

4/18/2019

To: Mayor and City Council members

Update on the ongoing design and construction work to expand capacity and redundancy for our water system at the FM521 water plant. -Trent



FM 521 Ground Storage Tank Expansion

Scope: The proposed project includes the installation of a third ground storage tank, related piping, upgrade of existing pumps, and controls to provide additional storage and increased firm capacity at the FM 521 Water Pressurization Facility. The Project includes a 2,000' run of conduit and fiber to connect the plant to the fiber located on Shadow Creek Parkway and provide continuity with the fiber run from Broadway along the FM 521 Waterline.

Justification: The City is in the process of extending both the FM 521 Waterline, and the McHard Road Waterline. The FM 521 Waterline is intended to transfer water from the City's planned Surface Water Treatment Plant.

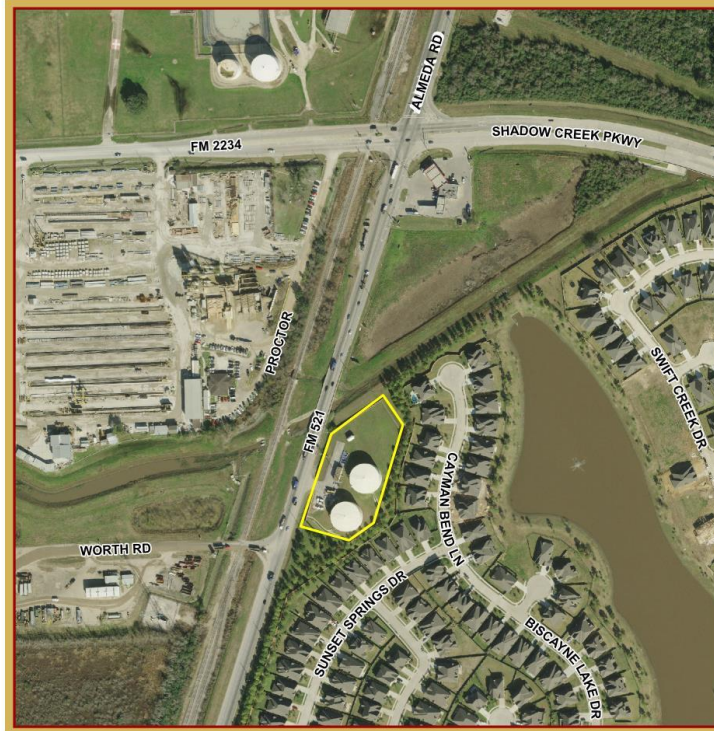
Project Manager: Jameson Appel

Construction Manager: Ronnie Hart

Designer: Costello, Inc.

Contractor: DN Tanks

Budget Info:



CITY OF PEARLAND

FM 521
Water Plant

Property Line



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1 inch = 300 feet
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Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
W/S Revenue Bonds	2017C	152,525		152,525
W/S Revenue Bonds			1,600,000	1,600,000
Impact Fee - Debt			1,900,000	1,900,000
Impact Fee - Cash		194,950		194,950
Other Funding Sources (Fund Balance)		152,525		152,525

Total Funding Sources	500,000	3,500,000	4,000,000
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Expenditures	To Date	Future	Total
PER			-
Land			-
Design	515,602		515,602
Construction	2,935,915		2,935,915
Construction - Phase 2		1,569,000	1,569,000
Construction Materials Testing		25,000	25,000
FF&E			-
Total Expenditures	3,451,517	1,594,000	5,045,517

Project Balance/Contingency	(1,045,517)
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*Staff will be requesting additional funds (W/S Revenue Bonds & Impact Fees) during the mid-year adjustments and in the FY2020 CIP. Budget shortfall is due to upsizing of the Ground Storage Tank from 2.3 MG -3.0 MG during the Phase 1 design as a result of modeling the overall system to allow for maximum capacity at the site. During scoping discussions for Phase 2 it was discovered that the stand by permanent generator is too small to run the up-sized plant and it is likely the current electrical service to the plant will have to be up-sized in order to fully operate the plant post improvements, these items were not including in the original study for Phase 1 and only recently discovered in preparation for phase 2 design/construction.

Phase I	Base Line	Current
<i>Design Start</i>	September-17	January-18
<i>Proposed Bid Start</i>	October-18	September-18
<i>Proposed Construction Start</i>	January-19	January -19
<i>Proposed Construction Completion</i>	January-20	January -20

Phase II	Base Line	Current
<i>Design Start</i>	March-19	
<i>Proposed Bid Start</i>	July-19	
<i>Proposed Construction Start</i>	September-19	
<i>Proposed Construction Completion</i>	June-20	

Phase I: The initial phase of construction which is confined to the pre-cast concrete tank work.

Phase II: The design for pumping and controls which was separated due to the specialty of the electrical and plant control work not belonging with the tank and piping construction.

Phase I Highlights:

- The contractor had a survey crew lay out the construction areas and set up SWPPP protection for the site.
- A five foot excavation for the tank slab and foundation has been completed, with over 500 truckloads of excavated material being hauled off site.
- **Importing and compaction of select fill for the tank pad is underway.**

Upcoming Phase I Work Items:

- Continue to haul in select materials to build up the tank pad in lifts.
- Form and pour concrete tank pad
- Relocate hydro tank
- **Start on construction of the tank walls**

Phase II Highlights:

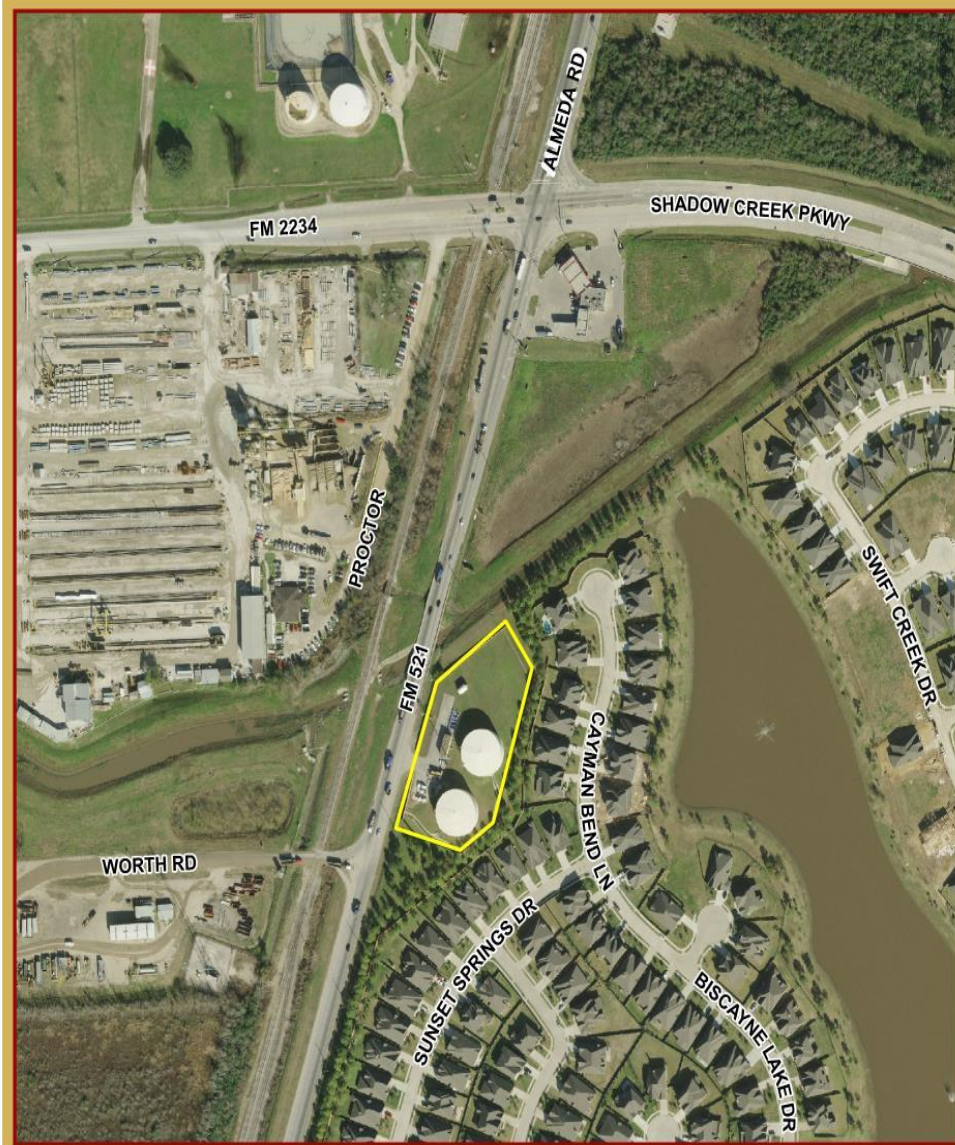
- Electrical and Control Design contract award was presented to City Council for consideration and approval on February 25, 2019. The awarded contract to Costello, Inc. is in the amount of \$278,502.
- **The Letter Report was finalized March 20th, 2019 documenting the basis of design (operational parameters) for the water plant's electrical, pumps/VFD and Generator.**
- The design was established on an accelerated schedule due to the need to have phase II construction mobilize prior to the completion of the tank currently underway.

Upcoming Phase II Work Items:

- **90 % plans to follow in early May** for City review.

Previous Memos: 10/26/2017, 6/28/2018, 11/08/2018, 2/07/2019

Project Location Map:



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Water Plant**

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Construction Photos:

Tank Construction Area



Excavation for Tank



Structural Fill for Tank Pad



Select fill for the tank pad.

