

## **APPENDIX A – TECHNICAL SPECIFICATIONS**

### **Collins Road Force Main Relocation - Whispering Pines Dr. to Blanding Blvd.**

The Company will perform construction of approximately 5200 LF of waste water force main including 184 LF of flanged 316L SST bridge mounted river crossing pipe with associated bridge hangers and approximately 5040 LF of 12-inch DR-18 PVC force main with associated fittings and appurtenances.

Installation will require coordination with JEA to maintain operation of existing pump stations during tie-ins. Maintenance of sewer service may require the use of vacuum trucks or by-pass systems.

Road restoration will include approximately 9150 SY of milling and resurfacing, 4500 SY of Case X pavement repair, and 65 LF of concrete curb and gutter.

#### **901 BID DRAWINGS**

Titled “Construction Drawings for Force Main Relocation – Collins Road – Whispering Pines Drive to Blanding Boulevard” as prepared by J. Collins Engineering Associates, LLC are attached.

#### **902 GEOTECHNICAL REPORT**

Titled “Report of a Geotechnical Exploration Collins Road Force Main Replacement” Report No. 1629528 prepared by Universal Engineering Sciences is attached.

#### **903 SUE TEST HOLE REPORTS**

Seven test hole reports, 1 through 7, Titled “Subsurface Utility Engineering Test Hole Report” prepared by Southeastern Surveying 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 COLLINS RD. AERIAL FORCE MAIN CROSSINGS REMOVAL AT ORTEGA RIVER**

Lump sum fee shall include removal of pipes from the aerial crossing at the Ortega River, disposal of all materials and waste. The limits of lump sum fee shall begin and end at the points of abandonment on either side of the river. On both the eastern and western bank of the river, the force main shall be removed to the first joint below grade and plugged per JEA standards. It is the Company’s sole responsibility to protect the adjacent Collins Rd. bridge during the removal of all utility materials. Any work necessary to repair the bridge to the original existing condition due to damage during removal of the pipe is the Company’s responsibility and shall be done at no cost to the Owner. It is the Company’s responsibility to protect the water body and avoid any sewage spills during the removal of the aerial force main crossings.

#### **906 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.

Company shall refer to the construction plans to note that the existing 6" force main east of Lift Station Ortega Oaks is to remain in service. The Company shall exercise care to prevent damage to that portion of the existing 6" force main remaining in service during abandonment of the adjacent 8" force main.

#### **907 EXISTING VALVES TO BE PLACED OUT OF SERVICE**

The measurement and payment shall be the unit price per MJ plug installed in accordance with JEA's Water and Sewer Standard as specified in Section 801.III.2. Unit pricing shall include closing the existing valve, removal and disposal of a section of existing piping, installing the MJ plug, and restoration at the removed valve box and cover. Existing piping remaining in service shall be restrained per the requirements of the Restraint Joint Schedule for a dead end. Costs associated with the installation of bell restraints shall not be paid under this bid item. Costs associated with the installation of bell restraints shall be paid under the associated bell restraint unit price.

#### **908 PERMITS AND PLANS APPROVALS**

JEA has obtained the following permits for the project:

- COJ Plan Approval
- FDEP Individual Permit for a Domestic Wastewater Collection / Transmission System

The Company must obtain a SJRWMD Notice of Intent to Use Noticed General Permit for Short Term Construction Dewatering (Form 40C-22-0590-1) prior to the commencement of any dewatering. As part of the permit, a Notice to District of Dewatering Activity (Form RDS-50) must be submitted to the SJRWMD ten days before commencement of dewatering.

Per the Groundwater Report it is recommended that the Company acquire the FDEP dewatering permit as part of the Construction General Permit.

The Company is responsible for obtaining City of Jacksonville (COJ) Right-of-Way (ROW) Permit and permits for removal or relocation of protected trees prior to construction. The COJ plan approval letter along with a set of the approved plans will be made available to the Company to obtain the ROW and Tree Removal Permits.

The Company is responsible for notifying FDOT prior to placing TTC signs or barriers within the FDOT ROW along SR 21, Blanding Blvd.

#### **909 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.

#### **910 CONNECTIONS TO EXISTING WATER AND SEWER UTILITIES**

Company shall verify size and type of pipe at each connection prior to ordering materials for connections. Price for connections shall be a lump sum price to include the installation of restraints/sleeves as shown in the plans or as approved by JEA.

#### **911 FLOW TRANSFER WORK PLAN**

A summary of the JEA pump stations affected by the transfer of waste water flow to the new 12" force main is attached. Contractor shall submit a Flow Transfer Work Plan for transfer of flow from the existing force main (10" along I-295, as well as the existing 6" force main located on Collins Road that is being replaced by the new 12" force main in this project). This plan to be submitted to JEA for review at least 30 days prior to the flow transfer.

#### **912 BYPASS PUMPING**

The Company shall provide all necessary labor, materials and equipment to maintain the uninterrupted sewer service of laterals, mains, trunks, force mains and pump stations at all times. The manner in which this is accomplished shall be left to the discretion of the contractor, subject to the requirements of the Contract and the prior approval of the JEA Engineer. The JEA Engineer's approval in no way relieves the contractor of any liabilities resulting from the bypass method chosen.

The Company shall not allow any sewage, at any time, to be pumped into any drainage structure or to spill, puddle, or run upon any street, construction trench, public or private property.

The responsibility for coordinating the need, length of time, method, and suction and discharge locations for bypass pumping shall be the responsibility of the Company subject to approval by the JEA Engineer.

#### **913 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.

#### **914 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.

#### **915 SWALE AND DITCH CONSTRUCTION/REGRAIDING**

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.

#### **916 DUST CONTROL**

The Company shall utilize a water spray truck to mitigate dusty conditions when roadways are unpaved and construction areas are not sodded. No separate payment shall be made for dust control, all costs shall be merged with the associated item of work shown in the Bid Form.

#### **917 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.

#### **918 TURBIDITY BARRIERS**

The Company shall take steps and make suitable provisions to minimize siltation and erosion of waterways that may result from its operation during the course of construction.

The Company shall make suitable arrangements, which may require temporary construction of flumes, boxes, or some other device(s), at the Work Location for the drainage and disposal of water. The Company shall be responsible for protecting adjacent property to the Work Location from damage by water resulting from its operation. The Work Location shall be returned to its original condition to the satisfaction of JEA.

The Company is cautioned that execution or maintenance that creates turbidity and that directly or indirectly affects the water quality of any waterway into which storm water is discharged in such a manner as to exceed the limitations prescribed in the Florida Administrative Code, is a violation of the water quality standards of the State of Florida.

Turbidity levels with the project area (including within 100 ft of the construction activity) shall not exceed background conditions.

The cost for turbidity barriers and other provisions for erosion control is included in the unit or lump sum price set forth in the contract for the items to which the turbidity barriers and erosion control provisions are incidental and appurtenant.

## **919 SURVEYING**

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.

## **920 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. The Company shall submit the station and elevation data 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.

## **921 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 representative shall investigate the condition and propose remedial action. The Company is reminded of the laws of Florida requiring notification of Gas Companies, 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.

**922 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.

**923 POLYMER CONCRETE MANHOLE**

At locations where new manholes are to be installed, such as at air release valve assemblies, the use of Polymer Concrete Manholes complying with the 2019 JEA Standard Section 427 are an acceptable alternative to concrete manholes with polyurethane specialty liners.

**924 INSTALLATION OF STAINLESS STEEL FORCE MAIN – ORTEGA RIVER CROSSING**

Lump sum payment shall include, but is not limited to, furnishing and installing all pipe supports, saddles, straps, and appurtenances necessary for the complete installation of the 12-inch force main crossing at the Collins Rd. bridge. Limits of the lump sum shall be approximately STA 28+65 to STA 30+50 (including the stainless steel piping and 45° bends on either side of the bridge).

**925 BRIDGE PIPING SHOP DRAWINGS**

The Contractor shall submit material certification to JEA to verify the material for the Collins Road Bridge Piping and hangers, hardware, etc. is 316 Stainless Steel.

**926 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.

**927 WORK RESTRICTIONS**

The contractor shall confine the active work area to no more than one block at a time.

City of Jacksonville Traffic Engineering and The Jacksonville Fire and Rescue Communications Center (FRCC) shall be notified of Road Closures / Detours. Provide dates and times of planned closures to [trafficeng@coj.net](mailto:trafficeng@coj.net) at minimum 72-hours ahead of closure / detour.

**928 PAVEMENT REMOVAL**

Saw cuts must be used on all asphalt removal.

**929 TEMPORARY PAVEMENT**

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.

### **930 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.

### **931 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-ARCI-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.

### **932 SIDEWALK REMOVAL AND REPLACEMENT**

The measurement and payment for this item shall be in accordance with JEA's Water and Sewer Standard as specified in Section 491.1 and 491.4. In addition to these requirements, the following conditions apply:

- Payment of the sidewalk removal shall also include removal of all existing retaining walls, steps, handrails, etc. These existing improvements shall be removed as part of this work due to their proximity and/or connection to the existing sidewalk.
- Payment of the sidewalk replacement shall also include construction of all pre-existing items that were removed such as but not limited to: retaining walls, steps, handrails, etc. All existing improvements that were removed during construction shall be reconstructed in their existing location to their existing configurations utilizing the existing materials to provide an improvement that is equal to or exceeds the pre-existing condition.