



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: November 22, 2023

Approved

Date

11/29/23

SUBJECT: MASTER CONSULTANT AGREEMENT WITH CAROLLO ENGINEERS FOR ENGINEERING SERVICES AS OWNER'S ADVISOR FOR THE 10199 – ADDITIONAL DIGESTER FACILITY UPGRADE PROJECT

RECOMMENDATION

Approve a Master Consultant Agreement with Carollo Engineers to provide engineering services as Owner's Advisor for the 10199 – Additional Digester Facility Upgrade Project at the San José-Santa Clara Regional Wastewater Facility from the date of execution through December 31, 2031, in a total amount not to exceed \$7,900,000, subject to the appropriation of funds.

SUMMARY AND OUTCOME

Approval of this Master Consultant Agreement with Carollo Engineers will provide the City with professional engineering and Owner's Advisor services related to progressive design build for the delivery of the Additional Digester Facility Upgrade Project (Project) at the San José-Santa Clara Regional Wastewater Facility (RWF). Approval of this Master Consultant Agreement will not result in any physical changes to the environment, as the City Council will need to take additional actions before Project construction starts.

BACKGROUND

The RWF is an advanced wastewater treatment facility that treats an average of 110 million gallons per day of wastewater collected from eight South Bay cities and four special districts. The anaerobic digestion process is a critical element of the RWF's biosolids processing and functions to stabilize biosolids and generate biogas to help meet the RWF's energy needs. Key

components of the digestion process include the anaerobic digesters, digester gas systems, and the dissolved air flotation thickeners.

In 2013, the City commenced the initial rehabilitation of the solids treatment process under the Digester and Thickener Facilities Upgrade project, which consisted of upgrading and converting four of the 16 existing mesophilic digesters (Digesters 5-8) into thermophilic digesters and upgrading six of the 16 existing dissolved air floatation thickeners to allow for sludge co-thickening. Additionally, a new sludge screening building, an external elevated gas piping system, and new flares were constructed. Construction on this project was completed in April 2022. See **Attachment** - Project Site Plan.

In May 2022, the City initiated the Project, which will upgrade six of the eight second phase mesophilic anaerobic digesters, including all structural, mechanical, and electrical components. These digesters will be integrated with the thermophilic digesters to complete the Temperature Phased Anaerobic Digestion process. The digesters will also be integrated with the new digested sludge dewatering facility that is estimated to be operational by fall 2025.

The Project will also include decommissioning of equipment and piping, upgrades to access roadways, landscape, signage, site drainage, and other miscellaneous upgrades required to make the system functional.

In addition, this Project will construct a new Fats, Oils, and Grease receiving facility that will be integrated into the Temperature Phased Anaerobic Digestion process.

The current estimate of \$80 million included in the Project adopted budget was based on an early construction completion date and assumed escalation rates lower than actual rates that have been experienced in prior years. The Project cost will be further refined by the Owner's Advisor and will incorporate additional scope and updated escalation rates as the Project definition is advanced and more specific details are known. Due to its size and complexity, the Project will be delivered as a progressive design-build project. Construction is estimated to begin in spring 2027 and be operational by early 2031.

Staff is seeking a consultant to provide Owner's Advisor services for the Project. These specialized engineering services include:

- Development of the Project Definition Report required for the procurement of a design build firm;
- Assistance with the procurement and selection of a design builder;
- Provision of technical support during detailed design development;
- Assistance with preparation of environmental engineering studies required for CEQA clearance;
- Provision of independent reviews of cost estimates;
- Assistance with negotiations for a Guaranteed Maximum Price for the Project;
- Support during the construction period by providing construction management and inspection services; and
- Support and performance troubleshooting after substantial completion.

ANALYSIS

On May 24, 2023, the City issued a Request for Qualifications seeking professional services for an Owner’s Advisor for the Project. A non-mandatory pre-proposal site tour was held on June 15, 2023, which was attended by four engineering firms. The City received Statements of Qualifications (SOQs) from all four firms by the July 6, 2023 submittal deadline. These firms were Brown and Caldwell, Carollo Engineers, CDM Smith, and Kennedy Jenks.

A Technical Evaluation Panel which consisted of representatives from the Environmental Services Department and a Capital Improvement Program consultant, evaluated and ranked all four SOQs in accordance with the procurement process set forth in the Request for Qualifications. Each panel member evaluated the SOQs using a consistent scoring matrix based on the firm’s expertise, experience, approach, cost; and Local Business Enterprise and Small Business Enterprise status.

As a result of the evaluation of the SOQs, the evaluation panel decided interviews were not required. In addition, the significant point difference between the two top firms was enough for the evaluation panel to determine interviews were unnecessary. Also, based on the quality of the SOQs submitted by the top two firms, the evaluation panel is confident that both firms would excel in the interview making the point gap between the top two firms relatively the same. The proposals were first reviewed for responsiveness and then evaluated in accordance with the point scale advertised in the Request for Qualifications. Each firm received a total score comprised of their SOQs score, and Local Business Enterprise/Small Business Enterprise status, as shown below.

Description	Weight
Statement of Qualifications	
Submittal Responsiveness	Pass/Fail
Minimum Qualifications	Pass/Fail
Expertise	30
Experience	30
Project Approach	20
Cost	10
Local Business Enterprise	5
Small Business Enterprise	5
TOTAL	100

The final ranking and scores for the four proposing firms are as follows:

Rank	Firm	Expertise	Experience	Approach	Cost	LBE*	SBE**	Interview	Total
1	Carollo Engineers	27.00	27.80	18.00	9.52	5.00	0	N/A	87.32
2	Brown and Caldwell	26.20	25.90	16.67	9.19	5.00	0	N/A	82.96
3	CDM Smith	24.60	24.60	16.53	10.00	5.00	0	N/A	80.73
4	Kennedy Jenks	21.90	21.20	15.07	9.45	5.00	0	N/A	72.62

*LBE = Local Business Enterprise

**SBE = Small Business Enterprise

In accordance with City policy, 10% of the total evaluation points were reserved for local and small business enterprise status. All firms qualified for Local Business Enterprise status. None of the firms qualified for the Small Business Enterprise status.

Staff recommends awarding a Master Consultant Agreement in an amount not-to-exceed \$7,900,000 to the top-ranked firm, Carollo Engineers. Carollo is a nationally recognized environmental engineering and consulting firm, specializing in the design and construction of all components associated with the treatment of wastewater, including all aspects of the biosolids treatment process. They proposed a team of well-qualified personnel with extensive experience in providing similar services for projects at other treatment facilities including:

- San Francisco Public Utilities Commission
- Dublin San Ramon Services District
- Sacramento Regional Wastewater Treatment Plant
- Fresno-Clovis Regional Wastewater Reclamation Facility
- City of Los Angeles Bureau of Sanitation
- Perris, Eastern Municipal Water District
- Yucca Valley, Hi-Desert Water District

The Carollo Engineers team demonstrated extensive knowledge of design of anaerobic digester facilities, excellent understanding of potential issues associated with the operations and maintenance of such facilities, broad experience in the role of Owner’s Advisor for similar types of projects and specifically design-build. The proposed team has strong prior experience in negotiations with design-build entities and comes highly recommended from references provided for previous projects at other publicly owned treatment works. The agreement not-to-exceed amount of \$7,900,000 represents approximately 9.9% of the estimated construction cost of \$80,000,000. Staff considers this amount appropriate for the work involved, and it is consistent with other Capital Improvement Program projects as well as the industry standard for Owner’s Advisor preliminary engineering and construction management services that is typically in the range of 5% to 12.5% of the estimated construction contract.

Depending on the type of services rendered, Carollo Engineers will be compensated based on actual hourly wages times a multiplier of 2.92 or 3.17. The 2.92 multiplier will be applied for construction management services and the 3.17 multiplier will be applied for all other services performed by the consultant. The multiplier covers overhead (e.g., fringe benefits, payroll taxes, group insurance, building/rental expenses, etc.), associated project costs (e.g., routine printing and copying, computer equipment use, network and telecommunications expenses, etc.), and profit.

This Project is consistent with the City Council-approved budget strategy to focus on rehabilitating aging RWF infrastructure, improve efficiency, and reduce operating costs. This Project is also consistent with the budget strategy principle of focusing on protecting our vital core services.

Policy Alternatives

Alternative #1: Direct City staff to provide the required services with in-house resources.

Pros: Fosters skill development and growth opportunities for City staff

Cons: City staff does not currently possess the capacity and technical expertise needed for the anticipated scope of services. This limited resource may cause delays in implementation of the Project.

Reason for not recommending: The Project demands a level of expertise that in-house staff currently does not have due to the Project's size, complexity, and recommended delivery method (design-build). The City can most efficiently bridge this gap by procuring consultants with the required knowledge and experience. In addition, the Capital Improvement Program has consistently supplemented in-house staff by engaging external experts to deliver complex design-build projects.

Alternative #2: Do not rehabilitate the existing digesters (Digester 9-16).

Pros: Continuing with the current operations of digesters 9-16 would result in immediate savings of capital cost for the RWF.

Cons: Based on the age and condition of the existing digesters 9-16, without rehabilitation, the risk of failure of this essential process increases. Additionally, the cost to maintain these aged facilities will also increase, as the cost and frequency of repairs will likely increase.

Reason for not recommending: Rehabilitation of the digester facilities has been a high priority capital improvement project due to the condition as well as safety concerns associated with the aging infrastructures. Continuing to operate the existing aging digesters 9-16 will increase the risk of digester failures, with higher operations and maintenance costs and possibly safety and permit violations. The City will still need to identify another way to address the aging digesters (digesters 9-16) and maintain the Temperature Phased Anaerobic Digestion process which is critical to the overall biosolids treatment process. Implementing this alternative may hinder the RWF's ability to treat biosolids in the future due to the aging second phase mesophilic digestion facility.

EVALUATION AND FOLLOW-UP

All service orders issued under this Master Consultant Agreement will be reported to the Treatment Plant Advisory Committee on the monthly summary of procurement and contract activity and the quarterly Capital Improvement Program agreement and service order summary. A progress report on this and other RWF capital projects will be made to the Transportation and Environment Committee and the City Council on an annual basis. Quarterly progress reports of the RWF Capital Improvement Program will also be submitted to the Treatment Plant Advisory Committee and posted on the City's website.

The current action is for the award of a Master Consultant Agreement for Owner's Advisor services only. After the procurement process for the selection of the design-build entity, staff will return to the City Council, anticipated in fall 2025, for approval of the final proposer ranking and authorization to negotiate the design-build contract. In summer 2027, staff will return for approval of the design-build contract and authorization to negotiate and execute contract amendments that include the Guaranteed Maximum Price for the Project and the initiation of the construction portion.

Staff will return to the City Council after completion of the CEQA review process, anticipated in fall 2025, to recommend the adoption of a resolution approving the CEQA findings for this Project. This process will be completed prior to any disturbance to the physical environmental conditions and no construction activity will be initiated before approval.

The preliminary project schedule milestones are as follows:

- Completion of the Project Definition Report and initiation of the design-build procurement process: Early 2025
- City Council approval of final proposer ranking and authorization to negotiate the design-build contract: Fall 2025
- Completion of 60% design and initiation of construction: Early 2027
- City Council approval of the design-build contract and authorization to negotiate and execute contract amendments that include the Guaranteed Maximum Price: Summer 2027
- Construction Substantial Completion: Summer 2030

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: \$7,900,000

2. COST ELEMENTS OF MASTER AGREEMENT:

Project Management	\$743,000
Project Definition Report, CEQA, and Permitting Support	\$2,073,000
Design-Build Contractor Procurement	\$434,000
Design Review and Guaranteed Maximum Price Negotiation Support	\$832,000
Construction Management and Post-Construction Services	\$3,818,000
TOTAL AGREEMENT AMOUNT	\$7,900,000

3. SOURCE OF FUNDING: 512 – San José-Santa Clara Treatment Plant Capital Fund.

4. FISCAL IMPACT: This contract is funded through the San José-Santa Clara Treatment Plant Capital Fund and will have no impact on the San José-Santa Clara Treatment Plant Operating Fund (Fund 513).

5. PROJECT COST ALLOCATION: In accordance with the recommendations set forth in Capital Project Cost Allocations Technical Memorandum (Carollo Engineers, March 2016), this project is allocated 40% to Biochemical Oxygen Demand and 60% to Total Suspended Solids.

BUDGET REFERENCE

The table below identifies the fund and appropriations to fund the Master Consultant Agreement recommended as part of this memorandum.

Fund #	Appn #	Appn. Name	Total Appn.	2023-2024 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	426D	Additional Digester Upgrades	\$2,179,000	272	10/17/2023 Ord. No. 30966

Services performed by Carollo Engineers under this agreement will be authorized by service orders. An appropriation is not required for execution of the Master Consultant Agreement but is required for each service order authorized under this agreement. The appropriation listed above is included in the 2023-2024 Adopted Capital Budget and may be used for services issued in 2023-2024. Future funding is subject to appropriation of funds and, if needed, will be included in the development of future year budgets during the annual budget process.

HONORABLE MAYOR AND CITY COUNCIL

November 22, 2023

Subject: Master Consultant Agreement with Carollo Engineers for Engineering Services as Owner's Advisor for the 10199 - Additional Digester Facility Upgrade Project

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COORDINATION

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

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the January 9, 2024 City Council meeting agenda.

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the December 14, 2023 Treatment Plant Advisory Committee meeting. A supplemental memorandum with the Committee's recommendation will be included in the January 9, 2024 City Council amended agenda.

CEQA

Statutory Exemption, File No. PP17-001, Section 15262, Feasibility and Planning Studies with no commitment to future actions; File No. ER23-123 (Additional Digester Facility Upgrade Project). Any future activities resulting in a change to the physical environmental would require approval of CEQA review.

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
Environmental Services Director

For questions, please contact Mariana Chavez-Vazquez, Assistant Director, at Mariana.Chavez-Vazquez@sanjoseca.gov or (408) 535-8550.

Attachment: Project Site Plan

Attachment - Project Site Plan



New FOG Receiving Facility



DAFT 1 to 6

DAFT 15 & 16

DIG 6

DIG 5

DIG 1

DIG 3

DIG 2

DIG 4

DIG 7

DIG 8

DAFT 7 to 12

DAFT 13 & 14

Upgrade Existing Digesters



DIG 15

DIG 16

DIG 9

DIG 10

DIG 11

DIG 12

DIG 13

DIG 14

