

BUSINESS CASE FORM

New Project or Budget Change?	New Project		Assigned Project #	2020107
Requested by:	Bryan K. Gongre <i>Project Manager / Area Manager</i>		Date:	5/15/2020
Project Name:	Sanlando I&I Deficiency Corrections Ph 4			
Company:	252	UTILITIES, INC. OF FLORIDA		
Business Unit:	255101	SANLANDO S		
Project Owner:	Patrick C. Flynn		BU Type:	SP
Project Manager:	Bryan K. Gongre		Budget Owner / RP:	Gary Rudkin
Start Date:	6/1/2020	Q2 2020	Region:	Florida 4
Estimated End Date:	10/30/2020	Q4 2020	State:	FL
Primarily Like-For-Like Asset Replacement?	Yes		Project Type: (check all that apply)	
Will project replace/retire any assets:	Yes		<input type="checkbox"/> Growth <input type="checkbox"/> Maintenance <input type="checkbox"/> Replacement <input type="checkbox"/> Upgrade <input type="checkbox"/> Cost Reduction <input checked="" type="checkbox"/> EH&S Compliance <input type="checkbox"/> Other <input type="checkbox"/> Developer Agreement <input type="checkbox"/> Divestment <input type="checkbox"/> Acquisition <input type="checkbox"/> Rate Case <input type="checkbox"/> Deferred Maintenance	
Previously Requested:	Engineering	Construction	Total	
This Request:		1,996,092	1,996,092	
Still to be Requested:		199,670	199,670	
Total Project Budget:	0	2,195,762	0	

Description:

1. CIPP lining of 24,319LF of 8" VCP GSM pipe
2. Install 62LF of sectional CIPP liners
3. Restoration of 5 manholes and raise 17 manhole ring and covers
4. Reinstate 176 each - 6" service laterals
5. Remove roots and treat within 5,652LF of GSM
6. Excavate, repair and restore sections of GSM in 9 locations within the collection basins

Change Order #1 -

Traverse Group 1.) Raise MH on Windmill Way/Replace broken collection main on Elderberry Lane/Add (2) cleanout cannons one each on Bay Hammock Ln and Squirrel Trail (\$113,300)

Traverse Group 2.) Credits for three MHs that did not need to be raised.(-\$61,950.00)

Traverse Group 3.) Replace broken collection main at 125 Oak Leaf Lane/Repair broken force main connection and sewer lateral at MH at 236 Cambridge Drive. (\$119,226.13)

Traverse Group 4.) Raise MH on Red Mulberry Court. (\$10,750.00)

APS 1.) Grout fracture to prepare for liner from MH156 to MH155 (\$6,000.00)

APS 2.) 125 Oak Leaf Lane video and clean. (\$7,593.75)

Brownies 1.) 125 Oak Leaf Lane Vactor and pumper truck use. (\$15,500.00)

Timeline Considerations:

This is a pro forma project included in the Utility's 2020 rate filing that must be completed by 12/31/21 to qualify as proforma.

Inter-dependent Project Project Number: 2018117 Project Name: Sanlando I_I Invest Ph 4 (If applicable)

Have engineering evaluations been performed? No Engineering project number: NA (If applicable)

JUSTIFICATION / ALTERNATIVES

Justification and Benefits:

The Sanlando service area provides sanitary sewer service to approximately 10,250 connections through a network of approximately 490,000 LF of gravity collection mains. A vast majority of the gravity collection system was constructed in the 1970's and consists of a combination of vetrified clay pipe (VCP) and PVC. The WW flows are received and treated at the Wekiva WWTF. The Wekiva WWTF is rated at 2.9 MGD with an average daily flow of 2.3 MGD. As a result of wet weather conditions in 2019, the Wekiva facility treated in excess of 3.5 MGD that was sustained over months. This condition continues to be the driver for the ongoing investigation of the collection system to determine where excess inflow/infiltration occurs. This is the fourth phase of such work. The phase 1 study focused on the areas where receiving lift stations were not repumping from upsteam stations and possibly skewing the run times. The deficiencies identified in the phase 1 study were corrected and run times at the stations were cut in half. The phase 2 study and corresponding corrections addressed the areas served by lift stations with elevated run times downstream of stations within the phase 1 project and again resulted in a 50% reduction in lift station run times. Phase 3 focused on the Longwood Groves subdivision collection system with similar success.

The phase 4 investigation involved a condition assessment of approximately 94,000 LF of GSM. In order to further reduce the infiltration of groundwater into the collection system the deficiencies identified in the study must be addressed through a combination of CIPP lining and excavation and replacment. Doing so will reduce operating expense in the form of electric and chemical cost reductions, reduced wear and tear on equipment, improvements in treatment efficiencies, and extension of the service life of collection system components by restoring the integrity of gravity mains and manholes. The amount of annual operating expense savings is not calculable at this time as the quantity of infiltration is not readily measurable and is based upon seasonal groundwater tables that vary according to weather patterns.

Risk Evaluation

This project will repair damaged gravity sewer mains that if not addressed, would continue to be sources of significant I&I that elevate treatment costs. Excess I&I will likely trigger adjustments to annual operating expenses for purchased power and chemicals in Sanlando in the upcoming rate case. As well, the vast majority of the collection system is located in road rights-of-way where a catastrophic failure of a gravity main could lead to the collapse of a paved roadway that would likely result in significant unplanned excavation, repair and restoration costs.

Alternatives Considered:

Recovery of this investment is timely not only from a rate making perspective but also due to the condition of the aging infrastructure and the need to address the many failures throughout the collection system thereby reducing O&M and extending the life of the assets. The longer these conditions exist the worse they will become eventually leading to collapse and complete failure. There are two components to this project. CIPP lining/root removal/manhole rehabilitation and excavate/repair activity. The lining and excavation were bid out separately. Three vendors bid the lining/rehab portion and three vendors bid the excavation/replacement work. This was necessary as most lining/rehab companies do not perform excavation services and those that do would skew the lining costs provided by the vendors that do not perform excavation services. The manhole segments were evaluated by degree of severity using a scale of high to low priority. A high priority was given those segments with visual signs of infiltration, multiple fractures, voids, etc. A lesser ranking of low was given to segments with multiple hair line cracks and no obvious signs of infiltration staining. To take advantage of economies of scale, as the budget allowed, segments that either ranked high, medium or low were included under this project. Also, although not yet evaluated, is the possibility of a cost reduction by lining an entire segment as opposed to the cost to install a short liner. Short liner costs are significantly higher as compared to LF cost to line an entire segment. This will be fleshed out prior to going to contract with the selected vendor.

Technical Review Summary:

Project was presented to and approved by the CPRT on 6/11/20 without the need for revisions.