



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

March 3, 2021

Houston Waterworks Team



Site Drone Map February 24, 2021





Construction Progress – Intake Pump Station (IPS)

- Vapor retarder installed at building 152
- Underslab plumbing installation at building 152
- Setting up overhead bridge crane at the pump station
- Metal decking installation on the Eastside of the building





Underslab plumbing installation at building 152



Underslab plumbing installation at building 152



Setting up overhead bridge crane at the pump station



Metal decking installation on the Eastside of the building





Construction Progress – Site Electrical

- Function Test & Breaker Operation at Facility 111
- Hi-Pot Testing Leakage Current at 4KVAC at Facility 111
- 281 Fiber Duct Bank

Function Test & Breaker Operation in Facility 111



Hi-Pot Testing Leakage Current at 4KVAC in Facility 111



281 Fiber Duct Bank

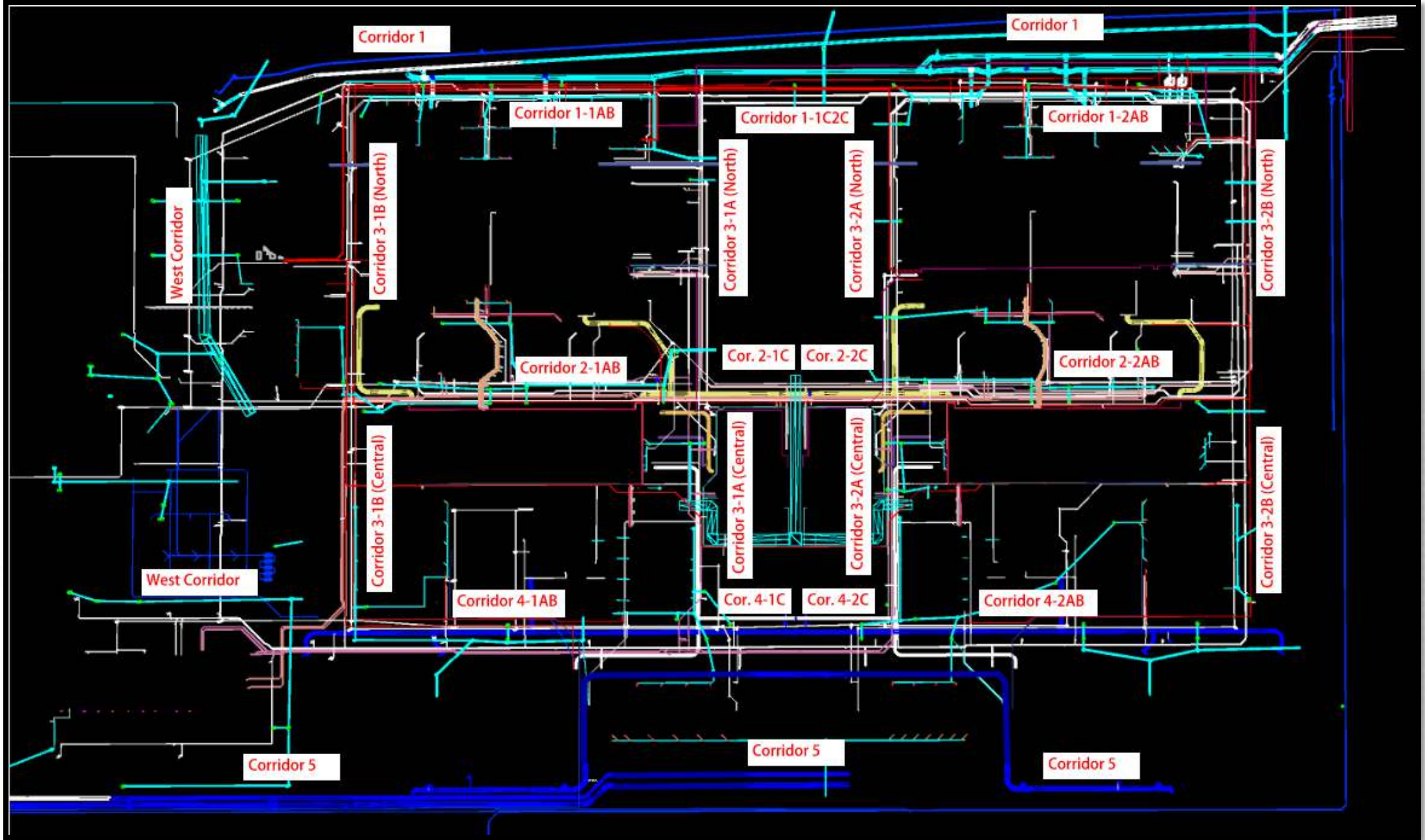




Construction Progress – Yard Piping

- **Preparing for tie-ins of the existing 66” RW main in Corridor 1**
- **Installing 24” & 30” RCP Storm and manholes in Corridor 2-1AB**
- **Installing 12” PW line in Corridor 3-1B**
- **Coated the 96” Victaulic Ring for the OZW line in Corridor 2-1AB**
- **Laying the 96” OZW pipe in Corridor 3-1B**
- **Laying the 84” & 120” FW distribution lines in Corridor 5**
- **Installed 108” FW pipe and built concrete supports in Corridor 5 – Phase 2**





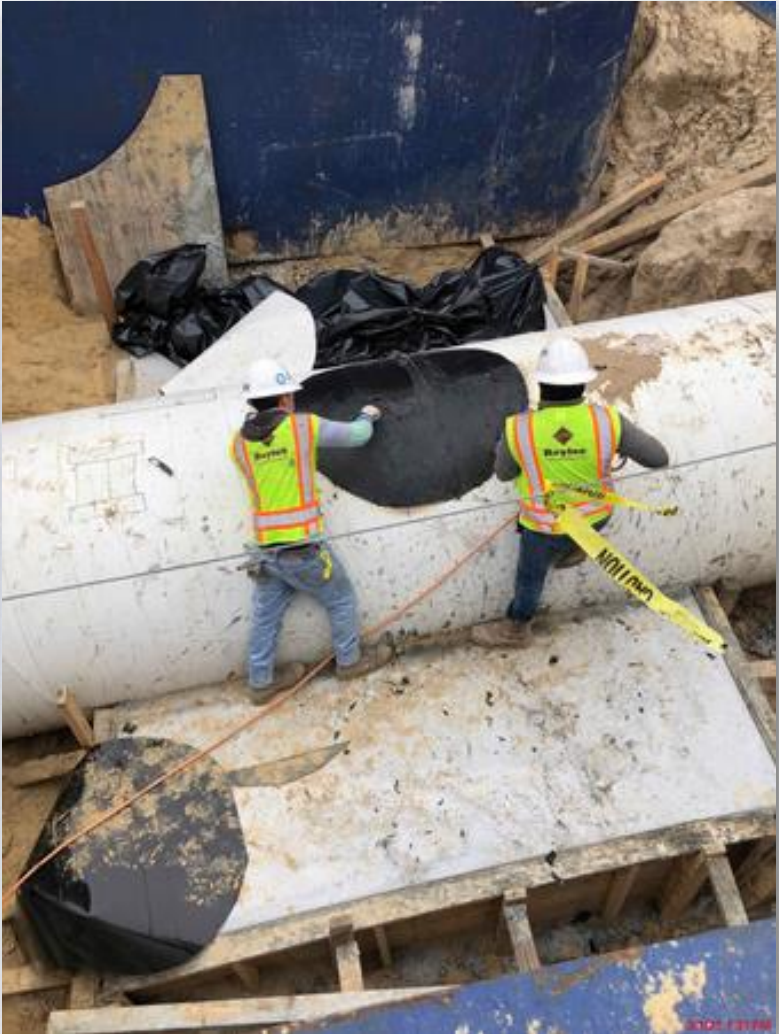
Exposing the West Line Stop location of the existing 66" RW main in Corridor 1



Placed the concrete support at the East Line Stop location of the existing 66" RW main in Corridor 1



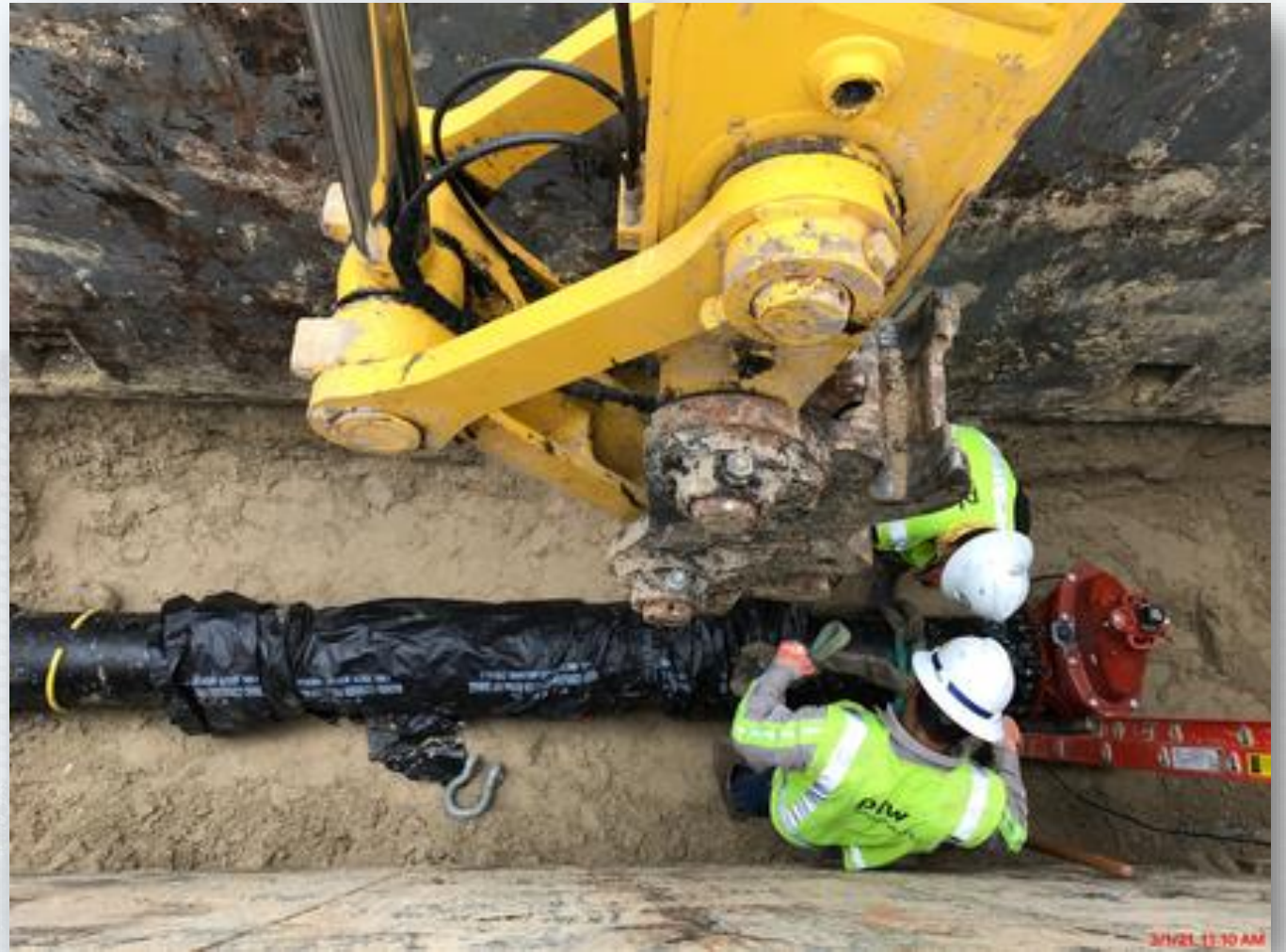
Removing the tape coating in preparation of welding the Tapping Saddles at the East location of the existing 66" RW main in Corridor 1



Installing 24" & 30" Storm RCP and manholes in Corridor 2-1AB



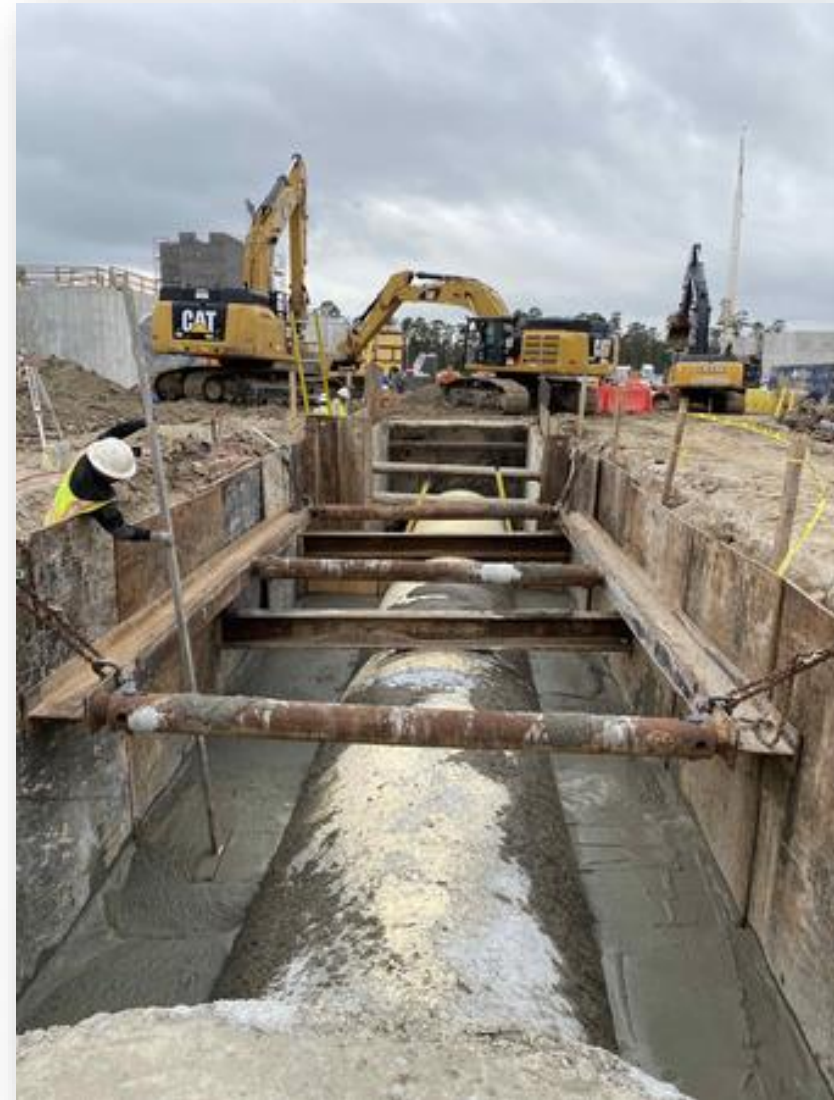
Installing 12" PW line in Corridor 3-1B North



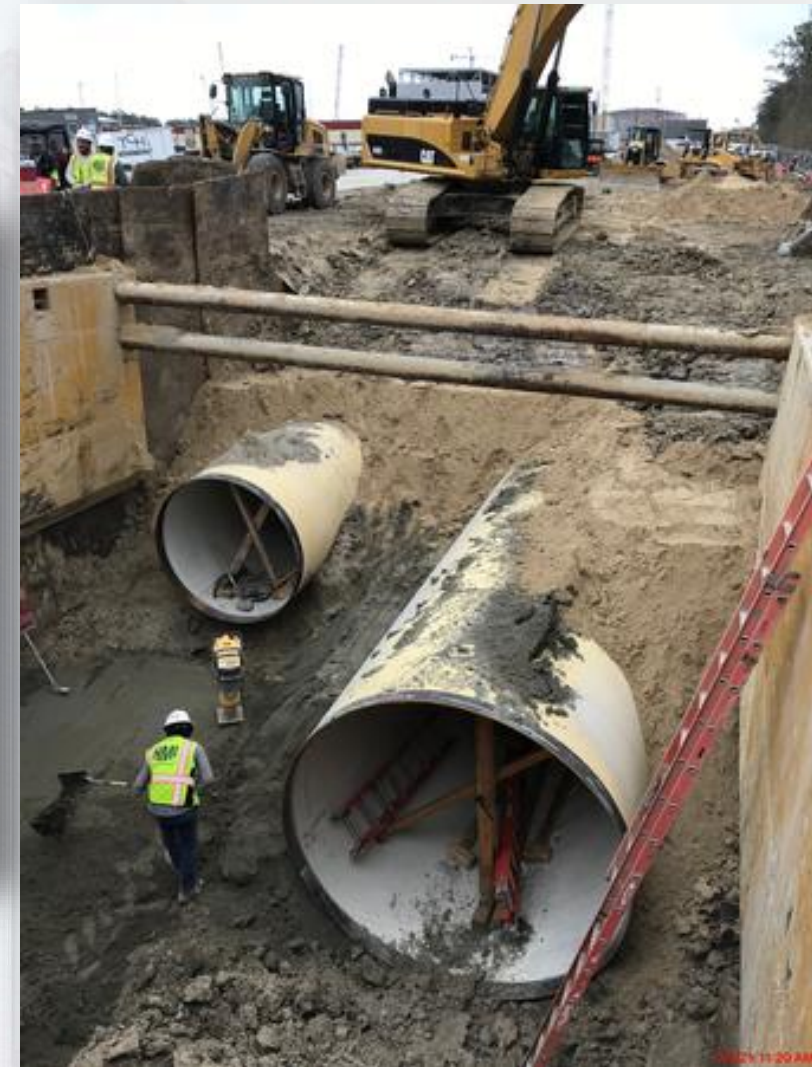
Coated the 96" Victaulic Ring for the OZW line in Corridor 2-1AB



Installing the 96" OZW pipe in Corridor 3-1B



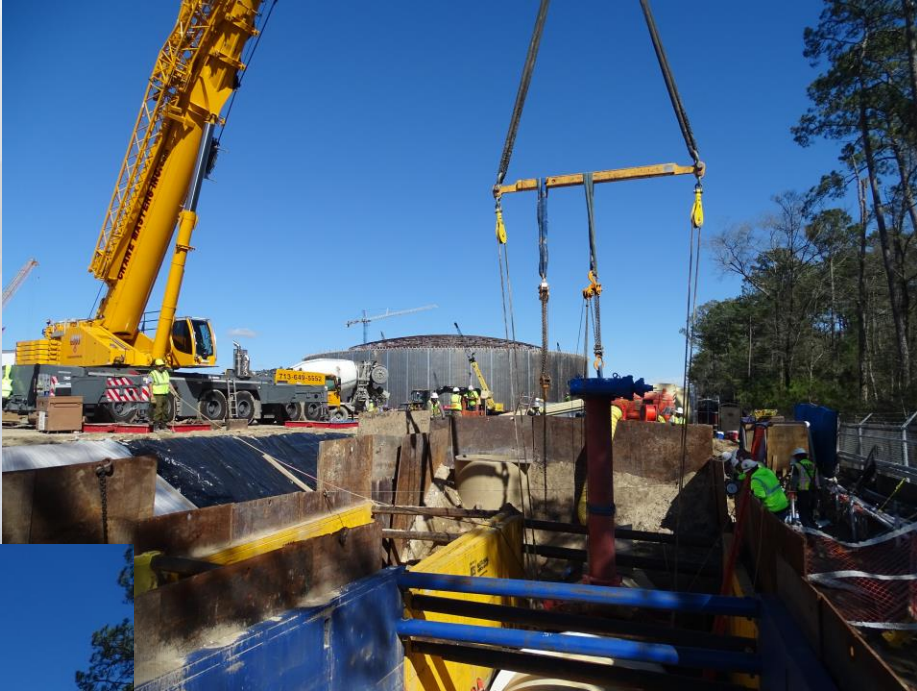
Laying the 84" & 120" FW distribution lines in Corridor 5



Installed 108" FW pipe and built concrete supports in Corridor 5 – Phase 2



Setting the 120" BFV on the FW distribution line in Corridor 5







Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Trough Installation & Grouting
- Setting 60" BWS Pipe Main Header
- Metal Roof Decking Install

291-TRANSFER PUMP STATION 1:

- CMU Walls Placement for Electrical Building
- Install, Form Encasement and Leak Testing of 6" PW and PPW Lines

292-TRANSFER PUMP STATION 2:

- Wall Sections C6 and B4 Concrete pour
- Reinforced and Formed up Wall A2
- Upper Levels Pipe Can Encasements Reinforcement
- Main Wall Sections Reinforcement

311-POST CHEMICAL FACILITY 1 SH/CS :

- Fabrication of SST CS Tanks.
- CMU Placement for Chemical Building.
- FRP – Tank Fill Stations.

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

- Containment Area: Tank Pads coating.
- FRP Containment Area walls.
- FRP –Post Chem Building SOG C1/C3,C7.
- FRP –Equipment Pads.

282 -FILTER MODULE 2:

- Pouring Exterior Tall Walls.
- Pouring Filter Slabs 18-21.



CENTRAL PLANT- 1st PHASE OVERALL



281-FILTER MODULE- Setting & Grouting Filter Troughs for (2-12)



281-FILTER MODULE – Installing 60" BWS (East Gallery)



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281-FILTER MODULE – Installing Roof Metal Decking



291-TPS – Aerial View (03/02/2021)



291-TPS – CMU Walls Placement for Electrical Room



291-TPS – Install, Form Encasement, and Leak testing of 6" PW and PPW Lines



311 – Aerial view –03/01/2021



Fabrication and Testing of SST CS Tanks



311 – CMU Placement for Chemical Bldgs.



311 – FRP Tank Fill Stations



312 - Overall view 03/01/21



312 -Containment Area: Tank Pads Coating



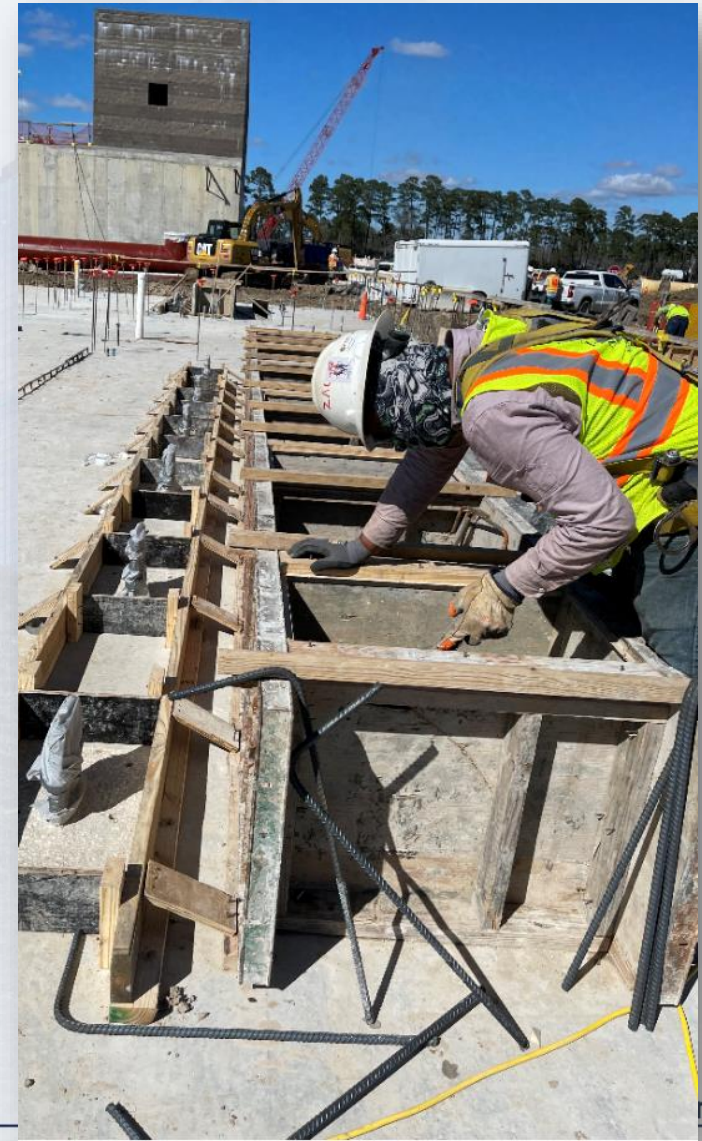
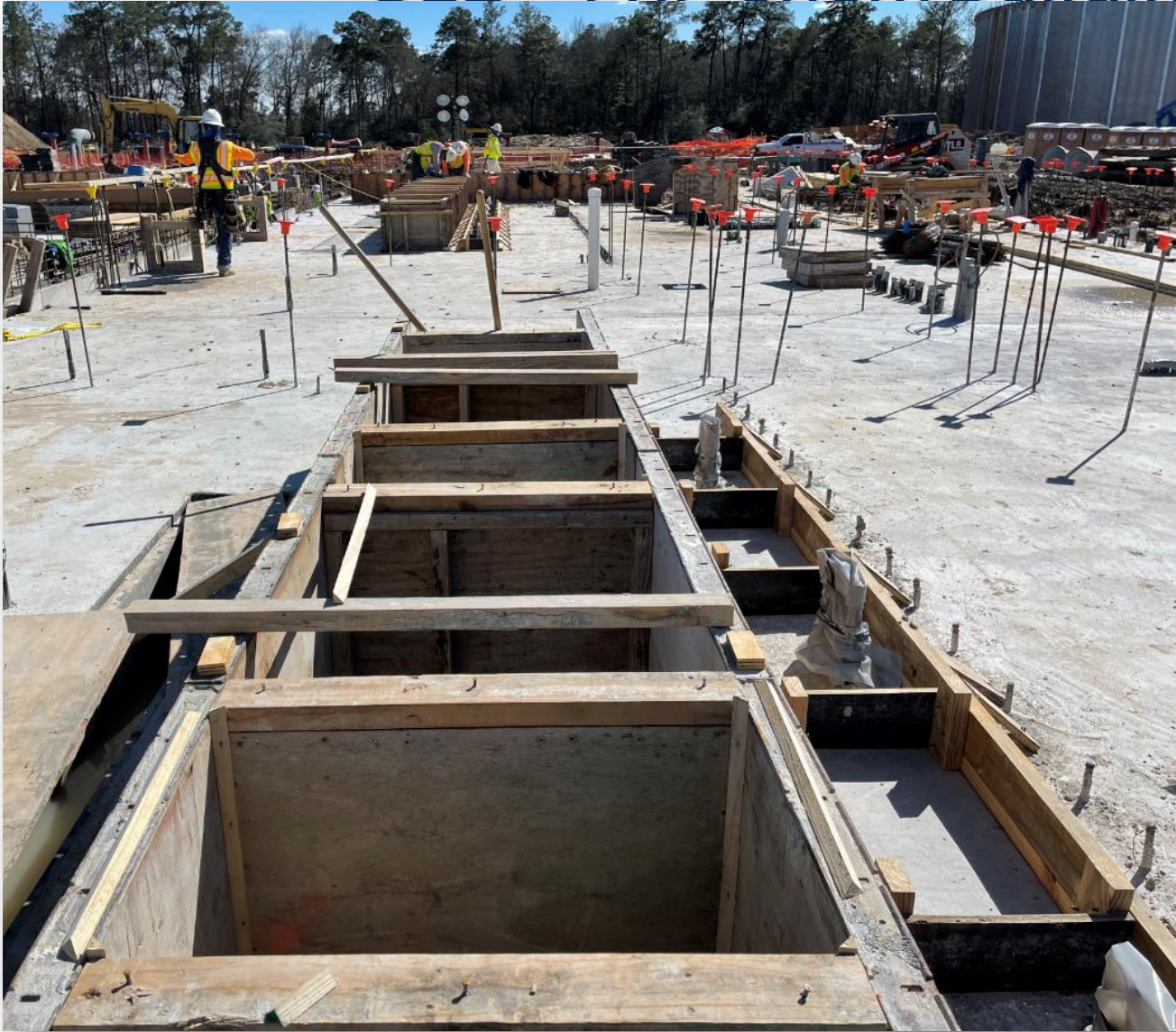
312 -Containment Area: FRP Walls



312 - FRP SOG Chem Building: Concrete Pour C1/C3,C7 SOG



312 – FRP Chem Building: Equipment Pads



314 – Mass excavation



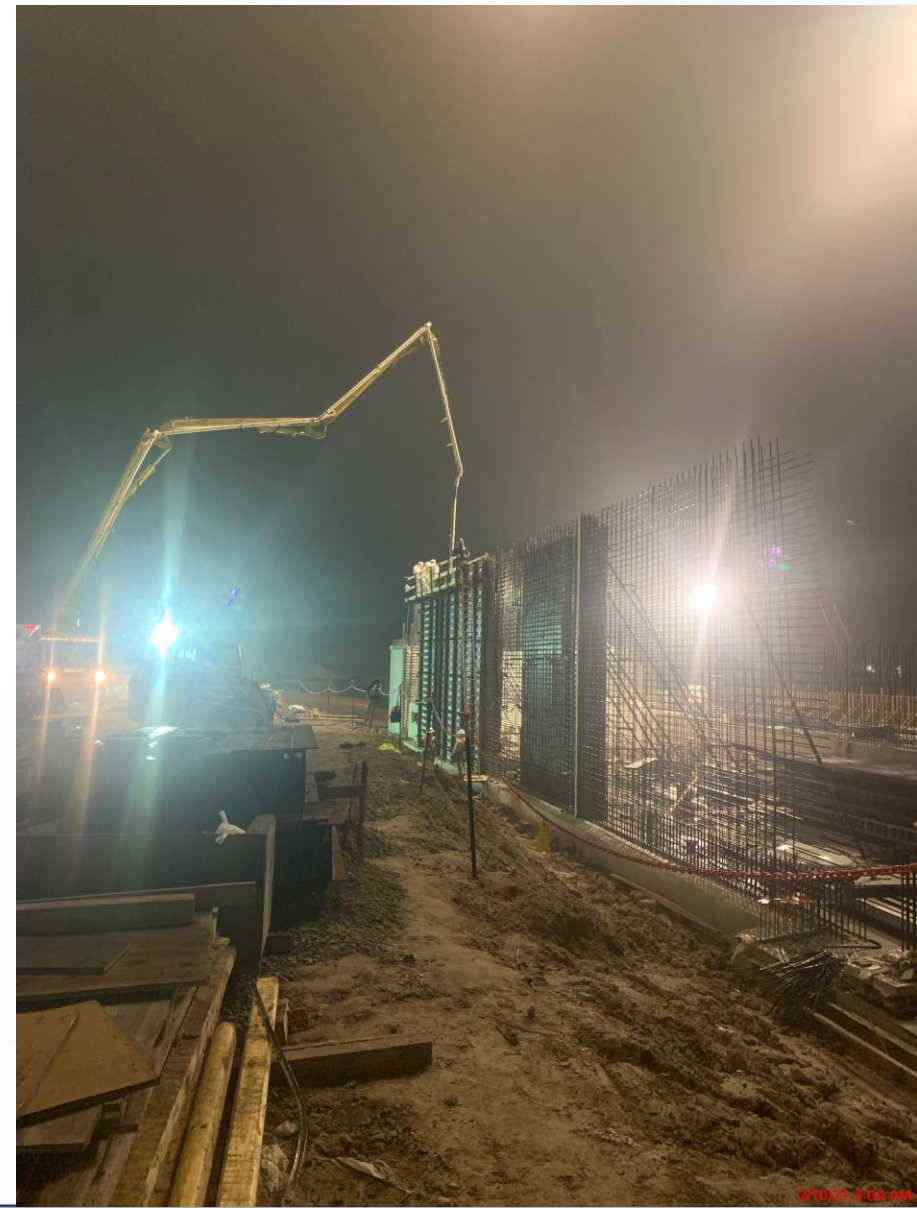
314 – Installation of Underground Conduits



CENTRAL PLANT – 2nd PHASE OVERALL



282-FILTER MODULE 2- Pouring Exterior Tall Walls



282-FILTER MODULE 2- Filter 18-21 Slab Pour



292-TPS – Arial View (03-02-2021)



292-TPS – Pour Wall Sections C6 and B4



292-TPS – Reinforced and Formed Up Wall A2



292-TPS – Upper Levels Pump Can Encasement Reinforcement



292-TPS – Main Wall Sections Reinforcement





Construction Progress – LREQ Basins Facilities 601/602

- **601 – 24" Butterfly Valve installation**
- **602 – Concrete Placement Seal Slab south of Basin**
- **602 – Formwork and Rebar Installation Slab Section 4**
- **602 – Formwork and Rebar Installation Slab Section 6**



601 – 24" Butterfly Valves Installation



602 – Concrete Placement Seal Slab south of Basin



602 – Formwork and Rebar Installation Slab Section 4



602 – Formwork and Rebar Installation Slab Section 6





Construction Progress – North Plant

201-Chlorine Dioxide Facility 1:

- Area-A SOG-1 F/R/P

211-Pretreatment Chemical Facility 1:

- Area-A Walls and Electrical

213-Pretreatment Chemical Facility 3:

- Lime Slurry Tank Installation

221-Rapid Mix Train 1:

- Slab on Grade F/R/P

224-Rapid Mix Train 4:

- Mudmat

241-Flocculation & Sedimentation Train 1:

- Slab On Grade F/R/P

242-Flocculation & Sedimentation Train 2:

- Elevated Deck & CWC Second Lift Walls F/R/P

502-Gravity Thickener Complex 2:

- GT-3 Drive Mechanism Installed

504-Gravity Thickener Complex 4:

- GT-8 Wall-4 F/R/P

611-Liquid Residuals Clarifier Facility 1:

- WE-W-7 & EL-SL-5 F/R/P

801-Basin Drain Pump Station 1

- Caisson Second Lift Sinking

802-Basin Drain Pump Station 2:

- Caisson Second Lift F/R/P



201-Chlorine Dioxide Facility 1: Area-A SOG-1 F/R/P



2/26/21 3:43 PM

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211-Pretreatment Chemical Facility 1: Area-A Walls and Electrical



2/26/21, 3:59 PM

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213-Pretreatment Chemical Facility 3: Lime Slurry Tank Installation



221-Rapid Mix Train 1: RM-SL-4 F/R/P



224-Rapid Mix Train 4: Mudmat



241-FlocSed Train 1: Slab 26 and Slab 22 FRP



242-FlocSed Train 2: Elevated Deck and CWC Walls



502-Gravity Thickener Complex 2: GT-3 Drive Mechanism Installed



2/26/21, 3:24 PM

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504-Gravity Thickener Complex 4: GT-8 Wall-4 F/R/P



611-Liquid Residuals Clarifier Facility 1: WE-W-7 F/R/P & Elevated

Slab 5 F/R/P



801-Basin Drain Pump Station 1: Caisson Second Lift Sinking



802-Basin Drain Pump Station 2: Caisson Second Lift F/R/P



2/27/21, 8:12 AM



Construction Progress – South Plant

- Commenced casting beds & pouring concrete panels for the GST 361.
- Finalizing soil preparation for floor footing forms and crane mobilization at GST 361.
- Completed wall panel installation at GST 362.
- Continued under slab electrical and plumbing at Fac 401.
- Pouring footers and foundation walls (Pump room) at Fac 401.
- Pump can encasement is near completion at Fac 401.
- Completed CLSM pour in lieu of pump can backfill at HSPS 402.
- Fac 111 expected to be energized with permanent power from Facility 102 ~ around mid-March.
- Commenced internal punch-list at Fac 111.
- Continued installation fire piping on the 2nd & 3rd floor at Fac 520.
- Continued installing equipment pads and walkway curb pads at Fac 520.
- Continued installing caulking in-between precast panels at Fac 520.
- Continued installing CMU at the 3rd floor at Fac 520.
- Continued installing structural steel at the Sludge Equalization Tank 510.



GST 361 & 362 AERIAL VIEW

February 24, 2021



GST 361

GST 362



GROUND STORAGE TANK 361



Finalizing soil preparation for floor footing forms and crane mobilization

Commenced casting beds & precast wall panel pouring

GROUND STORAGE TANK 362



2/26/21 8:09:00 AM CST

Completed wall panel installation

HSPS 401, MSB 111, HSPS 402 AERIAL VIEW

January 15, 2021



HSPS 401

MSB 111

HSPS 402

HIGH SERVICE PUMP STATION 401



Continued under slab electrical and plumbing



Pouring footers and foundation walls (Pump room)



Pump can encasement is near completion

HIGH SERVICE PUMP STATION 402



Completed CLSM pour in lieu of pump can backfill

MAIN SWITCHGEAR BUILDING 111



Expected to be energized with permanent power from Facility 102 ~ around mid-March



Commenced internal punch-list

DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW

February 24, 2021



520

510

DEWATERING BUILDING 520



Continued installing equipment pads and walkway curb pads



Continued installing fire piping on the 2nd & 3rd floors

DEWATERING BUILDING 520



Continued installing caulking in-between precast panels



Continued installing CMU at the 3rd floor

Sludge Equalization Tank 510



3/2/21 2:00 PM



2/26/21 8:02:04 AM CST

Continued installing structural steel and mixers



Construction Progress – Administration Building

- Installed Roofing at MB
- Installed Roof Blocking at AB
- Continued Electrical Rough-in at AB
- Continued PW Pipe at AB

Installation of Roofing at MB



Installation of Roof Blocking at AB



Continued Electrical Rough-in



Continued Installing PW Pipe

