

APPENDIX A – TECHNICAL SPECIFICATIONS

Walnut Street Gravity Sewer Replacement

The Company shall provide all labor and material to install approx. 2,700 LF of 36-inch diameter gravity sewer trunk line and 9- 6 foot diameter precast concrete manholes, 530 LF of 20-inch PVC force main, remove and replace approx. 760 LF of 8-inch gravity sewer by the open cut method and 105 LF of 54" steel casing by the jack and bore method. Upon completion of new gravity sewer main installation, the Company shall provide all labor and material to abandon in place approx.. 3,500 LF of 60-inch diameter gravity sewer.

901 BID DRAWINGS

Titled "Construction Drawings for Walnut Street 60-inch Sewer Rehabilitation: 36-inch Liberty Street Gravity Trunk Sewer" by Mott MacDonald, LLC are attached.

902 GEOTECHNICAL REPORT

Titled "Final Report for Geotechnical Exploration for Walnut St 60-inch Sewer Rehabilitation: 36-inch Liberty Street Gravity Trunk Sewer " prepared by Meskel & Associates Engineering is attached.

903 SUE TEST HOLE REPORTS

Test hole reports 1 through 38 Titled Vacuum Test Hole Reports prepared by DeGrove Surveyors, Inc. are attached.

904 RESPONSIBLE BIDDERS LIST (RBL) GC-11 LOCATE LINE VERIFICATION

Upon request by JEA, Company shall identify which subcontractor on JEA's RBL GC-11 Locate Line Services Verification listing will be utilized for the installation of locate wire on PVC piping. The Company may obtain a list of prequalified persons and/or companies by contacting the JEA Procurement Bid Section, 21 W. Church Street, Suite 103, Jacksonville, FL 32202, (904) 665-6740, or by fax (904) 665-7294, or online at JEA.com.

905 PIPE UNIT COST

Unit costs for pipes shall include all temporary pavements as necessary to restore the roadway after each working day, until final pavement repair is made.

906 PHASING

Any COJ standard pavement repair shall be completed within 10 calendar days or when 500 LF of roadway is disturbed after completion of the utility installation. All mobilization/demobilization required for rework/regrading of lime rock base, dust control, including asphalt paving shall not be paid for separately but shall be included in the cost of the associated items in the Bid Form.

907 REMOVAL/ABANDONMENT OF UTILITIES UNDER ROADWAYS

Water and sewer utilities to be abandoned under roadways shall be capped and grout filled for the length of the pipe under pavement.

908 REMOVAL/ABANDONMENT OF FORCE MAINS

Company shall refer to the JEA General Conditions for the removal and abandonment of all force mains. Company shall take every precaution to avoid contamination of all water sources adjacent to the scope of this project. The Company shall exercise care to prevent spills onto the ground surface and shall immediately contain and clean up any spills at no extra cost to the Owner. The Company shall properly dispose of all waste and wastewater arising from grouting operations. Under no circumstance is grout to be discharged into water bodies.

909 PERMITS AND PLANS APPROVALS

JEA has obtained the following permits for the project:

- COJ Plan Approval
- FDEP Permit to Construct a Domestic Collection/Transmission System
- FDOT Utility Accommodation Permit: 2019-H-294-00247

910 PERMIT COORDINATION MEETINGS

Company shall be responsible for being thoroughly familiar with all permit requirements prior to mobilizing and starting work associated with a particular permit. If a permit requires a notification or meeting with the issuing agency prior to starting work, Company shall be responsible for arranging said meeting and informing the JEA Representative. The following shall be attended by, but not limited to, the Company's Project Manager, Company's Site Superintendent, Permitting Agency Representative, JEA Project Manager and JEA Inspector.

911 CONNECTIONS TO EXISTING WATER AND SEWER UTILITIES

Company shall verify size and type of pipe at each connection prior to ordering materials for connections.

912 GRASSING/SODDING

The Company shall replace all sod in-kind. St. Augustine type grass/sod will not be allowed in City of Jacksonville Right-of-Ways.

913 CLEARING AND GRUBBING

Payment for clearing and grubbing shall not be paid for separately, but shall be included in the cost of the associated item of work. Payment will be compensation in full for all clearing and grubbing required for the roadway right-of-way and for any other clearing and grubbing indicated or required for the construction of the entire project area including area of excavated trenches and where trenchless operations are required, including all necessary hauling, furnishing equipment, equipment operation, furnishing any areas required for disposal of debris, leveling of terrain and the landscaping work of trimming, etc. as required.

914 SWALE AND DITCH CONSTRUCTION / REGRADING

The Company shall re-grade all existing swales and ditches as necessary to restore the swales and ditches to their original (or better) condition. No separate payment shall be made for re-grading or construction of new drainage ditches as required for restoration, but shall be included in the Bid Document for roadway paving replacement. Payment for sodding of swales and ditches will be separate.

915 DUST CONTROL

The Company shall utilize a water spray truck to mitigate dusty conditions when roadways are unpaved and construction areas are not sodded.

916 EARTHWORK

It shall be the sole responsibility of the Company to evaluate the geotechnical findings and recommendations along with the construction drawings to determine the quantity of soil to be managed or removed/disposed and replaced in order to meet the requirements of the Contract Documents. No separate payment shall be made for stockpiling, managing, mixing, and/or removal, disposal, importation and placement of A-3 sand required for backfill and/or over-excavation (bedding) material for the pipeline(s) and structures, but all costs shall be merged with the associated item of work shown in the Bid Form. Excess and/or unsuitable material shall become the property of the Company and shall be disposed of outside of the right-of-way.

917 UPDATED SURVEYING

In addition to the Surveying requirements set forth in Section 2.14.20 of this solicitation, the Company shall be responsible for staking the project stationing, easements and/or right-of-way boundaries. The survey datum used for this project is NAVD 1988.

918 FORCE MAIN PROFILE ELEVATIONS

The force main profile shown on the contract drawings indicate the station and elevation for the air release valves (ARV). The ARV must be located at a high point. To ensure this requirement is met, the Company shall take station and elevation readings of top of force main pipe at 100 foot intervals. The data collected shall be taken during the progression of the pipeline installation. Once the stations and elevations are collected, submit to the JEA Representative prior to installing the ARV. The JEA Engineer will review the elevations to determine if the station (location) for the ARV needs to be adjusted from that shown on the force main (FM) profile. If the Company installs the pipeline such that additional high points are created on the pipeline profile beyond that shown on the contract drawings, the company shall be solely responsible for furnishing and installing additional ARV/manholes at each of these high points. Elevations should be referenced to the survey benchmark.

919 EXISTING UTILITIES

Known surface and subsurface utilities are shown or noted on the drawings as accurately available information will permit. The JEA does not guarantee the information shown or noted or that utilities other than those indicated (on the drawings) do not exist. It is the responsibility of the Company to notify each of the utilities at least (15) fifteen working days prior to construction and request that the location of their respective utility or material be located and staked in the field. Should the company encounter unidentified utility, work in the immediate area shall promptly cease and the JEA representative shall be advised. The JEA shall investigate the condition and propose remedial action. The Company is reminded of the laws of Florida requiring notification of Gas Company, at least four (4) working days in advanced of any digging operation. The Company shall call the Sunshine State One Call of Florida (811) to request location of all facilities owned by utilities that participate in the locate program. Failure by the company to contact Sunshine One Call of Florida prior to digging shall obligate the company for damages to participating utility company and associated repair cost.

In order to reduce the disruption and cost of utility damages occurring in the COJ ROW and Easements, the Company shall prevent damages to existing utilities caused by its work through field verification of the location of existing utilities. In the case of open excavation, verification may be performed during the Company's work.

Company shall verify the location of existing utilities as needed to avoid contact. Existing utilities shall be exposed using detection equipment or other acceptable means. Such methods may include but shall not be limited to "soft dig" equipment and ground penetrating radar (GPR). The excavator shall be held liable for damages caused to the city's infrastructure and the existing facilities of other utility companies.

920 UTILITY POLE HOLDING / SUSPENDING

Holding or suspending of utility poles including power poles and telephone poles shall be performed as needed, and when trenching or excavating is within a horizontal distance from the pole that is less than the depth of the trenching or excavation. Work shall include, but not limited to, furnishing of all material, labor, supervision, tools, and equipment as required to hold/suspend utility poles. Company shall review the project and notify the JEA Project Manager of all anticipated holds/suspends within ten (10) days following the notice to proceed. JEA will be responsible for the coordination and provision of utility pole holds/suspends. Notice, giving the exact date and time, for each hold/suspend, shall be provided by the Company in writing to the JEA Project Manager at least two weeks in advance of each hold/suspend. No separate pay item will be made to the Company separately, but shall be included in the cost of the associated items in the Bid.

921 VALVE AND LOCATE WIRE BOX IDENTIFICATION MARKERS

The Company shall furnish and install fiberglass identification markers at all gate valve and locate wire box locations as directed by the JEA Representative. All costs associated with this work shall be included in the associated line item in the Bid Document.

926 WATER SERVICE REPLACEMENT

Long side water services will be located throughout the project limits. The Company shall replace all galvanized long side water services from the water main to the service meter prior to installation of the 30-inch force main as per section 350.III.11 of JEA water and sewer standards.

The Company shall notify the JEA inspector 2 weeks prior to any required water outage. The Company shall notify the residents a minimum of 48 hours prior to the outage event. JEA will provide door hangers for the outage event.

Payment of the replacement of long side water services will be per the unit price established on the bid form.

927 SEWER LATERAL PIPING – REMOVE AND REPLACE

Sewer laterals will be strategically located by The Company soliciting information from property owners and by observation of field conditions or by CCTV. Locations of sewer laterals are generally not depicted on the construction drawings.

Measurement of vitrified clay sewer lateral pipe removal and replacement for payment shall be by the linear foot on a horizontal plane along the projection of the centerline of the lateral pipe for only the minimal removal and replacement of the length lateral pipe dictated by the construction of the proposed water main or proposed force main. Payment of vitrified clay sewer lateral piping removal and replacement will be at the per linear foot price stated in the Contract for the size, class, and type of pipe actually installed. The unit price set forth in the Contract will constitute full compensation for excavation and native soil backfilling; de-watering; sheeting and shoring driven and pulled and drag shields for trenches of all depths; placing and removing all traffic signs and barriers and maintaining traffic; as-builts; as well as furnishing and installing the sewer lateral piping and fittings. Connection of sewer lateral pipe of different materials shall be with shear-resistant transition repair couplings. The couplings shall connect to the pipe ends with type 316 SS nut and bolt worm gear clamps. The couplings shall be ASTM C1173 & D5926 compliant, and shall be a Series 5000 Repair Coupling as manufactured by Fernco, Inc., or approved equal. The unit price shall also be full compensation for locating existing sewer lateral piping; the removal and disposal of the existing wastewater lateral piping; plus all incidental work including labor, materials, tools, and equipment.

Measurement of PVC sewer lateral pipe removal and replacement for payment shall be by the linear foot on a horizontal plane along the projection of the centerline of the lateral pipe for only the minimal removal and replacement of the length lateral pipe dictated by the construction of the proposed water main or proposed force main. Payment of PVC sewer lateral piping removal and replacement will be at the per linear foot price stated in the Contract for the size, class, and type of pipe actually installed. The unit price set forth in the Contract will constitute full compensation for excavation and native soil backfilling; de-watering; sheeting and shoring driven and pulled and drag shields for trenches of all depths; placing and removing all traffic signs and barriers and maintaining traffic; as-builts; as well as furnishing and installing the sewer lateral piping and fittings. Connection of sewer lateral pipe of different materials shall be with shear-resistant transition repair couplings. The couplings shall connect to the pipe ends with type 316 SS nut and bolt worm gear clamps. The couplings shall be ASTM C1173 & D5926 compliant, and shall be a Series 5000 Repair Coupling as manufactured by Fernco, Inc., or approved equal. The unit price shall also be full compensation for locating existing sewer lateral piping; the removal and disposal of the existing wastewater lateral piping; plus all incidental work including labor, materials, tools, and equipment.

928 FDOT PAVEMENT MARKING REQUIREMENTS

- Pavement markings should be placed as shown on the plans and detail sheets. If no specific striping comments are noted on the drawings, the Company shall replace damaged/removed striping due to construction activities with like striping and/or reflectors all in accordance with FDOT requirements.
- Any required temporary markings must be in place before opening lanes of traffic. Pay items for temporary pavement markings are not paid for separately but included in the associated item of paving.
- The removal of existing pavement markings will be considered an incidental item with no additional compensation provided.

- All permanent pavement markings shall be extruded thermoplastic and meet FDOT standard specifications, latest edition.
- Thermoplastic pavement markings are to be placed no sooner than 30 calendar days after the completion of the final pavement layer.
- A bituminous reflective pavement marker (RPM) adhesive meeting current FDOT specifications shall be used on asphalt roadways.
- Reflective pavement markers that do not conflict with permanent (thermoplastic) markings shall be placed on all final asphaltic concrete surfaces immediately after the temporary permanent striping is in place.

929 FDOT UTILITY PERMIT

The Company shall comply with all requirements and instructions in the approve FDOT permit 2019-H-294-00247 and the latest edition of FDOT's Standard Specifications for Road and Bridge Construction including, but not limited to, the following:

- All work within the FDOT ROW shall be complete within 60 days after commencement.
- Signed and sealed dewatering plan prior to commencing work.
- Signed and sealed shoring plan prior to commencing work.

930 COJ PAVEMENT MARKING REQUIREMENTS

- Pavement markings should be placed as shown on the plans and detail sheets. If no specific striping comments are noted on the drawings, the Company shall replace damaged/removed striping due to construction activities with like striping and/or reflectors.
- Any required temporary markings must be in place before opening lanes of traffic. Pay items for temporary pavement markings are to be included in the tabulation of quantities.
- The removal of existing pavement markings will be considered an incidental item with no additional compensation provided.
- All permanent pavement markings shall be extruded thermoplastic and meet current City of Jacksonville specifications and FDOT standard specifications, latest edition.
- Thermoplastic pavement markings are to be placed no sooner than 30 calendar days after the completion of the final pavement layer.
- A bituminous reflective pavement marker (RPM) adhesive meeting current City of Jacksonville and/or FDOT specifications shall be used on asphalt roadways.
- The Company shall use 4"x4" CLASS -B reflective pavement markers (RPMs) installed to meet current City of Jacksonville specifications and/or FDOT standard specifications. Acceptable examples are: Ennis Paint co., Model 911; Ray-O-Lite, Model AA-ARCII-FH; Apex, 921AR.
- Reflective pavement markers that do not conflict with permanent (thermoplastic) markings shall be placed on all final asphaltic concrete surfaces immediately after the temporary permanent striping is in place.

The Company SHALL contact the Pavement Marking Inspector (904-387-8861) 48 hours PRIOR to installing any pavement markings of any City of Jacksonville roadway or streets.

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