00 91 13.1

ADDENDUM NO. 1

DATE: July 24, 2023

PROJECT: Provo River Water Treatment Plant

OWNER: Provo City Water Resources, Provo Utah

ENGINEER: Hansen Allen and Luce, AECOM

TO: Prospective Bidder

BIDS CLOSE: September 14, 2023 (revised in this addendum) at 2:00 p.m., MT

TO ALL BIDDERS BIDDING ON THE ABOVE PROJECT:

All Bidders submitting a Bid on the above Contract shall carefully read this Addendum and give it full consideration in the preparation of their Bid.

CLARIFICATIONS

1. The Pre-Bid Meeting was held on 7/19/23. Minutes are included with this addendum for reference. Note that any items covered in meeting minutes do not change the contract documents, and such items must be covered in an addendum to be considered a change.

QUESTIONS AND ANSWERS

- Q: Can clarification be provided on how compliance with sustainability standards shall apply to ozone equipment manufacturers? (*Ref.# 46 31 53, part 1.05.C*)
- A: Addressed in this addendum (Requirement deleted)
- Q: Spec Section 46 33 44 Peristaltic Metering Pumps, Part 1.01 B: It says there is one (1) Peristaltic Metering Pump for pumping water to an Analytical Instrument.
- A: Addressed in this addendum (paragraph deleted)
- Q: Spec section 43 21 12 Vertical Turbine pumps. Is NSF certification required for all wetted components in the complete pump system?
- A: Yes, all components of the pumps which will be in contact with process water (and all equipment provided with the project) must meet NSF61 certification per Utah Drinking Water regulations. However, this does not require the pump manufacturer to provide every component of the pump. Individual components, such as the suction can or discharge head, may be provided by the Contractor or local supplier and the scope of supply shall be coordinated between Contractor and pump manufacturer ahead of the bid.
- Q: Spec section 43 21 12 Vertical Turbine pumps. Verify factory witness testing may be conducted.
- A: This will only be required for pumps >250 HP.

- Q: Spec section 43 21 12 Vertical Turbine Pumps. Regarding the seismic design requirements and certification, should this be included in the pump manufacturer's scope of supply or in the contractor's scope?
- A: This needs to be provided for the project. It is recommended that the contractor facilitate providing all certifications for equipment specified to maintain a single source of certification. However, the equipment suppliers could provide this if coordinated with the Contractor.
- Q: General question for vertical Turbine pumps: Can additional dimensional detail be provided for the UF low service feed pumps?
- A: A detail will be provided in a future addendum
- Q: Can Generac be approved for the generators and Galt or Mitsubishi approved for the VFDs?
- A: For both we have 4 vendors listed that in our experience are the most qualified and capable at providing the needed equipment while allowing for a competitive bid. These two specs do not allow for approved equals.

REVISIONS TO PROJECT SPECIFICATIONS

- I. Section 00 01 10 Table of Contents
 - a. Delete section "01 41 13 FEDERAL REQUIREMENTS (TO BE PROVIDED)" from the table of contents. Note that federal requirements are provided within section 00 45 15.
- II. Section 00 11 16 Invitation to Bid
 - a. Paragraph 1.02.A. Revise the bid date in this paragraph from 2:00 p.m., August 31, 2023 to the new time of 2:00 p.m., September 14, 2023.
 - b. Paragraph 1.06.A. Remove text "online at SciQuest (<u>www.purchasing.utah.gov</u>) or". Plans are not available online. Plans have been made available to prequalified. contractors.
- III. Section 00 21 13 Instructions to Bidders
 - a. Paragraph 2.06.C. In addition to the forms listed, provide the following:
 - i. Proposed Subcontractor Form (Document 00 43 36)
 - ii. Bidder Status Form (Document 00 43 38)
 - iii. BABA Self-Certification (Document 00 45 15-Attachment 1)
 - iv. Status Verification System Affidavit (Document 00 45 37)
 - v. Non-Collusion Affidavit of Prime Bidder (Document 00 45 38)
- IV. Section 00 45 15 Federal Contract Requirements
 - a. Attach "Section 00 45 15 Attachment 1 Build-America Buy America Self-Certification"
- V. Section 01 21 00 Allowances
 - a. Paragraph 3.03.A, add new subparagraph 3 to read as follows: "3. Include lump sum of \$50,000 for purchase and supply office furniture and other miscellaneous interior accessories."
- VI. Section 26 24 16 Panelboards

- a. Replace this specification section in its entirety with the version provided with this Addendum.
- VII. Section 46 31 53 Ozone Generating and Feed Equipment
 - a. Paragraph 1.05.C. Delete this paragraph in its entirety.
- VIII. Section 46 33 44 Peristaltic Metering Pumps
 - a. Paragraph 1.01.B. Delete this paragraph in its entirety. A metering pump is not being provided to send water to an analytical instrument.
- IX. Section 43 21 13 Vertical Turbine Pumps
 - a. Paragraph 1.03.G (NSF certification): Delete the last sentence of this paragraph and replace with the following: "The NSF-Certified components of the pump do not need to be furnished by a single supplier, provided that all components are NSF61 Certified. The Pump Manufacturer shall coordinate with the Contractor to determine the scope of supply for the full pump assembly. Wetted components without NSF61 Certification will not be considered."
 - b. Paragraph 1.05.D.7.a (factory witness testing): In the first sentence of this paragraph, replace the words "... Factory Witness Test any pump test." with the words "... Factory Witness Test pumps greater than 250 Horsepower."

REVISIONS TO DRAWINGS

- I. Drawings 01-C002 Easement Plan
 - a. General Note 1, Delete "ANY ADDITIONALTIME OUTSIDE THE 60 DAY PERIOD." and replace with "FOR ANY ADDITIONALTIME OUTSIDE THE 120 DAY PERIOD."

END OF ADDENDUM ITEMS

Any revisions to any of the Contract Documents made by this Addendum shall be considered as the same revision to any and all related areas of the Contract Documents not specifically called out in this Addendum.

The Bidder shall acknowledge receipt of this Addendum by inserting the date and number in the spaces provided on the bid form.

Hansen Allen and Luce

Michael Chambers, P.E.

John Krinks, P.E.

John Krinks

AECOM

Enclosures:

- 1. Attachment to specification section 00 45 15
- 2. Re-issued specification section 26 24 16
- 3. Pre-Bid meeting minutes and attachments.

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SECTION 00 45 15-ATTACHMENT 1 - AD-1

BUILD AMERICA - BUY AMERICA SELF-CERTIFICATION

The Contract shall provide the following self-certification form in compliance with federal funding requirements.

1.01 BUILD AMERICA – BUY AMERICA SELF-CERTIFICATION REQUIREMENTS

Contractors and their subcontractors who apply or bid for an award for an infrastructure project subject to the domestic preference requirement in the Build America, Buy America Act (BABAA) shall file the required certification to the non-federal entity with each bid or offer for an infrastructure project, unless a domestic preference requirement is waived by FEMA. Contractors and subcontractors certify that no federal financial assistance funding for infrastructure projects will be provided unless all the iron, steel, manufactured projects, and construction materials used in the project are produced in the United States. BABAA, Pub. L. No. 117-58, §§ 70901-52. Contractors and subcontractors shall also disclose any use of federal financial assistance for infrastructure projects that does not ensure compliance with BABAA domestic preference requirement. Such disclosures shall be forwarded to the recipient who, in turn, will forward the disclosures to FEMA, the federal awarding agency; subrecipients will forward disclosures to the pass-through entity, who will, in turn, forward the disclosures to FEMA.

1.02 BUILD AMERICA – BUY AMERICA SELF-CERTIFICATION FORM

For FEMA financial assistance programs subject to BABAA, contractors and subcontractors must sign and submit the following certification to the next tier (e.g., subcontractors submit to the contractor; contractors submit to the non-federal entity) each bid or offer for an infrastructure project that has not been waived by a BABAA waiver:

The undersigned certifies, to the best of their knowledge and belief, that:

The Build America, Buy America Act (BABAA) requires that no federal financial assistance for "infrastructure" projects is provided "unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States." Section 70914 of Public Law No. 117-58, §§ 70901-52.

The undersigned certifies that for the <u>Provo River Water Treatment Plant (Provo, UT)</u> that the iron, steel, manufactured products, and construction materials used in this contract are in full compliance with the BABAA requirements including:

1. All iron and steel used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

- 2. All manufactured products purchased with FEMA financial assistance must be produced in the United States. For a manufactured product to be considered produced in the United States, the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55% of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.
- 3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

"The [Contractor or Subcontractor],truthfulness and accuracy of each statement of the [Contractor or Subcontractor] understands 38, Administrative Remedies for False Clain disclosure, if any."	its certification and dis and agrees that the pro	closure, if a visions of 3	ny. In addit 1 U.S.C. Cl	tion, hap.
Signature of [Contractor's or Subcontractor's]	Authorized Official			
Name and Title of [Contractor's or Subcontrac	tor's] Authorized Offici	al		
Date				

END OF SECTION

SECTION 26 24 16 AD-1

PANELBOARDS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide panelboards rated 600 volts or less and 1200 amperes or less.
- B. Provide with circuit breakers and cabinets complete, as indicated and in compliance with Contract Documents.
- C. Provide mini-power zone unit substations.

1.02 REFERENCES

A. General:

- 1. The following documents form part of the Specifications to the extent stated. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
- 2. Unless otherwise noted, the edition of the referenced code or standard that is current at the time of the "date of record" for the Work shall be considered the effective code or standard for the duration of the project.
- 3. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.
- 4. Refer to specific Division 26 Sections for additional referenced codes and standards.

B. Federal Specifications (FS):

- 1. QQ-S-365B: General Requirements for Silver Plating, Electro Deposited
- 2. W-C-375B: Automatic Circuit Breakers.
- 3. W-P-115A: Panel, Power Distribution.

C. National Electrical Manufacturers Association (NEMA):

- 1. 250: Enclosures for Electrical Equipment (1000 volts maximum)
- 2. AB 1: Molded Case Circuit Breakers
- 3. PB 1: Panelboards

- 4. PB 1.1: Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.
- 5. PB 1.2: Application Guide for Ground-fault Protective Devices for Equipment.
- D. National Fire Protection Association (NFPA):
 - 1. 70: National Electrical Code (NEC)
- E. Underwriter's Laboratories, Inc. (UL):
 - 1. 50: Cabinets and Boxes
 - 2. 67: Panelboards
 - 3. 86A: Wire Connectors and Soldering Lugs for Use with Copper Conductors
 - 4. 489: Circuit Breakers, Molded Case and Circuit Breaker Enclosures
- F. InterNational Electrical Testing Association (NETA):
 - 1. NETA ATS 2021 Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems

1.03 SUBMITTALS

- A. Submit shop drawings and manufacturer's product data in accordance with requirements of Section 26 05 10 "Electrical Work General".
- B. Provide outline and support point dimensions
- C. Provide the following information as a minimum:
 - 1. Panelboard Tag.
 - 2. Panelboard type.
 - 3. Voltage.
 - 4. Number of phases.
 - 5. Main bus ampacity.
 - 6. Main circuit breaker trip rating.
 - 7. Integrated short circuit ampere rating
 - 8. Branch circuit breaker arrangement.

- 9. Branch circuit breaker trip sizes.
- 10. Flush or surface mounting.
- 11. Enclosure type.
- 12. Service entrance (if required).
- 13. Power Metering (if required).
- D. Product description and data sheets on circuit breakers, trip units, accessories, locking hardware, shunt trip, under-voltage release mechanism, typical thermal-magnetic curves for each size and type circuit breaker or trip unit.

1.04 QUALITY ASSURANCE

- A. Provide in accordance with Section 01 40 00 "Quality Requirements" and as specified.
- B. All panelboards shall be designed, manufactured, and assembled in accordance with the referenced standards.
- C. Listing and Labeling: All panelboards shall be listed and labeled by Underwriter's Laboratories, Inc. (UL), or other nationally recognized testing laboratory (NRTL).
- D. Service Entrance panelboards shall be UL/NRTL-labeled as suitable for that purpose.
- E. Single-source Responsibility: Provide panelboards products that are new, and from the same manufacturer for each building or job. Panelboard components shall be from the same manufacturer or listed as an assembly thereof.
- F. The manufacturer shall confirm and state the measure of and the set of the features that support the ease and speed of which corrective maintenance (CM) and preventive maintenance (PM) can be conducted on the proposed system. The Mean Time to Repair (MTTR), the measure used to quantify the time required to perform CM and Mean Preventive Maintenance Time (MPMT), a measure commonly used to quantify the time required to perform PM are to be confirmed by the manufacturer.

1.05 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Keys: Two spares for each type of panelboard cabinet lock.

1.06 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace panelboards that fail in materials or workmanship within specified warranty period.

1. Panelboard Warranty Period: 18 months from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PANELBOARD MANUFACTURERS

- A. Manufacturers acceptable contingent upon products' compliance with the specifications:
 - 1. Eaton
 - 2. ABB
 - 3. Siemens Corp.
 - 4. Schneider/Square D.

2.02 PANELBOARDS

- A. Factory assembled deadfront type panelboards.
- B. Furnish panelboards complete with branch circuit breakers and a main circuit breaker or main lugs only as indicated.
- C. Furnish panelboards with full capacity separate ground bus, separate insulated neutral bus and furnish panelboards connected to a 3-phase, 4-wire service or single phase, 3 wire service as indicated.
- D. Provide panelboards with the voltage, frequency and current ratings as indicated conforming to NEMA Standard PB1, Federal Specification W-P-115A. U.L. 67, and the NEC.
- E. Furnish the panelboard main and neutral buses, with minimum 98 percent conductivity rectangular copper bars provided with bolted type lugs as necessary.
- F. Drill buses to fit either "A", "B" or "C" Phase connectors, and ensure that connectors are inter-changeable and installed in a distributed phase sequence.
- G. Silver plate buses, connectors and terminals to a minimum thickness of 0.005-in., conforming to the requirements of Federal Spec. QQ-S-365B.
- H. Prevent terminal lugs from turning per NEMA standard PB 1 and ensure they are suitable for the conductor material and size.
- I. Provide main bus-bracing for each panel board adequate for a minimum of 10,000 amperes symmetrical short circuit at 240 volts and 14,000 amperes symmetrical short circuit at 480 volts unless otherwise indicated.

- J. Where the word "space" occurs on panel schedules, provide all necessary hardware in the space, including connection straps, mounting brackets, and filler plates so that only the addition of a future circuit breaker is required. Connection straps shall be rated a minimum of 100A in panelboards of 400A rating or less and a minimum of 225A in panelboards above 400A rating, unless otherwise noted on panel schedules.
- K. Provide surge protection devices (SPD) in accordance with Section 26 43 00 "Surge Protection Devices" where indicated on the drawings.
- L. Copper bus bars shall be of sufficient size to provide a current density of not more than 1000 amperes per square inch of cross section, and not more than 200 amperes per square inch at bolted connections.
- M. Minimum Short Circuit Rating for Bus Bracing: The bus shall be braced for the minimum symmetrical short circuit rating of the panel, as shown on the panel schedule.
- N. Provide main bus pressure connectors (main lugs) and separately supported sub-feed pressure connectors (lug landings) where noted. Provide additional bottom raceway space to accommodate pressure connectors and lug landings. In no instance shall the gutter space be less than required by NFPA-70.
- O. Pre-installed locking devices shall be provided for locking the main circuit breaker and each branch circuit breaker in the OPEN position, by means of a padlock. Locking devices shall not be removable from the front of the panel with the trim in place. Attachment of the locking device to the panel with adhesives is not acceptable.

2.03 CIRCUIT BREAKERS

- A. Each circuit breaker shall be bolted into position in the panelboard, whether by direct bolted connection to the bus or by being bolted to the panelboard frame. Each circuit breaker shall be replaceable without disturbing adjacent units. Plug-on circuit breakers held in place only by spring force of the bus lug and the pressure of the deadfront are not acceptable.
- B. Furnish frame sizes, trip settings and number of poles as indicated. Clearly and visibly mark circuit breakers with ampere trip rating. Furnish breakers meeting the requirements of F.S. W-C-375B and NEMA AB1.
- C. Provide circuit breakers, UL listed as Type HACR, for air conditioning equipment branch circuits. Provide circuit breakers, UL listed as Type SWD, for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where specified on panelboard schedules and/or the Drawings.
- D. Furnish all breakers with quick-make, quick-break, toggle mechanisms and thermal-magnetic, inverse time-limit overload and instantaneous short circuit protection on all poles, unless otherwise indicated. Automatic tripping indicated by the breaker handle assuming a clearly distinctive position from the manual ON and OFF position. Furnish breaker handle that is trip-free on overloads.

- E. Do not use single pole breakers with handle ties or bails in lieu of multi-pole breakers.
- F. For each panelboard, furnish quantity four handle lock devices for individual breakers to prevent the manual opening of the selected breakers. Turn devices over to Owner at completion of the project work.
- G. Ensure that voltage and interrupting rating of all breakers in a panelboard is not less than voltage and short circuit rating of the panelboard main buses, as indicated. Furnish breakers suitable to operate satisfactorily at the frequency indicated.
- H. Furnish ground fault interrupter (GFI) circuit breakers for certain circuits as indicated on the drawings. GFI breakers connected to receptacles shall have a 5-milliamp ground fault trip. GFI breakers connected to equipment shall have a 30-milliamp ground fault trip.
- I. Furnish single pole breakers with full module size. Do not install two pole breakers in a single module.
- J. Furnish time-current characteristic curves and catalog information and data for each size of breaker furnished.

K. Trip Unit:

- 1. Instantaneous magnetic trips shall be accessible and adjustable from the front of the breaker on frame size 100 amperes.
- 2. Trip units shall be interchangeable and adjustable for trip pick up and delay settings on frame size 225 amperes.
- 3. Breakers sized 400 amperes and higher shall be equipped with solid state trip units with long-time, short-time, instantaneous, and ground fault (LSIG) tripping characteristics.
- L. Breakers shall be rigidly mounted, separately removable and independent of trim plates for their support. Breakers shall be bolt on type.
- M. Breakers shall be industrial grade with a minimum pole width of 1-inch (25.4 mm) and a minimum height of 5-1/2-inches (139.7 mm). Miniature circuit breakers are not acceptable.
- N. The minimum symmetrical interrupting rating for molded-case circuit breakers shall be as specified on the panelboard schedule and/or Drawings. Series rated breakers are not acceptable.

2.04 CABINETS

A. Provide cabinets with NEMA enclosure type as indicated and without knockouts. Drill cabinets only for the exact conduit entrances and mounting bolts.

- B. Finish cabinet fronts, trims and surface-mounted boxes in ANSI No. 61 or 49, light-gray enamel over a rust-inhibitive primer. Attach the fronts (exterior trims) to the boxes or interior trims, by quarter-turn, indicating trim clamps. Design cabinets for surface or flush mounting as indicated.
- C. Unless otherwise specified, construct panelboard cabinets of code-gauge galvanized, sheet steel and equip with gutters of ample size for the risers and outgoing circuits. Ensure that the cabinets do not exceed 78 inch (1980 mm) in height.
- D. Trims for branch circuit panelboards shall be supplied with a hinged door over all circuit breaker handles. Doors in panelboard trims shall not uncover any live parts. Doors shall have a semi flush cylinder lock and catch assembly. Door-in-door trim shall be provided. Both hinged trim and trim door shall utilize three-point latching. No tools shall be required to install or remove trim. Trim shall be equipped with a door-actuated trim locking tab. Equip locking tab with provision for a screw such that removal of trim requires a tool, at the Owner's option. Installation shall be tamper-resistant with no exposed hardware on the panelboard trim.
- E. Provide enclosure with the following side gutter dimensions:
 - 1. Left side minimum 4-1/2 inch measured from inside lip of the box to the installed deadfront.
 - 2. Right side minimum 4-1/2 inch measured from inside lip of the box to the installed deadfront. With the door-in-door cover in place; minimum 3-1/4 inch from installed outer door hinge to the installed deadfront.

2.05 MINI-POWER ZONE UNIT SUBSTATION

A. General

- 1. The Contractor shall furnish and install single-phase and/or three-phase general purpose individually mounted mini-power zones of the two-winding type, self-cooled, as specified herein and as shown on the contract drawings.
- 2. kVA and voltage ratings shall be as shown on the drawings.
- 3. Units shall be designed for continuous operation at rated kVA, for 24 hours a day, 365 days a year operation, with normal life expectancy as defined in ANSI C57.96.
- 4. Each unit shall include a primary main breaker, an encapsulated dry-type transformer, a secondary main breaker, and a panelboard with secondary main breaker.
- 5. Primary main, secondary main and feeder breakers shall be enclosed with a pad lockable hinged door. Enclosure shall be NEMA 3R stainless steel.
- 6. Each unit shall be suitable for service entrance application and labeled as such.

- 7. Secondary bus shall be copper.
- 8. All interconnecting wiring between the primary breaker and transformer, secondary main breaker and transformer and distribution section shall be factory installed.
- 9. Refer to plans for interrupting rating.

B. Transformer

- 1. Transformers shall be insulated with a 180 degrees C insulation system and rated at 115 degrees C temperature rise.
- 2. Required performance shall be obtained without exceeding the above-indicated temperature rise in a 40 degrees C maximum ambient, with a 30 degrees C average over 24 hours.
- 3. All insulation materials shall be flame-retardant and shall not support combustion as defined in ASTM Standard Test Method D635.
- 4. Transformer sound levels shall not exceed the following ANSI and NEMA levels for self-cooled ratings: Up to 9 kVA 40 db and 10 to 30 kVA 45 db.
- 5. Transformer core shall be constructed with high-grade, non-aging, silicon steel with high magnetic permeability, and low hysteresis and eddy current losses. Maximum magnetic flux densities shall be substantially below the saturation point. The transformer core volume shall allow efficient transformer operation at 10% above the nominal tap voltage. The core laminations shall be tightly clamped and compressed. Coils shall be wound of electrical grade copper with continuous wound construction.
- 6. The core and coil assembly shall be completely encapsulated in a proportioned mixture of resin and aggregate to provide a moisture proof, shock-resistant seal. The core and coil encapsulation system shall minimize the sound level.
- 7. The core of the transformer shall be grounded to the enclosure
- 8. Provide two (2) 5% FCBN taps.
- 9. All transformers shall be equipped with a wiring compartment suitable for conduit entry and large enough to allow convenient wiring.

2.06 FACTORY TESTING

A. Standard factory tests shall be performed on the equipment provided under this section. All tests shall be in accordance with the latest version of NEMA and UL standards.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install panelboards plumb, in conformance with NEMA PB 1.1. Where surface mounted, provide suitable supports and rack branch circuit conduits. Where mounted on concrete wall, install with 1/2 inches (15 mm) steel spacers behind the panel. Mounting attachments and connections shall be designed in conformance with the minimum lateral seismic force of 0.5W per CBC. Mount such that the height of the top operating handle does not exceed 6 feet 7 inches (2 m) from the floor.
- B. Hang each door of the cabinet on semi- or fully-concealed hinges with a combination catch and lock.
- C. On cabinets 48 inch (1200 mm) high and over, install a 3-point catch assembly latching at top, bottom and approximate middle.
- D. Verify all panelboard locks are keyed alike.
- E. Install (5) five spare 1 inch conduits to accessible location above ceiling out of each recessed panelboard.
- F. Provide typed 8-1/2 by11-inch (216 by 280 mm) circuit directory (panel schedule) for each panelboard, in the format as shown on the panel schedules. Revise directory to reflect circuiting changes required to balance phase loads.
- G. Door hinge to be on the side opposite escape route if applicable.
- H. Provide filler plates for unused spaces in panelboards.

3.02 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, reprogram, and maintain the equipment.
- B. Training shall be a minimum of four (4) hours in operation and maintenance for up to five (5) Owner representatives. Schedule training with at least five (5) working days advance notification.

3.03 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

B. Acceptance Testing Preparation:

- 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
- 2. Test continuity of each circuit.

C. Tests and Inspections:

- 1. Perform each visual and mechanical inspection and electrical test for low-voltage air circuit breakers and low-voltage surge arrestors stated in NETA ATS, Paragraph 7.6 Circuit Breakers and Paragraph 7.19.1 Surge Arrestors, Low-Voltage. Certify compliance with test parameters.
- 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- 3. Perform the following infrared scan tests and inspections and prepare reports:
 - a. Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each panelboard. Remove front panels so joints and connections are accessible to portable scanner.
 - b. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each panelboard 11 months after date of Substantial Completion.
 - c. Instruments and Equipment:
 - (1) Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
- D. Panelboards will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results, with comparisons of the two scans. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.04 CONTRACT CLOSEOUT

A. Provide in accordance with Section 01 70 00 "Execution and Closeout Requirements".

END OF SECTION

Provo City Water Resources



PRE-BID MEETING AGENDA

Date: July 19, 2023 at 9:00 AM

Project: New Provo River Water Treatment Facility

Meeting: Pre-Bid Meeting Minutes

Location: Provo Water Resources Office: 1377 S 350 E, Provo UT 84606

<u>Note:</u> The statements made in this meeting, that in any way modify what is contained in the Issued for Bidding documents, are not to be considered as a change to those documents unless issued in an Addendum prior to the bid. Any questions discussed that impact the contract documents should be submitted for formal review and response.

1. Introductions Sign-in sheet is attached:

a. Provo City Water Resources: Owner

b. Hansen, Allen & Luce / AECOM: Design Engineer & Construction Administration Team

- c. Prequalified Contractors:
 - i. Gerber Construction Company
 - ii. MGC Contractors Inc.
 - iii. Wadsworth Construction

2. Project Overview:

This Project includes two components of the City's Aquifer Storage and Recovery (ASR) Program – 30 MGD WTP and 36-inch Transmission Pipeline. Other components not included with this Work include the Rock Canyon Pump station and Rock Canyon Pipeline.

3. Description of Project:

The project consists of building a new 30 million gallon per day capacity water treatment plant on a greenfield site and generally consisting of the following aspects:

- Site development including paving, underground utilities and process piping, grading and stormwater systems, landscaping, fencing, and final restoration.
- Treatment processes including low service pumping, strainers, UF membrane skids and cleaning systems, backwash recycle and sludge disposal equipment, liquid oxygen and ozone equipment, compressed air system, dual compartment clearwell, high service pump station, chemical feed facilities, and all related process integration.
- A new building for the administration and primary treatment process functions.
 Administration building is approximately 2,900 SF and includes offices, conference / break room areas, restrooms, maintenance area, electrical and mechanical rooms, control room, and laboratory. Process area is approximately 19,000 SF at the ground level floor and approximately 11,100 SF of occupiable space in the basement level.
- A new building for the high service pumping station and accessories which consists of approximately 2,220 SF for the pumping area and a 760 SF electrical room.
- All related HVAC and plumbing systems associated with the new buildings.

• All related electrical infrastructure associated with the new buildings and treatment equipment including standby natural gas generators.

4. Contract Type:

- a. Single Prime Contractor
- b. Bid Schedule per Specification Section 00 43 00

5. Bonds

- a. Bid Bond 5% Bid Bond required per Section 00 11 16-1.03.
- b. Performance & Payment Bonds Required (Sections 00 61 13 & 00 61 14)

Schedule

- a. Substantial Completion by December 31, 2025.
 - i. Contractors expressed major concerns on meeting this date given lead times (primarily involving electrical equipment).
 - ii. Substantial completion generally refers to the plant is capable of treating water in normal operation, including a functional controls system. If generators are not commissioned prior to the date because of lead times, this could be acceptable. However, if transformers are not installed, the plant would not be able to function.
 - iii. The deadline is driven by ARPA funding requirements. The Owner and Engineering team will discuss the schedule given lead times to try and reach a resolution.
- b. Final Completion to be performed within 60 days of substantial completion.
 - i. Contractors noted final completion within 60 days may not be feasible if this means certain exterior work (such as paving and landscaping) needs to be completed in the winter. This type of work can be delayed to be performed during appropriate weather conditions.
- c. Notice to proceed is expected to be issued within 60 days of the bid opening (bid 8/31).

7. Liquidated Damages

a. Liquidated Damages will be charged at the rate of \$500.00 per calendar day per Section 00 522 00-2.04.

8. Selection Criteria

- a. Project will be awarded based primarily on the lowest overall cost to the City, and will be made to a responsive, responsible Bidder whose Bid complies with all the requirements prescribed. (Part 3 of Section 00 21 13 - Instruction to Bidders). Lowest overall cost will be determined by the sum of Base Bid Schedule A and Base Bid Schedule B without contingency costs.
- b. Cost Contingency In the event that the FEMA Funding is not finalized within 60 days of the bid opening, a line item for extending the time for an additional 60 days has been included with Bid Schedules A and B.

- c. Per Section 00 43 00-1.05.C, the Owner may choose to seek a waiver for BABA compliance and is requesting that the Contractor provide an alternate bid excluding the BABA requirements. The Owner reserves the right to award the project based on the base bid or the non-BABA compliant bid alternate.
 - i. Waivers for equipment or materials which are not available to meet BABA (for example the UF membrane elements can get this, as there are no UF membranes manufactured in the United States) can be obtained without issues. Such work may be included in the base bid.
 - ii. Contractors expressed major concerns over their subs and suppliers being able to provide the two costs by bid day. They suggested working on obtaining any cost waivers following the bid (with bid selection on the base bid).
 - iii. The Owner and Engineering Team will evaluate these concerns.

9. Bid Instructions

- a. All final bid documents must be delivered to the Provo City Water Resources office at 1377 South 350 East, Provo, Utah 84606.
- b. All documents related to project including plans and specifications have been made available to the pre-qualified contractors.
- c. All pre-qualified contractors will receive addenda or other correspondence via email.
- d. Contractors are responsible for distributing plans, specifications, addenda, and other provided information to subcontractors or suppliers.
- e. The Contractor shall submit all information required as listed Section 00 21 13 Instructions to Bidders, including:
 - i. Bid Form (Document 00 41 00)
 - ii. Bid Bond (Document 00 42 00)
 - iii. Bid Schedule (Document 00 43 00)
 - iv. Proposed Subcontractor Form (Document 00 43 36)
 - v. Bidder Status Form (Document 00 43 38)
 - vi. Federal Funding Requirements (Document 00 45 15)
 - vii. Status Verification System Affidavit (Document 00 45 37)
 - viii. Non-Collusion Affidavit of Prime Bidder (Document 00 45 38)
- f. All questions shall be sent via email, addressed to either:
 - i. Shane Jones, sjones@provo.org, (801) 852-6773 (Owner)
 - ii. Michael Chambers, mchambers@halengineers.com (801) 803-1828 (Engineer).
- g. Bid date: August 31, 2023 at 2:00 PM MT
 - i. Last date to post addendum, 72 hours ahead of bid: August 28 at 2:00 PM MT
 - ii. Last date for contractors to ask questions: August 24, 2023 by end of day.
- 10. Funding and Payment Requirements

- a. Funding source is partially funded through a federal grant (FEMA BRIC Grant), and the project does have special requirements including Buy American Build American (BABA).
- b. BABA and non-compliant BABA discussion. See item 8.c.

11. Scope of Work

- a. Work Included in contract (outlined in Section 2 above)
- b. Work not included in contract
 - i. Waterlines and sanitary installed beyond limits shown on plans.
 - ii. Offsite fiber connections will be provided by the City of Provo. The city will bring fiber to the site at a location near the administration portion of the process building (east side of the process building near Freedom Boulevard).
 - iii. Operator Workstations and printers will be provided by the City of Provo.
- c. Allowances: \$270,000 through 2 allowances listed in Section 01 21 00.
 - i. Will be issuing additional allowance for furniture with Addendum 1.

d. Alternates

- i. Alternate 1: Provide Beck Actuators for all electric valve actuators.
- ii. Alternate 2: Price deduction to provide 20 MGD of equipment as shown on indicated drawings sheets.
- iii. Provide non-BABA compliant alternate bids.
- e. Posted Addendum
 - i. No addenda posted as of 7/19/23.

12. Site (imagery provided in meeting)

- a. Staging and storage / construction offices areas
- b. Raintree apartments parking laydown areas. Previous discussions with the 'corporate level' management has suggested spots are not available. However, Contractors are encouraged to work with the local management team to either rent or otherwise utilize parking areas on the north end of this lot.
- c. There was a question on the temporary easement duration noted on sheet 01-C002. Need clarification on 60 versus 120 days (payment after 60 days). This will be reviewed and addressed in an addendum as needed.
- d. Freedom Blvd lane closure: This is viable but the City needs information on the duration of the closure and an applicable traffic control plan ahead of approval.
- e. There is no sidewalk on the west side of Freedom Blvd and temporary fencing can be installed up to the curb.
- f. The office spaces directly to the north may have leasing opportunities if contractors are interested in utilizing this space for construction / engineering offices.

13. Inspections and Testing during Construction

- a. Construction inspection will be facilitated by the engineering Team.
- b. Quality Control and Materials Testing will be coordinated and paid by the Contractor.
- c. Special Inspections and Structural Observations will be provided and paid for by the City. Contractor shall give the Engineer 48 hours notice for all Special Inspections.
- d. All waterline pressure and tank leakage testing shall be performed by the contractor. The City will collect and pay for bacteriological testing for the Project.

14. Permits

- a. The City and Engineering Team has obtained the following permits:
 - i. State of Utah Division of Drinking Water Plan Approval
- b. Building permit has been reviewed by Provo City building department. Contractor will need to finalize permit and schedule and coordinate building department inspections. The City will cover all building permit fees.
- c. The Contractor will be responsible for updating and completing the Stormwater Pollution Prevention Plan previously submitted to the Provo City Public Works. The Contractor will need to submit the NOI and the SWPPP to the state. The Contractor will be responsible for implementing the SWPPP, updating as needed, and monitoring and reporting as required. A draft SWPPP has been developed by the Engineering team and will be provided to all Contractors.
- d. The Contractor will also be responsible for obtaining a "Construction Dewatering/Hydrostatic Testing" permit, installing and maintaining discharge facilities, and completing monthly testing and reporting. See attached instructions Provided during the meeting and attached to these minutes).
- e. Fugitive Dust Control Plan and Other Air Quality Permits, if required. See Utah Division of Air Quality website at https://deq.utah.gov/division-air-quality.
- f. Provo City Excavation Permit complete Prequalification Package (attached). Fees will be waived by the City. This is also attached to these minutes.
- g. UDOT Encroachment Permit Apply for permit online at the following location: https://www.udot.utah.gov/connect/business/permits/encroachment-permits/

15. Work Restrictions

- a. Work shall be done during reasonable hours in order to provide the least noise and conflict with surrounding areas. General policy shall be 7:00 A.M. to 6:00 P.M. local time, Monday through Friday.
- b. The contractor shall obtain the City's approval (two business days) prior to weekend construction.

16. Surveying

a. The Contractor shall provide all construction surveying and staking.

b. The Contractor shall survey all buried pipe bends and fittings prior to backfilling.

17. Utilities and Potholing

a. All utilities, to the best of our understanding, have been shown in the drawings; however, they may not be complete. The Contractor must have all areas blue staked. Potholing all utilities 200 feet in advance of waterline installation is required.

18. Traffic Control Plans

- a. The Contractor is responsible for preparing, submitting, and implementing all traffic control plans.
- b. Traffic interruptions to the public roadways shall be minimized as much as possible.
- c. UDOT discussions: Performing waterline installation on University Ave via open cut, including preliminary traffic control plan has been presented to UDOT.

19. Material Disposal

a. As part of the FEMA NEPA Compliance work, the City has cleared several areas for temporary staging of excavated material. This area is primarily the Rock Canyon parking lot. The west part of the raintree parking lot is approved by FEMA as a material storage site, but this has not been approved by Raintree. The Contractor may use one of these sites or may elect to find alternatives sites. The Contractor is also responsible for determining locations for permanent disposal of excavated materials. All temporary and permanent disposal sites must be approved by FEMA (due to funding requirements) prior to hauling material to the site. The Contractor may contract with Bio-West, Inc. (Bob Thomas – 435-752-4202), who assisted the City with the FEMA NEPA Studies, or with another environmental firm to obtain approval on disposal sites.

20. Other general construction items

- a. City shall be provided any agreements between contractor and private entities.
- b. Access to the Millrace Apartments and Raintree Commons / parking areas must be provided at all times.
 - i. Use of parking lot is restricted to pipeline and retaining wall construction and can only be performed during summer.
- a. BYU intermural field parking lot and stadium parking lot can only be crossed for waterline construction during June, July, or Aug.

21. Questions and Open Discussion

a. A question was asked if there is a preferred System Integrator: The City indicated APCO Inc. is the preferred integrator and currently provides system integration for the City. Design team will check the control system spec to verify what is included and will address in an addendum as needed. Provo indicated they could pay the integrator cost, but there are concerns doing this will create gaps in the scope of work between the

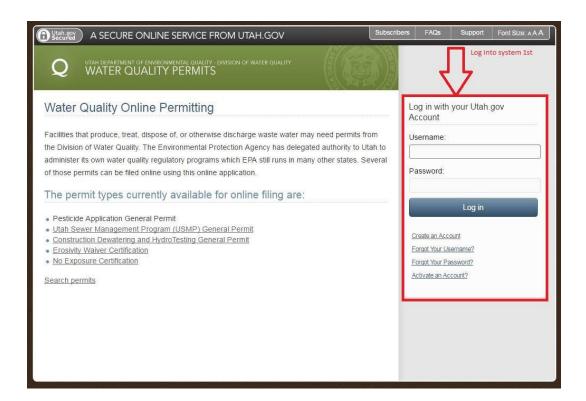
electrical contractor and the system integrator, as well as potential issues with coordinating schedules. Contractor preference is for them to carry the cost of the system integrator for better coordinating with the electrical contractor (electrical contractor could also be APCO).

- **b.** Groundwater drawn from dewatering wells can be discharged to mill race in compliance with the dewatering permit.
- 22. Adjourn and Site Visit

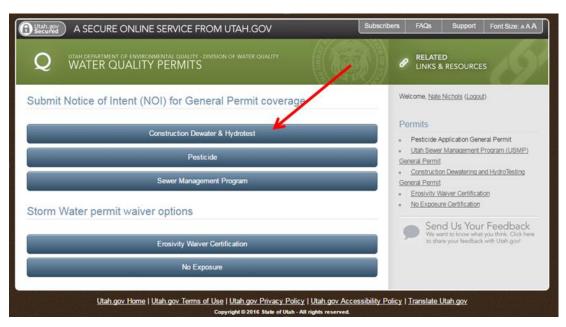
Construction Dewatering/Hydrostatic Testing

https://secure.utah.gov/account/login.html?returnToUrl=https%3A//secure.utah.gov/waterquality/uii authentication

BEFORE YOU DO ANYTHING, YOU WILL NEED TO LOG IN ON THE RIGHT SIDE OF THE PAGE, BY EITHER SETTING UP A NEW ACCOUNT OR LOGGING INTO AN EXISTING ACCOUNT. This can be the same account which was used to obtain Storm Water UPDES coverage.



Once you have logged into the system, click on the top link as seen below:



General Permit Construction Dewatering/Hydrostatic Testing

Once you get to this point, it is fairly easy to follow the prompts, and obtain coverage under the Construction Dewatering/ hydro testing general permit. This permit is good for one year, and can be reissued annually.

<u>Typically Water samples are collected and analyzed once a week, or at least once during the discharge for pH, TSS and oil and Grease (if a sheen is observed) and total Residual Chlorine.</u> Results of this analysis is due to our office by the 28th of the following month on the attached Discharge Monitoring report (DMR).

Please review the attached permit documents. It is the permitee's responsibility to be familiar with all requirements.



CORPORATION ENGINEERING DEPARTMENT CONTRACTOR PREQUALIFICATIONS REQUIREMENTS AND FORMS

- A. The requirements for pregualifications briefly consists of:
 - 1. The attached "Contractor's Proof of Responsibility and Statement of Qualifications" form filled out and notarized.
 - 2. A copy of your current Contractor's License with the proper classification for work you are doing.
 - 3. A two year or continuous \$ 10,000 License and Permit Bond. To remain in effect for two years from date of last project. (A License & Permit Bond form is attached or your insurance company will have their own form.)
 - 4. Combined single limit per occurrence Liability Insurance for bodily injury, personal injury and property damage with a minimum of \$1,000,000 in the aggregate per Provo City Code Book (Section 15). Also to include added underground coverage if excavating.

Also, please find attached three specification letters which you need to be aware of before doing any work in Provo City.

NOTE:

- 1) ALL WORK MUST BE IN COMPLIANCE WITH PROVO CITY STANDARDS AND SPECIFICATIONS.
- 2) It is the contractor's responsibility to keep prequalifications updated in order to be included on our Current Contractors List.
- 3) No permits will be issued unless pregualifications are up to date.



PROVO CITY CORPORATION

CONTRACTOR'S PROOF OF RESPONSIBILITY AND STATEMENT OF QUALIFICATIONS

A. GENERAL:

- 1. Provo City Corporation, under authority of the Utah Statutes, requires prequalifications of contractors before doing any street excavation in Provo City. This form shall be submitted to the Provo City Engineering Department, 1377 South 350 East, Provo, Utah 84606. The contents of the questionnaire shall be considered confidential.
- 2. Contractor shall answer all applicable questions. Answers to questionnaire shall be legible, preferably typed.

В.	CONTRACTOR INFORMATION:				
	Name of Contractor				
	Phone Number	Date	company organized		
	Where incorporated				
C.	Have you ever failed to complete	e any work awarded to you	or defaulted on a contract?		
	If yes, where and why?				
	Attach a statement of explanation, i	ncluding all pertinent facts.			
D.	EQUIPMENT: List your major equipment.	uipment that is available, in	ncluding description, number of units and		
Des	scription	#of Units	Equipment Condition		

E. **EXPERIENCE:**

- How many years have you been engaged in the contracting business under the present firm name?
- 2. Contracts on hand:

Descrip	otion	Gross Amou	nt % Completed to Date	
				
3.	Describe nature of wo	rk performed by your f	irm.	
4.	How many years of exp	erience have you had in	the type of work described in No. 3 a	bove.
5.	List the five most rece	nt major contracts com	npleted:	
Owner	A	ddress	Type of Work	Cost
F. Spec	ify types and classes of	work for which you rec	quest approval and qualifications:	
Dated at		this	day of,20	
Name of	organization			
Address_				
			Title	
(Signa				
State of _		-ee		
	F			
On this	day of	, 20	personally appeared before	
			, and being duly sworn, says that	t he is the
				the is the
(Title)		of (Name	e of Organization)	
•	the answers to the fare		all statements contained herein are	truo
and corre		going questions and a	an statements contained herein are	uue
Notary Pi	uhlic		My commission expires	

PERMIT BOND

To cover excavations on property and right-of-way belonging to Provo City Corporation.

KNOW ALL MEN BY THESE PRESENTS:
THAT WE, as Principal, and As Surety, being duly authorized to transact business in the State of Utah, are held and firmly bound unto Provo City Corporation,as Obligee, in the full penal sum of (\$) fo the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
WHEREAS, the above bounded Principal has or is about to obtain from the Obligee a permit or permits for making excavations connection with underground utilities or waterways according to the agreement executed between the Principal and the Obligee.
WHEREAS , the Principal is required by law to file with Provo City Corporation, a bond conditioned as herein set forth.
NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, That if the said Principal shall indemnify said Obligee against all loss, costs, expenses, or damage to it caused by the said Principal's non-compliance with or breach of any law, statutes, ordinances, rules, or regulations pertaining to such license or permit, and in particular the Standard Specifications of Provo City Corporation and the Agreement or permit or permits that are incorporated herein by reference as required by the execution bond, then this obligation shall become void and of no effect, otherwise to be and remain in full force and virtue until the day of,20 and
PROVIDED, HOWEVER , that this bond may be continued from year to year by certificate executed by the Surety hereon,
Signed, sealed and dated this day of,20
PRINCIPAL SEAL:
Principal
Ву
Title
SURETY SEAL:
Surety
By
Title
STATE OF UTAH
COUNTY OF ss.
being first duly sworn on oath deposes and says
That he is Attorney-in-Fact of the Surety of the foregoing bond, and that he is authorized to execute and deliver the foregoing obligation; that said Company is authorized to execute and deliver the foregoing obligation; that said Company is authorized to execute the same, and has complied in all respects with the laws of Utah in reference to being solid surety upon bonds, undertakings, and obligations. Subscribed and sworn to before me this day of20
Signed

Provo City Engineering Permit Fees

		Fee
Permit Fee		\$200.00
	Permit Type	
	Asphalt Greater Than 1000 Sq. F.t	plus \$0.10 per Sq. Ft.
	Asphalt Less Than 1000 Sq. Ft.	\$50 plus \$0.10 per Sq. Ft.
	Curb & Gutter	plus \$0.50 per Ln. Ft.
	Sidewalk	plus \$0.25 per Sq. Ft.
	Fire Hydrant	plus \$60.00 each
	Grading	plus \$60.00 per inspection
	Sewer Lateral	plus \$60.00 per lateral
	Sewer Main	plus \$0.50 per Ln. Ft.
	Water Service	plus \$60.00 per service
	Water Main	plus \$0.50 per Ln. Ft.
	Storm Drain	plus \$0.50 per Ln. Ft.
	Other Utilities	plus \$0.25 per Ln. Ft.
	Directional Boring	plus \$0.25 per Ln. Ft.
	Lane/ Street/Closure (per lane/per block) *	plus \$250.00 per Day
	Sidewalk Closure (per block face) *	plus \$50.00 per Day
	Parking/Bicycle Lane Closure	plus \$50.00 per Day
	Storm Drain Service	plus \$60 per service
Development Inspection		\$250.00 Minimum
After Hours Inspection		\$60.00 per hour (1 hour min.)
Permit Extension Fee		\$200.00
Working without Permit (Stop Work)		4 times permit fee
Reinspection Fee		\$95.00 per inspection
Traffic Control Plan Review Fee (For permits requiring multiple traffic control plans.		\$75.00 per plan
Hourly Inspection Fee for permits requiring multiple inspections		\$40.00 per hour (1 hour min.)
After Hours Inspection		\$90 per 2 hour min
•	Effective:	July 1, 2017