



City of Boynton Beach Agenda Item Request Form

Meeting Date: 03/ 3/2026

Proposed Resolution No. R26-031- Approve Amendment No. 1 to Task Order No. GESUT-3C-03-25 with Carollo Engineers, Inc. in the amount of \$100,000 for a new total amount of \$500,000 for professional engineering services required for the Wastewater and Potable Water Models Update and Calibration Project.

Requested Action: Staff recommends approval of Proposed Resolution No. R26-031.

Explanation of Request: This amendment is needed to accomplish the following tasks:

- Changes to Project Management and Meetings - Additional time to perform project management activities for an extended duration (four months), along with corresponding communication. Two (2) additional progress meetings (in person), one for each system, will be added for the coordination and presentation of additional tasks.
- Changes to Data Collection and Analysis - Using successive versions of the City's GIS database, the Consultant will update both the potable water distribution and wastewater collection system models to address data gaps and inconsistencies. Model elements will be renamed and reindexed to align with the Asset IDs provided in the City's GIS shapefiles. Additionally, a flow meter package will be procured and installed on a wastewater force main near the intersection of N. Congress Avenue and Savannah Lakes Drive.
- Changes to Hydraulic Models Conversion and Update - Consultant will update the wastewater hydraulic model to incorporate 3.6 miles of gravity segments with manholes, 27 additional lift stations (for a total of 131 simulated lift stations), and 27.9 additional miles of force main (for a total of 75.3 miles). Pump curves, pump control levels, and logic controls consistent with the provided information will be included in the wastewater model.
- Changes to Hydraulic Models Calibration - Calibration of the model with the new infrastructure operating in current dry weather and wet weather conditions is required. Consultant will adjust appropriate variables such as flow allocations, diurnal patterns, lift station operation settings, roughness coefficients, and inflow and infiltration potential to calibrate the model.
- Changes to Deliverables and Documentation - Two summary sections will be added to the Draft and Final Technical Memoranda: Water and Wastewater System Assessments Summary and Business Case Scenarios Summaries. The hydraulic models' deliverables will include one additional scenario per business case evaluated.

- **New Task 6 - Water and Wastewater System Assessments** - The objective is to identify hydraulic deficiencies with respect to the City's standard level of service and industry performance criteria to define and prioritize immediate capital investment needs. For the wastewater collection system, this includes identifying lift station capacity exceedances and evaluating force main capacity under both dry-weather and wet-weather conditions. For the water distribution system, this includes assessment of existing distribution and transmission pipelines relative to typical municipal design standards and identification of restrictions and headloss within the system.

- **New Task 7 - Business Case Scenarios** - The goal is to generate operational and management strategies that work hydraulically and promote economic sustainability for the City. For the wastewater collection system, this includes assessing impacts of inflow and infiltration on pumping and force main capacity, evaluating lift station pumping efficiency, assessing the ability to convey flows to the SCRWWTP using diversion and isolation valves, and evaluating impacts from changes in large customer demands and septic-to-sewer conversion. For the potable water distribution system, this includes evaluating water quality based on water age, assessing the ability to serve the City using a single water treatment plant, evaluating fire flow availability, and assessing impacts from systemwide demand changes.

How will this affect city programs or services? This project will provide the City with comprehensive, calibrated hydraulic models for both the wastewater collection system and potable water distribution system. These models will enable the City to identify immediate infrastructure needs, prioritize capital investments, optimize system operations, respond to regulatory agency inquiries with confidence, and plan for future growth. The assessments and business case scenarios will support informed decision-making regarding system improvements, operational strategies, and economic sustainability for the City's utility systems.

Budgeted Item: Yes

Account Line Item and Description: US2403 - 403.5000.533.31.90 (Water) - 50K available
US2403 - 403.5000.535.31.90 (Sewer) - 50K available

Fiscal Impact: The amendment was budgeted in the 2026 CIP Budget.

This amendment will increase the contract value by \$100,000, bringing the total contract amount to \$500,000. While this represents an additional cost to complete the task order, the investment in creating comprehensive, calibrated hydraulic models will generate significant long-term cost savings for the City. These models will enable staff to identify and prioritize capital improvements efficiently, optimize system operations to reduce energy costs, avoid costly emergency repairs through proactive planning, and make informed decisions that prevent unnecessary infrastructure investments. The ability to accurately model various scenarios will ensure that future capital projects are appropriately sized and strategically located, maximizing return on investment and extending the useful life of existing infrastructure.

Attachments:

[R26-031 Agenda_Item_4275-2026_Approve_Amendment_No._1_to_Task_Order_-](#)

[_Carollo_Engineers.docx](#)

[Exhibit A to Resolution - Signed Amd #1 corporate seal.pdf](#)

[CO#1 Proposal BBU Modeling Project Amendment.pdf](#)

[R25-041 Executed Resolution and TO.pdf](#)

[PO-251133.PDF](#)

[BBU Wastewater and Water Models Update and Calibration Exhibits A-C.pdf](#)

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