3/25/2021
To: Mayor and City Council members
Update on a project to bring additional capacity to our water system nearing completion. - Trent

Southdown Plant Ground Storage Tank Replacement

Is It In Budget?		Is It On Schedule?		Community Benefit
■ Yes	☐ No	■ Yes	☐ No	*Increase Water Supply Available to the Surrounding Community*
		Project Phase?		
		Construction		

Highlights:

- Contractor continues construction of proposed 400,000-gallon Welded Ground Storage Tank (GST)
- Contractor has completed installation of four (4) duct bank runs connecting the exterior control building with the pre-existing tank and exterior booster pump station.
- Electricity has been reestablished at the facility in preparation in order to test pumps and control building operation.
- Painters arrived onsite March 22, 2021 to begin painting the new Welded Ground Storage Tank.
- The control room is operational, and the existing tank is being brought back on-line in order to resume partial plant operations.

Current constraints and impacts to baseline schedule:

- Utility coordination delays with CPE in conjunction with Winter Storm Uri have impacted the contractors baseline schedule.
- Due to limited space inside of the facility contractor is unable to accelerate or compress schedule, many construction activities must be scheduled in series as opposed to running concurrently. Although challenging the contractor is maintaining the schedule other than impacts due to weather delays.

Budget Info:

Funding Sources	Series	To Date	Future	Total Budget
System Revenue - Cash		350,000		350,000
System Revenue - Cash				-
System Revenue - Cash				-
General Obligation Bonds				-
General Obligation Bonds				-
W/S Revenue Bonds	2020B	2,150,000		2,150,000
Impact Fee - Debt				-
Other Funding Sources				-
Total Funding Sources		**2,500,000**	**-**	**2,500,000**

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	273,068		273,068
Construction	1,974,158		1,974,158
Construction Management/Inspection			-
Construction Materials Testing	25,842		25,842

FF&E			-
Total Expenditures	**2,273,068**	**-**	**2,273,068**

Project Balance/Contingency	**226,932**

Schedule Info:

	Base Line	***Current***
Design Start	April-19	April-19
Bid Start	February-20	March-20
Construction Start	May-20	July-20
Proposed Construction Completion	April-21	May-21

Rain Days: 5

Upcoming Work Items:

- Pipe crew will arrive after completion of painting the GST and complete all connections to pre-existing tank.
- After paint and pipe connection predecessor activities, contractor will begin final site work such as paving and sidewalk installation.
- Water samples will be collected prior to opening the system for operation.

Project Manager: Fatema Weekly

Construction Manager: Cornelius Coleman

Designer: KIT Professionals, Inc.

Contractor: W.W. Payton

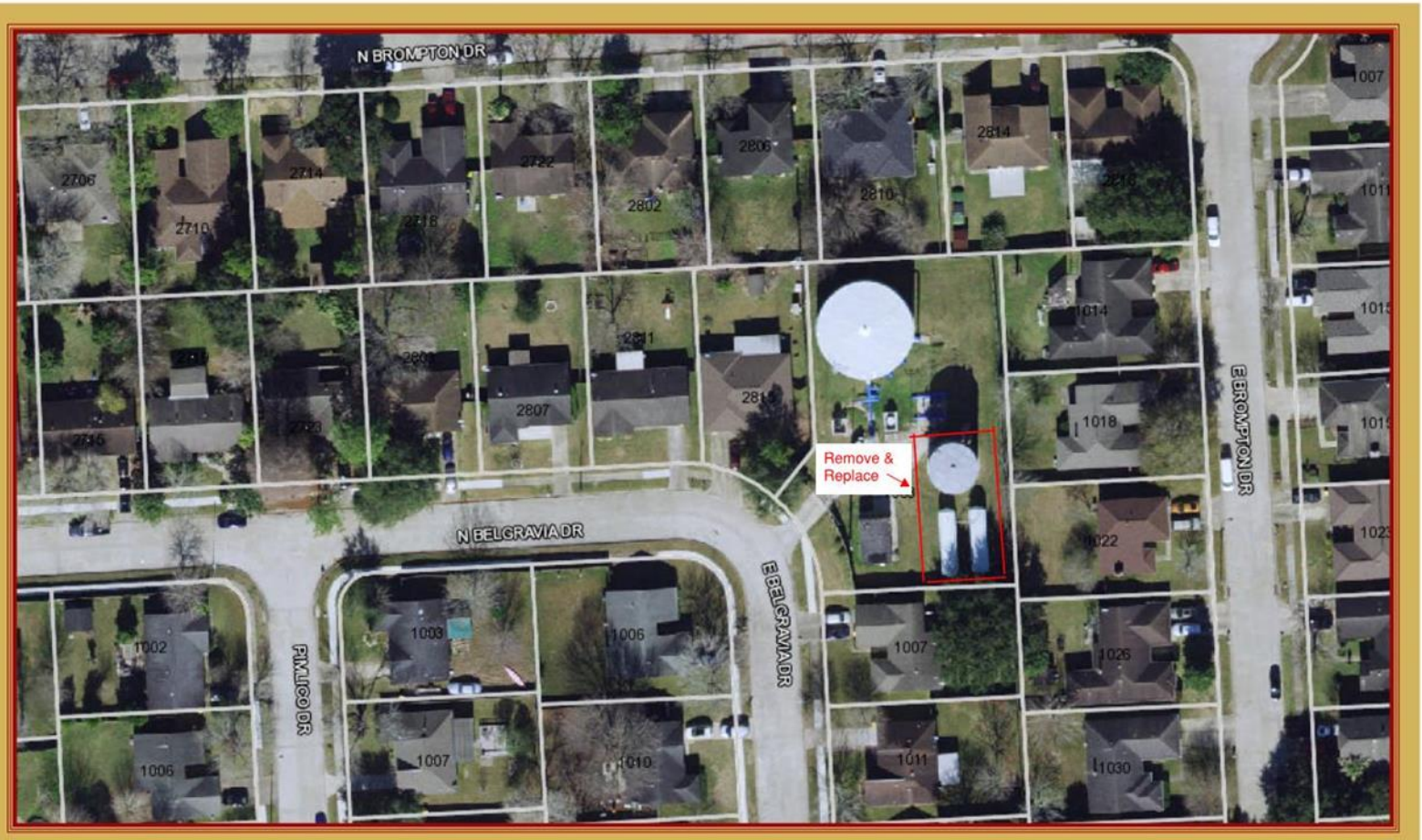
Scope: Project scope consist of the design to remove and replace the existing 140,000-gallon bolted steel ground storage tank (GST) with a new 500,000-gallon welded steel GST and associated yard piping, permanent removal of two existing hydro-pneumatic pressure tanks, and installation of a variable frequency drive (VFD) on an existing booster pump.

Justification: The water well and booster pump station were originally constructed with the subdivision development prior to the area's annexation into the City. Consequently, the City inherited the two original storage tanks. The bolted steel tank has already been decommissioned due to the tank reaching the end of its expected life and showing signs of leaking. Bolted steel tanks generally have a shorter life span than welded steel tanks or concrete tanks, with the decommissioning of this bolted tank it leaves the site with a single 500K-gallon tank to meet the current demand of nearly 1 million gallons per day. With a peaking factor of 2.0, the peak hourly demand for the service area is approximately 1.8 MGD (1,250 GPM). As a result, the well pump will run continuously to maintain water availability during these peak demands. Confirmation is based on the review of SCADA data for the Southdown WP GST Operational Levels for 2018.

Previous Memos: 03/07/2019, 10/31/2019, 01/09/2020, 04/16/2020, 01/21/21

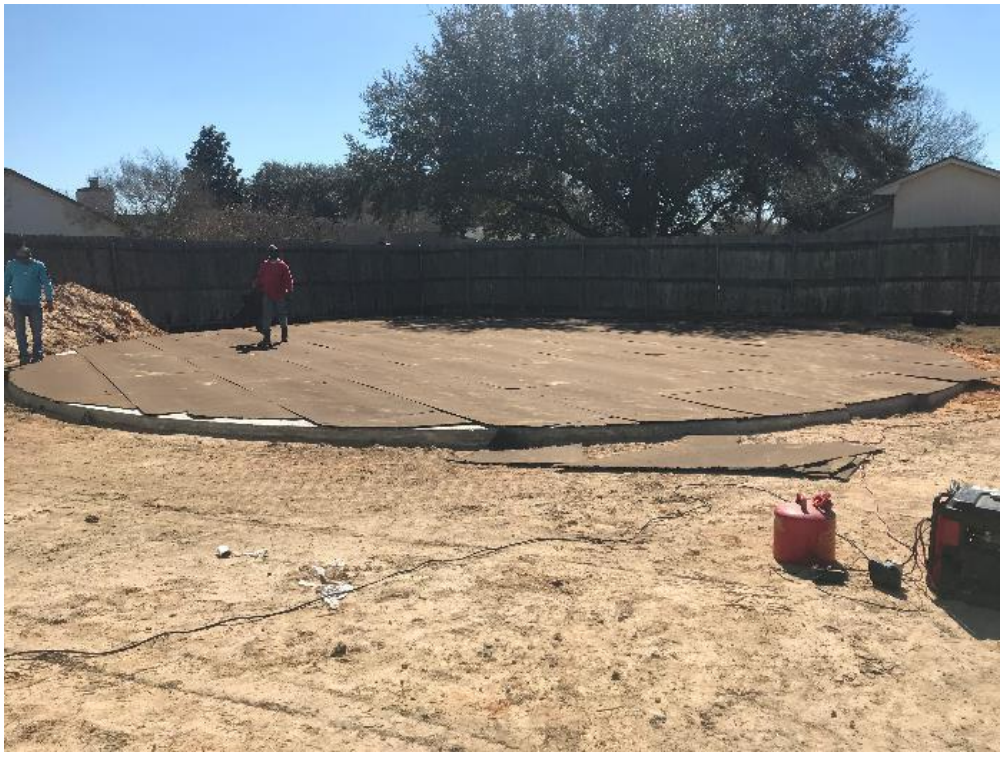
Project Location Map:

VICINITY MAP

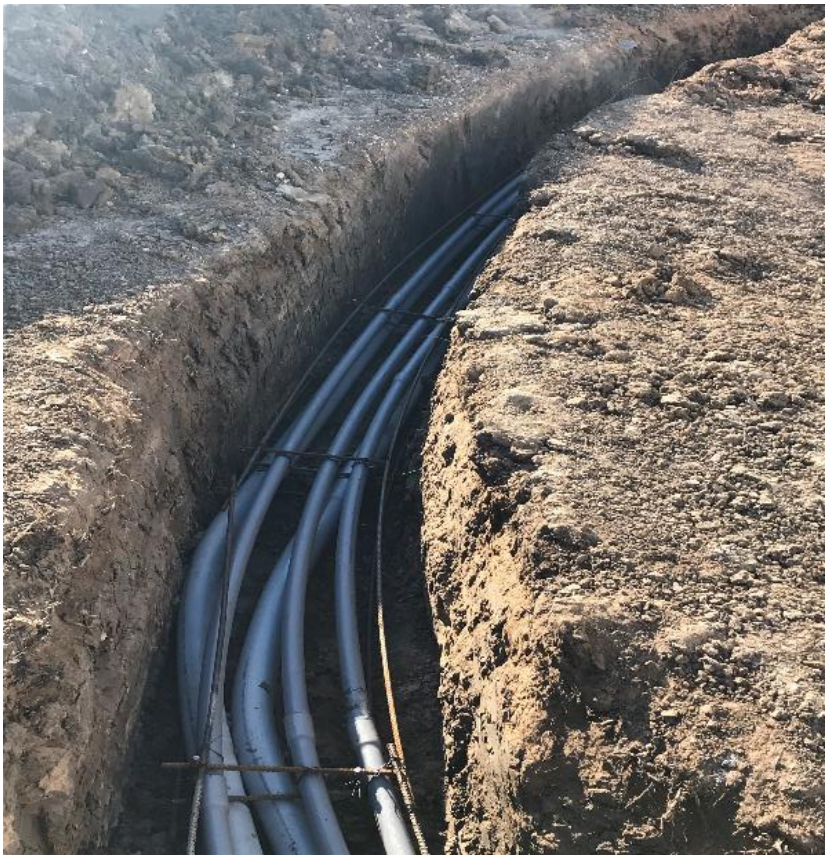


Project Photos:

Contractor wrecking forms and applying finish to GST retainer ring foundation.



Contractor installing tank padding and waterproofing mastic on proposed GST



Reinforced duct bank run with 1.5”, 3” and 1’ (spare) conduit.

Construction of 400,000-gallon welded GST at Southdown Groundwater Plant