CITY OF WEST SACRAMENTO
Yolo County, California

Bidding and Contract Documents
Coke and Triangle Sewer Lift Station Rehabilitation Project

ADDENDUM NO. 4
Issued March 30, 2020

Bidder's Note: Bidder shall acknowledge receipt and examination of this addendum on the Bid form and attach a signed copy to the Bid, both as required by the Sealed Proposal. See last page of this addendum for signature line of Bidder.

NOTICE

******* This addendum extends the last day for questions to Wednesday, April 9th at 10:00 a.m. ********

The Bidding Documents are hereby clarified, corrected, and changed as indicated below.

Submitted Questions (via email):

1. When will the non-mandatory pre-bid meeting presentation be available?

A: The non-mandatory pre-bid meeting presentation is now available for download on https://ciplist.com/plan/?West%20Sacramento/city/13870/plan/3406.

2. Due to the shelter in place order affecting the entire State of California at this time, will the City of West Sacramento accept an emailed electronic copy of proposers' responses?

A: Yes, the City will accept both electronic and hard-copy submissions. For electronic submissions, email to Amber Wallace (amberwa@cityofwestsacramento.org).

3. Per Section 02960 1.2.C the Contractor is required to maintain and inspect the temporary bypass system every 2 hours. Also, a responsible operator is required on site when pumps are operating. Please clarify if installing and maintaining the autodialer alarm system with a minimum of 3 cellphone contacts will waive the above QA inspection requirements.

A: The autodialer system is for alarm notification only and will not waive the quality assurance (QA) requirements. The Contractor will be required to inspect the temporary bypass pumping system every 2 hours for the first 48 hours then every 12 hours anytime the bypass system is in place. Refer to attached Section 02960 for the updated full list of requirements.

4. There is a PGE Electrical line located inside the footprint of the new Lift Station on Triangle Court. There is no relocation work included with the contract drawings. Will PG&E reroute their line prior to our work or is this relocation to be coordinated by the Contractor?

A: Underground utility locations provided on the Triangle SLS drawings using information obtained from Underground Service Alert (USA). The contractor will be responsible for field locating and identifying actual utility locations and potential conflicts. The City will coordinate utility relocation if conflicts are determined in the field.

5. There is also a Wave communication line potentially located in the footprint of the new Triangle lift station. This communication line will obstruct the shoring system required to demo the existing lift station. Can the utility owner pull their communication line before our work starts so the conduit can be temporarily cut to complete our work?

A: The Contractor will need to field verify all underground utilities in the work area to determine actual locations and potential conflicts. Choice and adjustments of the shoring system falls under means and methods and is the responsibility of the contractor. The City will coordinate utility relocation if conflicts are determined in the field.

Specifications:

PART 1, INVITATION TO BID –

- Change the cutoff date for questions from **"Wednesday, March 25th, 2020 at 10:00 a.m."** to **"Wednesday, April 9th 2020 at 10:00 a.m."**

SPECIFICATION SECTION 01020

- Construction milestones and sequencing has been added to Section 01020 for clarification and guidance on order of work.
- Replace Specification Section 01020 – Modification of Existing Facility and Order of Work in its entirety with the attached updated Specification 01020.

SPECIFICATION SECTION 02960

- Updates to quality assurance, testing requirements, City emergency contact information, and design criteria. The contractor will be responsible for all Sanitary Sewer Overflows (SSO's) associated with the temporary bypass pumping and sewer system.
- Contractor will be responsible for dewatering structures and pipelines associated with the project.
- Replace Specification Section 02960 – Temporary Bypass Pumping Systems in its entirety with the attached updated Specification 02960.

Attachments:

- Section 01020 – Modification of Existing Facility and Order of Work
- Section 02960 – Temporary Bypass Pumping Systems

City of West Sacramento,

By: Amber Wallace
Amber Wallace, P.E. Project Manager

ACKNOWLEDGMENT BY BIDDER,

By: _____

Title: _____

SECTION 01020

MODIFICATION OF EXISTING FACILITY AND ORDER OF WORK

PART 1: GENERAL

1.01 SCOPE

This section covers the care of and work to be done on the Coke and Triangle Lift Station's existing facilities at the site of the work, the requirements for providing continuous sewage conveyance during construction activities, and other requirements affecting the sequence of construction.

The Order of Work contained herein specifies required sequencing and/or timing of construction activities.

1.02 GENERAL CONSTRAINTS ON SEQUENCE AND SCHEDULING OF WORK

A. Conduct work in a manner that will not impair the operational capabilities of essential elements of the lift station.

B. Work sequence and constraints:

1. Utilize description of critical events in "ORDER OF WORK" in this Section as a guideline for scheduling and undertaking the Work.
2. Order of work and constraints presented do not include all items affecting completion of the Work, but are intended to describe critical events necessary to minimize disruption of the existing facilities.

PART 2: PRODUCTS

2.01 MATERIALS

See Divisions 2 through 17 for materials required.

PART 3: EXECUTION

3.01 GENERAL

A. As-built drawings for the existing Coke and Triangle Lift Station are available from the City or Engineer.

3.02 BYPASSING DURING CONSTRUCTION

Bypassing of untreated or partially treated wastewaters to surface waters or drainage courses will not be permitted. Bypassing of sewage that flows into the Coke and Triangle Lift Stations from various businesses will be required during construction. The bypass location will be located as indicated on the drawings.

3.03 REMOVAL AND REUSE OF EXISTING STRUCTURES AND EQUIPMENT

A. The Contractor shall remove all existing equipment, structures, piping, valves, and other items as indicated on the drawings. Where the plans indicate "Remove and Save", the Contractor shall carefully remove the item and protect it so as to avoid damage, shall thoroughly clean it, and stockpile it at a location on the site designated by the Engineer. Where the plans indicate "Remove and Reinstall", or "Relocate", the items shall be carefully removed and re-erected or reinstalled at another location as shown, after cleaning and such repairs and adjustments made as are necessary. Where indicated to be "Removed and Wasted", the Contractor shall remove the item and dispose of it off the site at his expense or may salvage it for his own gain.

B. The Contractor shall reuse all existing equipment, structures, piping, valves, and other items as indicated on the drawings. Where the plans indicate “Reuse”, the Contractor shall make every effort to incorporate the existing item into the project and will clean, repair and make adjustments as necessary.

3.04 INTERFERENCE WITH EXISTING LINES

A. The Contractor will be required to relocate or replace any pipe lines, electric conduits, or other facilities which must be disturbed for new construction work and which are required for facility operation, or make other arrangements satisfactory to the Engineer. Such relocation and replacement may be of temporary type, to be used until work is completed. In the event of accidental damage to existing lines resulting in interruption of service to yard or building lighting circuits or to any other facility which may be needed for use by the Owner prior to the Contractor's next regularly scheduled work period, the Contractor shall repair to the satisfaction of the Engineer such lines prior to stopping work on the day of such damage.

3.05 DEWATERING AND CLEANING OF STRUCTURES AND PIPELINES

A. The Contractor will dewater structures and pipelines through existing valving, portable pumps and a “Vactor” truck. It will be the Contractor's responsibility to provide necessary pumps, piping, and other equipment to complete the cleaning and drainage of the structures and pipelines.

B. All flushing and cleaning of dewatered structures shall be done by the Contractor in a manner satisfactory to the Engineer. In all cases the Contractor shall conform with OSHA requirements for work in confined spaces, including the provision of adequate ventilation.

3.06 ORDER OF WORK

A. General: The work shall be accomplished in an order that will allow continued operation (except for temporary shutdowns as specified herein) of the lift station as required to prevent Sanitary Sewer Overflows. To that end, basic requirements that cannot be violated unless specifically approved by the Engineer are established. Follow recommended sequencing as indicated on the drawings or create a separate work plan with approval of the Engineer.

Order of work subject to change by the Engineer. If modifications are necessary they may be requested in writing for approval of the Engineer.

B. Coke and Triangle Sewer Lift Station Sequencing / Milestones:
Milestones for construction and equipment procurement are provided below.

Sequence	Activity	Dependency Sequence	Deadline
0	First Order of Work Equipment and Construction Submittals, Submit Shop Drawings	N/A	15 days after Notice To Proceed (Ordering)
1	Mobilization, Traffic Control Plan, Bypass Pumping Plan	0	15 days after NTP (Work)
1A	Field Verify Utilities	1	25 days after NTP (Work)
2	, Demolition of Lift Station Sites (Civil, Mechanical, Electrical), Install new FRP Wet Well and Concrete Emergency Storage Manhole	1A	70 days after NTP (Work)
3	Install new Valve Vault, Piping, Pumps, Valving and Appurtenances	2	80 days after NTP (Work)

4	Install Electrical components (Generator, Automatic Transfer Switch, Conduit, Wiring)	**1A**	**100 days after NTP (Work)**
5	Civil/Site Final Grading and Paving, Fencing Enclosures	4	110 days after NTP (Work)
6	Start-up, Punch List and Final Closeout	5	120 days after NTP (Work)

SEQUENCE 0

- Begin gathering First Order of Work submittals for equipment
- Long lead time equipment submittals (Concrete Manholes, FRP Wet Well, Submersible Chopper Pumps, Generators, Fencing, etc.)
- Submit shop drawings

SEQUENCE 1 AND 1A

- Mobilization
- Traffic Control Plan
- Develop and Submit Bypass Pumping Plan
- Field Verify Utilities in Work Area

SEQUENCE 2 and 3

- Following approval of bypass plan and equipment, set up bypass pumping system
- Demolition of lift station sites
- Shore and install FRP wet well and emergency storage manhole with bypass pumping in place
- Install pumps, pipe stub-outs, vaults, valving, and appurtenances

SEQUENCE 4

- Install electrical components for both lift stations. Items include generator, ATS, conduit, wiring, controls, etc.

SEQUENCE 5

- Complete final paving and grading. Enclose lift station/generator site as indicated on the drawings.

SEQUENCE 6

- Facility Start-up
- Punch List
- Final Project Closeout and Demobilization

END OF SECTION

SECTION 02960

TEMPORARY BYPASS PUMPING SYSTEMS

PART 1: GENERAL

1.1 DESCRIPTION

A. Section includes requirements for implementing a temporary pumping system for the purpose of diverting existing sewage flow around work area for duration of the project.

1.2 QUALITY ASSURANCE

A. Follow national standards and as specified herein.

B. Perform leakage and pressure tests on discharge piping using clean water, before operation. The temporary bypass pumping system must be proven to operate for a 48-hour duration without failure or leaks. Notify Engineer 24 hours prior to testing.

C. Inspect bypass pumping visually every 2 hours for first 48 hours. Then every 12 hours anytime the bypass is in place. Visual inspection includes starting and stopping pumps, inspecting the wet well, and testing alarms.

D. Keep and maintain spare parts for pumps and piping on site, as required.

E. Maintain adequate hoisting equipment and accessories on site for each pump.

1.3 SUBMITTALS

A. Submit following Section 01330.

1. Detailed plan and description of proposed pumping system. Indicate number, size, material, location and method of installation of suction and discharge piping, size of pipeline or conveyance system to be bypassed, staging area for pumps, site access point, and expected flow.

    a. Size and location of manhole or access points for suction and discharge hose or piping.
    b. Sections showing suction and discharge pipe depth, embedment, select fill and special backfill, if buried.
    c. Temporary pipe supports and anchoring required.
    d. Thrust and restraint block sizes and locations.

e. Sewer plugging method and type of plugs
f. Bypass pump sizes, capacity, number of each size to be on site and power requirements.
g. Backup pump, power and piping equipment.
h. Calculations of static lift, friction losses, and flow velocity. Pump curves showing pump operating range.
i. Design plans and computation for access to bypass pumping locations indicated on drawings.
j. Calculations for selection of bypass pumping pipe size.
k. Method of noise control for each pump and/or generator.
l. Method of protecting discharge manholes or structures from erosion and damage.
m. Schedule for installation and maintenance of bypass pumping lines.
n. Procedures to monitor upstream mains for backup impacts.
o. Procedures for setup and breakdown of pumping operations.
p. Emergency plan detailing procedures to be followed in event of pump failures, sewer overflows, service backups, and sewage spillage.
    1) Maintain copy of emergency plan on site for duration of project.

1.4 CONTRACTORS RESPONSIBILITY FOR OVERFLOWS AND SPILLS

A. Schedule and perform work in manner that does not cause or contribute to incidence of overflows, releases or spills of sewage from sanitary sewer system or bypass operation. Contact and make the City aware of emergencies, spills, and overflows.

B. From Sequence 2 until Sequence 6, or for the duration temporary bypassing pumping is required, the Contractor **is fully responsible** for the operation of the Triangle and Coke Lift Stations and all the sewer flows generated from the upstream shed. Refer to Section 01020 for sequencing outline.

C. Contractor is responsible for all Sanitary Sewer Overflows (SSOs). Contractor will be responsible for all fines, damages related to and City staff hours responding to and reporting the SSO.

D. If deemed necessary due to lack of preparedness on the Contractor's part, the City has the option to clean up the sewage spill caused by the Contractor. Clean up costs incurred by the City shall be recoverable in addition to the penalties from the Contractor's progress payments.

1.5 CITY EMERGENCY CONTACT INFORMATION

A. In the event of an emergency, it is the contractor's responsibility to immediately notify the City.

B. The City can be reached through their Emergency Sewer Hotline (916) 617-4850. The Contractor will be charged for City's time and effort in response to the emergency.

C. Contact the City Chief Mechanic James Grey (707) 580-0505 for emergencies, questions, and information regarding the temporary bypass pumping system.

1.6 DELIVERY AND STORAGE

A. Transport, deliver, handle, and store pipe, fittings, pumps, ancillary equipment and materials to prevent damage and following manufacturer's recommendations.

1. Inspect all material and equipment for proper operation before initiating work.

B. Material found to be defective or damaged due to manufacturer or shipment.

1. When Engineer deems repairable: Repair as recommended by manufacturer.
2. When Engineer deems not repairable: Replace as directed by Engineer before initiating work.
3. Repair or replacement of defective or damaged material and equipment will be at no cost to the City.

PART 2: PRODUCTS

2.1 MATERIALS

A. Discharge and Suction Pipes: Approved by Engineer.

1. Discharge piping: Determined according to flow calculations and system operating calculations.
2. Suction piping: Determined according to pump size, flow calculations, and manhole depth following manufacturer's specifications and recommendations.

B. Polyethylene Plastic Pipe:

1. High density solid wall and following ASTM F714 Polyethylene (PE) Plastic Pipe (SDR-DR) based on Outside Diameter, ASTM D1248 and ASTM D3550
2. Homogenous throughout, free of visible cracks, discoloration, pitting, varying wall thickness, holes, foreign material, blisters, or other deleterious faults.

C. High-Density Polyethylene (HDPE).

1. Homogenous throughout, free of visible cracks, discoloration, pitting, varying wall thickness, holes, foreign material, blisters, or other deleterious faults.

a. Defective areas of pipe: Cut out and joint fused as stated herein.

2. Assembled and joined at site using couplings, flanges or butt-fusion method to provide leak proof joint. Follow manufacturer's instructions and ASTM D 2657.
    a. Threaded or solvent joints and connections are not permitted.

3. Fusing: By personnel certified as fusion technicians by manufacturer of HDPE pipe and/or fusing equipment.
4. Butt-fused joint: True alignment and uniform roll-back beads resulting from use of proper temperature and pressure.
    a. Allow adequate cooling time before removal of pressure.
    b. Watertight and have tensile strength equal to that of pipe.
    c. Acceptance by Engineer before insertion.
5. Use in streams, storm water culverts and environmentally sensitive areas.

D. Flexible Hoses and Associated Couplings and Connectors.
1. Abrasion resistant.
2. Suitable for intended service.
3. Rated for external and internal loads anticipated, including test pressure.
    a. External loading design: Incorporate anticipated traffic loadings, including traffic impact loading.

4. When subject to traffic loading, compose system, such as traffic ramps, covers, or trenches with steel plates.

    a. Install system and maintain H-20 loading requirements while in use or as directed by the Engineer.

E. Valves and Fittings: Determined according to flow calculations, pump sizes previously determined, and system operating pressures.

F. Plugs: Selected and installed according to size of line to be plugged, pipe and manhole configurations, and based on specific site.
1. Additional plugs: Available in the event a plug fails. Plugs will be inspected before use for defects which may lead to failure.

G. Aluminum "irrigation type" piping or glued PVC piping will not be permitted.

H. Discharge hose will only be allowed in short sections when approved by Engineer.

2.2 EQUIPMENT

A. Pumps

1. Fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in priming system.
2. Electric or diesel powered.
3. Constructed to allow dry running for long periods of time to accommodate cyclical nature of effluent flows.

B. Provide
1. Necessary stop/start controls for each pump.
2. Backup power system for the bypass system.
3. One standby pump of each size maintained on site.
4. Alarms notifying Contractor of high-water and pump failure.
   a. On-line, isolated from primary system by a valve.

C. Alarms

1. The contractor/vendor shall provide the necessary stop/start controls and alarms for each pump. Autodialers shall be used to alert of problems, if a header system is used to manifold the pumps, each pump shall include an autodialer.

2. It is the intent for the bypass pumping system to be operated and controlled by a series of wastewater floats to automatically start and stop pumps, depending on water levels in the manhole(s). The system, at a minimum, shall include an autodialer to alert and alarm the Contractor's and City designated staff by cell phone communication of potential failures and prior to any high-water alarms. The Contractor shall be responsible for ensuring proper operation and maintenance of the bypass pumping system.

3. Details on pump controls and instruments to safely operate and alarm of conditions. Provide sequence of Contractor's emergency response contacts for the autodialers.

4. The Contractor and City Operator(s) shall be linked by cell phone 24-hours a day during the course of bypass operations. Any alarms shall initiate a call to the contractor and City. City and contractor shall each have a minimum of three (3) individuals listed within the 'calling tree'. If the first contact does not confirm receipt of the alarm call, then the next contact shall be called until the alarm is either confirmed and/or all three (3) contacts are called. The City's link into the alarm status is only for informational purposes. The contractor shall be responsible for all bypass alarm conditions, and shall be required to resolve the condition that is causing the alarm.

D. Backup Power: Bypass pumping operations will require backup power provisions that can temporarily power the system for a minimum of 30 minutes.

2.3 DESIGN REQUIREMENTS

A. Bypass pumping systems:

1. Sufficient capacity to pump peak flow of 175 GPM.
    a. Peak flows greater than 175 GPM as approved by Engineer.
2. Maintain the sewage water surface level in the bypass wet-well a minimum of 3 feet below ground level at all times.
3. Operate 24 hours per day.

B. Provide pipeline plugs and pumps of adequate size to handle peak flow, and temporary discharge piping to ensure total flow of main can be safely diverted around section to be repaired.

PART 3: EXECUTION

3.1 PREPARATION

A. Determining location of bypass pipelines.

1. Minimal disturbance to existing utilities.
    a. Field locate existing utilities in proposed bypass area.
2. Obtain approvals for placement within public or private property.
3. Obtain Engineer's approval of location.
4. Costs associated with relocation of utilities and obtaining approvals at no cost to the City.

3.2 INSTALLATION AND REMOVAL

A. Provisions and requirements must be reviewed by Engineer before starting construction.

B. Remove manhole sections or make connections to existing sewer and construct temporary bypass pumping structures at access location indicated on Drawings and as required to provide adequate suction conduit.

C. Plugging or blocking of sewage flows shall incorporate a primary and secondary plugging device. When plugging or blocking is no longer needed for performance and acceptance of work, remove in a manner that permits the sewage flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream.

D. When working inside manhole or force main, exercise caution. Follow OSHA, Local, State and Federal requirements. Take required measures to protect workforce against sewer gases and/or combustible or oxygen-deficient atmosphere.

E. Installation of Bypass Pipelines:

1. Pipeline may be placed along shoulder of roads.

   a. Do not place in streets or sidewalks unless approved by the Engineer.

2. When bypass pipelines cross local streets and private driveways, place in roadway ramps.

   a. When roadway ramps cannot be used, place bypass in trenches and cover with temporary H-20 traffic rated steel plates as approved by Engineer.

3. If required, coring through existing manholes to install discharge piping shall be coordinated with the City and Engineer.

   a. When bypassing is complete, patch any existing manhole damage with grout per Section 03100.

F. During bypass pumping operation, protect sewer lines from damage inflicted by equipment.

G. Upon completion of bypass pumping operations, and after the receipt of written permission from Engineer, remove piping, restore property to pre-construction condition and restore pavement.

PART 4: MEASUREMENT AND PAYMENT

4.1 Except as otherwise specified herein, providing for and complying with requirements in this Section will not be measured for payment, but cost will be considered incidental to Contract.

END OF SECTION