

CITY OF WESTMORLAND

WTP Filter Replacement Project

ADDENDUM NO. 1

The following constitutes Addendum No. 1 for this project:

1. Specifications Section 01010 – Summary of Work and Sequence of Construction has been revised to make clarifications to subsection 3.1-A.2, and subsection 3.2. Replace Specification Section 01010 of the Bid Documents with the attached revised Section 01010.
2. Photos of the project site, including photos of the existing filter units and existing shade/roof structure have been included in an attached zip folder for reference.
3. Record drawings of the existing shade/roof structure over the filter area have been included.

Each bidder must acknowledge receipt of this addendum in the noted space below and on the signature page of the Bid Proposal. **Include a copy of this addendum with your Bid Proposal Package. It is the bidding Contractor's responsibility to notify its sub-contractors about changes based on all addenda.**



City of Westmorland

August 1, 2024

Date

ACCEPTANCE OF NOTICE

Receipt of ADDENDUM NO. 1 is hereby acknowledged by:

Company Name

Date

By: _____

Name and Signature

SECTION 01010
SUMMARY OF WORK AND SEQUENCE OF CONSTRUCTION

PART 1 - GENERAL

1.1 GENERAL

- A. The Work to be performed under this Contract shall consist of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and furnishing all labor, transportation and services, including fuel, power, water and essential communications, and performing all work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The Work shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the work in good faith shall be provided by the Contractor as though originally so indicated, at no increase in cost to the City.
- B. The work under this contract shall conform with the Standard Specifications for Public Works Construction, Latest Edition (Greenbook), including all relevant Supplement Amendments.
- C. Provide all labor, material and equipment to construct improvements to the City's water treatment plant, as indicated on the contract documents. Work will be as generally described below.
- D. The new Filter No. 2 design is based on the contact clarifier/filter (filter) design and filter unit control panel design manufactured by AWC Water Solutions in combination with the associated mechanical, electrical, and structural design improvements indicated in these Contract Documents. Mechanical, electrical, and instrumentation Shop Drawings for the new filter unit have already been prepared by AWC Water Solutions as part of the Contract Documents, and have been included in the Appendices to these specifications. The Contractor is required to furnish the new filter unit based on the AWC filter unit shop drawings, design, characteristics, specifications, and supporting information that is included herein. See Appendix A through Appendix E for AWC shop drawings and filter design characteristics information.
- E. Contractor shall keep the City fully advised as to their plans for carrying out the work and obtain City approval for all phases of his operations, as hereinafter specified.

1.2 OWNER'S USE OF THE PROJECT SITE

- A. The City may utilize all or part of the existing water treatment plant site during the entire period of construction. The Contractor shall cooperate and coordinate with the City and the City's Representative to facilitate the City's operations and to minimize interference with the Contractor's operations at the same time. In any event, the City shall be allowed access to the project site during the period of construction.

1.3 PROJECT LOCATION

- A. The Project is located in Westmorland, California, which is in Imperial County (north of El Centro, CA and north of Brawley, CA)
- B. Conditions at the Project site are as follows:
 - 1. Ground Elevation: minus (-) 140 feet (approximate); or 860 feet (approximate) with the adjustment described below.

Note: Elevations shown in the design drawings are adjusted from their actual "below sea level" values. An adjustment factor of 1,000 is added to each elevation value to obtain a positive elevation.
 - 2. Air Temperature Range: 40°F (minimum winter) to 120° F (maximum summer).

1.4 WORK COVERED BY CONTRACT DOCUMENTS (WORK SUMMARY)

- A. Improvements to be constructed by this contract shall be accomplished without shutting off, or diminishing, the water supply that can be delivered to the City's distribution system. The water treatment plant shall remain in operation at all times unless plant staff approve specific planned stoppages or reductions in treatment plant operation for defined maximum periods. The distribution pump station, however, cannot be taken out of service at any time because there are no water storage tanks located in the distribution system. This pump station must remain in constant operation which means that it must receive water from one of the two onsite water storage tanks at all times. Contractor shall organize and schedule his work as needed to accomplish these goals.
- B. The Work includes furnishing products, labor, tools, transportation, and services to construct the following major categories of work:
 - 1. Furnishing and installing a new aluminum contact clarifier/filter unit (filter) and filter unit control panel based on the filter unit mechanical, electrical, and instrumentation design provided in the Contract Documents by AWC Water Solutions (to replace existing Filter Unit No. 2) in combination with the associated mechanical, electrical, and structural design improvements indicated in these Contract Documents
 - 2. Temporary removal and reinstallation of existing raised walkways around Filter Unit No. 2 to allow for removal of existing filter unit and installation of new filter unit.
 - 3. Provision of temporary scaffolding and ladder access to top of existing Filter Unit No. 1 and Filter Unit No. 3 while existing raised walkways are removed to provide maintenance access to City Operations staff.
 - 4. Coordination with City for performing short duration temporary WTP shutdowns for installation (and subsequent removal) on temporary above-grade bypass pipeline (highlines) as necessary to accommodate continued WTP operation during construction of Filter Unit No. 2 replacement.
 - 5. Demolition, removal and disposal of the existing Filter Unit No. 2.
 - 6. Temporary removal of a portion of the existing filter area roof structure as

- necessary to accommodate installation of new filter unit.
7. Construction of new reinforced concrete housekeeping pad and EPDM pad in location of new Filter Unit No. 2.
 8. Installation of new Filter Unit No. 2 on top of new housekeeping pad and EPDM pad.
 9. Installation of new PSV discharge piping and connection to existing drain lines.
 10. Modification of existing raised walkways to accommodate the new Filter Unit No. 2.
 11. Modification and connection to existing influent, effluent, and backwash piping, as well as other filter unit appurtenances.
 12. Installation of new electrical controls and integration with existing electrical and controls system.
 13. Testing and commissioning of new Filter Unit No. 2.
 14. Reinstallation of filter area roof structure.
 15. **Additive Bid Item No. 1:** Furnishing of new WTP Control Building laptop with new HMI software to control operation of filter units. Programming of new HMI software and testing.

1.5 WORK COVERED BY CONTRACT DOCUMENTS

- A. Furnish and install complete operating engineered systems including appurtenant structural, mechanical and/or electrical mountings fittings or connections required for compliance with Manufacturer's installation requirements, for compliance with applicable building codes and standards, and as needed to permit systems to perform all functions required by the Contract Documents and described in Manufacturer's printed literature.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 CONSTRUCTION AND WTP OPERATING CONSTRAINTS

Work Schedule Goals and Constraints

- A. Construction Scheduling Goals: Contractor shall schedule and perform the Work of this contract as required to achieve the following goals:
 1. Contractor shall schedule and perform the construction of improvements in a manner that allows the water treatment plant to remain in operation at all times, EXCEPT for scheduled shutdowns of the plant for short duration and only with the City's written approval of each plant shutdown regarding how it is done; when it is done, and for what duration. City Staff are responsible to operate and maintain the water treatment plant. Contractor's work shall not impede plant operation or cause an avoidable loss of water treatment capacity that would preclude water system demands or regulatory requirements from being met.

2. Maintain operation of two (2) WTP filter units throughout the construction of improvements. A planned, short duration temporary shutdown will be required to construct improvements on the existing influent and effluent piping manifolds for Filter Unit No. 2. Contractor will be required to prepare and submit for approval a Temporary Shutdown Plan and Work Sequence Plan that details the duration of this temporary filtration system shutdown. The Work Sequence Plan shall include a shade/roof structure removal and reinstallation plan (including roof removal and reinstallation details) if the Contractor believes temporary removal and replacement of a section of the existing shade/roof structure is required for replacement of the filter unit. If the Contractor believes that they can install the new filter unit without needing to temporarily remove and replace a section of the existing shade/roof structure, the Contractor may submit their proposed alternative means of filter unit installation for review and approval by the City. No construction shall be allowed until the temporary shutdown plan and work sequence has been approved by the City. It is critical that the planned temporary shutdown be as short in duration as possible since the distribution system does not have sufficient water storage reservoirs that can supply extended domestic demand or fire flow when the filtration system is out of service.
3. Maintain the City Staff's access to all facilities within the plant site to enable them to perform their daily activities as required for uninterrupted operation of the water treatment plant. Do not decrease available parking for City vehicles (including personal automobiles driven by City Staff to the treatment plant). There is also a requirement for chemical suppliers to drive into the plant site to make deliveries.
4. Comply with CEQA mitigation measures (see Section 01050) throughout construction.

B. Scheduling Constraints for Base Bid Improvements:

1. There are two functioning Westech Aqua-Cell filter units. These filter units must be operable at all times.
2. Furnish and install above-grade temporary piping (highlines) as required to maintain the WTP operation.
3. Water Quality Instrumentation (e.g. Turbidity meters, chlorine analyzers, pH/Temperature sensor, 7-day Circular Chart Recorder) must remain in operation at all times except for brief outages when the switchover to a replacement device is occurring. The readings from these devices provide data that is necessary for documenting plant operation, and for creation of reports and calculations that must be submitted to the State. An example of this is the instrumentation and readings associated with calculation of the Chlorine Contact Time.

A chlorine analyzer that measures the influent water to whichever tank is being use as the Contact Time Tank must always be in operation to measure the chlorine residual concentration. There must also be a chlorine analyzer near

the outlet from the Contact Time Tank, to measure the chlorine residual leaving that tank. If the permanent chlorine analyzer(s) are not available for these measurements, then Contractor shall furnish temporary analyzers (instruments) to provide all of the water quality measurements that are required for State reporting purposes and for the Contact Time calculations.

4. The water treatment process requires injection of the following chemicals:
 - Ferric Sulfate (this chemical is injected into the raw water at the Headworks (in the Rapid Mix Chamber).
 - Alum (this chemical is injected in the 12" diameter piping immediately upstream of the three Westech Aqua-Cell filter units).
 - Sodium Hypochlorite Solution (this chemical is injected in the 12" diameter piping immediately downstream of the Filtered Water Pump Station).

Each of these chemical injection processes must be in operation whenever one or both of the Westech filter units is in operation.

3.2 GENERAL SEQUENCE OF CONSTRUCTION

- A. The following is only an EXAMPLE general sequence of construction to illustrate the type of work descriptions to be included in the Contractor's Temporary Shutdown Plan and Work Sequence Plan. The Contractor is required to develop and submit for approval a Temporary Shutdown Plan and Work Sequence Plan that details how the Contractor shall accomplish the Work and the duration of the planned temporary filtration system shutdown that coincides with the Contractor's overall project schedule. The following general construction sequence is not to be considered as the general sequence of construction required. It is the Contractor's responsibility to ensure that their developed Temporary Shutdown Plan and Work Sequence Plan that is submitted to the City can be used to successfully accomplish the work per the requirements of the Contract Documents.

Preparation

1. Coordination with City to ensure WTP will remain operable and continue to provide potable water to the community for the full duration of construction.
2. Coordination with City to ensure construction of improvements does not conflict with other construction projects planned at the WTP.
3. Submit shop drawings and other submittals.
4. Begin manufacturing and shipping materials and equipment after receiving approved submittals.

Construction: Base Bid Work

1. Temporary removal of existing raised walkways.
2. Coordinate with City to perform planned temporary short duration WTP shutdown to isolate existing Filter Unit No. 2 from existing Filter Unit No. 1 and existing Filter Unit No. 3.
3. Furnish and install above-grade temporary piping (highlines) as necessary to maintain the WTP operation.
4. Once Filter Unit No. 2 is isolated from WTP system, commence normal

- operation of Filter Unit No. 1 and Filter Unit No. 3.
- 5. Demolition, removal, and disposal of the existing Filter Unit No. 2.
- 6. Temporary installation of maintenance access to Filter Unit No. 1 and Filter Unit No. 3.
- 7. Temporary removal as necessary of existing filter area shade/roof structure over the Filter Unit No. 2 area to accommodate installation of new Filter Unit No. 2.
- 8. Construction of new house keeping pad and EPDM pad.
- 9. Installation of new Filter Unit No. 2 and associated appurtenances.
- 10. Installation of new PSV discharge piping and connection to existing drain lines.
- 11. Modification to existing influent, effluent, backwash piping, and other filter unit appurtenance connections.
- 12. Removal of temporary maintenance access ladders/scaffolding to existing Filter Unit No. 1 and Filter Unit No. 3
- 13. Modification and reinstallation of existing raised walkways.
- 14. Installation of new electrical controls and integration with existing electrical and controls system.
- 15. Testing and commissioning of new Filter Unit No. 2.
- 16. Coordinate with City to perform planned temporary WTP shutdown to remove temporary piping (highlines) if installed and connect new Filter Unit No. 2 to existing piping.
- 17. Commence normal operation of WTP.
- 18. Reinstallation of filter area shade/roof structure.
- 19. Site cleanup and demobilization.

Construction: Additive Bid Item Work (Item No. 1)

Additive Bid Item work will be done at Owner’s option based on funding considerations. Additive Bid item #1 can impact the control of the new Filter Unit No. 2.

Additive Bid Item work that can be done without impact to production of filtered water, can be done at Contractor’s convenience within the overall authorized construction schedule.

Quality Control

- 1. Demonstrate satisfactory installation and operation of installed work, including performing vendor and system functional tests. Note: Contractor shall implement this responsibility at appropriate times throughout the construction process.

Closeout

- 1. Provide operator training, including O&M manuals that contain the engineering cut-sheets on all equipment.
- 2. Provide record drawings.
- 3. Clean up and restore construction areas.

4. Provide warranty as specified.

3.3 CONTRACTOR'S GENERAL WORK REQUIREMENTS

A. The Contractor shall observe the following requirements:

1. Prior to construction, Contractor shall submit a construction schedule to the City for review and approval per the specifications. Contractor shall coordinate directly with the City to ensure that construction of the improvements as required by these Contact Documents does not conflict with other planned construction projects at the WTP.
2. Systems or individual equipment items shall be isolated, dewatered, decommissioned, de-energized, or depressurized in accordance with the approved detailed Outage Plan and schedule.
3. Whenever temporary relocation of existing facilities is required for execution of the work, the Contractor shall provide the necessary labor and temporary piping and wiring as required at no additional cost to City.
4. Any temporary facilities and equipment not required after completion of the final work shall be promptly removed. If the Contractor does not remove the temporary facilities, the City will remove the facilities at the Contractor's expense.
5. When shutdown of any existing facilities is necessary, the Contractor shall notify the City Representative not less than seven (7) days prior to the shutdown using a Shutdown Request form provided by the City Representative.
6. The Contractor shall not begin an alteration until specific permission has been granted by the City Representative for each case or situation. The City Representative will coordinate the Contractor's planned procedure with the operation of this facility. The making of connections to the existing facilities or other operations that interfere with the operation of the existing equipment shall be completed as quickly as possible and with as little delay as possible, as approved on the Outage Plan and on the Shutdown Request Form. Any operational functions of the existing water treatment plant equipment or facilities that are required to be done to facilitate the work of the Contractor will be performed by City personnel only as identified in the approved Outage Plan.
7. If it is necessary for proper operation or maintenance of the water treatment plant, the Contractor shall re-schedule construction operations so that the work will not conflict with necessary operations or maintenance of the existing water treatment plant. This shall be at no additional cost to the City.
8. The Contractor shall maintain safe access into and through the work area as may be directed by the City's Representative, to allow the City's operation and maintenance of his facilities.

9. The City's Representative/WTP Operators shall be the sole judge of when the Contractor's operations are causing interference with water treatment plant operation, or is impeding the City's access through Contractor's work area, and his orders and instructions shall be carried out without delay and at the Contractor's expense.

3.4 CONTRACTOR'S USE OF PREMISES

- A. Do not shut off pipelines or power, or take action which might adversely affect Owner's use or operation of his facilities or premises without prior written authorization from Owner.
- B. Contractor shall use City property (see Drawing G-5 for property line delineation) that is outside the northern fence line (existing fence line or revised fence line) to park his vehicles, construction equipment, store materials, for use as a laydown area, and for other construction purposes. Contractor shall NOT obstruct access within the existing plant site except for access impacts that cannot be avoided; and those impacts shall be minimized in both area and duration.
- C. Install approved signs, barricades and lights necessary to ensure public safety and safety of Owners operators and personnel. Provide steel plates across ditches to enable safe access of Owner's personnel to facilities.

3.5 OWNER'S OCCUPANCY OR USE OF NEW CONSTRUCTION

- A. Pre-startup checkout and functional testing shall precede Owner's use of completed Work.
- B. Owner shall commence "beneficial use" of constructed facilities prior to completion of the overall construction contract, so that the water treatment plant can be restored to full operation in the plant's "normal configuration" at the earliest opportunity.

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