



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

**September 10, 2020**





# Drone Site Map: September 4, 2020





# Construction Progress – Intake Pump Station (IPS)

- Fish Screen Installation
- Driving shoring for 108" RW pipe trench



# Fish Screen Installation



# Driving shoring for dual 108" RW pipe trench





# Construction Progress – Site Electrical

- Existing Plant Hydro Excavation
- Existing Plant Duct Bank Installation
- MDB520/MDB111A Duct Bank Installation & MMH111A-5/MMH520-2 Manhole Placement



# Existing Plant Hydro Excavation






# Existing Plant Duct Bank Installation



# MDB520/MDB111A Duct Bank Installation & MMH111A-5/MMH520-2 Manhole Placement





# Construction Progress – Substation Facility 102

- **Installing stairs for the building**
- **Continue interior wall paint touch up and painting door frames**
- **Continue building roof installation**
- **Setting steel, welding horizontal bus duct and installing CTs**



# Installing stairs for the building



# Continue interior wall paint touch up and painting door frames



# Continue building roof installation



# Setting steel, welding horizontal bus duct and installing CTs

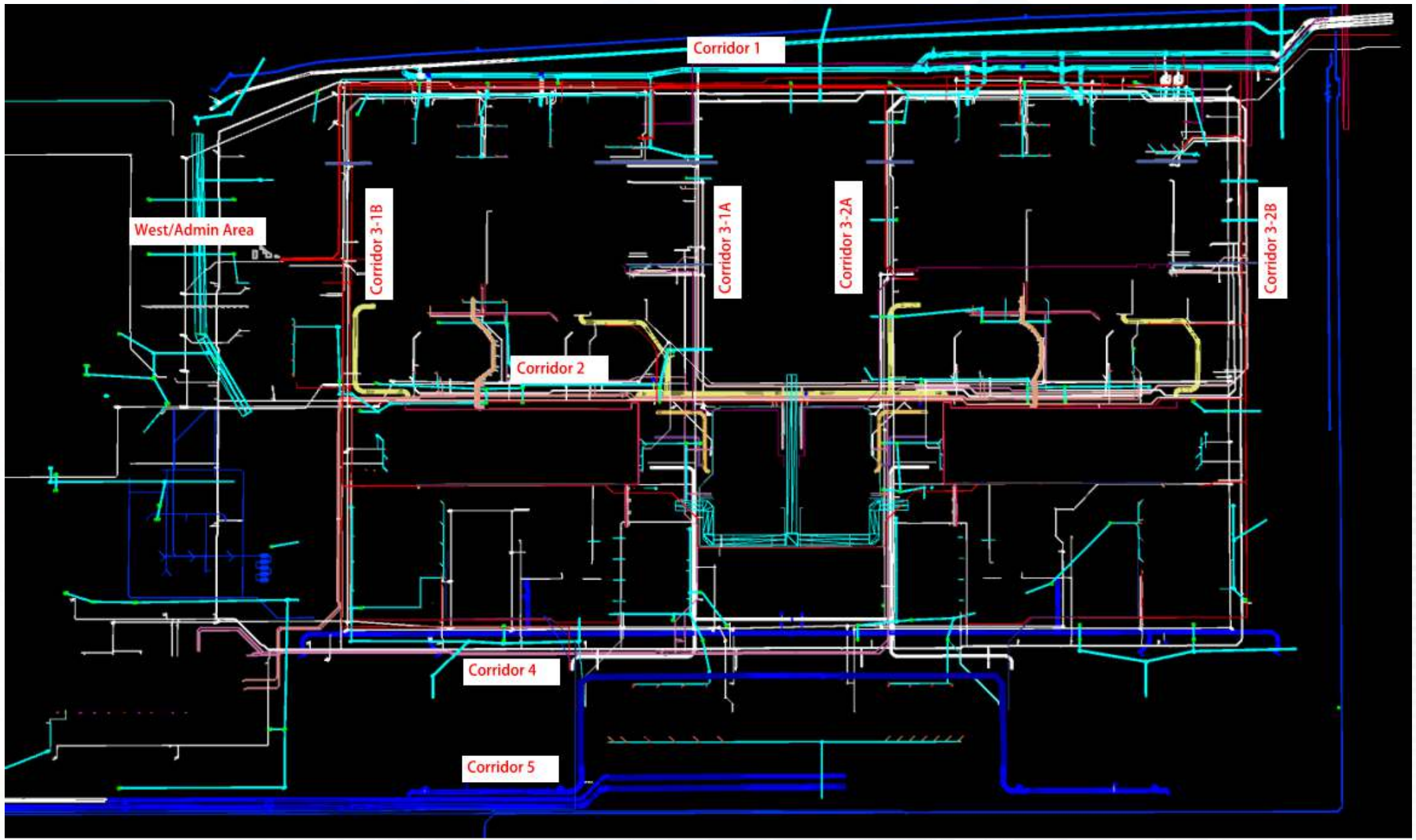




# Construction Progress – Yard Piping

- **Installing 6” & 24” PW laterals in Corridor 4**
- **Installing dual 16” CEN lines in Corridor 4**
- **Installing Storm Sewer RCP, inlets, and manholes in Corridor 4**
- **Laying 10” PDR & SSG lines in Corridor 3-1B**
- **Installing 96” FW pipe & flex coupling in Corridor 4**
- **Laying 108” FW pipe in Corridor 5**
- **Installing dewatering system for distribution lines in Corridor 5**
- **Laying 84” and 120” FW distribution lines in Corridor 5**





# Installing 6" & 24" PW laterals in Corridor 4



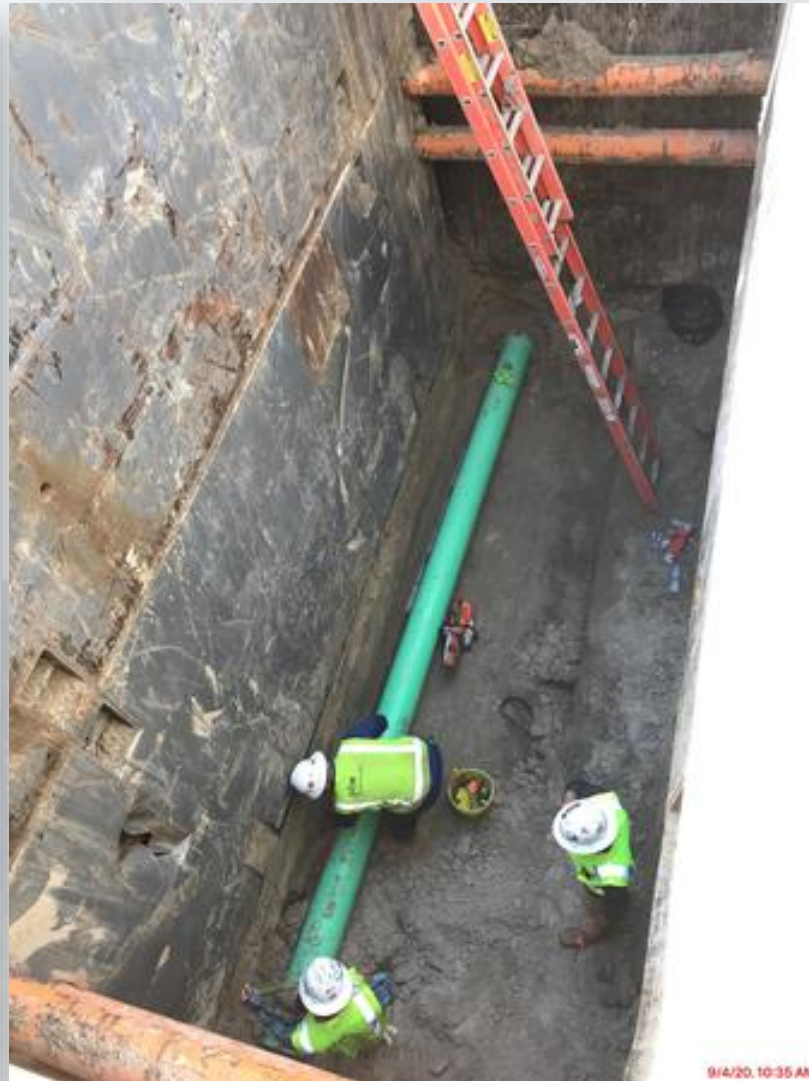
# Installing dual 16" CEN lines in Corridor 4



# Installing Storm Sewer RCP, inlets, and manholes in Corridor 4



# Installing 10" PDR & SSG lines in Corridor 3-1B (by West Road)



# Installing 96" FW pipe & flex coupling in Corridor 4



# Laying 108" FW pipe in Corridor 5 (North of 111)



# Installing dewatering system for distribution lines in Corridor 5





# Laying 84" and 120" FW distribution lines in Corridor 5





# Construction Progress – Central Plant

## 281-FILTER MODULE 1 :

- Forming/Reinforcing Walls.
- Pouring Walls.
- Reinforcing/Pouring Skylight Curbs.
- East Side Masonry.
- West Gallery Top Deck Shoring.
- Gallery Deck B2.

## 291-TRANSFER PUMP STATION 1:

- Top Deck Sections A6 and C6 Pour
- Top Deck Section B6 RFP

## 292-TRANSFER PUMP STATION 2:

- FRP Pump Can Lower Wall (East & West)
- Formwork and Pour Retaining Wall

## 311-POST CHEMICAL FACILITY 1 SH/CS :

- Footing Seal Slab FP –Building West Area
- Footing Reinforcement –Building Electrical Room
- Containment Walls RFP –Containment Area

## 312 – POST CHEMICAL FACILITY 2 FA/LAS/PEC/SB

- Installation of Underground Conduit –Containment Area

## 282 -FILTER MODULE 2:

- Forming/Reinforcing Base Slab 1
- Forming Base Slabs 2/3.



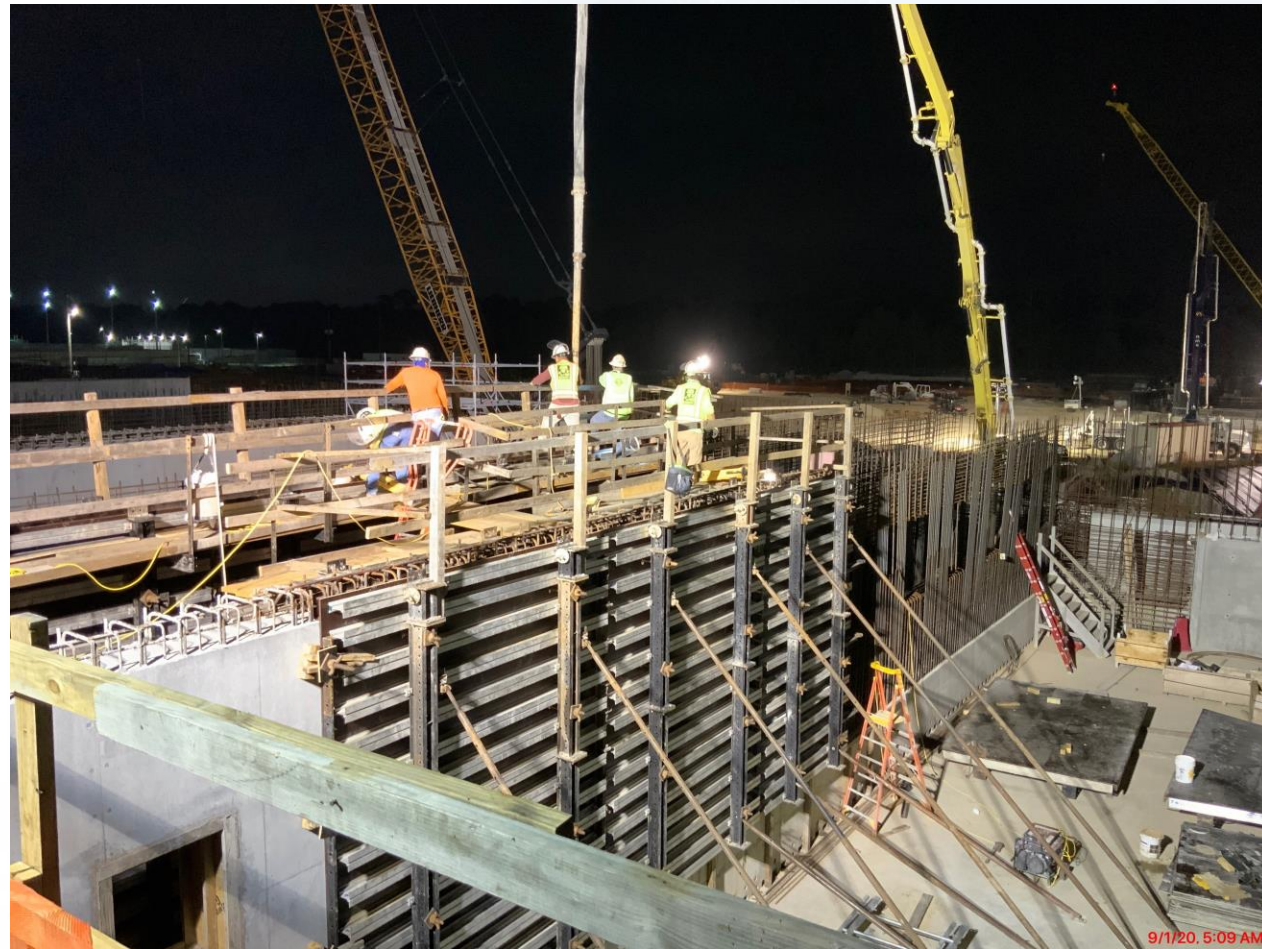
# Central Plant-1st Phase



# 281-FILTER MODULE-Forming/Reinforcing West Filter Walls



# 281-FILTER MODULE-Pouring Walls



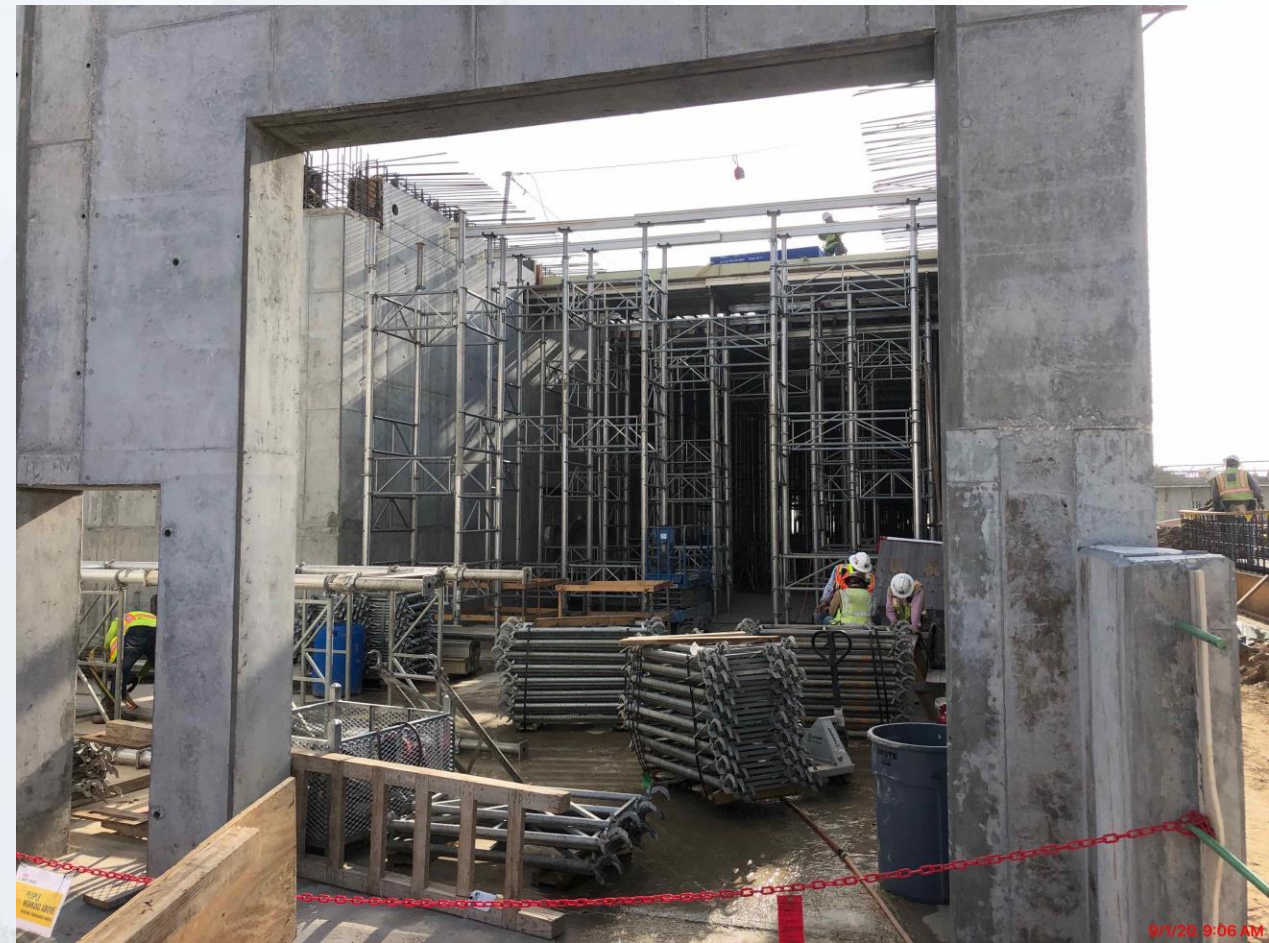
# 281-FILTER MODULE- Reinforcing & Pouring Skylights Curbs



# 281-FILTER MODULE- East Side Masonry

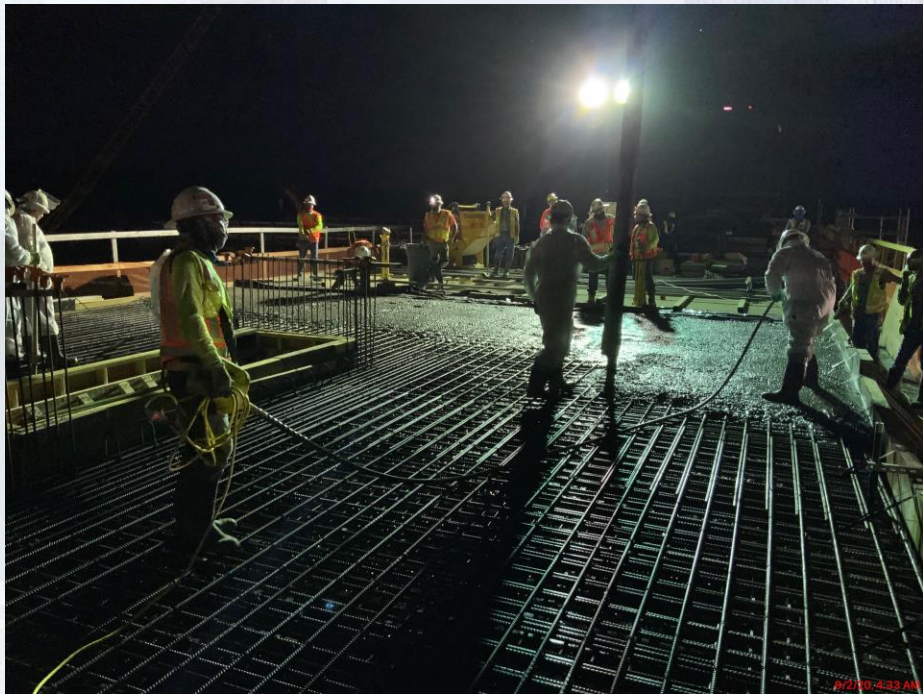


# 281-FILTER MODULE- Extending Shoring For West Gallery Deck





# 281-FILTER MODULE- Gallery Deck B2 Forming/Reinforcing/Pouring



# 291– Top View 09/01/2020



# 291– Top Deck Sections A6 and C6 Concrete Pour



# 291–Top Deck B6 RFP



# 311 - Overall view



# 311-Post Chemical Building: Footing Seal Slab FP



# 311-Post Chemical Building Area: Footing Reinforcement



# 311-Post Chemical Tank Farm: Containment Walls RFP





# 312-Post Chemical Containment Area : Installation UG Conduits



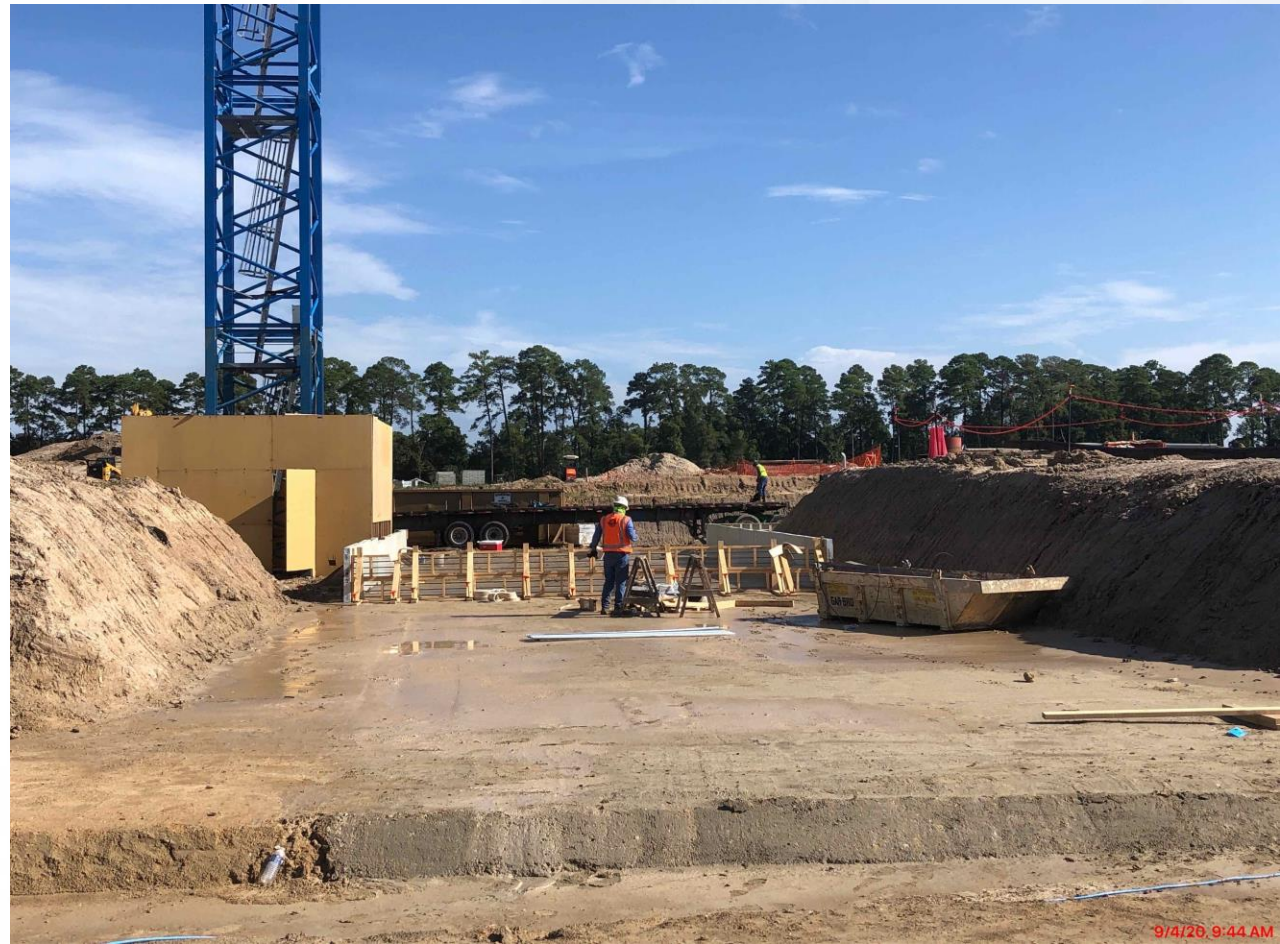
# Central Plant – 2nd Phase



# 282- FILTER MODULE 2- Reinforcing Base Slab 1



# 282-FILTER MODULE 2- Forming Base Slab 2/3



# 292 – Pour Pump Can Lower Wall (East & West)



# 292 – Forming and Pour Retaining Wall





# Construction Progress – LREQ Basins Facilities 601/602

- **601 – Continue to build forms for 24" RCY pour-backs**
- **601 – Concrete pour for the 24" RCY pour-backs**
- **602 – Formwork Installation for Pump Station**



# 601 – Continue to build forms for 24" RCY pour-backs





# 601 – Concrete pour for the 24" RCY pour-backs



# 602 – Formwork Installation for Pump Station





# Construction Progress – North Plant

## 213-Pretreatment Chemical Facility 3:

- Structural Concrete Work
- U/G Electrical

## 214-Pretreatment Chemical Facility 4:

- Structural Concrete Work

## 222-Rapid Mix Train 2:

- EL-SL-2 F/R/P

## 241-FlocSed Train 1

- Cross Collector Slabs and Walls F/R/P

## 242-FlocSed Train 2

- Elevated Slab Column F/R/P
- Sedimentation Basin #4
- Knife Walls

## 244-FlocSed Train 4

- East/West Corridor Excavation
- 8 inch RCYS and 24 inch PDR Installation

## 252-Ozone Contractor Train 2:

- WL-4/WL-4a F/R/P

## 502-Gravity Thickener Complex 2

- Basin #4 WL-1 F/R/P
- Basin #3 Slab-On-Grade F/R/P

## 504-Gravity Thickener Complex 4

- Service Building Walls Completed
- Basin #7 SL-2 F/R/P

## 611-Liquid Residuals Clarifier Facility 1:

- Elevated Slab 3 F/R/P
- WDW-4 F/R/P



# Facility 213 - WL-6/WL-11 F/R/P



9/21/20, 9:32 AM

# Facility 214 - Walls F/R/P



9/3/20 9:33 AM

Houston Waterworks Team



# Facility 222 - EL-SL-2 F/R/P



# Facility 241 – Cross Collector Slabs/Walls F/R/P



# Facility 242 - EL-SL Column and Temporary Shoring





# Facility 242 – Sedimentation Basin #4



9/2/20, 9:24 AM

# Facility 242 – Knife Walls



9/3/20, 9:19 AM

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# Facility 244 – 24" PDR Installation



# Facility 252 – WL-4/WL-4a F/R/P



9/8/20, 1:49 PM

# Facility 502 - GT#4 WL-1 F/R/P and GT#3 SOG



# Facility 504 - Service Building Walls Completed



# Facility 504 - GT#7 SL-2 F/R/P



9/9/20, 12:57 PM

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# Facility 611 – EL-SL-3 & WDW-4 F/R/P







# Construction Progress – South Plant

- **Backfilling of 102” Outlet Pipe is Complete at GST 361**
- **Load Transfer Platform Installation at GST 362**
- **Erection of Structural Steel at MSB 111 Roof**
- **Installation of 78” Pipe and Backfilling at HSPS 401**
- **Installation of Pump Can Footing Rebar at HSPS 402**
- **Cellular Concrete & TSL-OTSL Pipe Encasement at Sludge Equalization Building 510**
- **Erection of Structural Steel at the 3rd floor Dewatering Building 520**
- **Concrete Pour and Grating on 2nd floor at Dewatering Building 520**



# Backfilling of 102" Outlet Pipe is Complete at GST 361



# Load Transfer Platform Installation at GST 362



# Erection of Structural Steel at MSB 111 Roof



# Installation of 78" FW pipe at HSPS 401



# Reinforcing, forming, and pouring 78" FW pipe encasement at HSPS 401



# Installation of Pump Can Footing Rebar at HSPS 402



# Cellular Concrete & TSL-OTSL Pipe Encasement at Sludge Equalization Building 510





# Erection of Structural Steel at the 3rd floor Dewatering Building 520



# Concrete Pour and Grating on 2nd floor at Dewatering Building 520





# Construction Progress – Administration Building

- Installation of Vapor Barrier and Sand at AB
- Placed SOG at MB
- Began installation of rebar at AB

# Achieved Final Grade at AB



# Placement of SOG at MB



# Placement of SOG at MB



# Installation of Rebar at AB



