

TASK ORDER NO. 1

SCOPE OF SERVICES AND FEE PROPOSAL

WWTF PROCESS PIPING CONDITION ASSESSMENT – PHASE 2

CITY OF NEW PORT RICHEY

I. PROJECT SCOPE

Description:

The City of New Port Richey (CITY) owns and operates the New Port Richey Wastewater Treatment Facility (WWTF), located at 4730 Main Street, New Port Richey, Florida 34652. The WWTF has a treatment capacity of 7.5 Million Gallon Per Day (MGD) based on an Annual Average Daily Flow (AADF) measurement. On May 4, 2019, a buried section of the 20-inch ductile iron influent piping, which transfers mixed liquor suspended solids (MLSS) flows from the Headworks to Aeration Basin No. 2, ruptured, resulting in a significant sewage spill. Upon visual inspection of the pipe there was catastrophic corrosion of the interior of the pipe wall, ultimately causing the pipe to rupture. This pipe was installed as part of the facility expansion completed in 1988. Due to the state of observed corrosion in the pipe, it is suspected that other process piping that was installed during that same facility expansion time frame may be in a similar state of deterioration. The CITY has completed the emergency replacement of the influent MLSS piping from the Headworks structure to Aeration Basins No. 1 and 2, along with the Phase 1 condition assessment of the structural conditions of the influent piping to Aeration Basins No. 3 and 4, and the Schreiber Tank. While this work targeted the influent piping for the aeration treatment basins, other essential process pipes at the WWTF could pose an operational risk and release potential spillage if they experienced leaks or ruptures.

The CITY is requesting professional engineering assistance from Stroud Engineering Consultants, Inc. (ENGINEER) with the Phase 2 condition assessment to investigate the structural integrity of other wastewater or solids containing underground process piping at the WWTF. It is understood that this project will evaluate the condition of the following process pipe elements:

1. The 24-inch diameter MLSS effluent pipes from Aeration Basin Nos. 1, 2, 3, and 4 to the header piping.
2. The 36, 48, and 54-inch MLSS header pipe from the Aeration Basins manifold to the Clarifier Splitter Structure.
3. The 30-inch diameter ML influent pipes from the Clarifier Splitter Structure to the Secondary Clarifiers.
4. The 20, 36, and 42-inch diameter Secondary Effluent pipes from the Secondary Clarifiers to the Effluent Filters.
5. The 20 and 30-inch Return Activated Sludge (RAS)/Waste Activated Sludge (WAS) pipes from the Secondary Clarifiers to the RAS/WAS Pump Station.
6. The 24-inch diameter RAS pipe from the RAS/WAS Pump Station to the Headworks Structure.
7. The 10-inch diameter wastewater force main from Cross Bayou to the Headworks Structure.
8. The 24 and 30-inch diameter wastewater force mains from West Main Street to the Headworks Structure.

Mr. Brent Heath, P.E. will serve as the ENGINEER's project manager on this task order for the duration of the scope of services. The ENGINEER will provide project management as part of this task order, which shall include: continuous management and coordination of the overall project;

preparation of miscellaneous correspondence; coordination of sub-consultant services; and attendance at monthly project meetings (as requested) with the CITY. The progress of the project will be discussed with the CITY's designated project manager as necessary throughout the remaining life of the project. A written summary of the project status and completed tasks will be provided with each invoice submitted by the ENGINEER.

Based on the above background discussion, the following specific tasks and services are anticipated for this project, and are included in this Scope of Services:

1.0 INSPECTION AND TESTING SERVICES

The ENGINEER will gather background information needed from the CITY, such as record drawings of the WWTF yard piping and off-site force main infrastructure, to verify the testing locations. The ENGINEER will make site visits to further our understanding of both the existing facilities and proposed testing locations.

The ENGINEER will provide the labor, materials, and equipment necessary to develop drawings to aid in the implementation of the pipe testing, showing the proposed testing locations for each pipe.

The ENGINEER's testing scope will include the following:

- Coordinate with a subsurface utility engineering (SUE) sub-consultant to identify the horizontal location of buried utilities, utilizing ground penetrating radar technology, within the proposed project area and obtain utility locates in select locations for the purpose of confirming horizontal and vertical locations of buried utilities, and to expose the test hole locations using vacuum soft-dig excavation methods. Based on the size of the pipe being exposed, the excavation may result in a trench of up to 6-8 feet long. The ENGINEER has included costs within Task 2 to provide funding for the proposed utility locates and excavations, with an anticipated quantity of twenty (20) crew days. Following each excavated test hole in the asphalt road and upon completion of the ultrasonic thickness testing at each location, the hole locations will be restored with asphalt patch materials and compaction, to provide for the paving restoration. Maintenance of traffic will be provided throughout the SUE and testing activities.
- The ENGINEER will perform a visual inspection of the exposed pipe exterior of the various ductile iron process piping. The ENGINEER will conduct ultrasonic thickness testing to determine the pipe wall thickness at the exposed testing locations. The intent of the inspection, and associated testing, will be to determine the current condition of the piping (i.e. degree of corrosion, wall thickness, structural integrity, etc.) and to evaluate if repairs are needed. The ultrasonic thickness testing is a type of non-destructive testing that provides the measurement of the pipe wall thickness. These measurements are compared to the pipe manufacturer's data to determine if there is pipe wall reduction, which is an indication of exterior/interior corrosion. However, the testing only measures the wall thickness at the point of the test and is not indicative of the pipe condition upstream or downstream of the test location. Therefore, it is important to obtain numerous test locations for each process pipe to gain a clearer understanding of the pipe condition. The ENGINEER will coordinate with the CITY Public Works and WWTF Operations staff throughout the excavation/testing process, provide copies of test reports, and assist the CITY with review of the information generated.

2.0 PIPE CONDITION ASSESSMENT REPORT

The ENGINEER will prepare a report summarizing the test results, determination of pipe condition, extent of piping in need of repair, an assessment of pipe repair methods available, and preliminary estimated costs associated with the repair.

If repairs to any process pipe are determined to be necessary, a separate task order will be prepared to provide engineering services to include design and oversight of the selected pipe repair, if necessary.

3.0 SUE/TEST LOCATION EXCAVATION

The ENGINEER will coordinate with a sub-consultant as described in Task 1 to provide the associated SUE and test location excavations to allow for the pipe testing. The budget for this task is based on an estimated cost for the sub-consultant to provide twenty (20) crew days for the work. Experience with the test hole excavation work for Phase 1 provided guidance with developing the budget for this task. The WWTF site had soil conditions (e.g. excessive rock, congested pipe/conduit layouts, high water table, etc.) that made the excavation work difficult requiring extended time for each test hole location.

II. DELIVERABLES

This Scope of Services is to include the following deliverables:

- Drawings of Proposed Testing Locations
- Final Report (summarizing the test results, existing pipe conditions, extent of piping in need of repair, and potential repair options/costs).

III. ASSUMPTIONS

This Scope of Services is based upon the following assumptions:

- **Paving Restoration:** It is assumed that the restoration activities for pipe inspection holes/trenches performed in the paved areas of the WWTF will be completed as patch repairs by the SUE Sub-consultant. Any increased pavement restoration work will require a separate contractor to complete.

IV. ENGINEER’S COMPENSATION

For Tasks 1 and 2 described above, the CITY will compensate the ENGINEER on a fixed fee basis. For Task 3, the CITY will compensate the ENGINEER based on actual cost for the SUE and Testing Excavation Subcontractor(s). Compensation to the ENGINEER for the services included in the above tasks shall not exceed the following:

1.	INSPECTION AND TESTING SERVICES	\$ 29,600.00
2.	PIPE CONDITION ASSESSMENT REPORT	\$ 15,900.00
3.	SUE/EXCAVATION SERVICES	\$ 45,000.00
	TOTAL AUTHORIZATION	\$ 90,500.00

V. ADDITIONAL SERVICES REQUIRING AUTHORIZATION IN ADVANCE

If required by the ENGINEER and authorized by the CITY, additional services related to this Task Order shall be provided by the ENGINEER for additional professional fees negotiated with and agreed to by the CITY.

VI. PROJECT SCHEDULE

The ENGINEER will begin the activities described herein immediately upon receiving written notice to proceed. The estimated project schedule is outlined as follows:

<u>Task 1</u>	<u>Weeks to Complete After Notice to Proceed Issued</u>
Inspection/Testing Services	12
Pipe Condition Assessment Report	16
CITY Review	18
Final Report	20

TASK ORDER NO. 1

WWTF PROCESS PIPING CONDITION ASSESSMENT – PHASE 2

Stroud Engineering Consultants, Inc.

A. SCOPE OF SERVICES – The City of New Port Richey hereby authorizes the firm of Stroud Engineering Consultants, Inc. to perform the specific services summarized on the attached statement entitled TASK ORDER NO. 1, SCOPE OF SERVICES AND FEE PROPOSAL.

B. TIME OF COMPLETION – Work under this Authorization will begin upon Notice to Proceed from the City and will be completed within the schedule presented on the attached statement entitled TASK ORDER NO. 1, SCOPE OF SERVICES AND FEE PROPOSAL.

C. KEY PERSONNEL – Stroud Engineering Consultants, Inc. shall appoint a single representative with whom the City of New Port Richey shall coordinate. This representative shall have the authority to transmit instructions, receive information, interpret and deliver decisions, etc. Key personnel assigned to the project by Stroud Engineering Consultants, Inc. shall not be removed from the project without the prior written approval of the City of New Port Richey. For this authorization key personnel are as follows: Brent Heath, P.E.

D. COMPENSATION – Professional fees for this authorization will be fixed fee in accordance with the AGREEMENT FOR GENERAL UTILITY ENGINEER, WATER-RESOURCE AND ENVIRONMENTAL CONTINUING SERVICES (GUE&WR&EC) with the City of New Port Richey, dated February 11, 2020.

E. ACCEPTANCE – By signature hereon, the parties each accept the provisions of this TASK ORDER NO. 1, and authorize the Consultant to proceed at the direction of the City's representative, in accordance with the SCOPE OF SERVICES AND FEE PROPOSAL.

Witness: 

STROUD ENGINEERING CONSULTANTS, INC.


Brent A. Heath, President



Date

Attest:

CITY OF NEW PORT RICHEY, FLORIDA

City Clerk

Mayor

Date