

5 August 2020

To: Mayor and City

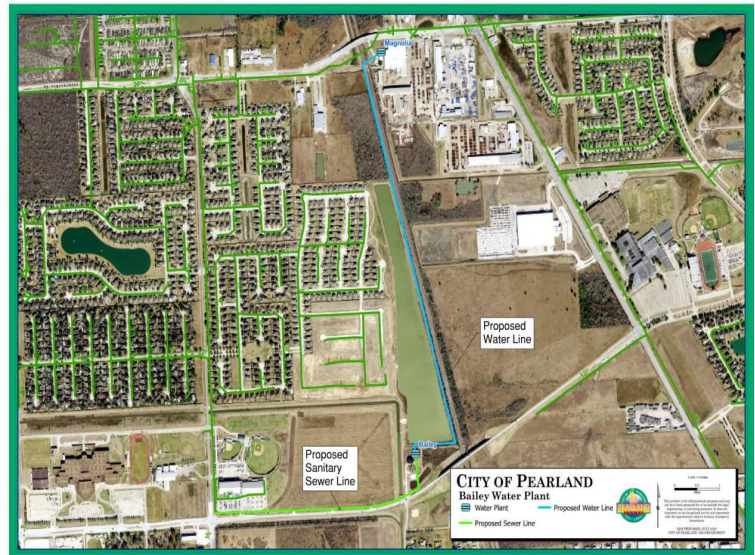
Council members

First phase complete with new concrete 1 MG tank. Phase 2 with new sanitary line and waterline design and permitting nearing completion. Clay



Bailey Water Plant Improvements & Bailey Sewer Line – (Veterans to Bailey Water Plant)

Scope: The Bailey water well has elevated levels of manganese and iron that cause taste, odor and appearance issues though the water product itself remains safe for consumption. Phase 1 of this project is completed, and Phase 2 is in design. Phase 1 of this project was the installation of a new 1 MG concrete Ground Storage Tank to replace the existing welded steel tank. Phase 2 will include: a gravity sanitary sewer line from the Natatorium to the Bailey Plant, a waterline to transport water from the Magnolia Water Plant to the Treatment Plant, and a



“green sand” filtration system to treat the manganese and iron issues at the Bailey Plant.

Justification: The 2.8 million gallon per day (MGD) well at the Bailey water plant and the 1.4 MGD , well at the Magnolia plant are critical to provide system water quality maintenance and provisions for drought contingency and peak day demands. The City of Pearland has maintained a log of customer complaints regarding water quality. Complaints regarding brown/rusty colored water indicate problems with iron and manganese have occurred when the well is in production.

Project Manager: Morgan R Early

Construction Manager: Michael Collins

Designer: Enprotec/Hibbs & Todd

Contractor: DN Tanks

Budget Info:

Bailey Water Plant:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
W/S Revenue Bonds	2018B	620,000		620,000
W/S Revenue Bonds	2019B	4,240,000		4,240,000
W/S Revenue Bonds			4,280,000	4,280,000
Impact Fee - Debt				-
Other Funding Sources				-
Total Funding Sources		4,860,000	4,280,000	9,140,000

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	533,610	26,824	560,434
Construction (Tank)	1,596,570		1,596,570
Construction (Pretreatment)		6,928,000	6,928,000
Construction Materials Testing	35,125	14,875	50,000
FF&E			-
Total Expenditures	2,165,305	6,969,699	9,135,004
Project Balance/Contingency			4,996

Bailey Sewer Line:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
System Revenue - Cash		30,000		30,000
W/S Revenue Bonds			600,000	600,000
W/S Revenue Bonds				-
Impact Fee - Debt				-
Other Funding Sources				-
Total Funding Sources		30,000	600,000	630,000

Expenditures	To Date	Future	Total
PER			-
Land			-
Design		30,000	30,000
Construction		500,000	500,000
Construction Management/Inspection			-
Construction Materials Testing			-
FF&E			-
Total Expenditures	-	530,000	530,000

Project Balance/Contingency	100,000
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Schedule Info:

Phase 1	Base Line	Current
Design Start	December-18	January-19
Bid Start	August-19	June-19
Construction Start	August-19	November-19
Proposed Construction Completion	May-20	May-20

Rain Days: 14

Phase 2	Base Line	Current
Design Start	December-18	January-19
Bid Start	August-20	October-20
Construction Start	December-20	
Proposed Construction Completion	August-21	

Rain Days: N/A

Phase 1 Highlights:

Since the last project update the contractor, DNTanks, has completed the following construction tasks:

- Substantial completion walk-thru was conducted on May 15, 2020 and attended by City of Pearland Water Department, Engineering and Capital Projects, engineer of record, and contractor.
- A punch list of items that needed additional attention was created and communicated to the contractor for completion prior to the City's final acceptance.
- A final inspection was conducted June 15, 2020 to conclude all punch items completed. All pending items were complete and required closeout documents submitted. The project is currently awaiting 95% germination of hydroseed to release retainage and close the project.
- **Construction phase 1 was completed on time and within City's planned budget.**

Phase 2 Design Update:

- Enprotec/Hibbs & Todd (eHT), the consulting engineer, has begun the BNSF railroad permit application to be submitted with final plans. The permit is required for the line from the Magnolia plant to cross under the railroad's right-of-way and tracks.
- Staff is working on easement acquisition needs based on proposed location and alignment of the wastewater line along Bailey Rd. from the Natatorium to the Bailey Plant, and water transmission line from the Magnolia well to the Bailey plant. The wastewater line will be sized to serve future Fire Station 7 and potential future development.
- Staff reviewed the 30% plans and have sent them back to eHT to review and incorporate into the next submittal.
- Staff pursued proposals from demolition contractors to remove the existing steel 1.0 MG GST. Offsetting the cost to demo with an incentive of valuable scrap materials did not decrease the proposal to budgeted amount. It was concluded that including the demo scope in the Phase 2 project bid documents would provide the City with the best value.

Phase 2 Upcoming Work Items:

- Evaluation of cost and maintenance needs for epoxy-coated carbon steel compared to stainless steel in order to determine appropriate material for AERALATOR treatment process unit.
- Design of proposed structure that will protect the liquid bleach bulk storage tanks from damaging UV rays and excessive heat from the sun. The cover will be a simple design over the tanks, which will also be double wall and insulated to reduce degradation of tanks from the gaseous chemicals.
- Updated draft Basis of Design Report (BODR) incorporating the sanitary sewer line and addressing comments discussed at last team meeting. BODR will include a revised Opinion of Probable Construction Costs (OPCC) which will detail this scope as a separate item.
- **Design consultant to submit 60% construction documents for Staff review in mid-August. Once reviewed and all comments have been addressed, consultant will submit for TCEQ review and approval.**

Previous Memos: 11.08.18;08.08.19;11.07.19; 01.30.20; 04.02.20

Project Location Map:

VICINITY MAP

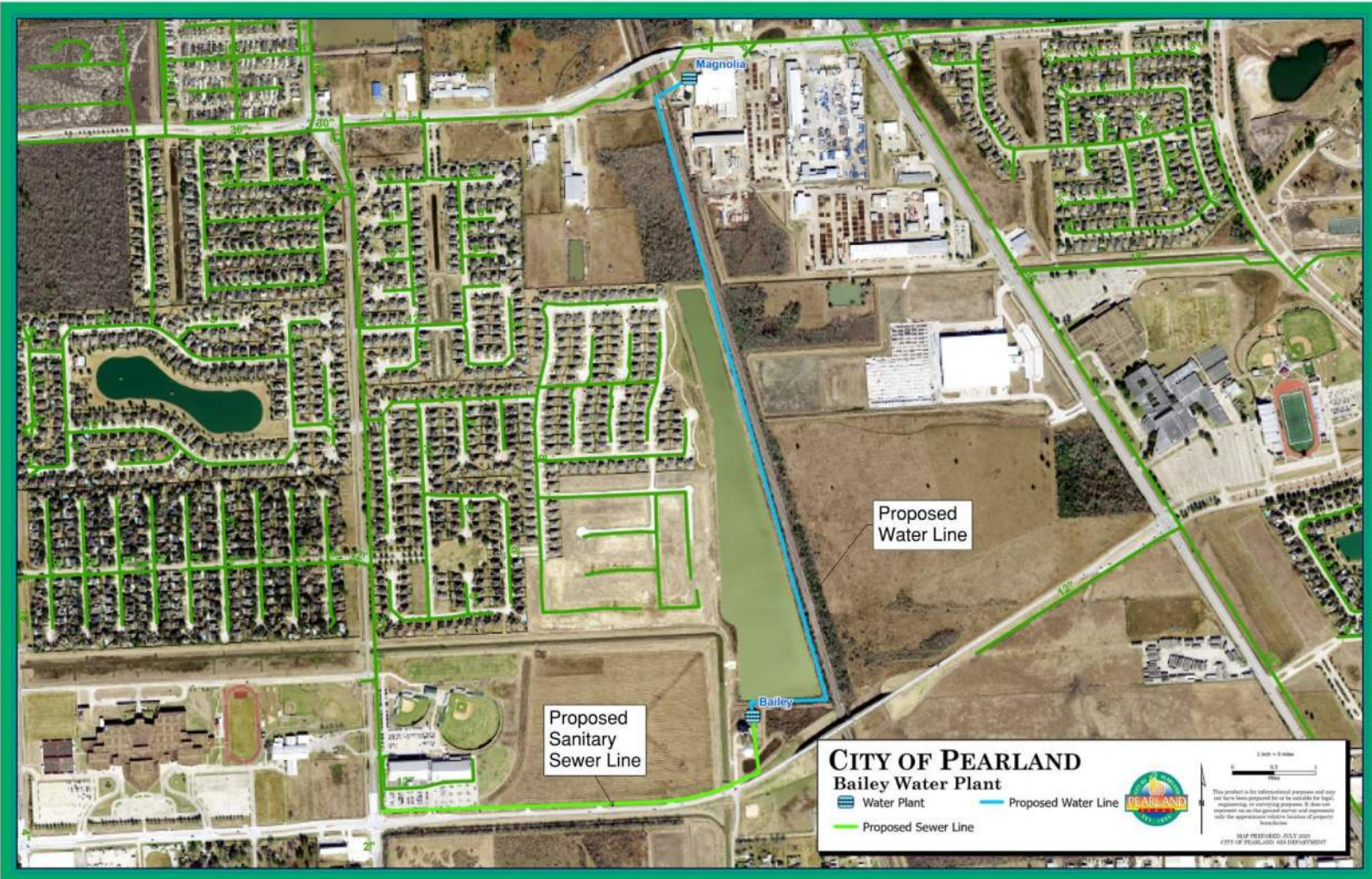


Bailey WTP 1.0 MG Prestressed Concrete GST



1:9,000
1 inch = 750 feet
NORTH
This product is for informational purposes
only and may not be prepared
or be suitable for legal, engineering,
or surveying purposes.
MAP PREPARED: JULY 30, 2019

Phase II Proposed Utility Alignments





Phase I Completed Tank