



THE CITY OF KEY WEST

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EXECUTIVE SUMMARY

Date: December 22, 2021

To: Patti McLaughlin, City Manager

CC: John Paul Castro, Utilities Director

From: Ian McDowell, Associate Engineer

Subject: Approve change order to task order no. 9 from Black & Veatch Corporation for engineering evaluation and design services for replacement of activated sludge pump plumbing at the Richard A. Heyman Environmental Protection Facility

Action Statement

Approve change order for task order No. 9 from Black & Veatch Corporation in the amount for \$55,358.00 for engineering evaluation and design services for replacement of return activated sludge (RAS) and waste activated sludge (WAS) plumbing at the wastewater treatment facility, under the General Engineering contract approved in Resolution 17-207 and extended in Resolution 20-142. Authorize the City Manager to execute this agreement and any necessary budget transfers/amendments. The original design task order was for \$92,813.00 bringing the total design cost to \$148,171.00.

Background

The RAS and WAS pumps at the Richard A. Heyman Environmental Protection Facility (RAHEPF) are used to maintain balance of microorganisms in the treatment process of wastewater. These pumps are over 30 years old and exhibit significant signs of wear and tear. Localized equipment related to the pumps, including instrumentation and plumbing, show similar signs of age-related deterioration. It is desirable to renew the RAS pumps, WAS pumps, instrumentation, and plumbing to maintain and improve reliability and serviceability of the critical systems at the RAHEPF. Task order #9 was approved in resolution 21-078 for the amount of \$92,813.00.

After further review, both RAHEPF staff and city of Key West staff suggest that the extent of plumbing replacement be expanded to include the manifold and valves immediately after the RAS and WAS pumps. This plumbing consists of 35-year-old ductile iron pipe that deteriorates from the inside out with no indication of condition until failure. In November, while city staff

were in discussions about the need for additional work and potential change order with Black & Veatch, an elbow in the RAS system failed and flooded the utilidor at RAHEPF.

Purpose and Justification

The purpose of this change order is to include evaluation of alternate plumbing materials and design of replacement plumbing and valves at the manifold for the RAS and WAS system with task order No. 9. Specifically, Black & Veatch will evaluate HDPE as a piping and valving material as opposed to the existing ductile iron pipe. HDPE does not corrode like ductile iron pipe and is significantly easier for plant staff to repair and replace. The evaluation and design represent a significant step in updating plumbing materials at RAHEPF which can reduce long-term costs, maintenance efforts, and improve reliability.

This resolution supports Key West Strategic Plan infrastructure goal #4 and economic goal #1: *Long-term sustainability of the City's hard assets*

Financial

Funding will come from account 401-3504-535-6500 in project number SE35042102. Staff has reviewed the hourly cost breakdown and believe the rate mixture is properly balanced and match the hourly rates set forth within the contract documents.

Recommendation

Staff recommends approving task order for \$55,358.00 for Black & Veatch Corporation to provide engineering evaluation and design services to replace plumbing of the activated sludge pumps at RAHEPF and authorizing the City Manager to execute this agreement and any necessary budget transfer/amendments.