



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

August 12, 2020



Summer Interns' Project Process Tour by Randy Rogers



Drone Site Map: July 23, 2020





Construction Progress – Intake Pump Station (IPS)

- Continue the 108" bridge piping installation
- Continue installing under bridge conduit



Continue the 108" bridge piping installation



Continue installing under bridge conduit





Construction Progress – Site Electrical

- 152 Duct Bank Installation South of 111
- Existing Plant South Road (Zone 2) Progress
- Duct Bank Installation Near 510



152 Duct Bank Installation South of 111




Existing Plant South Road (Zone 2)



Duct Bank Installation Near 510





Construction Progress – Substation Facility 102

- **Painting of the Control Building Exterior/Interior Walls**
- **Installation of insulated switches and grounding steel**

Painting of the Control Building Exterior/Interior Walls



Installation of insulated switches and grounding steel

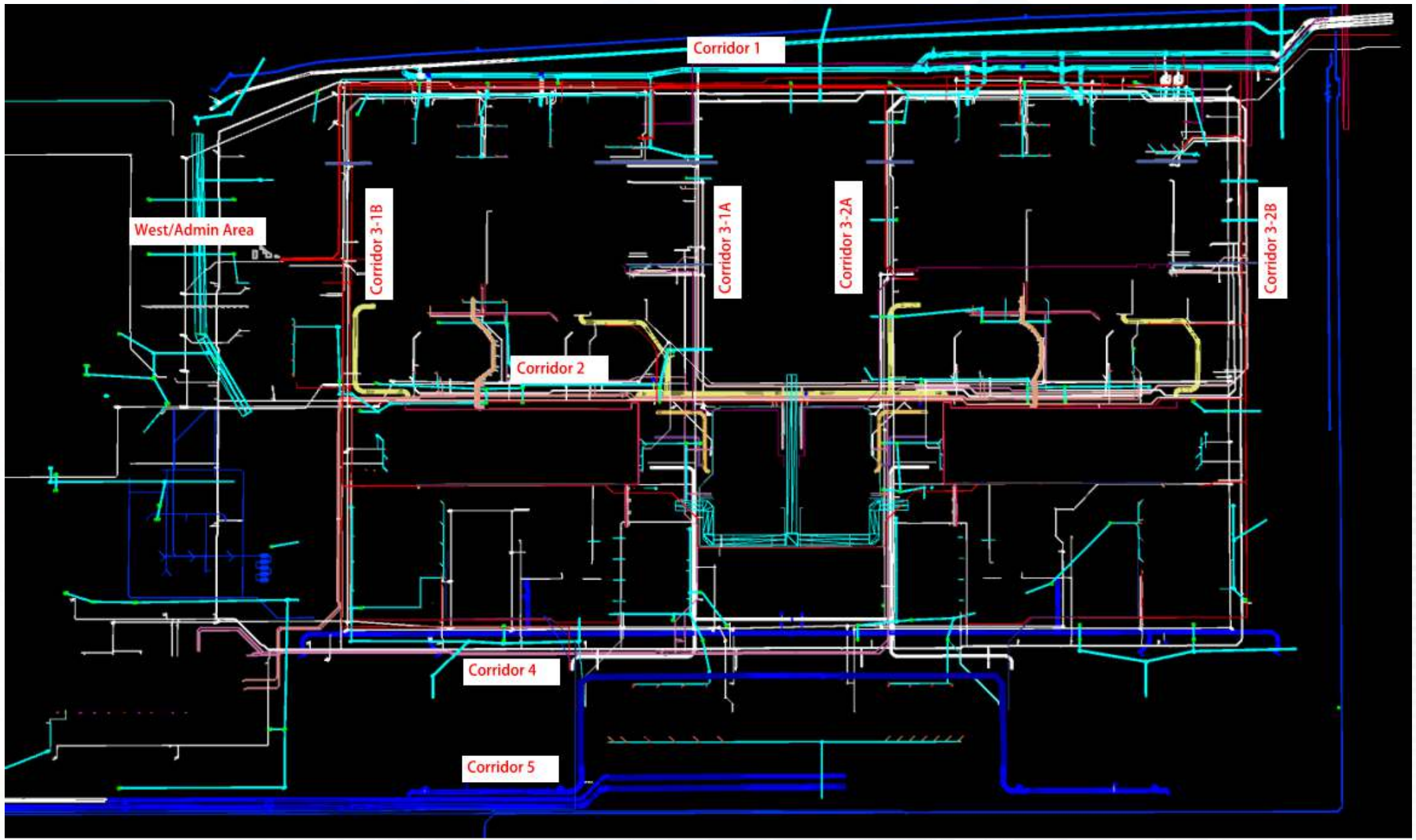




Construction Progress – Yard Piping

- **Laying and backfilling 108” RW pipe in Corridor 1**
- **Installing 16” CEN line in Corridor 4**
- **Installing 12” PW in Corridor 4, and 6” PW in Corridor 3**
- **Installing Storm Sewer 24” RCP, inlets, and manholes in Corridor 4**
- **Setting 78” BFVs and 120” coupling and tee on FW header in Corridor 5**
- **Installing 84” and 120” FW steel pipe in Corridor 5**





Laying and backfilling 108" RW pipe in Corridor 1



Installing 16" CEN line in Corridor 4



Installing 12" PW in Corridor 4, and 6" PW in Corridor 3



Installing Storm Sewer 24" RCP, inlets, and manholes in Corridor 4



Setting 78" BFVs and 120" coupling and tee on FW header in Corridor 5



Installing 84" and 120" FW steel pipe in Corridor 5





Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Forming/Reinforcing Walls.
- Pouring Walls.
- Masonry For Blower Room.
- West Side Gallery Deck Shoring

291-TRANSFER PUMP STATION 1:

- Top Deck Section B3 Concrete Pour
- Pump Can Area Backfill and Compaction

292-TRANSFER PUMP STATION 2:

- Pump Can Lower Wall Reinforcement and Form-up

311-POST CHEMICAL FACILITY 1 SH/CS :

- Backfilling UG Conduit –Building Area
- Concrete Pour SOG A3
- Concrete Pour SH Tank Pads
- Installation of Rebar for SOG A4

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

- Installation of Underground Conduit –Building Area

282 -FILTER MODULE 2:

- Pouring Encasement of Underslab DR Pipe.
- Backfilling Under-slab Pipe encasement.
- Retaining wall B/W TPS
- Installing 18" FD DI Pipe



281-FILTER MODULE-Forming/Reinforcing Walls



281-FILTER MODULE-Pouring Walls



281-FILTER MODULE- Masonry for Blower Room



281-FILTER MODULE- East Side Masonry



281-FILTER MODULE- West Side Gallery Deck Shoring



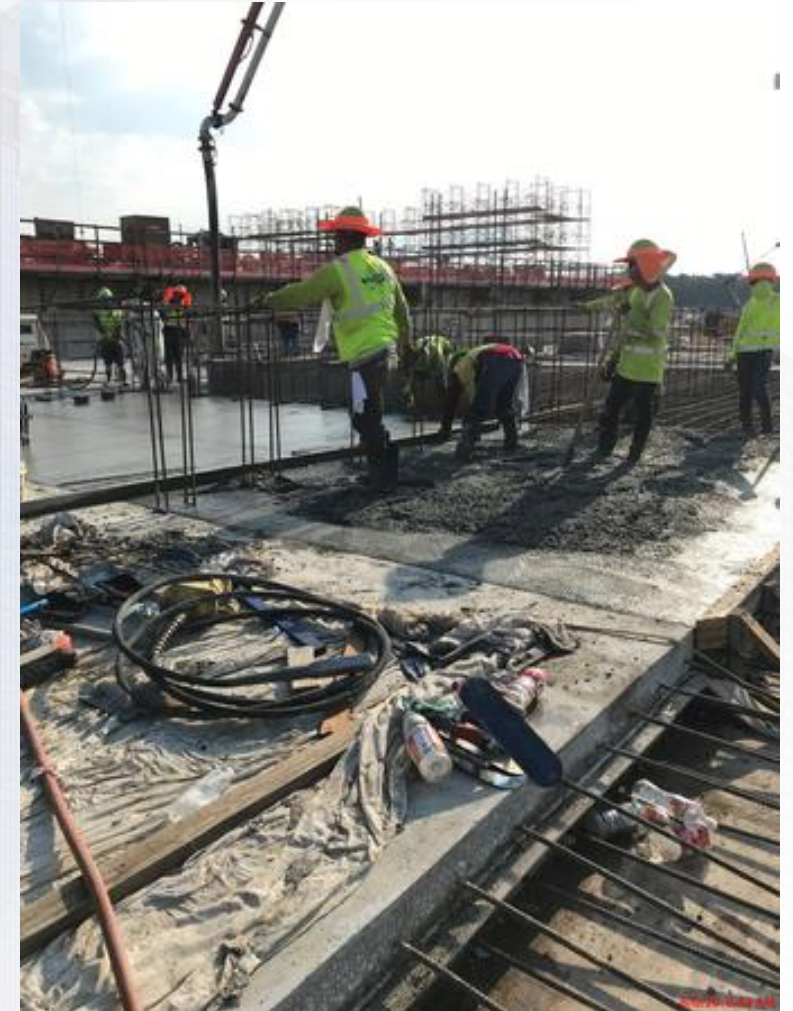
281-FILTER MODULE- East Vs West Side



291– Top View



291– Top Deck Section B3 Concrete Pour



291– Pump Can Area Backfill and Compaction



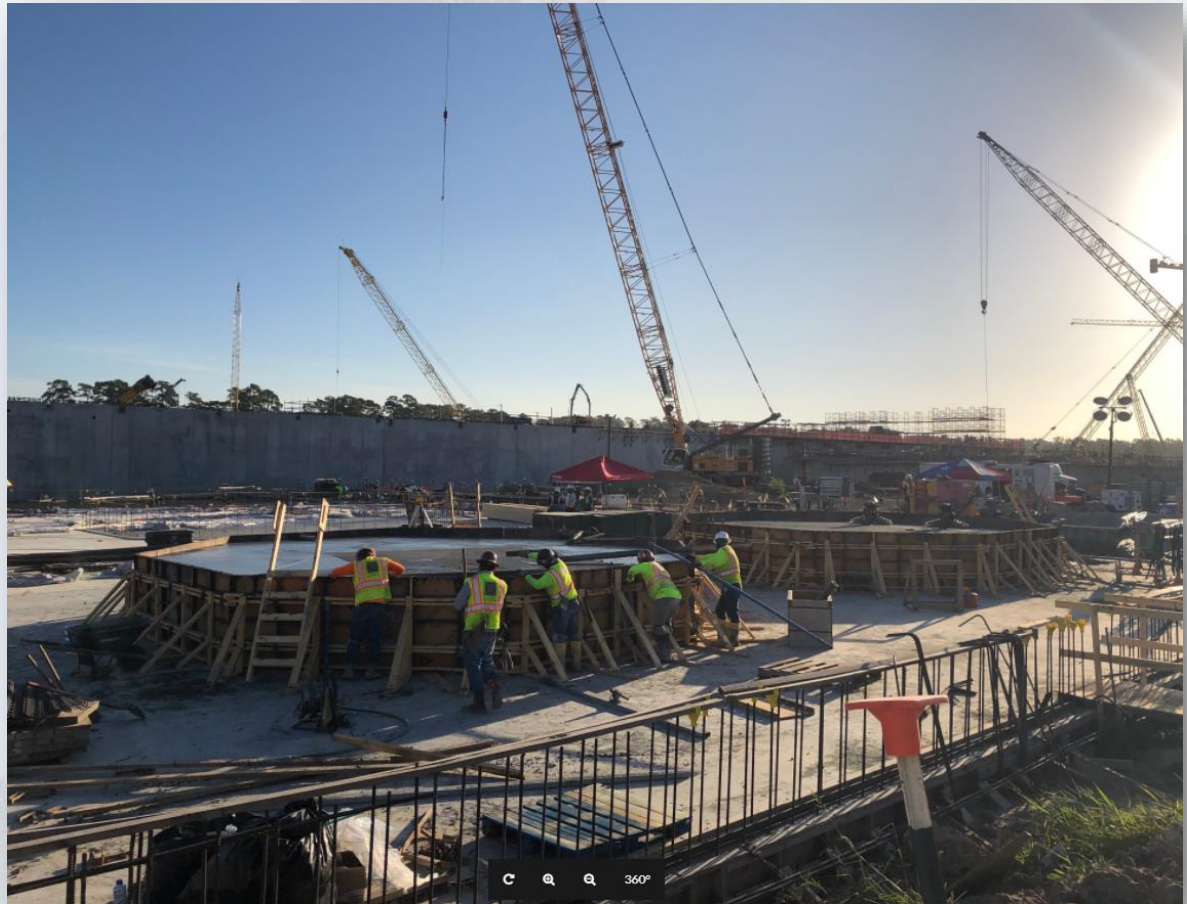
311-Post Chemical Building: Backfill UG Conduits



311-Post Chemical Tank Farm: Concrete Pour SOG A3



311-Post Chemical Tank Farm: Concrete Pour SH Tanks



311-Post Chemical Tank Farm: Installation of SOG A4



312-Post Chemical Building: Installation UG Conduits



Central Plant-1st Phase



282-FILTER MODULE 2- Pouring Encasement of Underslab DR Pipe



282-FILTER MODULE 2- Backfilling Under-slab Pipe Encasement



282- FILTER MODULE 2- Retaining Wall B/W TPS



282- FILTER MODULE 2- Laying 18" FD DI Pipe



292 – Pump Can Lower Wall Reinforcement and Form-up



Central Plant – 2nd Phase





Construction Progress – LREQ Basins Facilities 601/602

- **601 - Formwork Installation for walls P14 and P18**
- **601 - Concrete Pour for walls P14 and P18**
- **601 - Formwork and Concrete pour for walls P12 and P21**



601 – Formwork Installation for walls P14 and P18



601 – Concrete Pour for walls P14 and P18



601 – Formwork and Concrete pour for walls P12 and P21





Construction Progress – North Plant

213-Pretreatment Chemical Facility 3:

- Structural Concrete Work
- U/G Electrical

214-Pretreatment Chemical Facility 4:

- Structural Concrete Work

221-Rapid Mix Train 1:

- 78 inch RW pipe Installation
- Vault Backfill

222-Rapid Mix Train 2:

- RM-WL-4B F/R/P

242-FlocSed Train 2

- Slab-on-Grade
- Elevated Slab Column Formwork
- Ported Wall F/R/P

244-FlocSed Train4

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

252-Ozone Contractor Train 2:

- Structural Concrete Work on OZ WL-1

502-Gravity Thickener Complex 2

- Basin #4 Slab-On-Grade and Walls F/R/P
- Basin #3 Slab-On-Grade F/R/P

504-Gravity Thickener Complex 4

- Service Building W-1 and W-3 F/R/P

611-Liquid Residuals Clarifier Facility 1:

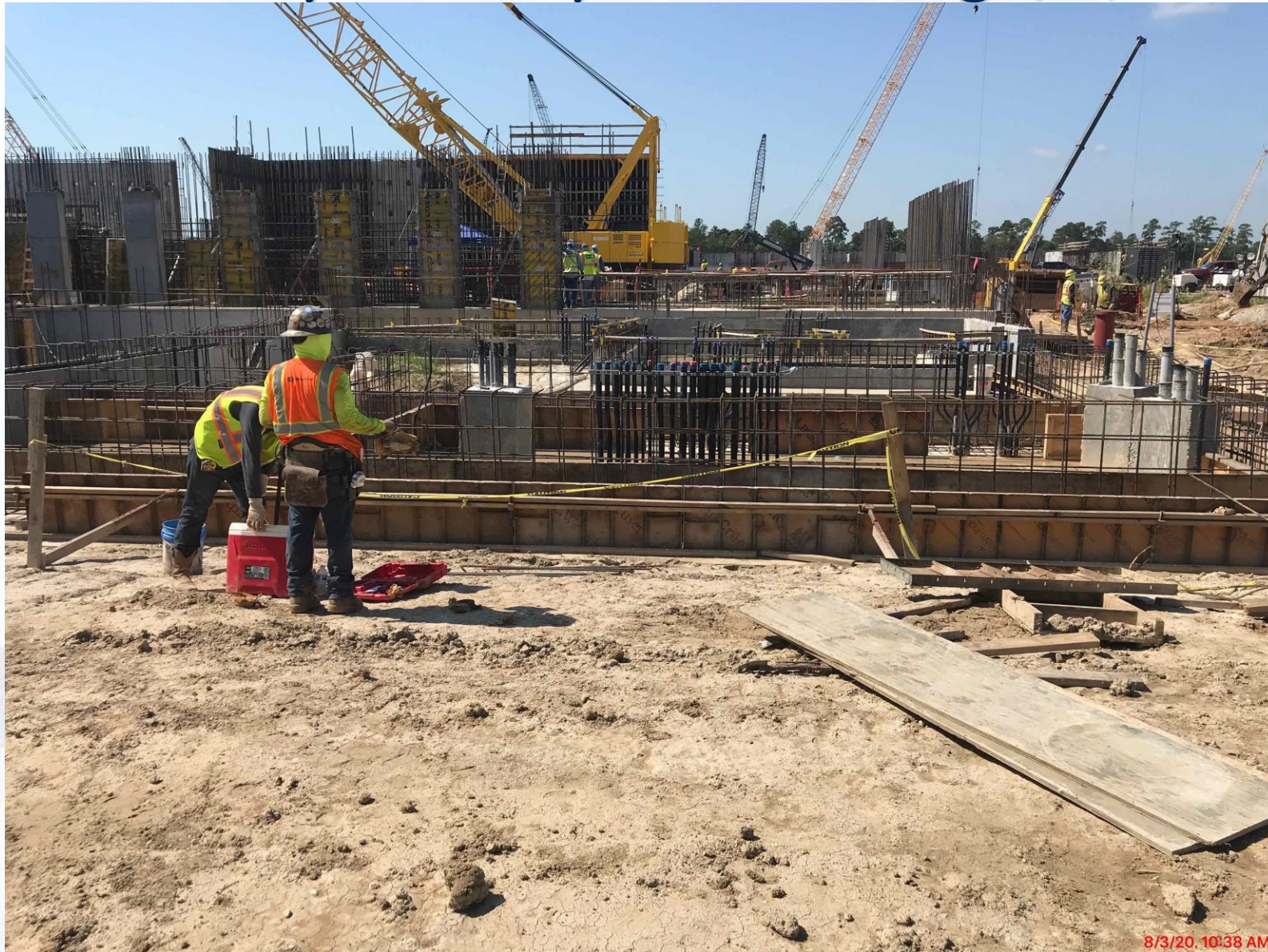
- Pump Station Walls F/R/P

612-Liquid Residuals Clarifier Facility 2:

- RCYS and PDR Excavation and Backfill



Facility 213 - Spread Footing F/R/P



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Facility 214 - Slab-on-Grade and Walls F/R/P



Facility 221 - Valve Vault Backfill



Facility 222 - RM-WL-4A F/R/P



Facility 242 - Ported Wall and Divider Wall F/R/P



Facility 241 - Cross Collector Excavation



Facility 244 - 24 inch PDR Installation



Facility 502 - GT#4 Walls and GT#3 SL-2 Placement



Facility 502 - GT#4 WL-5 F/R/P



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Houston Waterworks Team



Facility 504 - Service Bldg W-1 and W-3 F/R/P



Facility 504 - GT#7 Excavation and Mud Mat Placement



Facility 612 - PDR and RCYS Piping Backfill





Construction Progress – South Plant

- **Backfilling of 102” Outlet Pipe at GST 361**
- **Load Transfer Platform Installation at GST 362**
- **Switchgear Pads and CMU Installation at MSB 111**
- **Installation of 78” Valves at HSPS 401**
- **Installation of 78” Pipe and Backfilling at HSPS 401**
- **Welding of Whalers and Vacuum Pump for Dewatering at HSPS 402**
- **Cellular Concrete Pour at Sludge Equalization Building 510**
- **Installation of Vertical Mixers for Polymer Tanks at Dewatering Building 520**
- **Erection of Structural Steel at Dewatering Building 520**
- **Installation of Metal Decking at Dewatering Building 520**

Backfilling of 102" Outlet Pipe at GST 361



Load Transfer Platform Installation at GST 362



Switchgear Pads and CMU Installation at MSB 111



Installation of 78" Valves at HSPS 401



Installation of 78" Pipe and Backfilling at HSPS 401



Welding of Whalers and Vacuum Pump for Dewatering at HSPS 402



Cellular Concrete Pour at Sludge Equalization Building 510



Installation of Vertical Mixers for Polymer Tanks at Dewatering Building 520



Erection of Structural Steel at Dewatering Building 520



Installation of Metal Decking at Dewatering Building 520





Construction Progress – Administration Building

- Achieved Final Grade at MB
- Began excavation of Trench Drain at MB
- Installed Plumbing above EL 53' at AB
- Encasement of Plumbing with CLSM



Achieved Final Grade at MB



29° 55' 59.40628"N -95° 11' 35.63624"W
Aug 4, 2020 7:21:01 AM

Excavation of Trench Drain at MB



Installation Plumbing above EL 53' at AB



Encasement of Plumbing with CLSM



