

Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: May 1, 2024

Approved



Date

5/14/24

SUBJECT: FIRST AMENDMENT TO THE MASTER CONSULTANT AGREEMENT WITH BLACK & VEATCH FOR ENGINEERING SERVICES FOR THE YARD PIPING IMPROVEMENTS PROJECT AT THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

Approve the First Amendment to the Master Consultant Agreement with Black & Veatch for engineering services for the Yard Piping Improvements project at the San José-Santa Clara Regional Wastewater Facility, increasing the amount of compensation by \$2,500,000, for a total agreement amount not to exceed \$12,250,000; and extending the term of the agreement from June 30, 2026 to December 31, 2027.

SUMMARY AND OUTCOME

City Council approval of the First Amendment to the Master Consultant Agreement with Black & Veatch (B&V) will provide professional engineering services for condition assessment, design, and engineering support services during construction and post construction necessary to successfully complete the Yard Piping Improvements project.

BACKGROUND

The San José-Santa Clara Regional Wastewater Facility (RWF) has approximately 300,000 linear feet of piping that varies in age, material, condition, reliability, redundancy, and diameter (some pipes are as large as 12 feet in diameter). See **Attachment** – Yard Piping Location Map. Of this piping, 67,000 linear feet are process pipes that carry gas, liquids, sludge, air, steam, and other process streams to and from the various treatment areas. Ten percent of the pipes at the RWF are more than 25 years old, and 10 percent are more than 50 years of age. Based on a 2015 analysis of RWF process pipes plans, 16 pipe systems totaling 21,000 linear feet, were identified as high priority or at high risk of failure. The purpose of the project is to rehabilitate critical aging process pipes to increase their lifespan and improve the reliability of the RWF's operations.

Original Project Scope and Agreement - Design-Build method

In 2017, the City originally planned to deliver a portion of the project using the design-bid-build approach, while delivering the majority of this project using what staff then referred to as the progressive design-build delivery method. That method involved a two-step procurement process for the design-build entity. California state law (Senate Bill 706) recently changed the California Public Contract Code's definition of "progressive design-build" to mean a new one-step procurement process. For the sake of clarity, this memorandum will refer to the originally planned delivery method as "traditional design-build" (DB).

Pursuant to this DB delivery approach, in September 2017, staff began the procurement for an owner's advisor. On April 24, 2018, City Council approved a master consultant agreement with B&V with a total maximum compensation of \$9,750,000 and a term that ends on June 30, 2026.

Revised Project Scope and Agreement – Design-Bid-Build method

In November 2019, following a more comprehensive delivery analysis, staff determined that design-bid-build would be a more effective method to deliver the project compared to DB due for the reasons listed below.

- DB would require conducting all the pipe inspections prior to developing a guaranteed maximum price. Given the planned annual maintenance shutdowns and multiple large projects in construction at the RWF, it would be difficult to isolate and access the process pipes for field inspection in a timely manner. It would take several years to complete before construction could begin.
- Further research revealed that there was lack of similar projects in the industry that had been delivered using the DB method.

The selection of the design-bid-build delivery method led staff to adjust the services that B&V would perform under the agreement, as listed below.

Original Service	Adjustment
Perform initial condition assessment	Perform full condition assessment
Develop project definition report	Removed
Assist with DB procurement	Removed
Assist with environmental review/permits	No adjustment
Participate in guaranteed maximum price negotiations	Removed
Develop process shutdown plans	Develop design documents for bid and award
Develop construction packages	Develop design documents for bid and award
Provide design/constructability reviews	Removed
Provide construction management services	Provide engineering services during construction
Provide post-construction services	No adjustment

ANALYSIS

In addition to the change in delivery method, the project scope was divided and sequenced into four phases. This would allow B&V and staff to perform condition assessment, design, and construction activities for multiple phases in parallel. It also allowed work to begin on two high priority, large diameter pipes. The project phases and status are listed below.

Phase	Status
96-inch and 87-inch Settled Sewage Pipe Rehabilitation	Completed April 2021
Yard Piping Improvements – Phase 1	Completed May 2022
Yard Piping Improvements – Phase 2	In construction; completion expected spring 2025
Yard Piping Improvements – Phase 3	In alternatives analysis

The most significant service scope change from DB to design-bid-build methods was that B&V would need to perform full pipe condition assessments, which had been planned to be done by the DB entity.

Over six summer seasons, B&V has performed condition assessments on more than 60 pipes. These were extensive efforts, with each assessment requiring B&V to develop field inspection methods, prepare process shutdown strategies for pipe isolation, conduct field inspections, identify pipe deficiencies, rate pipe conditions, and define pipe rehabilitation limits. The final condition assessment work to inform the scope of Yard Piping Improvements – Phase 3 was completed in March 2024. The total cost of these efforts was approximately \$3.65 million.

Under the current agreement, B&V has provided design services and engineering services during construction for the 96-inch and 87-inch Settled Sewage Pipe Rehabilitation and Yard Piping Improvements – Phase 1 projects, which were completed in April 2021 and May 2022, respectively. B&V is currently providing engineering services during construction for Yard Piping Improvements – Phase 2, which is expected to be completed in spring 2025. B&V is also performing alternatives analysis for Yard Piping Improvements – Phase 3 that is anticipated to be completed this summer.

To date, 10 service orders have been executed under the agreement. Approximately \$9,000,000 of the agreement's \$9,750,000 has been authorized, as summarized in the following table.

Scope of Services	Amount
Project management	\$966,233
Condition assessment	\$3,648,486
Alternative analysis and detailed design	\$2,787,001
Bid/award services	\$160,153
Engineering services during construction	\$1,438,689
Total amount authorized to date	\$9,000,562
Available balance	\$749,438

The available balance of approximately \$750,000 is insufficient to have B&V complete the needed services for Yard Piping Improvements – Phase 3, including detailed design, bid and award support, engineering services during construction, and post-construction services. Those services are estimated to cost \$3,250,000.

This first amendment will increase the maximum compensation of the agreement by \$2,500,000, for a total amount not to exceed \$12,250,000. This amount represents 30% of the combined estimated construction cost of approximately \$41.1 million for all four phases, which staff considers reasonable given the extensive condition assessment work required.

According to the current project schedule, design for Yard Piping Improvements – Phase 3 will be completed in December 2024, the construction contract will be awarded in summer 2025, and project completion is anticipated in spring 2027. This amendment extends the term of the agreement to December 31, 2027.

Policy Alternatives

Alternative #1: Direct City staff to complete the design and perform engineering services during construction using in-house resources.

Pros: None

Cons: Staff does not have the capacity or expertise to complete the required work. Design of piping rehabilitation and responses to contractor requests for information, design clarifications, submittals and change orders requires in-depth engineering expertise spanning multiple engineering disciplines (e.g., civil, structural, mechanical, electrical, process, instrumentation, and controls). Use of City staff will result in delays to the project, impacting cost and schedule, and subsequently creating delays to other pending capital projects. In addition, if City staff assumed design responsibility it would release the consultant from their liability as engineer-of-record.

Reason for not recommending: The complexity of this project requires the use of specialized expertise and experience in the planning, design, construction, and management of wastewater treatment systems. City staff does not have the required expertise and experience to provide engineering services for construction and post construction necessary to successfully complete this project.

EVALUATION AND FOLLOW-UP

No follow-up action with the City Council is expected at this time. Quarterly progress reports of the RWF Capital Improvement Program will be submitted to the Treatment Plant Advisory Committee and posted on the City's website.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: \$2,500,000
2. COST ELEMENTS OF AGREEMENT/CONTRACT (COMPARED TO ORIGINAL AGREEMENT):

	Original	Proposed First Amendment	Total
Project management	\$966,233	\$220,000	\$1,186,233
Condition assessment	\$3,648,486	\$0	\$3,648,486
Alternative analysis and detailed design	\$3,536,439	\$700,000	\$4,236,439
Bid and award services	\$160,153	\$80,000	\$240,153
Engineering services during construction	\$1,438,689	\$1,500,000	\$2,938,689
TOTAL AGREEMENT AMOUNT	\$9,750,000	\$2,500,000	\$12,250,000

3. SOURCE OF FUNDING: 512 – San José-Santa Clara Treatment Plant Capital Fund.
4. FISCAL IMPACT: The project will have no additional impact on the San José-Santa Clara Treatment Plant Operating Fund (Fund 513) or the General Fund.
5. PROJECT COST ALLOCATION: In accordance with the recommendations set forth in the Capital Project Cost Allocations Technical Memorandum (Carollo Engineers, March 2016), this project is allocated between the four billable parameters relative to the rolling weighted average distribution of all RWF assets.

BUDGET REFERENCE

The table below identifies the fund and appropriations to fund the contract recommended as part of this memorandum and remaining project costs, including project delivery, construction, and contingency costs.

Fund #	Appn #	Appn Name	Total Appn	Amount for Amendment	2023-2024 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	7396	Yard Piping and Road Improvements	\$4,419,000	\$2,500,000	287	10/17/2023 Ord. No. 30966

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COORDINATION

This memorandum has been coordinated with the City Attorney's Office, the City Manager's Budget Office, the Finance Department, and the Department of Planning, Building, and Code Enforcement.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the June 4, 2024 City Council meeting.

COMMISSION RECOMMENDATION AND INPUT

This item is scheduled to be heard at the May 23, 2024 Treatment Plant Advisory Committee meeting. A supplemental memorandum with the committee's recommendation will be included in the June 4, 2024 City Council amended agenda.

CEQA

Addendum to the Environmental Impact Report for the San José/Santa Clara Water Pollution Control Plant Master Plan (Resolution No. 76858) for the Yard Piping and Road Improvements Project, File No. PP19-063.

PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/

KERRIE ROMANOW

Director, Environmental Services Department

For questions, please contact Mariana Chavez-Vazquez, General Manager, San José-Santa Clara Regional Wastewater Facility at (408) 535-8550

Attachment: Yard Piping Location Map

