

Progressive Design-Build Services for the Greenland Water Reclamation Pipelines: Water, Reclaimed Water and Sanitary Sewer Force Main

Project Owner: JEA

Client: Garney / Mott MacDonald

Markets: Municipal, Utilities

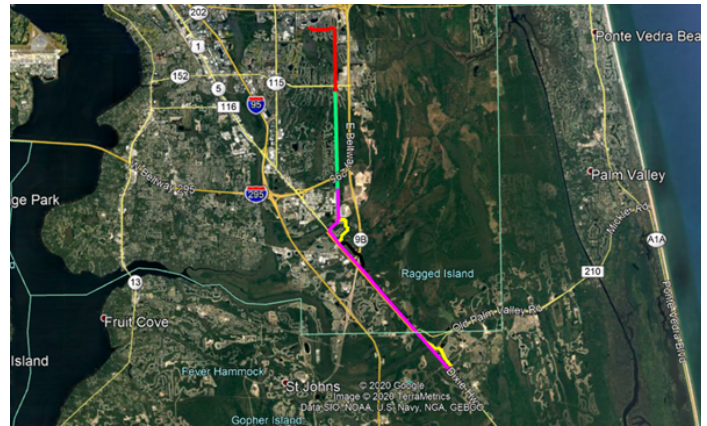
Project Profile:

With the planned construction of the new Greenland Water Reclamation Facility (WRF), JEA developed pipeline projects with the purpose of providing a means of transferring wastewater and reclaimed water to and from the WRF site, and included a water main extension identified as part of an Integrated Stormwater Management (iWater) study. Design-build services for the project include designing, permitting and constructing the following:

- 34,500 LF of 24-inch (min. diameter) force main extension (CIP 100-62);
- 39,000 LF of 24-inch (min. diameter) reclaimed water transmission main (CIP 730-12);
- 2,000 LF of 24-inch (min. diameter) reclaimed water main stub out for a future reclaimed water main to
- Mandarin Wastewater Treatment Plant (WWTP);
- 20,500 LF of 24-inch (min. diameter) water main extension (CIP 102-33).

MAE's scope of work for the project team on this ongoing pipeline program has included performing more than 200 Standard Penetration Test (SPT) along pipeline alignments and at jack and bore / horizontal directional drill locations. In addition, field permeability testing was performed on soil strata at jack-and-bore crossings at FDOT roadways for soil permeability measurements to develop Dewatering Reports. We performed laboratory index property testing on recovering soil samples and provided an engineering report to assist the design and construction of the project improvements.

Service: Geotechnical Engineering



In addition to the geotechnical exploration, 12 groundwater sampling wells were installed along the Philips Highway portion of the Water Main and Reclaimed Water Main alignments adjacent to the FEC Railroad tracks. Groundwater samples were obtained to test for contaminants that would negatively impact the use of a Generic Permit for the discharge of groundwater to "waters of the state."