



**CITY OF GREELEY
Purchasing**

**Request for Proposal
RFP #F24-05-046**

TERRY RANCH STATE LAND BOARD WELL DRILLING

for the

WATER AND SEWER DEPARTMENT

**REQUEST FOR PROPOSAL (RFP)
RFP #F24-05-046**

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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.

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 MT
RFP Issued	May 15, 2024
Mandatory Pre-Proposal Conference/Site Visit. Click link below for location	June 13, 2024 from 8:30AM – 4:00PM
Inquiry Deadline	June 20, 2024 by 4:00 PM
Final Addendum Issued	July 3, 2024
Proposal Due Date	July 12, 2024 by 4:00 PM
Interviews (if required)	TBD
Notice of Award (tentative)	TBD

Link to Site Visit

<https://goo.gl/maps/YTvDkLKyv7CjXA7T96>

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“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 acquired the rights to 1.2 million acre-feet of nontributary groundwater from the Upper Laramie Aquifer under parcels owned by the Terry Grazing Association (TERRY RANCH) located north of Carr, Colorado. As part of the transaction, Greeley also acquired a lease to additional undecreed nontributary groundwater rights from the Upper Laramie Aquifer under 16 neighboring parcels owned by the Colorado State Land Board (SLB). TERRY RANCH and SLB may be referred to as OWNER herein. The TERRY RANCH and SLB parcels are presented in Exhibit 5).

B. Overview

The City of Greeley Water and Sewer Department (GREELEY or the CITY) is requesting proposals for the construction and testing of 16 gravel packed wells to be completed to water well construction standards under Colorado Department of Water Resources standards 2 CCR 402-2. The 16 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 Exhibit 5 – Map of the Proposed State Land Board Well Locations). 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 the date, place, and time listed in the Schedule of Events table above. 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, GREELEY 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 and accessible via the Rocky Mountain E-Purchasing System. 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. Potential CONTRACTORS will also submit project execution plans that describe equipment to be used in the project, the number of drilling rigs and pump rigs operating at any given time, work schedule plan, products and materials to be used in well construction, drilling fluids to be used, aquifer testing equipment, and any other pertinent information that will affect project execution.

Work at the site is anticipated to begin in late 2024, but within a timeframe that is agreeable to both parties of the Contract. Once work begins the CONTRACTOR has nine (9) months to complete the project from first mobilization, with a possible extension of three (3) months, for a total project duration not to exceed twelve (12) months.

Both TERRY 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 limit disruption to the grazing operation to the extent possible. **Note that no work can occur east of the railroad tracks during the bison's calving season (April through June). Exhibit 5 shows the location of the railroad tracks.**

C. Goals

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

Greeley's objectives for delivery of the project are as follows:

1. **Well completion:** Complete 16 wells, 1 well per SLB Section, in the Upper Laramie Aquifer
2. **Maintain project scheduling:** meet the project schedule by working closely with GREELEY and their CONSULTANT
3. **Meet all design specifications and reporting requirements for all wells:** this includes working with GREELEY and their CONSULTANT on punch lists, final walk-throughs, and as-builts. Minimize impacts to TERRY RANCH operations: create as few disturbances as possible to all buildings, roads, ranch staff, resort patrons, and bison herds
4. **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
5. **Project cost:** construction of the project is within GREELEY'S budget
6. **Quality:** provide 16 wells that meet or exceed all standards and construction services
7. **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: GREELEY reserves the right to amend the Scope of Services to stay within budget.

A.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 wells, which are field verified, are presented in Exhibit 5. **One well per SLB section is required (16 total).**

The completion method, depth, casing and screen material, screen length and specifications of each well will be completed in accordance with specifications in Exhibit 6 – Greeley State Land Board Well Specifications. Geophysical logging will be performed on the wells mentioned in the Geophysical Logging of Wells paragraph of this section. These wells will include a pilot hole to log deeper units, backfilling the pilot hole to the final well depth, reaming, as described in the Geophysical Logging of Wells paragraph of this section. Wells with single well testing will undergo aquifer testing consisting of an 8-hour step test, an 8-hour constant rate test, and water quality sampling (see Exhibit 6). Wells with an associated observation well will have an 8-hour step-test and a 24-hour constant rate test, and water quality sampling (see Exhibit 6).

All wells will be drilled, completed and screened in the upper portion of the Upper Laramie aquifer. The CONTRACTOR will drill the wells, which will be 6-inch nominal diameter wells or similar, to the total well drilling depth specified in Exhibit 6. The CONSULTANT will determine the placement of the screened intervals within 4 hours after the completion of drilling or geophysical logging, if applicable, for each well. The anticipated length of screen for each well is shown in Exhibit 6.

Lost Circulation

During the drilling and reaming of the borehole, if there is no return of circulation drilling fluid for a period of at least one (1) continuous hour due to no fault of the CONTRACTOR, then GREELEY will compensate CONTRACTOR for the period of drilling under lost circulation at the CONTRACTOR's hourly rate in lieu of footage compensation. If and when lost circulation conditions are encountered due to hydrogeologic conditions, the CONTRACTOR shall immediately notify GREELEY so that it is aware of the situation and the cost to be incurred and shall also notify the CONSULTANT. Immediately upon the occurrence of lost circulation conditions, the CONTRACTOR shall document times, quantities, and circumstances of lost circulation conditions during each occurrence. Failure of the CONTRACTOR to promptly notify GREELEY of Lost Circulation Conditions will void the CONTRACTOR's opportunity to implement this clause, but will not affect the CONTRACTOR's responsibility to maintain the integrity of the borehole. GREELEY will provide compensation at a rate of cost, plus ten percent markup to the CONTRACTOR for all drilling fluid materials and additives used during the period of lost circulation. GREELEY shall not incur costs for drilling fluids or additives placed in the borehole during non-lost circulation conditions. If lost circulation is the result of CONTRACTOR's operations or activities (e.g., excessive fluid weight), all costs to regain circulation shall be borne by the CONTRACTOR. Lost circulation conditions under this section

shall apply only when there is a loss of drilling fluid to the formation that exceeds the maximum available discharge rate of water into the borehole, to the extent that the fluid level in the annulus outside the drill pipe cannot be maintained to a level above 20 feet below ground surface for at least one (1) hour, due to no fault of the CONTRACTOR.

The conditions of this section shall apply from the beginning of the period of lost circulation and shall continue only until such time that the drilling fluid level can be maintained within the 20 feet below ground surface. After an initial Lost Circulation Conditions event has occurred, should circulation be lost again, the conditions of this paragraph will go into effect immediately, and continue until such time as drilling fluid circulation is regained, as described in this paragraph.

Geophysical Logging of Pilot Boreholes

The well drilling and construction process will be different than described above for the following wells: SLB-7, SLB-8, and SLB-11. The CONTRACTOR will drill the initial pilot boreholes to the borehole depth noted in Exhibit 6. The CONTRACTOR shall keep the hole open for geophysical logging by a geophysical logging company as described in Section II C.7. Then, the CONTRACTOR shall grout and backfill the hole to the total well depth shown for these wells in Exhibit 6. The CONTRACTOR shall ream the pilot boreholes to the final diameter, and complete construction and testing of these wells as outlined in the paragraph above. These wells will be completed as 6-inch nominal diameter or similar diameter wells.

Aquifer Testing with Observation Wells

For eight (8) select wells, modified aquifer testing shall be performed on the following wells: SLB-1, SLB-3, SLB-7, SLB-8, SLB-9, SLB-10, SLB-13, and SLB-15 (see Exhibit 6). For aquifer tests involving these wells, water levels will be monitored in observation wells during pumping tests in addition to monitoring water levels in the pumping wells. The CONTRACTOR will assist the CONSULTANT in installing temporary transducers in the wells described above after completion and prior to conducting step tests and constant rate tests. In addition, the CONTRACTOR will assist the CONSULTANT with transducer installations in nearby monitoring wells indicated in Exhibit 6 prior to testing the wells. The CONTRACTOR will install temporary 1-inch PVC with slotted screens above the test pump to house the temporary transducers in the pumping wells and will install a similar 1-inch PVC with slotted screen near the bottom of the observation wells.

A.2 Work Sequence

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/observation wells. Wells that need additional wells completed to serve as monitoring/observation wells will be tested when the corresponding monitoring/observation wells are completed and available for monitoring. The wells will be completed in an order that allows those at sites with 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 well site and a pumping unit can be set up at the completed well for development, water quality testing, and production and aquifer testing. It is recommended that the CONTRACTOR plan on operating multiple drilling rigs whenever possible to complete the project within the scheduled time frame.

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

TERRY RANCH STATE LAND BOARD WELL DRILLING

A.3 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	DRILLING RIG MOBILIZATION & DEMOBILIZATION (INCLUDING REMOBILIZATION TO NEW DRILLING PAD SITES)	LUMP SUM		
2	DRILLING PAD DEVELOPMENT	LUMP SUM		
3	DRILL 12-INCH BOREHOLE OR SIMILAR TO TOTAL WELL DEPTH	7,965 L.F.		
4	FURNISH AND INSTALL 21.5-FOOT, 6-INCH OR SIMILAR O.D. MILD STEEL WELL CASING	352 LF		
5	FURNISH AND INSTALL STEEL TO PVC CONNECTION	16 UNITS		
6	DRILL 6.25-INCH TEST BORE TO PILOT BOREHOLE DEPTH	3,450 L.F.		
7	GEOPHYSICAL LOGGING (CALIPER, GAMMA, SPONTANEOUS POTENTIAL, AND RESISTIVITY)	3 WELLS		
8	STANDBY FOR GEOPHYSICAL LOGGING	3 WELLS		
9	BACKFILL PILOT BOREHOLE WITH CEMENT GROUT	1,800 L.F.		
10	REAM PILOT HOLE TO TOTAL DEPTH	1,650 L.F.		
11	FURNISH & INSTALL 6-INCH O.D. OR SIMILAR SCHEDULE 80 PVC CASING	5,749 L.F.		
12	FURNISH & INSTALL 6-INCH O.D. OR SIMILAR SCHEDULE 80 PVC SCREEN	1,816 L.F.		
13	FURNISH & INSTALL 8 x 12 SILICA SAND OR SIMILAR SIZE GRAVEL PACK	2,216 L.F.		
14	FURNISH & INSTALL 10-FOOT BENTONITE SEAL	160 L.F.		
15	FURNISH & INSTALL CEMENT SEAL	5,509 L.F.		
16	FURNISH AND INSTALL STEEL PVC STICKUP ENCLOSURES	16 WELLS		
17	WELL DEVELOPMENT BY SWABBING	196 HRS.		
18	WELL DEVELOPMENT BY AIRLIFT PUMPING	128 HRS.		
19	PUMP INSTALLATION & REMOVAL	16 WELLS		
20	WELL DEVELOPMENT BY SURGE PUMPING	64 HRS.		
21	VIDEO LOGGING OF COMPLETED WELLS	16 WELLS		
22	PUMP RIG MOBILIZATION & DEMOBILIZATION (INCLUDING REMOBILIZATION)	LUMP SUM		
23	SET TRANSDUCERS AND DROP PIPE IN PUMPING AND OBSERVATION WELLS	16 WELLS		
24	PRODUCTION AND AQUIFER TESTING	256 HRS.		

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25	CLEANING, DISINFECTING & CAPPING WELLS	16 WELLS		
26	WATER HAULING	LUMP SUM		
	TOTAL FOR WELLS SLB-1 THROUGH SLB-16 USING 6-INCH O.D. OR SIMILAR PVC CASING AND SCREEN			
27	DRILLING RIG STANDBY HOURLY RATE			
28	PUMP RIG STANDBY HOURLY RATE			
29	LOST CIRCULATION HOURLY RATE			

B. ABBREVIATIONS

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

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
RPM	Revolutions per minute

C. MEASUREMENT AND PAYMENT

C.1 General

This section covers methods of measurement and payment for items of work under this contract.

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 plans, 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.

C.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 performed 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.

C.3 Mobilization and Demobilization

Mobilization and demobilization 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, well development, and aquifer testing 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.

C.4 Pilot Borehole

The drilling of the pilot borehole shall include the drilling of the initial pilot borehole and all work incidental to the completion of the pilot 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 20 feet below ground surface as set to the bottom of the hole, the depth of which will be as directed by the CONSULTANT. The pilot bore depth indicated on the geophysical logs for each applicable well shall be the final determinant as to total depth drilled.

C.5 Geophysical Logging

The CONTRACTOR shall provide a geophysical logging contractor to run geophysical logs in the boreholes for wells SLB-7, SLB-8, and SLB-11. 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 II E.3, Paragraph 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 for three (3) wells specified in the schedule of quantities for the work.

C.6 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 uppermost screen or between screened intervals.

C.7 Well Screen

The CONTRACTOR shall furnish and install the well screens for each well as specified. The work shall include furnishing, installing, and attaching the screens to the casing strings 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.

C.8 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 an estimated 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 as presented in Exhibit 6.

C.9 Bentonite Seal

The CONTRACTOR shall furnish material for and construct a bentonite seal above the gravel pack. The bentonite seal shall be composed of powdered bentonite and sand slurry or bentonite pellets 10 feet in length down-hole, intended to act as a barrier to prevent the cement seal from infiltrating the gravel pack. Payment shall be made on an estimated linear-foot basis at the price listed in the schedule of quantities. Measurement will be from the top of the gravel pack to the top of the placed bentonite seal as presented in Exhibit 6.

C.10 Cement Seal for Primary Casing

The CONTRACTOR shall grout each well casing as specified. The work shall include all work associated with the grouting operation. Payment shall be made on an estimated linear-foot basis at the price indicated in the schedule of quantities. Measurement will be from the top of the sand-bentonite seal to three feet below the depth of where a pitless adapter connection would be placed (note that pitless adapters will not be installed under this scope of work).

C.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.

C.12 Well Development by Swabbing

The CONTRACTOR shall develop the wells by swabbing as specified in Section E.3. 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. Downtime for any reason will not be included in this item.

C.13 Test Pump Installation and Removal

The CONTRACTOR shall furnish, install and remove test pumps as specified in Section E.3. The test pump will be capable of pumping each well at the specified pumping rate. The pump will be installed with both a flow meter that has both totalizing and instantaneous read capabilities. 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 GREELEY at its sole discretion.

C.14 Well Development by Pumping

The CONTRACTOR shall furnish all labor and equipment necessary for surge pumping of the wells as specified in Section E.3. 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.

C.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.

C.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.

C.17 Video Logging Well

The CONTRACTOR shall have a color video log run on all wells 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 and GREELEY. The CONTRACTOR will not be paid for any video log rejected by the CONSULTANT or GREELEY 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.

C.18 Standby Time

Delays in drilling, well construction, development, and testing due to direction by the CONSULTANT or GREELEY 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 GREELEY. 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.

C.19 Cuttings and Fluids Hauling and Disposal

The CONTRACTOR shall be responsible for containing and managing, on-site, all drill cuttings, contaminated and/or turbid development fluids, and drilling muds. 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, or shall be allowed to reach, any streams.

D. CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

D.1 Site Access

1. CONTRACTOR will keep GREELEY and the CONSULTANT informed when they will be on and off the work site.
2. **The CONTRACTOR will be required to access the site from the South and not through the Terry Bison Ranch Resort, unless otherwise permitted by TERRY RANCH (see Exhibit 5)**

D.2 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 during the months of April, May, 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 and 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 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.

D.3 Noise Control

1. 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.4 Dust Control

1. Take reasonable measures to prevent unnecessary dust.

2. Cover dusty material in transit when necessary to prevent blowing.

D.5 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.

D.6 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.
3. Vehicles and equipment movement should be halted during wet and muddy conditions to prevent excessive rutting.

D.7 Environmental Considerations

1. No trees or bushes shall be removed without the written approval of the CONSULTANT and TERRY RANCH or SLB. 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.

D.8 Traffic Regulation

1. 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.
2. **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.
3. When on the ranch, the CONTRACTOR shall keep vehicles and equipment on designated access roads.
4. CONTRACTOR is not to create new roads without CITY and TERRY RANCH or SLB approval.
5. 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.

6. The CONTACTOR shall furnish properly equipped flagmen where necessary to provide for public safety, or where required by jurisdictional authorities.

D.9 Noxious Weed Prevention Measures

1. To prevent the spread of noxious weeds, the CONTRACTOR shall thoroughly wash all equipment before entering the property and after working in areas with noxious weeds.

E. CONSTRUCTION OF WATER WELLS SLB-1 THROUGH SLB-16

E.1 General

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

1. Driller's Qualifications

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.

2. Submittals For the Wells

The CONTACTOR 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 and as directed by the CONSULTANT or CITY.

3. Well Design

- A. The general well design shown on the well design figure (Exhibit 7) 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 such identified wells.
- B. PVC casing and screen shall be used to construct each well. If the CONTRACTOR has concerns about completing a particular well with PVC casing to the anticipated depth, the CONTRACTOR will discuss said concerns with the CITY and CONSULTANT and alternative well designs will be considered which avoid the need to order steel casing and screen.

4. 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.

E.2 Products

1. Drilling Fluid

- A. Drilling fluid includes any water, air, additives, or drilling muds used in drilling the boreholes. Any drilling fluids or additives used shall be specifically manufactured and approved for use in water wells.

TERRY RANCH STATE LAND BOARD WELL DRILLING

- B. Drilling muds are considered drilling fluids that contain water mixed with clays and may contain additives to impart desired fluid properties. Any clays used in muds will be off-site clays that do not contain any contaminants.
- C. All water used in each well construction and development shall be fresh water and shall be transported to the site by approved methods. CONTRACTOR may use the wells on Terry Ranch (WWR 2 through WWR 5, along with EB 1 and EB 2, for non-potable water supply as identified in Exhibit 5). These wells do NOT have pumps installed or power to the well.
- D. Note that all Terry Ranch wells have been idle since at least 2020. Because of this, CONTRACTOR should be prepared to redevelop the existing wells if they are fouled, if such action is necessary to use water from the existing wells to perform the Work.

2. Well Casing

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

3. Well Screens

A. General

The well screens for each well shall be newly-manufactured, continuous slot screen in order to provide maximum inlet area consistent with strength requirements. The screens will be able to readily 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.

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, manganese, or any other contaminant 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 Exhibit 7. 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.
- E. 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.

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.

E.3 Execution

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:
 - a. Description of drilling rig, including maximum safe working capacities; and
 - b. Type of development pump proposed.

2. Drilling Water

- A. Drilling Water for drilling the wells will be made available by GREELEY at no cost to the CONTRACTOR. The water source is the six (6) existing Wells WWR-2 through WWR 5, along with EB 1 and EB 2, for non-potable water supply as identified in Exhibit 5. These wells do NOT have pumps installed or power to the well. 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. 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 during drilling operations. 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. Well construction reports and pumping test reports required by 2 CCR 402-2 shall be submitted by the CONTRACTOR to the DWR prior to the expiration of the particular well permit, or within 60 days, whichever is sooner.
- 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.
- C. In addition to the above information, the CONTRACTOR shall keep records providing the following information for each well:
 - a. Well development and test records maintained on an hourly basis, showing production rate, static water level, pumping water level, drawdown, production of sand, and all other pertinent information concerning method of development.
- D. **All measurements for depths shall be referenced to existing ground surface at the well sites.**

4. Completion Borehole Drilling

- A. The completion boreholes shall be drilled to the total borehole depths presented in Exhibit 6 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 20 feet below ground surface 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 completion boreholes shall be drilled at 12-inch diameters or similar 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.

5. Pilot Borehole Drilling

- A. The pilot boreholes shall be drilled to the pilot borehole depths presented in Exhibit 6 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 20 feet below ground surface 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 minimum of 6.25-inch diameter or some other diameter smaller than 8 inches to accommodate the diameter of geophysical tools, 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.

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 (if CONTRACTOR does not have its own geophysical logging capabilities) 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 the 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 spontaneous potential, natural gamma ray, and caliper. All logs will be run from total depth to 20 feet below ground surface.

7. Overbore Drilling

- A. If necessary, the pilot boreholes shall be backfilled, then reamed to the base of the target aquifer formation and as directed by the CONSULTANT.
- B. The pilot 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.**

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 ensure 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 are installed straight and true.
- D. When the well is completed, its casing shall extend at least 18 inches above the ground surface. Temporary steel stickup casing (like a steel monitoring well enclosure) shall be installed over the PVC stickup to protect from damage by bison.

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.
- C. 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.
- D. 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.
- E. 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.

10. Bentonite Sealing

- A. After the gravel envelopes have been placed, ten (10) feet of a fine sand and powdered bentonite mixture or bentonite pellets 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.
- B. Powdered bentonite and sand mixture or bentonite pellets shall be completely hydrated with water to a complete seal to the underlying gravel pack. CONTRACTOR shall make sure no bridging of the bentonite seal will occur during placement of the bentonite seal.

11. Cementing Casing

- A. CONTRACTOR shall fill the annular space between the casings and the walls of the production hole with cement grout. 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 to a depth of three feet below frost line or where a pitless adapter would otherwise be located with the cement slurry (note that pitless adapters will not be installed under this scope of work). 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.

- B. The placing of grout shall be done in such a manner as to completely fill the cavity up to three feet below frost level, or where a pitless adapter would otherwise be placed, and to completely seal off the upper portion of each well from infiltration of water (note that pitless adapters will not be installed under this scope of work). **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.**

12. Development

A. General

- a. 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.
- b. Measurements of discharges and of the static and pumping water levels shall be made periodically when possible, 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

- a. 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 airlifting of water from the swabbing interval. Swabbing shall commence at the uppermost screen section and proceed downward as each interval is removed of fines.
- b. 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.
- c. The last phase of development shall consist of surge pumping the well after the test pump has been set. Exhibit 6 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 Exhibit 6 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 or 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.

- d. Clay dispersants, sodium hypochlorite and other chemicals or additives to aid in development may be used with prior approval of the CONSULTANT and CITY.

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) constant rate 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 in Exhibit 6.
- 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 capable of totalizing and instant reads 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 E.3.3.
- D. The following tests are anticipated, however, the flow rates and times presented on Exhibit 6 are estimates for bidding purposes, and subject to change at the discretion of the CONSULTANT should site conditions merit.

1. Step Test

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

- 1. Anticipated Rates: As per Exhibit 6

- ii. Recovery

- 1. 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

- i. Duration: 8 hrs for tests observing water levels in only the pumping well, and 24 hrs for tests involving an observation well. As per Exhibit 6

- 1. Rate: as per **estimates** presented on Exhibit 6 or the maximum pumping rate of the well at which the pumping rate can be sustained for the test period, as instructed by CONSULTANT.

- 2. 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.

3. Well Recovery Test

i. Duration: 8 to 24 hrs.

1. 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 two temporary 1-inch diameter PVC pipes 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.

- E. 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.

1. 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.
2. 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.
3. 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.
4. 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 and shall be a minimum of 50 feet away from the well. The CONTRACTOR will work out locations for the discharge with the CONSULTANT prior to discharging groundwater.**

14. 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.

15. Water Quality Testing, Cleaning, Disinfection and Capping

- A. At the end of the constant rate test 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. The CONTRACTOR will provide a low flow sampling port downstream of the meter 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 per rule 15 found in 2 CCR 402-2. The CONTRACTOR shall be responsible for ensuring that each well is totally cleaned and disinfected per Rule 15 of 2 CCR 402-2 well construction rules..
- 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.**

F. PERIOD OF AWARD

The completion date of providing the required product and services shall be **one year from negotiated start date, but not after 12/31/2027.**

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.

G. 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 five 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 #F24-05-046**

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 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.

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.

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

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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.

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.

RFP responses must be emailed 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 will be considered as non-responsive and will 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 inches 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, G. 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 drilling 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. Provide the names and resumes of the key personnel that will be performing the proposed services, including the primary project manager.
2. Describe in detail your company's capacity to work on these projects. List the equipment and 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.
3. 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 (e.g. for geophysical logging). Also, include the names and resumes of the key subcontractor personnel who will be working on the project.

F. Evaluation Criterion #2 – Project Experience

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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:
 - a. Company name
 - b. Contact name
 - c. Phone number
 - d. Email address
 - e. Location of project
 - f. Brief description of project scope and value
 - g. Status of project
2. The City reserves the right to contact the references provided in your proposal as well as other references without prior notification to you.

G. Evaluation Criterion #3 - Availability & Schedule

1. There is a required time frame in which the City would like this work to be completed. Construction is anticipated to begin in late 2024. The construction, development, and testing of all sixteen (16) wells listed in the Scope of Work should be completed within nine (9) months of initial mobilization. If all activities are not completed within nine (9) months, the CONTRACTOR may give notice to the CITY and OWNER thirty (30) days prior to the end of the nine (9) month period that they are extending activities for up to an additional ninety (90) days. The total time to complete activities listed in the Scope of Work shall not exceed twelve (12) months from initial mobilization.
2. Describe your project execution plan 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.

H. Evaluation Criterion #4 - Value/Cost of Efforts

1. Provide a cost for the construction services and products using the provided bid sheet, including the units and quantities shown. Additional costs may be provided using additional recommended bid items at the contractor's discretion.

I. Proposal Acknowledgement

Include this form as provided in Exhibit 1.

J. Certificate of Insurance

A sample Certificate of Insurance is provided in Exhibit 3.

K. 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 interviews by short-listed offerors, committee members may revise their initial scores based upon additional information and clarification received in this phase. Please note that interviews 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.

Evaluation Criteria

- | | |
|--|-----------|
| 1. Company and Personnel Qualifications: | 20 Points |
| 2. Project Experience: | 20 Points |
| 3. Availability & Schedule: | 30 Points |
| 4. Value/Cost of Efforts: | 30 Points |

An interview may be requested by short-listed offerors prior to award. However, an interview 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.

SECTION VII. 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.

Original Signature by Authorized Officer/Agent

Type or printed name of person signing

Company Name

Title

Phone Number

Vendor Mailing Address

Website Address

City, State, Zip

Proposal Valid Until (at least for 90 days)

E-Mail Address

Project Manager:

Name (Printed)

Phone Number

Vendor Mailing Address

Email Address

City, State, Zip

F24-05-046 Exhibit 2-Sample Contract.pdf

[F24-05-046 Sample Contract.pdf](#)

**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 _____

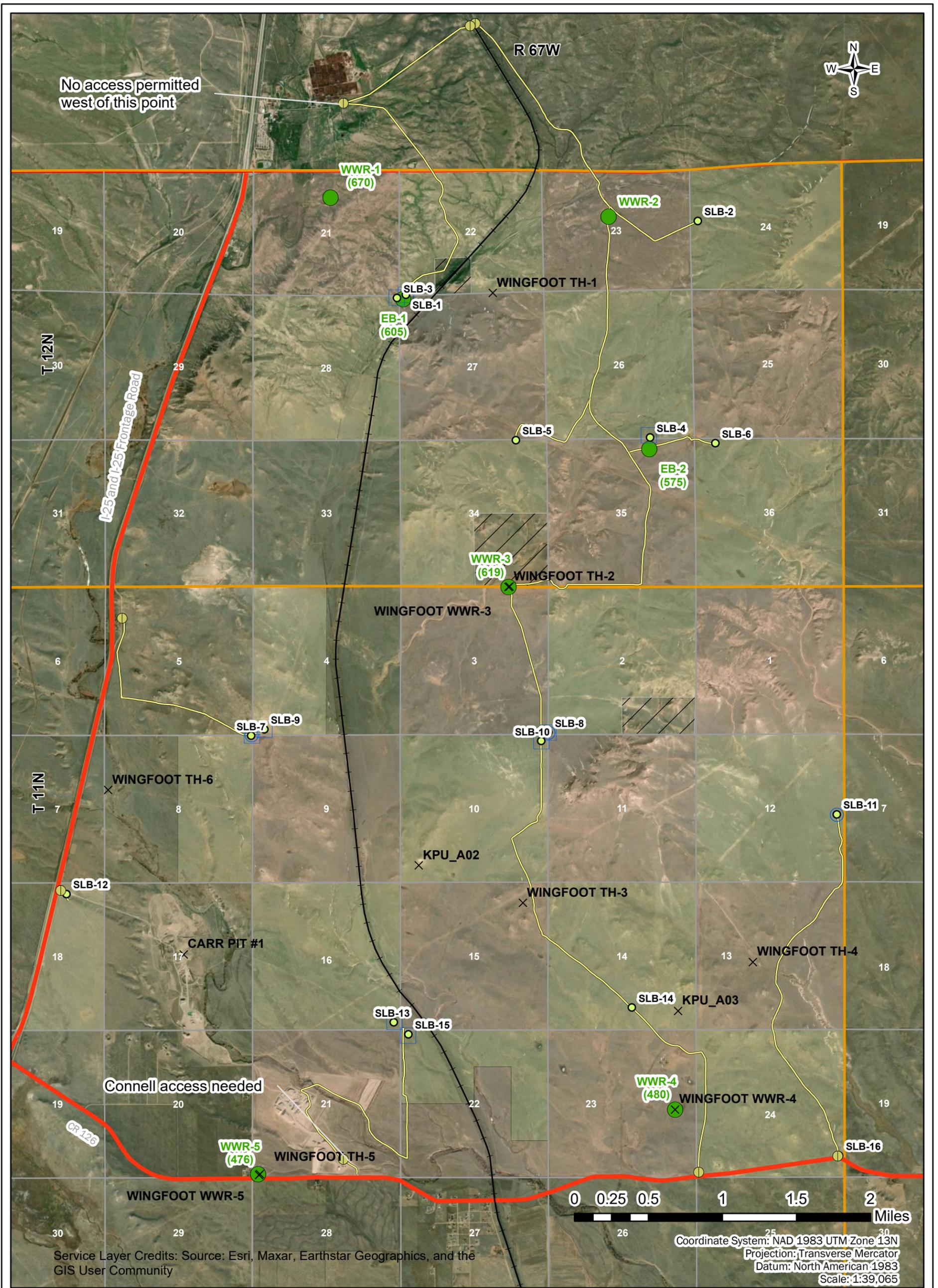
Authorized Signature _____

Title _____

Date _____

EXHIBIT 5

MAP OF THE PROPOSED STATE LAND BOARD WELL LOCATIONS



Legend			
	Proposed SLB Well Locations		CDSS Geophysical Logs
	Proposed Locations for Geophysical Logging		Well Name (Net Sand/Silt)
	Aquifer Test Locations with Multiple Observation Wells		Locked Gates and No Access Points
	Access Routes for Rigs		Railroad Tracks
	township		Roads and Highways
	first		Not Owned by Terry Ranch or State Land Board
	State Land Board Property		
	Terry Ranch Property		


MARTIN AND WOOD WATER CONSULTANTS, INC.
 538 Commons Drive
 Golden, CO 80401
 (303) 526-2600
 www.martinandwood.com

Exhibit 5
Map of the Proposed State Land Board Well Locations
City of Greeley

Job No.: 607.2
 Date: 4/29/2024
 Drawn: CRV

EXHIBIT 6

GREELEY STATE LAND BOARD WELL SPECIFICATIONS

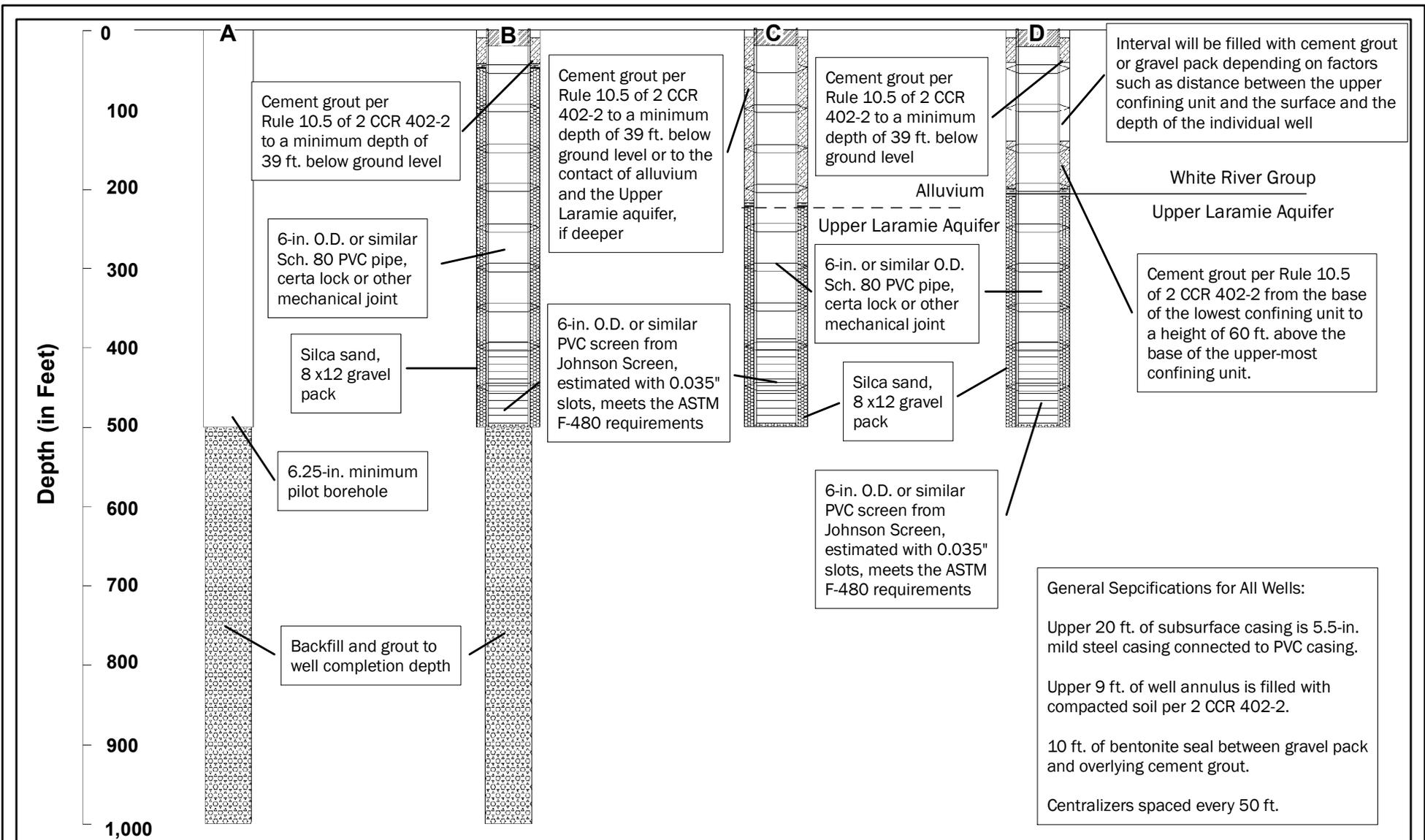
**Exhibit 6
Greeley State Land Board Well Specifications
City of Greeley**

Well ID	UTM83 X	UTM83 Y	Well Completion Depth (feet below surface)	Total Well Depth (feet)	Total Primary Casing Length (feet)	PVC Casing Length (feet)	Steel Casing Length (feet)	Screen Length (feet)	Gravel Pack Height (feet)	Bentonite Seal Height (feet)	Cement Grout Height (feet)	Pilot Borehole Depth (feet)	Reamed Pilot Hole Depth (feet)	Backfill Depth (feet)	Anticipated Approximate 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	509641.3	4537324	410	415	305.5	284.0	21.5	106	131	10	269	0	0	0	150	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	SLB-3
SLB-2	512806.7	4537339	695	700	582.5	561.0	21.5	114	139	10	546	0	0	0	420	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
SLB-3	509515.5	4537078	380	385	295.5	274.0	21.5	86	111	10	259	0	0	0	190	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	SLB-1
SLB-4	512319.1	4535661	600	605	513.5	492.0	21.5	88	113	10	477	0	0	0	360	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
SLB-5	510937.9	4535590	510	515	407.5	386.0	21.5	104	129	10	371	0	0	0	190	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
SLB-6	513546.5	4535571	650	655	523.5	502.0	21.5	128	153	10	487	0	0	0	170	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
SLB-7	507997.8	4532458	570	575	405.5	384.0	21.5	166	191	10	369	1,200	570	630	120	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	3-arm caliper, electrical resistivity, spontaneous potential, gamma	SLB-9
SLB-8	511136.5	4532443	510	515	399.5	378.0	21.5	112	137	10	363	1,150	510	640	180	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	3-arm caliper, electrical resistivity, spontaneous potential, gamma	SLB-10
SLB-9	507907.7	4532402	560	565	405.5	384.0	21.5	156	181	10	369	0	0	0	120	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	SLB-7
SLB-10	511053.5	4532393	500	505	389.5	368.0	21.5	112	137	10	353	0	0	0	180	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	SLB-8
SLB-11	514302.4	4531511	570	575	435.5	414.0	21.5	136	161	10	399	1,100	570	530	200	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	3-arm caliper, electrical resistivity, spontaneous potential, gamma	None
SLB-12	506102.6	4530713	570	575	463.5	442.0	21.5	108	133	10	427	0	0	0	80	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
SLB-13	509456.5	4529284	460	465	333.5	312.0	21.5	128	153	10	297	0	0	0	90	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	SLB-15
SLB-14	511212.2	4530776	310	315	219.5	198.0	21.5	92	117	10	183	0	0	0	40	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
SLB-15	509616	4529152	310	315	217.5	196.0	21.5	94	119	10	181	0	0	0	40	24 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	SLB-13
SLB-16	514277.9	4527820	280	285	195.5	174.0	21.5	86	111	10	159	0	0	0	20	8 hours at a fixed rate up to 75 gpm	Four Steps, 20 through 90 gpm	None	None
Totals			7,885	7,965	6,093	5,749	352	1,816	2,216	160	5,509	3,450	1,650	1,800					

Note:
gpm = gallons per minute
SLB = State Land Board

EXHIBIT 7

PROPOSED TYPICAL PVC AND STEEL WELL DESIGN FOR GREELEY STATE LAND BOARD WELLS



- A: General design of a pilot borehole construction prior to backfilling to completion depth and reaming to final diameter in the Upper Laramie aquifer.
 B: General design of an Upper Laramie aquifer well constructed from a pilot borehole, using a Type II aquifer not overlain by a Type III aquifer as an example.
 C: General design of an Upper Laramie aquifer well constructed to the completion depth in a Type II aquifer overlain by a Type III aquifer.
 D: General design of an Upper Laramie aquifer well constructed to the completion depth in a Type I aquifer through a single confining layer.