



Legislation Text

File #: 18-0734, **Version:** 1

Item:

Design Services for Aeration System Enhancements for the Triangle Wastewater Treatment Plant Amendment

Date of BOCC Meeting: April 9, 2018

Request for Board Action:

The Board is requested to authorize the County Manager to enter into a contract amendment to increase the existing design consultant contract with Black & Veatch International Company (FR# 17-832) for Aeration System Enhancements for the Triangle Wastewater Treatment Plant in the amount of \$34,500, bringing the total contract amount from \$213,000 to \$247,500.

Background:

Black & Veatch International Company (B&V) is providing engineering services for the upgrade of the Triangle Wastewater Treatment Plant (TWWTP) Aeration System. The upgrade includes the installation of a diffused aeration system in oxidation ditch number two consisting of two 125 horsepower blowers with variable frequency drives and two membrane disc diffuser grids. The Black and Veatch TWWTP Aeration System Improvement Technical Memorandum completed in May 2017 served as the outline for these improvements (Attachment A). Services provided by Black and Veatch International Company include preparation of the plans and specifications, construction inspection, approvals/permitting, construction administration, and record drawing preparation.

The amendment will cover two changes in scope: (1) Attachment B reflects changes in the electrical and control design such that the existing dissolved oxygen probe will be able to control the new positive displacement blowers; and (2) Attachment C reflects additional changes in the electrical and control design for the installation of an additional dissolved oxygen probe and relocation of the existing dissolved oxygen probe to provide greater operator control over the new displacement blowers. These changes will allow greater operational control by TWWTP staff resulting in potential energy savings and optimized nutrient removal.

Engineering design costs for the TWWTP Aeration System Enhancements Amendment are estimated to be \$34,500. Once this design process is completed, the subsequent construction project to implement the improvements will be funded from the Enterprise Fund.

In review of the MWBE compliance for the Amendment to RFQ 17-012 TWWTP Efficiency and Resiliency Improvements, Black & Veatch International Company will be utilizing Milhouse Engineering verified as MWBE certified African-American firm and is expected to achieve up to 59.67% MWBE participation used on this project. The MWBE Compliance Review form is provided as Attachment D.

Alignment with Strategic Plan: This action is in accordance with Durham County Strategic Plan Goal 4: “Environmental Stewardship and Community Prosperity,” as this project will ensure a clean environment by

restoring oxidation ditch number two to its original treatment capacity. Additionally, the transition from mechanical surface aeration to diffused aeration with dissolved oxygen control should result in reduced energy usage at the TWWTP.

Resource Persons: Jay Gibson PE, General Manager; and Kyle Manning PE, Senior Project Manager

County Manager's Recommendation: The County Manager recommends the Board to authorize the County Manager to enter into a contract amendment to increase the existing design consultant contract with Black & Veatch International Company (FR# 17-832) for Aeration System Enhancements for the Triangle Wastewater Treatment Plant in the amount of \$34,500, bringing the total contract amount from \$213,000 to \$247,500.


County Manager: _____