

INDIVIDUAL PROJECT ORDER NUMBER 01

Describing a specific agreement between Kimley-Horn and Associates, Inc. (the Consultant), and the City of Deltona (the Client) in accordance with the terms of the Master Agreement for Continuing Professional Services dated September 28th 2020, which is incorporated herein by reference.

Identification of Project:

Project Name: Fisher WWTF Improvements Analysis
KH Project Manager: Rhea Dorris, P.E.
Project Number: 049603001

Project Understanding

The Fisher Wastewater Treatment Facility (WWTF) is an existing 1.4 million gallons per day (MGD) annual average daily flow activated sludge domestic wastewater facility consisting of two wastewater treatment plants (one contact stabilization and one aeration/oxidation ditch). Effluent from both plants are conveyed by gravity to a common pump station and pumped to traveling bridge sand filters, followed by disinfection from chlorination. The disinfected effluent is stored in an onsite 1.9 MG holding pond with a percolation pond of 0.05 MGD AADF. Two concerns have been identified for this facility that require upgrades:

1. The traveling bridge sand filters are at the end of their useful service life and are in need of replacement. The replacement can be accomplished by utilizing a standalone disc filter at the WWTF in replacement of the sand filters, or by re-routing the flow downstream of secondary treatment to the existing disc filters at the nearby Alexander Avenue Water Reclamation Facility.
2. The nitrogen concentration in the holding pond has been exceeding the maximum regulatory limit. This is likely due to a short-circuiting issue within the contact stabilization treatment plant, which causes a portion of raw wastewater to be conveyed directly to secondary clarification. This leads to an elevated ammonia concentration in the effluent. Potential improvement options include bypassing the holding pond by routing the chlorine contact effluent to the onsite pump station or modifying the contact stabilization treatment system to resolve the short-circuiting issue.

A feasibility analysis is required to evaluate the best improvement options for the above concerns.

Specific scope of basic Services:

Task 1 – Improvements Feasibility Evaluation

Kimley-Horn will investigate the existing facility operations to identify facility improvement options. Up to three improvement options will be evaluated for technical feasibility, effluent water quality, regulatory feasibility, impact on the facility operations, and the overall cost of the improvement. The regulatory feasibility includes discussion with FDEP on the potential improvements and summarizing any permit modifications needed for FDEP's approval of future designs. The technically feasible options will be schematically developed to check operations considerations and potential construction conflicts. Kimley-Horn will develop a planning-level engineer's opinion of probable cost estimate and preliminary schematic diagrams for the selected improvement options

Task 2 – Technical Memorandum and Review Workshop

The analysis and results of the feasibility evaluation will be summarized in a draft technical memorandum. Kimley-Horn will submit the draft technical memorandum to the City, attend one review workshop to discuss the results of the evaluation with the City, and gather comments from City staff. Kimley-Horn will then incorporate the City's feedback into a final technical memorandum and submit to the City.

**Schedule:**

The following schedule will be provided. This assumes two weeks of City review time for the draft technical memorandum.

Milestone	Completion Date
Draft Technical Memorandum Submitted	30 days from NTP
Final Technical Memorandum Submitted	60 days from NTP

Deliverables:

The following deliverables will be provided:

- Draft Report – electronic copy and 4 hard copies
- Final Report – electronic copy and 4 hard copies

Terms of compensation:

Kimley-Horn will perform these services on a time and materials basis with a not-to-exceed maximum of \$24,900, inclusive of expenses. A breakdown on the fee by task is below, and a detailed breakdown is provided in **Attachment A**.

Task	Fee
Task 1 Improvements Feasibility Evaluation	\$14,400
Task 2 Technical Memorandum and Review Workshop	\$10,500
Total	\$24,900

The project will be invoiced monthly based upon the overall percentage of services performed. Payment will be due within 25 days of your receipt of the invoice and should include the invoice number and Kimley-Horn project number.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.

ACCEPTED:

CLIENT

KIMLEY-HORN AND ASSOCIATES, INC.

BY: _____

BY:  _____

TITLE: _____

TITLE: Asst. Secretary

DATE: _____

DATE: 3/16/2021