

A G E N D A



Recommendation for Council Action (CLMD)

| | | | | |
|---|--|-------|---------------|-----|
| Austin City Council | Item ID: | 45876 | Agenda Number | 11. |
| Meeting Date: | June 18, 2015 | | | |
| Department: | Contract Management | | | |
| Subject | | | | |
| Authorize negotiation and execution of an amendment to the professional services agreement with CAROLLO ENGINEERS, INC. to provide engineering services for the South Austin Regional Wastewater Treatment Plant Blower Improvements Project in the amount of \$1,571,447, for a total contract amount not to exceed \$4,062,447. | | | | |
| Amount and Source of Funding | | | | |
| Funding is available in the Fiscal Year 2014-2015 Capital Budget of the Austin Water Utility. | | | | |
| Fiscal Note | | | | |
| A fiscal note is attached. | | | | |
| Purchasing Language: | | | | |
| Prior Council Action: | August 29, 2013 – Council authorized negotiation and execution of a Professional Services Agreement with CAROLLO ENGINEERS, INC. | | | |
| For More Information: | Steve Parks, 512-974-3576; Charles Celauro, 512-972-0653; Lucy Bonee, 512-974-7967; Elizabeth Godfrey-Weidig, 512-974-7141 | | | |
| Boards and Commission Action: | June 10, 2015 - Approved by the Water and Wastewater Commission on a 5-0-2 vote with Commissioners Castleberry and Lee off the dais. | | | |
| Related Items: | | | | |
| MBE / WBE: | This contract was awarded in compliance with City Code Chapter 2-9B Minority Owned and Women Owned Business Enterprise Procurement Program by meeting the goals with 8.53% MBE and 13.57% WBE participation to date. | | | |
| Additional Backup Information | | | | |

The South Austin Regional Wastewater Treatment Plant (SARWWTP) consists of three parallel treatment units: Train A, Train B, and Train C. Each unit generally consists of physical and biological processes that treat raw sewage to meet criteria required by the City and regulatory agencies. The current treatment capacity of the wastewater treatment plant is 75 million gallons per day (MGD) as measured on an average daily basis. Trains A and B were constructed in the mid-1980s and Train C was constructed in the early 2000s.

In August of 2011, SARWWTP experienced a major chlorine leak which significantly damaged equipment in the Train A and B Secondary Treatment Building, including air blowers housed in the building. The blowers are vital components of the treatment process. They provide air for many purposes at the plant but primarily for the biological processes that treat the sewage in the activated sludge treatment process. The chlorine leak damaged the blower controls, instrumentation, condition monitoring devices, motor control centers and the Secondary Treatment Building's air conditioning, lighting, electrical and ventilation systems. Emergency repairs were completed including the installation of temporary blowers and other equipment which allowed Trains A and B to be returned to operation. However, following repairs, the remaining useful life of the blower system was estimated at only between 1 and 5 years.

CAROLLO ENGINEERS, INC. (CAROLLO) was retained in August 2013 to provide professional engineering services to design a new blower system for Trains A and B and design repairs to the Secondary Treatment Building. Due to unforeseen conditions related to air and electrical requirements of the plant, the original scope of work provided by CAROLLO expanded in both the preliminary engineering and final design phases of their work.

As part of their preliminary engineering, CAROLLO completed analyses of the total amount of air necessary for treatment at the plant's current capacity of 75MGD. These analyses revealed that air requirements were considerably higher than what the plant was originally designed for. This was due in part to higher strength sewage currently experienced at the plant and to changes in design regulations for wastewater treatment plants. The greater air requirements dictate the need for larger blowers and piping and for additional air diffusers in the various biological treatment units. Special analyses were required to determine the number and location for new diffusers. These analyses were performed during the preliminary phase while design of the diffusers will take place during final design.

Regarding electrical requirements, 12.48 kilovolt (kV) motors were recommended to be used to replace the old blower motors at the plant. CAROLLO recommended their use contingent upon improvements being made at the Onion Creek Electrical Substation such that the 12.48 kV motors would meet current service criteria set by Austin Energy at the substation. However, after significant collaboration with Austin Energy, it was determined that improvements at Onion Creek Substation are not being made at this time due to cost concerns, necessitating the use of lower voltage 4.176 kV motors. These lower voltage motors required step-down transformers and reduced voltage starters to meet Austin Energy service criteria, leading to significant additional design effort by CAROLLO.

In summary, CAROLLO has made significant recommendations that will provide the City a robust and more reliable air delivery system for the South Austin Regional Wastewater Treatment Plant for the foreseeable future beyond that which was included in the original scope of engineering services. The additional scope of their efforts includes:

1. Additional engineering associated with air diffuser improvements which were not foreseen in original scope,
2. Additional design services related to the interconnecting air header as an enhancement to the original system,
3. Additional electrical engineering design and programming services associated with motor sizing and blower control,
4. Additional construction phase engineering services related to the added complexity of the improved system recommendations.

Final design is scheduled to be completed by the end of December 2015 and construction is expected to be underway in the second quarter of 2016.

This amendment has been reviewed and approved by the City's Change Control Committee. The Change Control

Committee was established to comply with Council Resolution No. 20120126-048, which required the establishment of consistent criteria and process to evaluate contractual changes for all contracts administered by the City's Contract Management Department (CMD). The Change Control Committee is comprised of management level subject matter experts from various stakeholder departments.

The project will be managed by the Public Works Department.

Carollo Engineering, Inc. is located in Austin, Texas.