



DATE: October 8, 2024

TO: Mayor and City Council

FROM: Director of Public Works

SUBJECT: Adopt a Resolution Authorizing the City Manager to Execute an Agreement to Pre-Purchase Substation Electrical 12 kV Transformers and Switches for the Water Resource Recovery Facility (WRRF) Improvements – Phase II Project

RECOMMENDATION

That Council adopts a resolution (Attachment II) authorizing the City Manager to execute a procurement purchase order with Blocka Construction, Inc., (Blocka Construction) in an amount not-to-exceed \$990,000 for substation electrical 12 kV transformers and switches for the WRRF Improvements - Phase II Project.

SUMMARY

The Water Resource Recovery Facility (WRRF, formerly WPCF) treats an average flow of approximately eleven million gallons per day (MGD) and meets current regulatory requirements for discharge of treated effluent to the deep waters of the San Francisco Bay. The WRRF Improvements – Phase II Project (Phase II Project) design phase is underway that will include improvements to the WRRF that will enable it to meet recently promulgated regulations requiring the plant to reduce nutrients in the effluent by 53% by 2034.

The improvements will include a new administration and laboratory building, relocated primary effluent equalization tanks, a new biological nutrient removal (BNR) process, a new grit removal facility, modifications to the existing solids contact tank, demolition of the functionally obsolete existing west trickling filter, and construction of related ancillary facilities including pump stations, new aeration blower facilities, new process piping, and electrical infrastructure to support the new facilities. As part of the improvements, two new medium voltage (12 kV) transformers and switches are required to power the new facilities. Supply chain issues have resulted in very long lead for critical infrastructure and have caused long delays in some recent City projects. Therefore, it is necessary to start the procurement process early ahead of the start of construction for the Phase II Project.

BACKGROUND

The WRRF core infrastructure was originally constructed in 1952 to treat wastewater flows from the City's residents and businesses prior to discharge into the San Francisco Bay. Over the years, the WRRF has undergone several major upgrades to meet more stringent discharge requirements, as well as increasing capacity as the City's population and industry have grown. The WRRF now treats an average flow of approximately eleven million gallons per day (MGD) and meets current regulatory requirements for discharge of treated effluent to the deep waters of the San Francisco Bay (Bay). The existing treatment process, however, does not significantly remove nutrients from the wastewater flows.

Regulatory Requirements for Nutrient Reduction in Discharges to the Bay

Continued nutrient loading to the Bay is a growing concern for the Bay Area water quality community. Recent data indicate an increase in algae biomass in many areas of the estuary, suggesting that the Bay's resilience to the effects of nutrients may be declining due to a variety of contributing factors. In the summers of both 2022 and 2023, harmful algal blooms occurred in the Bay. As a result, the San Francisco Bay Regional Water Quality Control Board (Water Board) has recently promulgated new regulations and has approved a new watershed permit that will limit discharge of nutrients (nitrogen) to the Bay. The new permit requires the East Bay Dischargers Authority (of which the City of Hayward is a member) to reduce nutrients discharged to the Bay by 50% by 2034.

Proposed Projects

The City intends to award two separate construction contracts for work related to biological nutrient removal.

1. WRRF New Administration Building and Laboratory – Project 612-07786: The existing Administration Building was originally constructed in 1970 and subsequently expanded in 1994 to accommodate increased laboratory space requirements. Since it was last modified, the WRRF has seen increased staffing levels due to increasing regulatory requirements, and consequently the existing facilities can no longer efficiently accommodate the space needs and functional requirements of daily operations. The project includes construction of a 22,000 square foot two-story administration/operations/laboratory building. The design is at the 100% design stage and the Consultant is currently incorporating review comments from the City, construction management team, building department, and planning department into the final bid documents. The project is scheduled to bid in the fall of 2024 with construction starting around February 2024. Construction is anticipated to last around 27 months.
2. Phase II Improvements – Project No. 612-07760: The Phase II Improvements Project now includes the Primary Effluent Equalization Tanks (PE EQ Tanks) – Project No. 612-07749. Previously the PE EQ Tanks was going to be constructed under a separate bid package with a start date earlier than the Phase II Project with

the goal being to have the PE EQ Tanks operational before the Phase II Project started. Because of the length of the PE EQ Tanks construction, and the desire to have the Phase II Project completed in 5-years (by 2030), the Phase II Project must start before the PE EQ Tanks are operational. Advantages of combining the project included gains in efficiency (managing one project and one contractor versus two, construction of similar elements (pile supported large rectangular basins), less risk with competing contractors on site, and more efficient project delivery). In addition to the PE EQ Tanks, the project includes new BNR basins, a new final clarifier, a new grit removal facility, rehabilitation of the two existing final clarifiers, demolition of the existing west trickling filter, and related ancillary facilities including pump stations, new aeration blower facilities, new process piping, and electrical infrastructure to support the new facilities. Construction is anticipated to last about 52 months.

The design team, Brown and Caldwell, has been in contact with potential suppliers for the medium voltage transformers and switches and based on the time to prepare submittals, fabricate, and deliver the transformers, and because they are needed to be operational before startup of the BNR basins, that delivery of this equipment is on the critical path. Normally this type of equipment would be procured by the Contractor after award of the contract, however in recent years fabrication time on transformers has been increasing from around 50 weeks to over 120 weeks. The transformer fabrication time on the Switchgear Rehabilitation Project, a separate WRRF project which is currently under construction, is currently 103 weeks. One of the transformer manufacturers specified on the Phase II Project has quoted a 137-week fabrication time. Adding in time to prepare submittals for approval, time for engineering consultant to review, release for fabrication, factory testing, and transit time, the procurement time is estimated to take a little over three years. Therefore, it is necessary to begin the procurement process earlier so as to not delay completion of the Phase II Project. By the time the Phase II Project is awarded, the transformers will already be in fabrication. The contract between the City and Blocka Construction will then be assigned to the Phase II Contractor under an assignment and novation agreement wherein Blocka Construction and the Phase II Contractor agrees to transfer the rights and obligations of the City under the electrical procurement contract to the Contractor.

DISCUSSION

Electrical Procurement Vendor Selection

On August 23, 2024, staff publicly issued a request for quotation on the City's OpenGov platform. On September 13, 2024, the City received three bids from 1) Blocka Construction; 2) Jafar Pro LLC; and 3) OneSource Distributors. The bids ranged from a low of \$254,180 to a high of \$940,000. The Engineers Estimate for the equipment was \$806,000. Staff evaluated the three bids and submitted qualifications statements by the bidders, as well as terms and conditions submitted by Jafar Pro LLC and OneSource Distributors that were not required to be submitted with their bids that essentially limited their scope of supply, and took multiple exceptions to the specifications. Based on the evaluation of the bids, staff is recommending awarding to the lowest responsible and

responsive bidder Blocka Construction. Blocka Construction did not take any exceptions to the bidding documents and submitted bid forms as required.

Irregularities for the other two vendors bid submissions include the following:

Jafar Pro LLC:

- Failed to provide quotes for all of the work specified and failed to follow instructions included in the Request for Quotes for how to fill in the cost proposal form. The proposal cost form has 7-line items that include 1) preparation of submittals and certification for release for manufacturing; 2) completion of factory testing; 3) delivery of equipment to the project site; 4) preparation of seismic anchorage calculations stamped and signed by a California registered professional engineer; 5) preparation of operations and maintenance manuals; 6) delivery of warranties and bonds; and 7) completion of demonstration and training services after installation. Jafar only quoted the first line item which included preparing submittals and certification for release for manufacturing. Jafar's bid form omitted quotes for items 2 through 7 and is therefore non-responsive as it does not include the entire scope of work. It should also be noted that their bid is about 32% of the engineers estimate.
- Failed to demonstrate the required experience including a list of three references for projects of similar size and scope. References are requested to demonstrate the firm has the ability and experience to perform work of similar type, scope, and complexity within the past 5-years. The procurement documents further state that selection will be based on the lowest proposed cost proposal that also meets the specified experience, and who has the capacity to perform the work. Jafar Pro LLC did not furnish any references with the bid.
- Failed to acknowledge Addendum 1. Addendum 1 did not materially change the bid so this is a minor irregularity.
- Qualified the terms of the contract by submitting a quote sheet that was not requested as part of the bid forms. The quote sheet included exceptions to the specified warranty (2-years instead of the required 5-years), noted that they were a firm that specializes in resale of products, and indicated that they were providing a manufacturer of transformers that was not listed as one of the acceptable manufacturers in the technical specifications. Although submittals can be prepared and reviewed that might demonstrate equivalence to the specified vendors, this is typically done post-award. If this vendor were determined to not meet the specifications, the contract would have to be terminated and the project re-bid leading to potential delays in completion of the WRRF Improvements – Phase II Project.
- Submitted payment terms that were not in compliance with the payment provisions included in the procurement contract.

OneSource Distributors:

- Failed to provide quotes for all of the work specified and failed to follow instructions included in the Request for Quotes for how to fill in the cost proposal

form. The proposal cost form has 7-line items that include 1) preparation of submittals and certification for release for manufacturing; 2) completion of factory testing; 3) delivery of equipment to the project site; 4) preparation of seismic anchorage calculations stamped and signed by a California registered professional engineer; 5) preparation of operations and maintenance manuals; 6) delivery of warranties and bonds; and 7) completion of demonstration and training services after installation. OneSource only quoted the first three line items and included a higher bid amount for line item 1 than was allowed per the bidding instructions (15% of lump sum total rather than the specified maximum of 10%). OneSource's bid form omitted quotes for items 4 through 7 and is therefore non-responsive as it does not include the entire scope of work. OneSource's bid was \$591,595.13 or about 27% under the Engineer's estimate which staff believe is low based on discussion below under "Cost Analysis".

- Did not follow the bidding instructions and submitted a terms and conditions of sale document that contradicts the bidding documents. Some deviations include:
 - Submitted payment terms that were not in compliance with the payment provisions included in the procurement contract.
 - Based their quote solely on one specification section, Section 26 11 16.13, "Liquid Filled, Medium-Voltage Substation Transformers" and Section 23 13 23 "Medium Voltage Metal Enclosed Switchgear." Omitted the rest of the technical specifications including preparation of operations and maintenance data, extended warranties, and installation services including demonstration and training.
 - Took exception to the specified 5-year warranty and offered only 18-months from delivery or 12-months from commissioning, whichever occurs first.
 - Included clauses related to shortage of electronic components and that delays of delivery of the transformer could occur and would require schedule and price adjustments. In addition, provided statement of potential cost increases for a number of commodities and labor due to the length of time to procure the transformers and statement that additional cost would be passed on to the City prior to shipment.
 - Did not include factory testing which was required in the technical specifications for both the transformers and the switches.
 - Listed a number of exceptions to the technical specifications. It should be noted that vendors were provided the opportunity to clarify specification provisions such that addenda could be issued that would change the specification technical provisions so they would not have to list exceptions to the Bid. Listing exceptions to technical provisions, and submitting with the Bid, if allowed, would provide an unfair advantage to the Bidder taking such exceptions.
 - Did not include seismic design calculations.
- Failed to demonstrate the required experience including a list of three references for projects of similar size and scope. OneSource Distributors listed two references,

but no details on the projects to demonstrate the firm has the ability and experience to perform the work of similar type, scope and complexity within the past 5-years.

Cost Analysis:

The Engineer's estimate for this procurement package was \$806,000 and was based on a vendor quote from one of the named manufacturer's (Eaton). From review of the Engineer's Estimate, Eaton's quote is based on the technical specifications for the transformers and the switches, however at the time they were requested to provide budgetary quotes, they did not have other related specification sections to include such as preparation of operations and maintenance manuals, field services including performing demonstration and operations and maintenance training services, or providing the extended warranties and bonds. In addition, the procurement documents included a copy of the agreement that forms the contract between the City and the supplier that includes contract provisions related to milestone completion dates for release of materials for fabrication, and for delivery of materials to the site subject to liquidated damages; an agreement to be executed that the supplier and the City agree to enter into an assignment and novation agreement with the Contractor for the Phase II project thereby limiting the City's risk in administering and supplying this critical infrastructure in accordance with the Contractor's requirements and schedule; provision of extended warranties; compliance with a payment schedule (which matches the bid form); and provision of a supply bond guaranteeing that the supplier will fulfill their obligations to fulfill the requirements of the contract, among other requirements. Blocka's bid at \$940,000 is 16.6% over the engineer's estimate which is reasonable when considering the contract provisions they must meet, the timeline of the project extending years from bid date, and the risk that they assume with the milestone completion dates subject to liquidated damages. It is clear that the other two bidders, by submitting qualifications to their bids, and by omitting large portions of the scope of work from their bids, did not provide a reasonable bid that complied with the bidding documents, and are therefore non-responsive.

ECONOMIC IMPACT

The current construction cost for the Phase II Project (at 60% design stage) is estimated to be \$224 million with a range between \$190 and \$269 million. These costs do not include any soft costs such as design or construction management costs, or the construction cost of the Administration Building. The cost of the two transformers and switches is included in the Phase II Project estimate. It is anticipated that these improvements will substantially impact rates, resulting in doubling of the current rates over the next ten years, sewer service rates and sewer connection fees.

FISCAL IMPACT

Staff is requesting approval to award the Contract to Blocka Construction in the amount of \$940,000 plus \$50,000 in contingency for a total not-to-exceed amount of \$990,000. Although the use of the contingency is not anticipated, staff request an allowance be included in the event additional services and/or materials are identified that are needed

for a complete and operational facility, or in the event an omission is identified in the contract language that results in a material change in scope.

The City will initiate the project with shop drawings to be prepared and submitted for approval. The Contract includes a 175-day duration for the supplier to obtain approved submittals and release for fabrication subject to liquidated damages. The City will pay \$94,000 for completion of this milestone. The remaining payment of \$846,000 will be assigned by novation to the Phase II Contractor and included in the bid form. Therefore, payment for the remaining portions of the work including factory testing, delivery to the project site, startup and testing, and training for Operations and Maintenance staff will be paid under the Phase II contract.

The funding for this procurement contract will be allocated from the Sewer Improvement Fund, 612-07660 (WRRF Phase II Improvement Project). A total of \$2.8 million is available in FY 2025 to cover the cost of this contract. Upon award of the Phase II construction contract, staff will return to Council to Authorize additional funding as required.

Staff submitted an application for Water Infrastructure Financing and Innovation Act (WIFIA) funding in the amount of 49% of the total project costs. The remainder of the project would primarily be funded through tax exempt municipal bonds, which are not yet issued. As the design progresses, the estimated project cost is expected to be adjusted, especially as construction costs become better defined in the future as the design is more complete. Staff continue to monitor if applying for a State Revolving Fund (SRF) loan is feasible and are seeking grants as well. Budget adjustments will be brought forward to Council through the annual budget approval process.

STRATEGIC ROADMAP

This agenda item supports the various goals of Council's Strategic Roadmap. The WRRF Improvements Phase II Project will address infrastructure needs and improvements to increase the reliability of the City's treatment plant, and construct process improvements to meet more stringent nutrient limits in accordance with upcoming regulatory requirements, while supporting the goals of Council. Specifically, this item relates to the implementation of the following projects:

Confront Climate Crises & Champion Environmental Justice.

Mitigate Climate Crisis Impacts through Resilient Design and Community Engagement
Project C14b: Implement Shoreline Master Plan, including mitigating sea level rise in the industrial corridor through building requirements and outreach

Invest in Infrastructure.

Invest in Water Supplies, Sanitation Infrastructure & Storm Sewers
Project N19: Update Water Pollution Control Facility Phase II Plan

SUSTAINABILITY FEATURES

The WRRF Improvement Project Phase II will help maintain and improve the biology and health of the San Francisco Bay which is vital for the region and the State. The Phase II Project will also satisfy the nutrient removal requirements specified in the 3rd Watershed Permit to reduce nitrogen loads to the Bay.

The effects and risks of rising sea water levels have been reviewed and will be incorporated into the design of the new facilities.

The Administration Building and Laboratory design will meet State and local requirements related to sustainability (i.e., California Building Code, California Energy Code, etc.) which require a minimal level of energy efficiency, resource conservation, material recycling, etc. In addition, the building will be designed and constructed to meet Leadership in Energy and Environmental Design (LEED) standards for a Silver Certification, or better. The Administration Building and Laboratory will also include a 75kW solar array in the parking lot to generate renewable energy.

PUBLIC CONTACT

As part of the funding process, an environmental study (Initial Study and Mitigated Negative Declaration) was posted for public review and comment.

There is currently a web site hosted on the City's website that posts periodic updates throughout the multi-year duration of the project. This will continue.

NEXT STEPS

The following schedule has been developed for the electrical procurement:

Award Procurement Contract	October 10, 2024
Notice to Proceed	October 24, 2024
Release for Fabrication	April 17, 2025
Approval of Plans and Specifications and Call for Bids for the Phase II Project	September 2025
Award of Construction Contract for the Phase II Project and Novation Assignment of Procurement Package	January 2026
WRRF Improvements – Phase II Project Construction Completion	June 2030

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