discharged toward any streams or drainages.**

- D. The CONTRACTOR shall provide for connection of the sand tester in the discharge piping for the well.

3.14 Sand Content Testing

- A. The CONTRACTOR shall furnish the necessary equipment to accurately test the pumped water from the well for sand content. The testing equipment shall be the Rossum Centrifugal Sand Sampler, as illustrated in the Journal of American Water Works Association, Volume 46, Number 2, February 1954 or approved equal. The test shall be conducted by the CONSULTANT, upon notification by the CONTRACTOR, after completion of the well development by pumping. The sand content shall be as determined by the CONSULTANT. The following are the sand content requirements for the well:

Sand production less than 10 parts per million within 10 minutes after start of pumping, from a 30-minute off condition.

Sand production average less than 2 parts per million during a continuous 4-hour pumping period. The 4-hour pumping period will begin 30 minutes after start of pumping from a 30-minute off condition. The pumping rate, during sand content testing, shall be the rate specified by the CONSULTANT as the design rate for the well.

The CONTRACTOR shall be held responsible for meeting the sand content requirements and no well will be accepted until the sand content requirements are met.

3.15 Plumbness and Alignment

- A. The well shall be constructed and all casing shall be set sufficiently round, plumb and true to permit the free installation of a submersible pump regularly specified for the size casing installed. To demonstrate the compliance of his work with this requirement, the CONTRACTOR shall furnish all labor, tools and equipment, and shall make these tests to the satisfaction of the CONSULTANT. Tests for plumbness and alignment may be made either just prior to gravel packing and grouting the casing or following completion of the well, but in either case prior to acceptance of the well.

Periodic check tests, however, should be made by the CONTRACTOR during the performance of the work. Records of deflection readings and all other pertinent information shall be kept and made a part of the permanent well logs and records. The test procedure utilized shall be that as described in Appendix C of the AWWA Standard for Water Wells, ANSI/AWWA A-100-90.

Should any well fail to meet the requirements for plumbness or alignment, it shall be corrected by the CONTRACTOR at his expense or an acceptable new well drilled. The CONSULTANT may waive the requirements for plumbness if, in his judgment, the CONTRACTOR has exercised all possible care in construction of the well and the defect is due to circumstances beyond the CONTRACTOR'S control, and if the utility of the completed well will not be materially diminished.

- B. After each well has been developed and tested, they shall be sounded and cleaned of sand or other materials that remain.

3.16 Water Quality Testing, Cleaning, Disinfection and Capping

- A. At the end of the step-tests the CONSULTANT shall provide for the collection of water samples for water quality testing. The CONTRACTOR shall assist the CONSULTANT with collecting water quality samples for each of the constructed wells of the Work. The CONTRACTOR will provide a suitable method to collect water quality samples as agreed upon between the CONTRACTOR and CONSULTANT.
- B. After each well has been developed and tested, they shall be sounded and cleaned of sand or other materials that remain.
- C. Prior to capping each well the CONTRACTOR shall sterilize the wells. Industrial grade sodium hypochlorite shall be uniformly injected into each well to establish a solution of not less than 100 parts per million concentration. It shall then be thoroughly mixed in each well by agitation with air, or the bailer or surge block. The CONTRACTOR shall be responsible for ensuring that each well is totally cleaned and disinfected so as to produce microbiologically satisfactory water.
- D. **After the water quality sampling and disinfection, the well shall be capped with a steel bolt-down cover at least 1/8-inch-thick over the top of the casing. This is the only acceptable methodology for capping the well; clamping covers, screw-type expanding seals or any other welded or non-welded covers will not be accepted.**

- 3.17 Site Restoration Upon completion of the Work, the CONTRACTOR will restore and revegetate all work sites, and if necessary, access roads, as close as possible, to their original condition. The SLB must approve the scope and practices of all restoration done on the SLB parcels and any restoration done on TERRY RANCH parcels must be approved by TERRY RANCH. If the CONTRACTOR needs to sub-contract this work, they may do so with the written approval of the CITY and SLB. The CITY and SLB will instruct the CONTRACTOR/sub-contractor in acceptable methods to restore the disturbed sites after a contract has been awarded.

Restoration expectations are, but not limited to:

- Sites brought back to original grade
- Rock/cobble removal/back dragging
- Fertilizer
- Native seed (SLB approval required)
- Straw mulch

After Site Restoration is completed, the CONTRACTOR/sub-contractor will warranty that if within 12 months of the finish date less than 70% of ground cover has been restored with native grass at any of the work sites it will be reseeded at no extra expense to the CITY.

B. Period of Award

The completion date of providing the required product and services shall be **December 31, 2023**.

If the City desires to extend the contract, no later than thirty (30) days prior to expiration, the City's Purchasing Contact may send a notice in writing to the vendor requesting firm pricing for the next twelve-month period. After the City evaluates the firm pricing proposal from the vendor, it will determine whether to extend the contract. All awards and extensions are subject to annual appropriation of funds. The provisions of the foregoing paragraphs with respect to extensions of the terms of the contract shall be null and void if the contract has been terminated or revoked during the initial term or any extension thereof. All decisions to extend the contract are at the option of the City.

C. Minimum Mandatory Qualifications of Offeror

The bidders shall have completed a minimum of three gravel packed wells of the size and type herein specified, completed in a sedimentary rock aquifer, or similar geologic environment in the past three years, and shall be a licensed water well driller in the State of Colorado. If the bidder intends to install the test pumping equipment in each completed well, he shall also be a Licensed Pump Installer in the State of Colorado. If a subcontractor is utilized for the testing portion, the subcontractor shall be a Licensed Pump Installer in the State of Colorado.

SECTION III. ADMINISTRATIVE INFORMATION

A. Issuing Office

The City's contact name listed herein is to be the sole point of contact concerning this RFP. Offerors shall not directly contact other personnel regarding matters concerning this RFP or to arrange meetings related to such.

B. Official Means of Communication

All official communication from the City to offerors will be via postings on an electronic solicitation notification system, the Rocky Mountain Bid System (www.rockymountainbidsystem.com). The Purchasing Contact will post notices that will include, but not be limited to, proposal document, addenda, award announcement, etc. It is incumbent upon offerors to carefully and regularly monitor the Rocky Mountain Bid System for any such postings.

C. Inquiries

Prospective offerors may make written inquiries by e-mail before the written inquiry deadline concerning this RFP to obtain clarification of requirements. There will be opportunity to make inquiries during the pre-proposal conference, if any. No inquiries will be accepted after the deadline. Inquiries regarding this RFP (be sure to reference RFP number) should be referred to:

E-Mail: Purchasing@greeleygov.com
Subject Line: **RFP #F23-01-001**

Response to offerors' inquiries will be published as addenda on the Rocky Mountain Bid System in a timely manner. Offerors cannot rely on any other statements that clarify or alter any specification or other term or condition of the RFP.

Should any interested offeror, sales representative, or manufacturer find any part of the listed specifications, terms and conditions to be discrepant, incomplete, or otherwise questionable in any respect, it shall be the responsibility of the concerned party to notify the Purchasing Contact of such matters immediately upon discovery.

D. Insurance

The successful contractor will be required to provide a Certificate of Insurance (Exhibit 3) or other proof of insurance naming the City of Greeley as "additional insured". Coverage must include COMMERCIAL GENERAL LIABILITY coverage with minimum limits of \$2,000,000, and WORKER'S COMPENSATION coverage with limits in accordance with State of Colorado requirements.

COMPREHENSIVE AUTOMOBILE LIABILITY with minimum limits for bodily injury and property damage coverage of at least \$1,000,000, plus an additional amount adequate to pay related attorneys' fees and defense costs, for each of Consultant's owned, hired or non-owned vehicles assigned to or used in performance of this Agreement.

The City and the Terry Ranch Grazing Association shall be named as additional Insured for General and Auto Liability Insurance.

Awarded offeror must present the City with proof of PROFESSIONAL LIABILITY COVERAGE with a minimum limit of \$5,000,000.

E. Modification or Withdrawal of Proposals

Proposals may be modified or withdrawn by the offeror prior to the established due date and time.

F. Minor Informalities

Minor informalities are matters of form rather than substance evident from the response or insignificant mistakes that can be waived or corrected without prejudice to other vendors. The Purchasing Manager may waive such informalities or allow the vendor to correct them depending on which is in the best interest of the City.

G. Responsibility Determination

The City will make awards only to responsible vendors. The City reserves the right to assess offeror responsibility at any time in this RFP process and may not make a responsibility determination for every offeror.

H. Acceptance of RFP Terms

A proposal submitted in response to this RFP shall constitute a binding offer. The autographic signature of a person who is legally authorized to execute contractual obligations on behalf of the offeror shall indicate acknowledgment of this condition. A submission in response to this RFP acknowledges acceptance by the offeror of all terms and conditions as set forth herein. An offeror shall identify clearly and thoroughly any variations between its proposal and the RFP in the cover letter. Failure to do so shall be deemed a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in the RFP.

I. Protested Solicitations and Awards

Right to protest. Any actual or prospective bidder, offeror or contractor who is aggrieved in connection with the solicitation or award of a contract must protest in writing to the City Manager as a prerequisite to seeking judicial relief. Protestors are urged to seek informal resolution of their complaints initially with the Purchasing Manager. A protest shall be submitted within ten (10) calendar days after such aggrieved person knows or should have known of the facts giving rise thereto. A protest with respect to an invitation for bids or request for proposals shall be submitted in writing prior to the opening of bids or the closing date of proposals, unless the aggrieved person did not know and should not have known of the facts giving rise to such protests prior to bid opening or the closing date for proposals.

1. Stay of procurement during protests. In the event of a timely protest under Subsection (A) of this Section, the Purchasing Manager shall not proceed further with the solicitation or award of the contract until all administrative and judicial remedies have been exhausted or until the City Manager makes a written determination on the record that the award of a contract without delay is necessary to protect substantial interest of the City. (Ord. 75, 1984 §2 (part))

J. Confidential/Proprietary Information

All proposals will be confidential until a contract is awarded and fully executed. At that time, all proposals and documents pertaining to the proposals will be open for public inspection, except for the material that is proprietary or confidential. However, requests for confidentiality can be submitted to the Purchasing Contact provided that the submission is in accordance with the following procedures. This remains the *sole responsibility* of the offeror. The Purchasing Contact will make no attempt to cure any information that is found to be at a variance with this procedure. The offeror may not be given an opportunity to cure any variances after proposal opening. **Neither a proposal in its entirety, nor proposal price information will be considered confidential/proprietary.** Questions regarding the application of this procedure must be directed to the Purchasing Contact listed in this RFP.

K. Acceptance of Proposal Content

The contents of the proposal (including persons specified to implement the project) of the successful contractor shall become contractual obligations into the contract award. Failure of the successful offeror to perform in accordance with these obligations may result in cancellation of the award and such offeror may be removed from future solicitations.

L. RFP Cancellation

The City reserves the right to cancel this RFP at any time, without penalty.

M. Negotiation of Award

In the event only one (1) responsive proposal is received by the City, the City reserves the right to negotiate the award for the services with the offeror submitting the proposal in lieu of accepting the proposal as is.

N. Contract

A sample copy of the contract award the City will use to contract for the services specified in this RFP is included as Exhibit 2 for your review. The attached contract is only a sample and is not to be completed at this time.

O. RFP Response/Material Ownership

All material submitted regarding this RFP becomes the property of the City of Greeley, unless otherwise noted in the RFP.

P. Incurring Costs

The City is not liable for any cost incurred prior to issuance of a legally executed contract and/or a purchase order.

Q. Utilization of Award by Other Agencies

The City of Greeley reserves the right to allow other State and local governmental agencies, political subdivisions, and/or school districts to utilize the resulting award under all terms and conditions specified and upon agreement by all parties. Usage by any other entity shall not have a negative impact on the City of Greeley in the current term or in any future terms.

R. Non-Discrimination

The offeror shall comply with all applicable state and federal laws, rules and regulations involving non-discrimination on the basis of race, color, religion, national origin, age or sex.

S. News Releases

Neither the City, nor the offeror, shall make news releases pertaining to this RFP prior to execution of the contract without prior written approval of the other party. Written consent on the City's behalf is provided by the Public Information Office.

T. Certification of Independent Price Determination

1. By submission of this proposal each offeror certifies, and in the case of a joint proposal each party, thereto certifies as to its own organization, that in connection with this procurement:

- a) The prices in this proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other offeror or with any competitor;
 - b) Unless otherwise required by law, the prices which have been quoted in this proposal have not been knowingly disclosed by the offeror and will not knowingly be disclosed by the offeror prior to opening, directly or indirectly to any other offeror or to any competitor; and
 - c) No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.
2. Each person signing the Request for Proposal form of this proposal certifies that:
- a) He/she is the person in the offeror's organization responsible within that organization for the decision as to the prices being offered herein and that he/she has not participated, and will not participate, in any action contrary to (1.a) through (1.c) above; or
 - b) He/she is not the person in the offeror's organization responsible within that organization for the decision as to the prices being offered herein but that he/she has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (1.a) through (1.c) above, and as their agent does hereby so certify; and he/she has not participated, and will not participate, in any action contrary to (1.a) through (1.c) above.
3. A proposal will not be considered for award where (1.a), (1.c), or (2.) above has been deleted or modified. Where (1.b) above has been deleted or modified, the proposal will not be considered for award unless the offeror furnishes with the proposal a signed statement which sets forth in detail the circumstances of the disclosure and the City's Purchasing Manager, or designee, determines that such disclosure was not made for the purpose of restricting competition.
4. The Contract Documents may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same document. The Contract Documents, including all component parts set forth above, may be executed and delivered by electronic signature by any of the parties and all parties consent to the use of electronic signatures.

U. Taxes

The City of Greeley is exempt from all federal excise taxes and all Colorado State and local government sales and use taxes. Where applicable, contractor will be responsible for payment of use taxes.

V. Assignment and Delegation

Neither party to any resulting contract may assign or delegate any portion of the agreement without the prior written consent of the other party.

W. Availability of Funds

Financial obligations of the City of Greeley payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted and otherwise made available. In the event funds are not appropriated, any resulting contract will become null and void without penalty to the City.

X. Standard of Conduct

The successful firm shall be responsible for maintaining satisfactory standards of employees' competency, conduct, courtesy, appearance, honesty, and integrity, and shall be responsible for taking such disciplinary action with respect to any employee as may be necessary.

The City may request the successful firm to immediately remove from this assignment any employee found unfit to perform duties due to one or more of the following reasons:

1. Neglect of duty.
2. Disorderly conduct, use of abusive or offensive language, quarreling, intimidation by words or actions or fighting.
3. Theft, vandalism, immoral conduct or any other criminal action.
4. Selling, consuming, possessing, or being under the influence of intoxicants, including alcohol, or illegal substances while on assignment for the City.

Agents and employees of Contractor or Consultant working in City facilities shall present a clean and neat appearance. Prior to performing any work for the City, the Contractor or Consultant shall require each of their employees to wear ID badges or uniforms identifying: the Contractor or Consultant by name, the first name of their employee and a photograph of their employee if using an ID badge. Their employee shall wear or attach the ID badge to the outer garments at all times.

Y. Damages for Breach of Contract

In addition to any other legal or equitable remedy the City may be entitled to for a breach of this Contract, if the City terminates this Contract, in whole or in part, due to Contractor's breach of any provision of this Contract, Contractor shall be liable for actual and consequential damages to the City.

Z. Other Statutes

1. The signatory hereto avers that he/she is familiar with Colorado Revised Statutes, 18-8-301, et seq. (Bribery and Corrupt Influence) and 18-8-401, et seq. (Abuse of Public Office) as amended, and that no violation such provisions is present.
2. The signatory hereto avers that to his/her knowledge, no City of Greeley employee has any personal or beneficial interest whatsoever in the service or property described herein. See CRS 24-18-201 and CRS 24-50-507.

SECTION IV. PROPOSAL SUBMISSION

Following are the response requirements for this RFP. All specific response items represent the minimum information to be submitted. Deletions or incomplete responses in terms of content or aberrations in form may, at the City's discretion, render the proposal non-responsive.

Email your RFP Response to purchasing@greeleygov.com . Only emails sent to purchasing@greeleygov.com will be considered as responsive to the request for proposals. DO NOT submit your RFP Response to multiple email addresses. Emails sent to other City emails may be considered as non-responsive and may not be reviewed.

Proposals shall be submitted in a single Microsoft Word or PDF file under 20MB. The Proposal must not exceed 20 total pages, excluding cover letter, index or table of contents, front and back covers, and title pages/separation tabs. Pages shall be 8 ½ x 11 inch except for up to four (4) pages of 11 x 17 inches. Eleven-point font or larger must be used for the proposal and appendices. Resumes included as an appendix are not considered part of the 20 pages.

The RFP number and Project name must be noted in the subject line, otherwise the proposal may be considered as non-responsive to the RFP.

Electronic submittals will be held, un-opened, until the time and date noted in the RFP documents or Posted addenda.

To facilitate the evaluation, offeror shall submit and organize all responses in the same order as listed in Section V. Proposals that are determined to be at a variance with this requirement may not be accepted.

Late proposals will not be accepted. It is the responsibility of the offeror to ensure that the proposal is received at the City of Greeley's Purchasing Division on or before the proposal due date and time.

SECTION V. RESPONSE FORMAT

The following items are to be included in your proposal, in the order listed. Deviation from this may render your proposal non-responsive.

A. Cover Letter

Include a cover letter introducing your company, summarizing your qualifications, and detailing any exceptions to this RFP (please note that significant exceptions may make your proposal non-responsive). This letter should also provide principal contact information for this RFP, including address, telephone number, fax number, e-mail, and website (if applicable).

B. Use of Subcontractors/Partners

There may be areas for use of subcontractors or partners in this project. If you are utilizing this approach, your proposal must list the subcontractors/partners, their area(s) of expertise, and include all other applicable information herein requested for each subcontractor/partner. Please keep in mind that the City will contract solely with your company, therefore subcontractors/partners remain your sole responsibility.

C. Minimum Mandatory Qualifications

Include an itemized description of how your company meets each of the minimum mandatory qualifications outlined in Section II, C. Failure to meet or exceed these requirements will disqualify your response.

D. Company Information

1. Provide the following information as listed: Company Name, Address, Phone Number, and Names of Principals.
2. Identify the year in which your company was established and began providing consulting services.
3. Describe any pending plans to sell or merge your company.
4. Provide a comprehensive listing of all the services you provide.

E. Evaluation Criterion #1 - Company and Project Team

1. Describe your customer service philosophy.
2. Provide the names and resumes of the key personnel that will be performing the proposed services, including the primary project manager.
3. Describe in detail your company's capacity to work on these projects. List the number of people that you can commit to working on this project and the amount of time each is expected to spend on the project.
4. List the names of the subcontractors you expect to use, the services to be provided by the subcontractors and the amount of time that each is expected to spend on the project. Also, include the names and resumes of the key subcontractor personnel who will be working on the project.
- 5.
6. Describe the methods and timeline of communication your company will use with the City's staff and consultants.

Evaluation Criterion #2 – Project Experience

1. Provide information from at least three projects of similar scope that have been completed in the past five years (5) years. Include, at a minimum, the following information:
 - 1) Company name
 - 2) Contact name
 - 3) Phone number
 - 4) Email address
 - 5) Location of project

- 6) Brief description of project scope and value
- 7) status of project.

The City reserves the right to contact the references provided in your proposal as well as other references without prior notification to you.

Evaluation Criterion #3 – Approach to Scope of Work

1. Describe any project approaches or ideas that you would apply to this project and that you feel would enhance the quality of your services.
2. Describe how the team will handle quality control, specifically how design issues would be monitored and resolved, plans checked and cross-referenced and bid documents ensured to be complete, accurate, and coordinated with subcontractors.

Evaluation Criterion #4 - Availability & Schedule

There is a required time frame in which the City would like this work to be completed (the bison are calving on the east side of the railroad tracks April through June so all work must be done before then. Construction should be ready to begin as soon as possible after the contract has been awarded. The sixteen (16) wells listed in the Scope of Work should be completed by April 1, 2024. Any delays due to well site not being ready, weather, or for other reasons outside the Contractors control will not be counted against the specified project completion time. If the CONTRACTOR may foresee the work being completed after said date, a revised completion date will be negotiated with the City.)

1. Describe and provide a schedule showing how your company will meet this proposed schedule, and if this timeline is not feasible, please explain why. Completion dates of the contract and scoring will be based on the proposed schedule provided by the contractor. The schedule shall provide a specific timeline for the work, critical path for completion of work. Show milestones and completion dates on the schedule.

Evaluation Criterion #5 - Value/Cost of Efforts

1. Provide a cost for the construction services and products broken down per task listed under the **Scope of Services**, above. Show a breakdown of all reimbursable expenses required to complete the work. If applicable, the subcontractors' costs must be shown as separate items. Also, provide hourly rates for your firm and all subcontractors. These rates will be considered valid throughout the project.

F. Proposal Acknowledgement

Include this form as provided in Exhibit 1.

G. Certificate of Insurance

A sample Certificate of Insurance is provided in Exhibit 3.

H. Debarment Form

Include this form as provided in Exhibit 4.

SECTION VI. EVALUATION AND AWARD

A. Proposal Evaluation

All proposals submitted in response to this RFP will be evaluated by a committee in accordance with the criteria described below. Total scores will be tabulated, and the highest ranked firm will enter into negotiations.

If the City requests presentations by short-listed offerors, committee members may revise their initial scores based upon additional information and clarification received in this phase. [Please note that presentations have been tentatively scheduled per the Schedule of Events on the first page of this RFP.](#) If your company is invited to give a presentation to the committee, these dates may not be flexible.

In preparing responses, offerors should describe in great detail how they propose to meet the specifications as detailed in the previous sections. Specific factors will be applied to proposal information to assist the City in selecting the most qualified offeror for this contract. Following is the evaluation criteria that will be used. Criteria will be assigned a points value.

List Evaluation Criteria here:

1.	Company and Personnel Qualifications:	15 Points
2.	Project Experience:	15 Points
3.	Approach to Scope of Work:	20 Points
4.	Availability & Schedule:	25 Points
5.	Value/Cost of Efforts:	25 Points

A presentation and/or demonstration may be requested by short-listed offerors prior to award. However, a presentation/demonstration may not be required, and therefore, complete information should be submitted with your proposal.

B. Determination of Responsibility of the Offeror

The City of Greeley awards contracts to responsible vendors only. The City reserves the right to make its offeror responsibility determination at any time in this RFP process and may not make a responsibility determination for every offeror.

The City of Greeley's Municipal Code defines a "Responsible Offeror" as one who has "the capability in all respects to perform fully the contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance." The City reserves the right to request information as it deems necessary to determine an offeror's responsibility. If the offeror fails to supply the requested information, the City shall base the determination of responsibility upon any available information or may find the offeror non-responsible if such failure is unreasonable.

COOPERATIVE PURCHASING STATEMENT

The City of Greeley encourages and participates in cooperative purchasing endeavors undertaken by or on behalf of other governmental jurisdictions. To the extent, other governmental jurisdictions are legally able to participate in cooperative purchasing endeavors; the City of Greeley supports such cooperative activities. Further, it is a specific requirement of this proposal or Request for Proposal that pricing offered herein to the City of Greeley may be offered by the vendor to any other governmental jurisdiction purchasing the same products. The vendor(s) must deal directly with any governmental agency concerning the placement of purchase orders, contractual disputes, invoicing, and payment. The City of Greeley shall not be liable for any costs or damages incurred by any other entity.

EXHIBIT 1
PROPOSAL ACKNOWLEDGEMENT

The offeror hereby acknowledges receipt of addenda numbers _____ through _____.

Falsifying this information is cause to deem your proposal nonresponsive and therefore ineligible for consideration. In addition, falsification of this information is cause to cancel a contract awarded based on one or both of the above preferences.

By signing below, you agree to all terms & conditions in this RFP, except where expressly described in your cover letter.

Original Signature by Authorized Officer/Agent

Type or printed name of person signing

Company Name

Title

Phone Number

Vendor Mailing Address

Fax Number

City, State, Zip

Proposal Valid Until (at least for 90 days)

E-Mail Address

Website Address

Project Manager:

Name (Printed)

Phone Number

Vendor Mailing Address

Fax Number

City, State, Zip

Email Address

EXHIBIT 2
SAMPLE CONTRACT

(Incorporated by Reference.
Click on Link below to access)

[F23-01-001 Exhibit 2-Sample Contract.pdf](#)

EXHIBIT 3 **SAMPLE CERTIFICATE OF INSURANCE**

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LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.</small></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;">INSURER</th> <th style="width:25%;">TYPE OF INSURANCE</th> <th style="width:10%;">POLICY NO.</th> <th style="width:10%;">POLICY EFF.</th> <th style="width:10%;">POLICY EXP.</th> <th style="width:50%;">LIMITS</th> </tr> </thead> <tbody> <tr> <td rowspan="5"></td> <td>GENERAL LIABILITY</td> <td></td> <td></td> <td></td> <td>EACH OCCURRENCE \$1,000,000</td> </tr> <tr> <td><input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY</td> <td></td> <td></td> <td></td> <td>DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000</td> </tr> <tr> <td><input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR</td> <td></td> <td></td> <td></td> <td>MED EXP (Any one person) \$5,000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>PERSONAL & ADV INJURY \$1,000,000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>GENERAL AGGREGATE \$2,000,000</td> </tr> <tr> <td></td> <td colspan="4"> GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC </td> <td>PRODUCTS - COMP/OP AGG \$2,000,000</td> </tr> <tr> <td rowspan="5"></td> <td>AUTOMOBILE LIABILITY</td> <td></td> <td></td> <td></td> <td>COMBINED SINGLE LIMIT (Ea accident) \$1,000,000</td> </tr> <tr> <td><input checked="" type="checkbox"/> ANY AUTO</td> <td></td> <td></td> <td></td> <td>BODILY INJURY (Per person) \$</td> </tr> <tr> <td><input type="checkbox"/> ALL OWNED AUTOS</td> <td></td> <td></td> <td></td> <td>BODILY INJURY (Per accident) \$</td> </tr> <tr> <td><input checked="" type="checkbox"/> SCHEDULED AUTOS</td> <td></td> <td></td> <td></td> <td>PROPERTY DAMAGE (Per accident) \$</td> </tr> <tr> <td><input checked="" type="checkbox"/> HIRED AUTOS</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> NON-OWNED AUTOS</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="4"></td> <td>UMBRELLA LIAB</td> <td></td> <td></td> <td></td> <td>EACH OCCURRENCE \$</td> </tr> <tr> <td><input type="checkbox"/> EXCESS LIAB</td> <td></td> <td></td> <td></td> <td>AGGREGATE \$</td> </tr> <tr> <td><input type="checkbox"/> DEDUCTIBLE</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> RETENTION \$</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="4"></td> <td>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> <tr> <td>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? 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DSM

EXHIBIT 4
DEBARMENT/SUSPENSION CERTIFICATION STATEMENT

The proposer certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal, State, County, Municipal or any other department or agency thereof. The proposer certifies that it will provide immediate written notice to the City if at any time the proposer learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstance.

DUNS # (Optional) _____

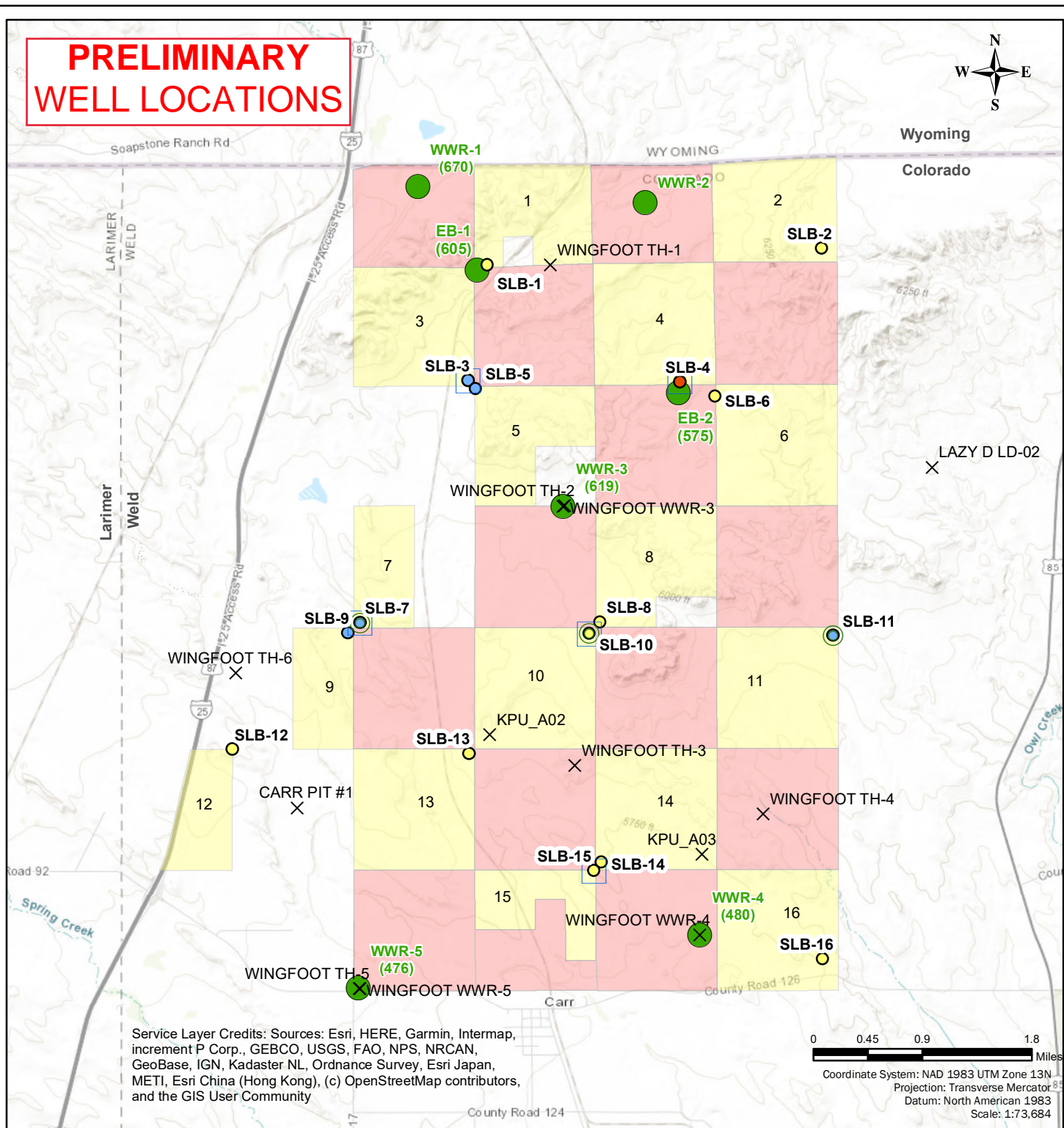
Name of Organization _____

Address _____

Authorized Signature _____

Title _____

Date _____

**Legend**

- | | | |
|---|---|---|
| ● Well Name (Net Sand/Silt in Feet) | ○ Proposed Geophysical Log Locations | ● Fully penetrating entire ULA |
| State Land Board | Multi-Well Test Well | ● Fully penetrating upper ULA |
| Terry Ranch Property | × CDSS Geophysical Logs | ● Partially penetrating upper ULA |

Greeley SLB Well Depth Class**Figure 1**

Construction of Water Wells and
Testing of Water Wells on State Land Board Lands
Location Map of Proposed State Land Board Wells

Job No.: 607.2
Date: 3/17/2022
Drawn: CRV

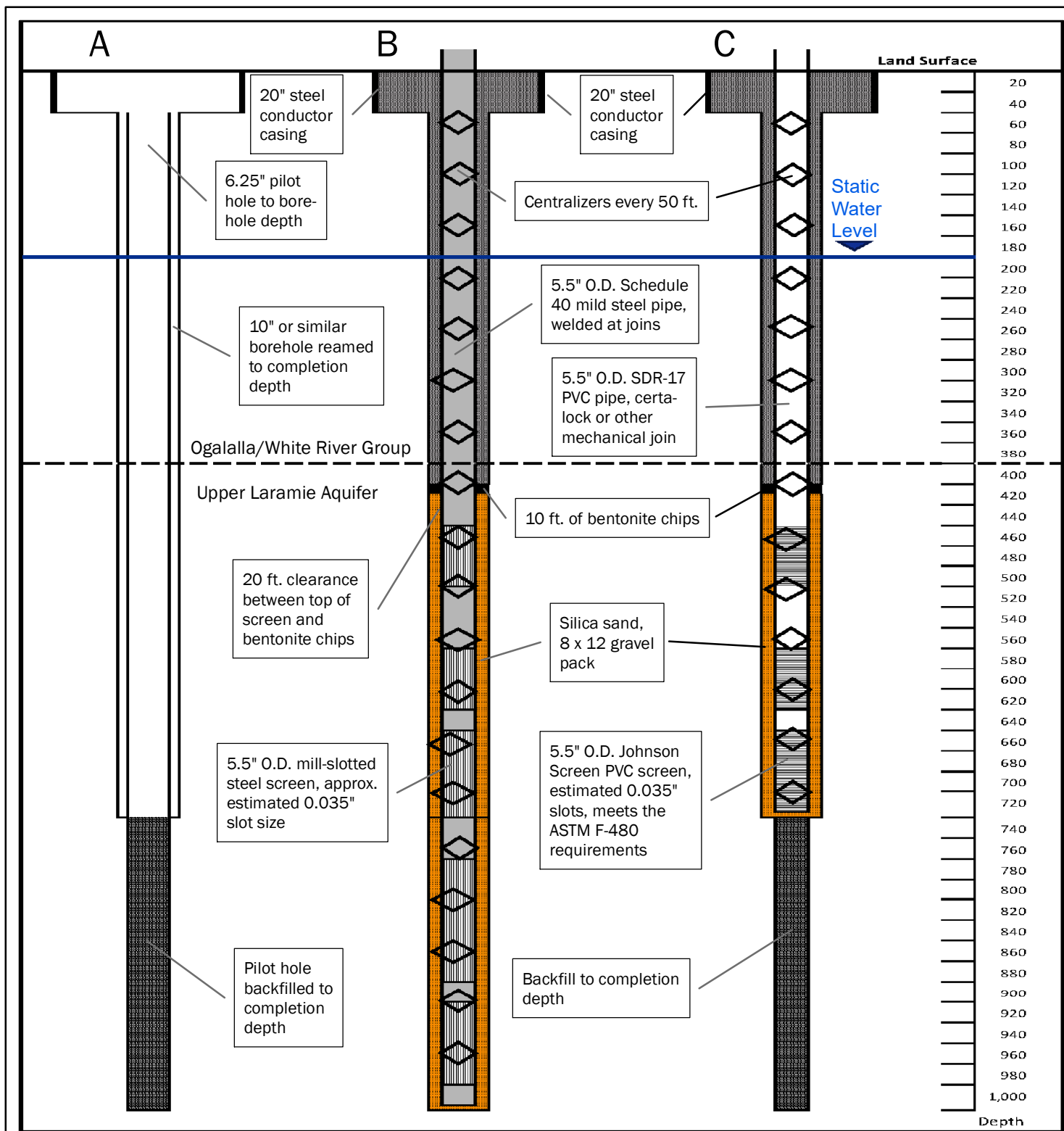


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ATTACHMENT B

Table 1
Construction of Water Wells and Testing of Water Wells on Greeley State Land Board Lands
State Land Board Lands Well Specifications

Well ID	UTM83 X	UTM83 Y	Degree of Penetration in the Upper Laramie Aquifer (ULA)	Outer Diameter (inches)	Well Completion Depth (feet below surface)	Screen Length (feet)	Gravel Pack Length (feet)	Cement Grout Length (feet)	Borehole Depth (feet)	Backfill Depth (feet)	Anticipated Static Water Level (feet below surface)	Anticipated Constant Rate Pumping Rate (gallons per minute)	Anticipated Step Test Pumping Rates (gallons per minute)	Geophysical Logs	Observation Well
SLB-1	509693.1	4537233	Partially penetrating upper ULA	5.5	410	100	120	280	410	0	150	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	None
SLB-2	514135.3	4537451	Partially penetrating upper ULA	5.5	610	80	100	500	610	0	420	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	None
SLB-3	509437.7	4535700	Fully penetrating upper ULA	5.5	640	270	290	340	640	0	190	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	SLB-5
SLB-4	512254	4535682	Fully penetrating entire ULA	5.5	1,020	270	290	720	1,020	0	360	18 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	EB-2
SLB-5	509542.4	4535589	Fully penetrating upper ULA	5.5	640	270	290	340	640	0	190	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	SLB-3
SLB-6	512710.6	4535503	Partially penetrating upper ULA	5.5	470	110	130	330	470	0	170	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	None
SLB-7	508003.3	4532481	Fully penetrating upper ULA	5.5	720	260	280	430	1,200	480	120	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	3-arm caliper, electrical resistivity, gamma	SLB-9
SLB-8	511195.5	4532488	Partially penetrating upper ULA	5.5	320	110	130	180	320	0	180	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	SLB-10
SLB-9	507839.7	4532345	Fully penetrating upper ULA	5.5	720	260	280	430	720	0	120	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	SLB-7
SLB-10	511051.8	4532340	Partially penetrating upper ULA	5.5	320	110	130	180	1,100	780	180	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	3-arm caliper, electrical resistivity, gamma	SLB-8
SLB-11	514284.4	4532310	Fully penetrating upper ULA	5.5	580	130	150	420	1,030	450	200	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	3-arm caliper, electrical resistivity, gamma	None
SLB-12	506305.1	4530802	Partially penetrating upper ULA	5.5	260	100	120	130	260	0	80	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	None
SLB-13	509452.8	4530742	Partially penetrating upper ULA	5.5	610	230	250	350	610	0	90	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	None
SLB-14	511142.7	4529219	Partially penetrating upper ULA	5.5	450	180	200	240	450	0	40	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	SLB-15
SLB-15	511110.6	4529185	Partially penetrating upper ULA	5.5	450	180	200	240	450	0	40	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	SLB-14
SLB-16	514148.3	4528014	Partially penetrating upper ULA	5.5	430	180	200	220	430	0	20	8 hours at a fixed rate between 20 and 120 gpm	Four Steps, 20 through 120 gpm	None	None
				Totals	8,650	2,840	3,160	5,330	10,360	1,710					



A: General pilot borehole and final borehole construction prior to reaming to total depth.

B: General design of a steel well to a completed depth of 700 feet or below. Well is fully-penetrating the Upper Laramie aquifer as an example.

C: General design of a PVC well completed to a depth above 700 feet deep. Well is back-filled to the completed depth and partially-penetrates the Upper Laramie aquifer as an example.



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Figure 2
Proposed Typical PVC and Steel
Well Design for Greeley-SLB Wells

Job No.: 607.2
Date: 3/25/2022
Drawn: CRV