



SCOPE OF SERVICES

Solicitation Number: CLMP198

Project Name: Large Diameter Wastewater Interceptors Multi-Sensor Pilot Project

PROJECT FOR:

CITY OF AUSTIN, AUSTIN WATER, THROUGH ITS CAPITAL CONTRACTING OFFICE

PROJECT TITLE:

Large Diameter Wastewater Interceptors Multi-Sensor Pilot Project

OBJECTIVES OF THE PROJECT:

Austin Water is requesting that qualified firms submit statements of qualifications for a pilot project to test and evaluate the use of multi-sensor technology in the condition assessment of large diameter sewer lines. A range of diameters, depths, and lengths have been selected and this pilot project will evaluate the use of technology, obtaining data, and incorporation of the results into Austin Water's existing asset management system.

BACKGROUND:

The City of Austin's wastewater collection system consists of approximately 1.2 million linear feet of 24" or larger wastewater mains, roughly 8.5% of the overall collection system. Due to the age and corrosive sewer environment and the use of concrete pipe material, there is a need to perform condition assessment on these large diameter interceptors and tunnels.

In the past few years, there have been significant advances in multi-sensor technology (CCTV, Sonar, and Laser) which have been incorporated into the inspection and assessment of large diameter sanitary sewer lines. This solicitation will be a pilot project to evaluate this new technology in anticipation of future assessments of the large diameter lines in the collection system.

ANTICIPATED SERVICES:

The anticipated services will include civil engineering, project management, investigation, analytical study, field services, coordination, evaluation of historical data, preliminary engineering and other engineering services as necessary for this pilot project. In addition, firms will use multi-sensor equipment to obtain condition assessment of the areas identified in this pilot study. The services should be performed by engineering firms with a significant amount of experience in sewer condition assessment programs. Selected firms should be knowledgeable and experienced in wastewater collection systems, the collection of field data, developing successful programs incorporating existing City systems and implementing additional systems, and developing cost effective and efficient recommendations for addressing system deficiencies.

The selected firm will also be expected to work with the City's project sponsor and project manager.

REQUIRED TASKS:

- **Initial Submittals** – Provide initial submittals, including but not limited to, project work plan and schedule, staffing and equipment plan including proposed resources and equipment, and quality control plan.
- **Review Proposed Pilot Areas** – Review proposed areas for pilot project for applicability and identification of any major issues.
- **Review Existing Data** – Review existing as-built drawings, pipe manufacturer lay sheets, shop drawings and other record information to best estimate as constructed conditions, including original wall thickness.
- **Develop Work Plan** – Prepare work plan, schedule, and Health and Safety Plan for performing multi-sensor assessment on the selected lines. Identify any access or other concerns that could impact sewer assessments.
- **Field Preparation** – Locate manholes in the study area and determine equipment access routes. If clearing is required, it may require permitting from the City's General Permit Office. If work is in the roadway, it may require permitting from the City's Right of Way Office. In addition, frames and covers may need to be removed and replaced to provide access for multi-sensor equipment.
- **Multi-Sensor Assessment** – Using established technology, perform an assessment of the large diameter lines using Multi-Sensor Inspection (Closed Circuit Television Camera (CCTV), Sound Navigation and Ranging (SONAR) and Light Amplification by Stimulated Emission of Radiation (LASER).
- **Review and Evaluation** – Perform a completeness check of all assessments and evaluate structural conditions of the pipeline segments.
- **Incorporate Data** – Incorporate and transfer data to the City's current computerized maintenance management system (Hansen) and the City's TV video inspection footage (Granite XP). The current Hansen nor Granite XP systems will likely not be able to incorporate data from SONAR and LASER. Provide options and recommendations for database management systems to incorporate the additional information from SONAR and LASER investigations.
- **Technical Memorandum** – For each pilot area, provide a Sealed Technical Memorandum documenting CCTV, laser profile, and sonar results along with any defects requiring immediate repairs, including recommendations on proposed repairs, estimated remaining useful life, rehabilitation options, as required, and estimated costs for rehabilitation or replacement.
- **Technical Assistance** – Based upon the results from the pilot studies, provide technical guidance and assistance in developing a City wide multi-sensor technology program for Austin Water including the preparation of an overall project schedule and technical specifications for the multi-sensor work.

PROPOSED AREAS:

Austin Water has identified seven areas for this pilot project. These areas range in diameter and location and are detailed in the table below and Attachment 1 – Proposed Pilot Areas.

Area	Diameter										Total LF	
	15"	18"	24"	30"	36"	42"	48"	54"	66"	72"		
1				3,111		4,355						7,465
2										6,860		6,860
3							180	7,435				7,615
4										3,342		3,342
5	197	500	5,125									5,822
6							7,501					7,501
7				3,748	336	1,072						5,156
Total LF	197	500	5,125	6,859	336	5,426	7,681	7,435	3,342	6,860		43,761

* The 15” and 18” diameter pipes should be included in the assessment only if equipment is compatible with these sizes.

PROPOSED PROJECT SCHEDULE:

Review of proposed pilot areas and existing data should be completed within 2 months of the Notice to Proceed. It is estimated that developing of a work plan, field preparations, and multi-sensor assessment will take 3 to 6 months to complete. The draft technical memorandum should be submitted within 2 months after the multi-sensor assessment is completed and the final technical memorandum should be submitted within 4 months after the multi-sensor assessment is completed.

PROPOSED PROCUREMENT SCHEDULE

Submittal Due Date: May 18, 2016
 Interviews (if needed): July 6, 2016
 Water & Wastewater Commission: August 10, 2016
 Council: August 18, 2016
 Contract Executed: October 13, 2016

COST ESTIMATE:

The estimated budget for this project shall not exceed \$800,000.

MAJOR AND OTHER SCOPES OF WORK:

Below is a list of the major scopes of work that the City has identified for this project. ****There must be representation for all major scopes of work listed in the prime’s statement of***

qualifications. The experience of the firms listed to perform the Major Scopes of Work, whether a subconsultant or prime firm, will be evaluated under Consideration Item 6 – Major Scopes of Work – Comparable Project Experience.

In addition, the City has identified Other Scopes of work that MAY materialize during the course of the project. The City does not guarantee that the scopes listed under Other Scopes of work will materialize on this contract. If the prime consultant intends to enter into a subconsulting agreement on a scope of work not listed below, the prime consultant is required to contact SMBR and request an updated availability list of certified firms in each of the scopes of work for which the prime consultant intends to utilize a subconsultant.

*** Major Scopes of Work**

**Multi-Sensor Assessment of Large Diameter Wastewater Lines
Evaluation and Interpretation of Multi-Sensor Assessment Data, including Recommendations**

Other Scopes of Work

None

Notes:

- Construction Inspection and Public Information and Communications are **NOT** a subconsultant opportunity. These services will be performed in-house or under a separate contract, if needed, and will be determined when project assignment is made.
- Participation at the prime or subconsultant level may create a conflict of interest and thus necessitate exclusion from any contracts resulting from the work performed in the design phase.
- If the City determines that a conflict of interest exists at the prime or subconsultant level, the City reserves the right to replace/remove the prime or instruct the prime consultant to remove the subconsultant with the conflict of interest and to instruct the prime consultant to seek a post-award change to the prime consultant's compliance plan as described in City Code § 2-9B-23. Such substitutions will be dealt with on a case-by-case basis and will be considered for approval by Small and Minority Business Resources (SMBR) in the usual course of business. The City's decision to remove a prime or subconsultant because of a conflict of interest shall be final.