



DATE: January 24, 2017

CATEGORY: Consent

DEPT.: Public Works

TITLE: **Annual Water and Sewer Main Replacements – Leong Drive, Projects 16-21 and 16-22 – Authorize Design Services**

RECOMMENDATION

Authorize the City Manager to execute a design services contract with Schaaf & Wheeler Consulting Civil Engineers of Santa Clara in a not-to-exceed amount of \$893,094 to provide civil engineering services to design and prepare construction documents for the Annual Water and Sewer Main Replacements – Leong Drive, Projects 16-21 and 16-22.

BACKGROUND

An extensive review of the water and sanitary sewer infrastructure near the City's property at 750 Moffett Boulevard (Moffett Gateway site), it was determined that improvements are necessary to address the following items:

- The 16" diameter sanitary sewer trunk main that crosses through the Moffett Gateway site and under Stevens Creek and State Route 85 is at the end of its useful life and in need of replacement;
- There are no water services to the Moffett Gateway site; and
- Nearby water mains are inadequate to serve anticipated development/growth.

In the Disposition and Development Agreement for the Moffett Gateway site, the City agreed to extend water services to the site, and the developer agreed to reimburse the City for the upsizing of the water main on Leong Drive.

The City has worked extensively with the Santa Clara Valley Water District (SCVWD) and other regulatory agencies on acceptable alternatives for replacement of the sanitary sewer trunk main under Stevens Creek and State Route 85. The existing pipeline does

not meet the SCVWD's current standard for vertical clearance under the creek channel, so replacement at the existing location and grade are not feasible.

An alternative is to construct a siphon, which is a U-shaped pipe that would be deeper under the creek channel, but would hold standing wastewater at all times. Siphons are maintenance intensive, more prone to stoppage than conventional gravity sewers, and sometimes associated with odor issues because of the standing wastewater in the pipe. Overflows are particularly problematic in this location because of the proximity of Stevens Creek and the Moffett Gateway development. Siphons are typically used under creeks or depressed freeways where no conventional gravity alternative is feasible.

With the assistance of engineering firm Schaaf & Wheeler of Santa Clara, the City identified a conventional gravity alternative whereby the sanitary sewer crossing of Stevens Creek and State Route 85 could be abandoned and the flow redirected to a new, deeper sanitary sewer main on Leong Drive.

The recommended alternative would:

1. Reverse sewer main direction on Leong Drive to flow northward towards the East Trunk sewer main.
2. Redirect sewer flows from the Moffett Gateway property towards Leong Drive.
3. Redesign and upsize the sewer main on Leong Drive to accommodate additional development and growth. Replacing the existing sanitary sewer main in Leong Drive will also allow additional separation between the water main and sanitary sewer main, which is currently less than allowed by the California Department of Health guidelines.
4. Include consideration of two location options for crossing Moffett Boulevard during design.

Figure 1 below shows the proposed project.



Figure 1

ANALYSIS

In December 2014, a Request for Proposals (RFP) for engineering services was issued for evaluation of the City’s pump station and sewer trunk system. Three firms responded and a review panel of Public Works staff deemed Schaaf & Wheeler to be the best-qualified firm based on merits of their written proposal, extensive experience in completing wastewater infrastructure projects, demonstrated competence, and understanding of the project goals.

One result of Schaaf & Wheeler’s evaluation is the proposed concept of abandoning the creek/freeway crossing and redirecting the sewer on Leong Drive. Schaaf & Wheeler’s unique qualifications for performing the design of the current project include:

- Having performed an extensive hydraulic analysis to identify the preferred alternative and, therefore, having a unique familiarity with the project goals, constraints, and existing conditions;
- Experience in the design of water and sewer systems, including flow reversal of sewer mains; and

- Knowledge about the City of Mountain View, having worked closely with staff on the City's water and sewer system hydraulic models as well as private development projects throughout the City and particularly in the vicinity of Leong Drive.

Because of these unique qualifications and the fact that Schaaf & Wheeler was originally hired through a competitive proposal process, staff therefore recommends awarding the design services contract to Schaaf & Wheeler rather than engaging in another competitive proposal process.

Schaaf & Wheeler's proposed scope of services and fees for the project is provided in Attachment 1. The not-to-exceed contract amount of \$893,094 includes \$512,685 for basic services (including reimbursables), construction support of \$83,668, additional services in the amount of \$196,741 that may be needed depending on site conditions and Caltrans requirements, and a contingency in the amount of \$100,000 for unforeseen items. The recommended fees are within the range typically charged for such services, and staff considers the fees to be fair and reasonable. Staff recommends funding this agreement proportionally to the work on the water and sanitary sewer system in the amount of \$218,182 from CIP 16-21 Miscellaneous Water Main/Service Main Replacement and \$674,912 from CIP 16-22 Miscellaneous Storm/Sanitary Sewer Main Replacement.

With City Council approval of this contract, Schaaf & Wheeler could begin the project in February 2017. Design is scheduled to be completed in February 2018, and construction is planned to begin in June 2018.

FISCAL IMPACT

The Annual Water Main and Service Main Replacement, Project 16-21, and the Annual Storm and Sanitary Sewer Main Replacement, Project 16-22, are funded with \$2,415,000 from the Water Fund and \$1,523,000 from the Wastewater Fund, respectively. The project budget is adequate to fund the recommended agreement for design services. Construction costs are proposed to be funded from a new capital improvement project that will be recommended to the City Council as part of the upcoming Capital Improvement Program review process.

ALTERNATIVES

1. Do not approve the recommended contract and direct staff to issue an RFP to a larger number of engineering firms.

2. Do not proceed with the project at this time.
3. Provide other direction.

PUBLIC NOTICING – Agenda posting.

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AAB/TS/7/CAM
908-01-24-17CR-E

Attachment: 1. Schaaf and Wheeler Design Services Proposal

cc: Schaaf & Wheeler

APWD – Solomon, APWD – Hosfeldt, USM, SCE – Muench, PCE – Arango, ACE –
Gunn, F/c