Agenda Item #8.1
For Board Meeting of: February 4, 2021

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES

FROM: ANDREW WILT, ASSOCIATE CIVIL ENGINEER
TRANSPORTATION AND PUBLIC WORKS

SUBJECT: PROJECT WORK ORDER APPROVAL – PROFESSIONAL ENGINEERING DESIGN SERVICES FOR SEISMIC UPGRADES AND IMPROVEMENTS PHASE 5 – R9A, R16, AND R17 AND VFD AND FIRE PUMP ADDITIONS AT S16 AND S17

AGENDA ACTION: MOTION

RECOMMENDATION

It is recommended by the Transportation and Public Works Department and the Water Department that the Board of Public Utilities, by motion, approve Project Work Order (PWO) No. A010135-2016-17 under the Master Professional Services Agreement with Brelje and Race Consulting Engineers, of Santa Rosa, California, to provide Professional Engineering Design Services for the Seismic Upgrades and Improvements Phase 5 – Reservoirs (R) 9A, 16, and 17 and variable frequency drive (VFD) and Fire Pump additions at water pump stations (S) 16 and 17 project in the amount not to exceed $1,035,400.00.

EXECUTIVE SUMMARY

This proposed action will approve Brelje and Race Consulting Engineers to provide engineering design services for the Seismic Upgrades and Improvements Phase 5 – R9A, R16, and R17 and VFD and Fire Pump additions at S16 and S17 project (Project).

BACKGROUND

The City of Santa Rosa (City) has completed four phases of a five-phase program to bring the City's steel water tank reservoirs into compliance with seismic, structural, electrical, OSHA, and water quality codes, regulations, and standards. The City is proposing to upgrade reservoirs R9A, R16, and R17 as the fifth and final phase of this program. Reservoir improvements will include seismic and structural improvements including foundation ring wall and anchorage replacements, steel shell strengthening, and interior roof support improvements. Safety and site security improvements are targeted such as ladder and platform replacement, Saf-T-Climb extensions, and site fencing. To improve

water quality a mixing system will be included along with separating inlet and outlet piping, and tank overflow pipe modifications will be made to provide an airgap to remove direct connection to storm drain. Finally, corrosion improvements will be included such as removal and replacement of coatings.

In June of 2018 West Yost completed a Technical Memorandum (TM) that identified three reservoirs (R9A, R16, R17) with deficiencies. The structural and seismic analysis performed as part of that TM revealed errors in the original design calculations which resulted in deficiencies in structural performance for R16 and R17. In addition, code requirements have changed significantly since these two reservoirs were designed and constructed as part of a development project in approximately 1995. Reservoir R9A has similar deficiencies, but the deficiencies were attributed to the significant code changes that have occurred since 1977 when R9A was designed and constructed.

West Yost's 2018 TM also evaluated water pump stations, with no improvements recommended. However, City staff has proposed modifications to S16 and S17 to improve fire protection in Water Pressure Zones 17, 16, and 3 (which is adjacent to 17). The proposed pump station modifications include replacing existing motor controls with variable frequency drives (VFD's) and motors, installing a new 1,500 gallons per minute (gpm) pump, motor and VFD, and building upgrades to accommodate new pump, electrical equipment, and the larger generator that will be installed as part of a different project, Project Identification (PID) 2256 Backup Generators – Water and Wastewater Facilities. Due to water quality and seismic concerns, the normal operating level of R17 is kept between 35% and 50% of full. The additional high flow pumps would allow Operations to raise the maximum level of the tank to 90% during sustained fire flow demands. Additionally, the additional pumping capacity would allow the movement of up to 2,500 gpm to Zone 3.

In addition to the design of the improvements for the reservoirs, this PWO will include an evaluation and design for pump station improvements to improve the fire protection of Water Pressure Zones 17, 16, and 3.

PRIOR BOARD OF PUBLIC UTILITIES REVIEW

N/A

ANALYSIS

A Request for Proposals for engineering design services was issued on August 19, 2020 through PlanetBids to 54 engineering firms that had Master Professional Services Agreements with the City. Only one proposal was received by the September 14, 2020 deadline.

A review panel made up of a Quality Control Associate and an Associate Civil Engineer reviewed and evaluated the proposal. Brelje and Race Consulting Engineers was selected by the panel as the most qualified consultant for the project.

Staff inquired with some of the engineering firms that did not submit proposals as to the reasons behind their failure to submit for this project. Those that responded indicated that they were too busy for this project or did not have qualified personnel available to perform the work.

Master Professional Services Agreements that exceed $500,000 require the Board of Public Utilities' (BPU) approval.

FISCAL IMPACT

This proposed PWO is for a not-to-exceed amount of $1,035,400.00 (including 10% contingency). Approval of this PWO has no additional impact on the budget. Funds for this project were appropriated in the fiscal year 2020-21, Capital Improvement Program budget.

ENVIRONMENTAL IMPACT

Approval of this PWO is exempt from CEQA because it is not a project which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, pursuant to CEQA Guideline section 15378, and is in part a continuation of planning for the proposed Project pursuant to CEQA Guideline Section 15262.

Furthermore, any construction related to the PWO is anticipated to be categorically exempt from the California Environmental Quality Act (CEQA), pursuant to CEQA Guidelines Section 15301, Class 1(d) because the project involves restoration of deteriorated structures, facilities or mechanical equipment to meet current standards of public health and safety.

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

On January 12, 2021 the Contract Review Subcommittee reviewed this item and recommended that the Board approve the Project Work Order with Brelje and Race Consulting Engineers, of Santa Rosa, California, to provide engineering design services for the Seismic Upgrades and Improvements Phase 5 – R9A, R16, and R17 and VFD and Fire Pump Additions at S16 and S17 project.

ATTACHMENTS

- Attachment 1 – Project Work Order Agreement
- Attachment 2 – West Yost Technical Memorandum

CONTACT

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