



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

January 27, 2021



Site Drone Map January 15, 2021





Construction Progress – Intake Pump Station (IPS)

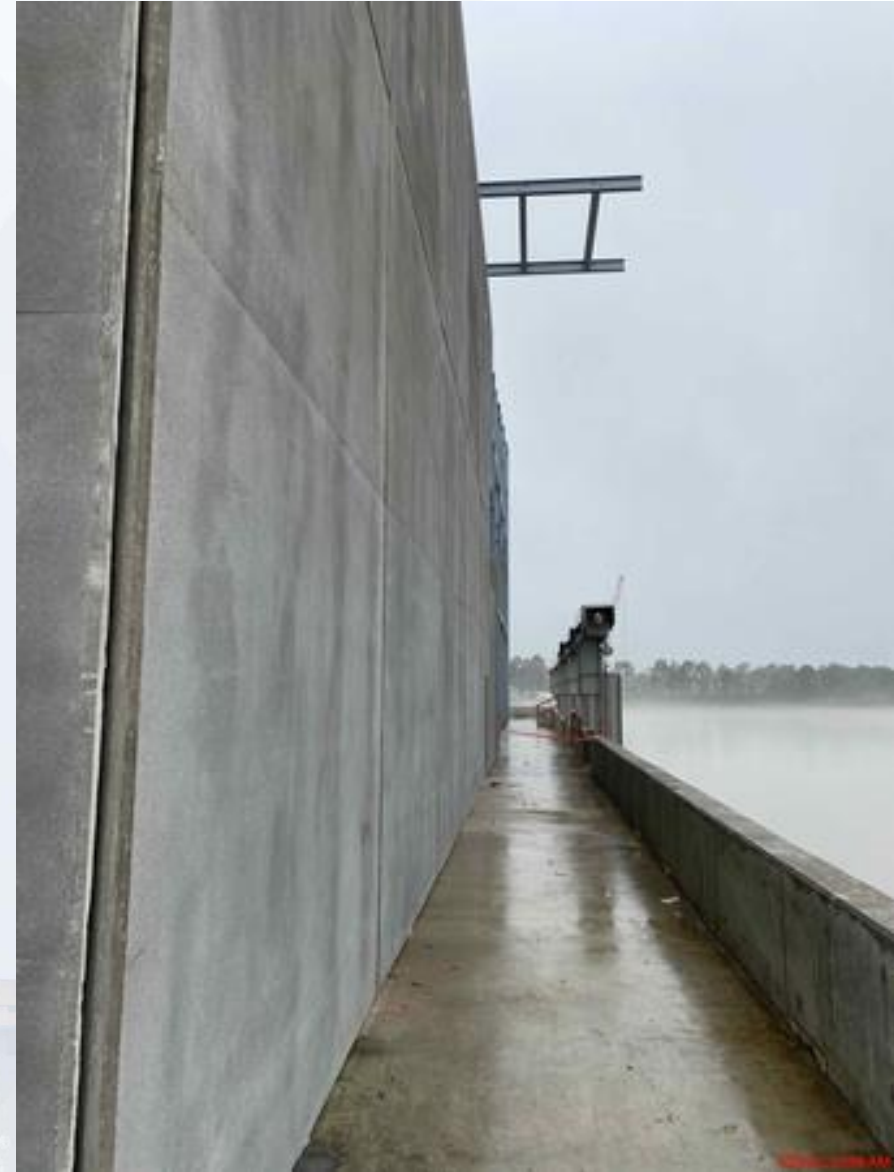
- Installing structural steel roofing members on Eastside of the building
- Installing precast concrete panels on the Northside
- Installing formwork for the concrete anchor box
- Continue installing the 108" underground pipe
- Installing underground duct bank at building 152



Installing structural steel roofing members on Eastside of the building



Installing precast concrete panels on the Northside



Installing formwork for the concrete anchor box



Continue installing the dual 108" RW pipe



Installing underground duct bank at building 152





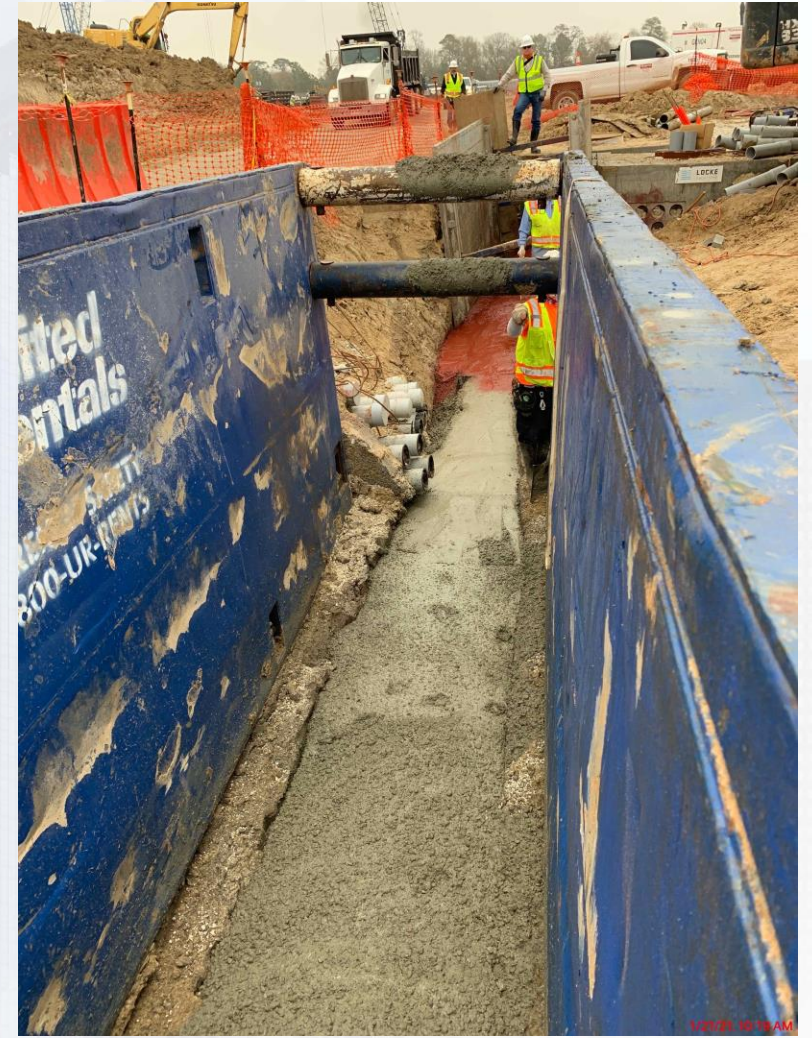
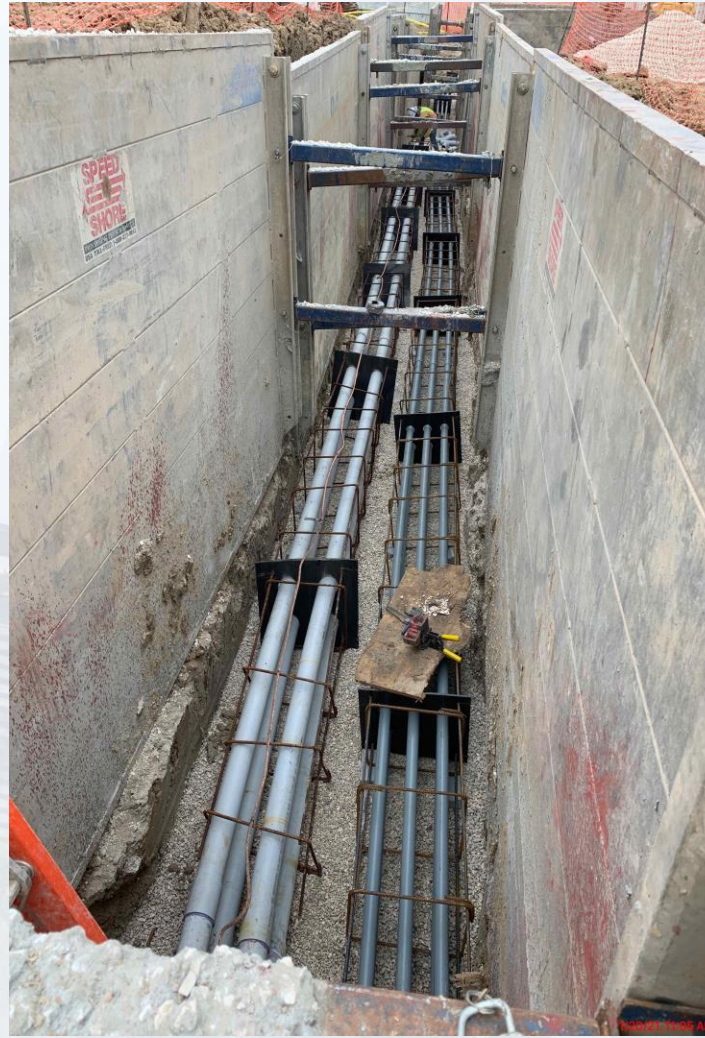
Construction Progress – Site Electrical

- Wire Pulling at MMH111A-6 (South of Facility 111)
- Arrival of 313 Transformers
- Duct Bank Installation North of Facility 111

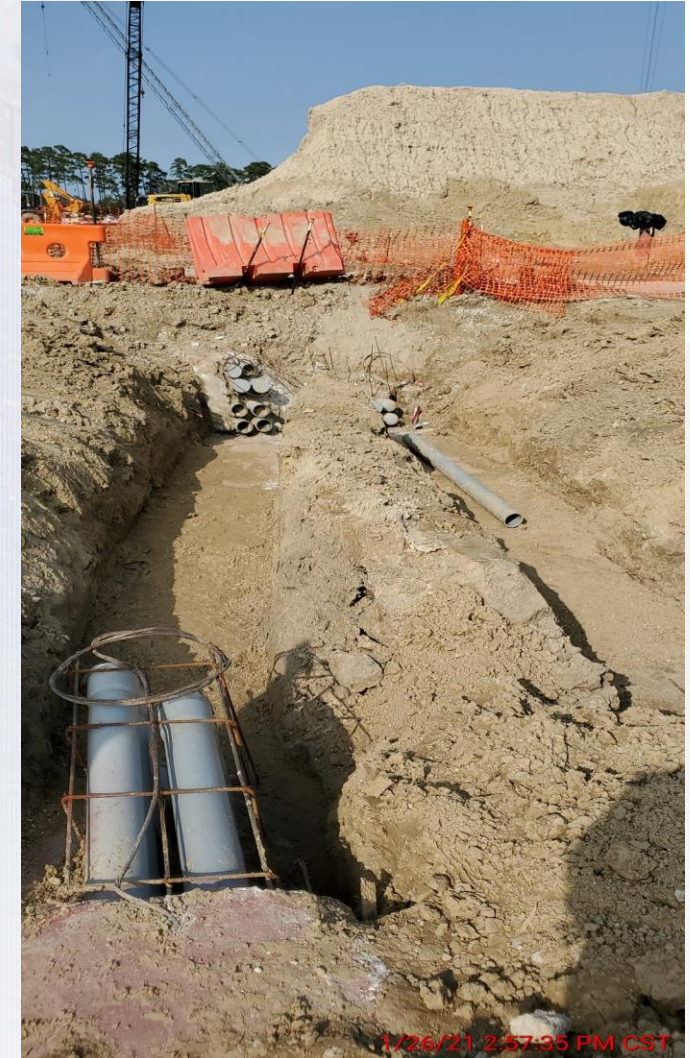
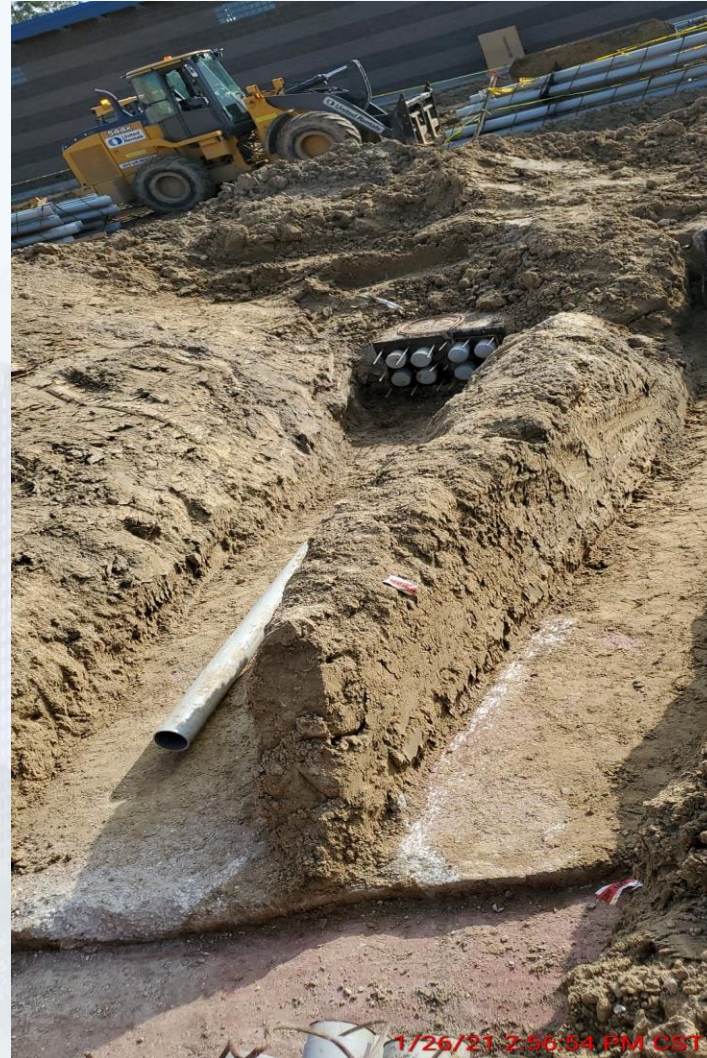
Wire Pulling at MMH111A-6 (South of Facility 111)



MDB080 Installation



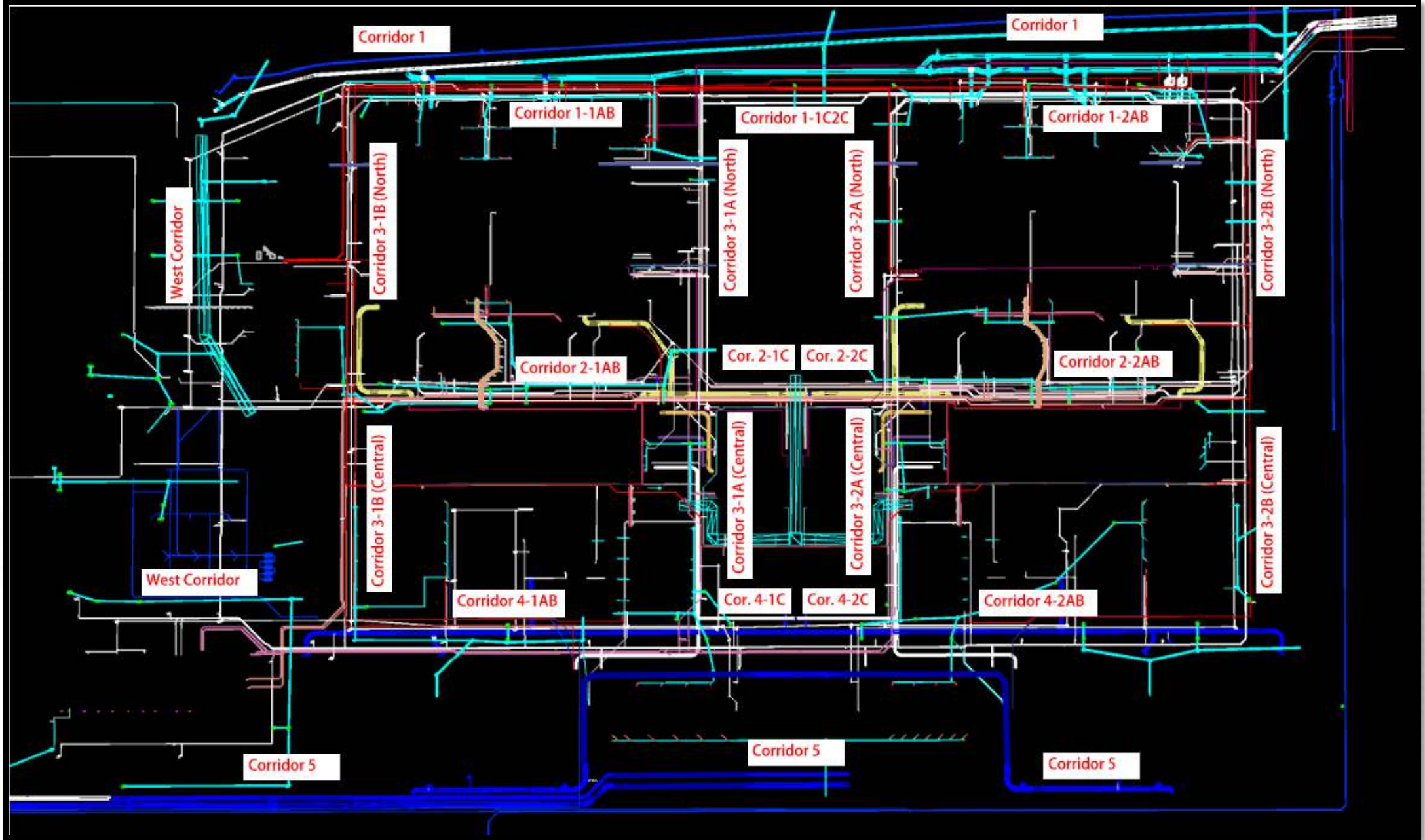
Duct Bank Installation North of Facility 111



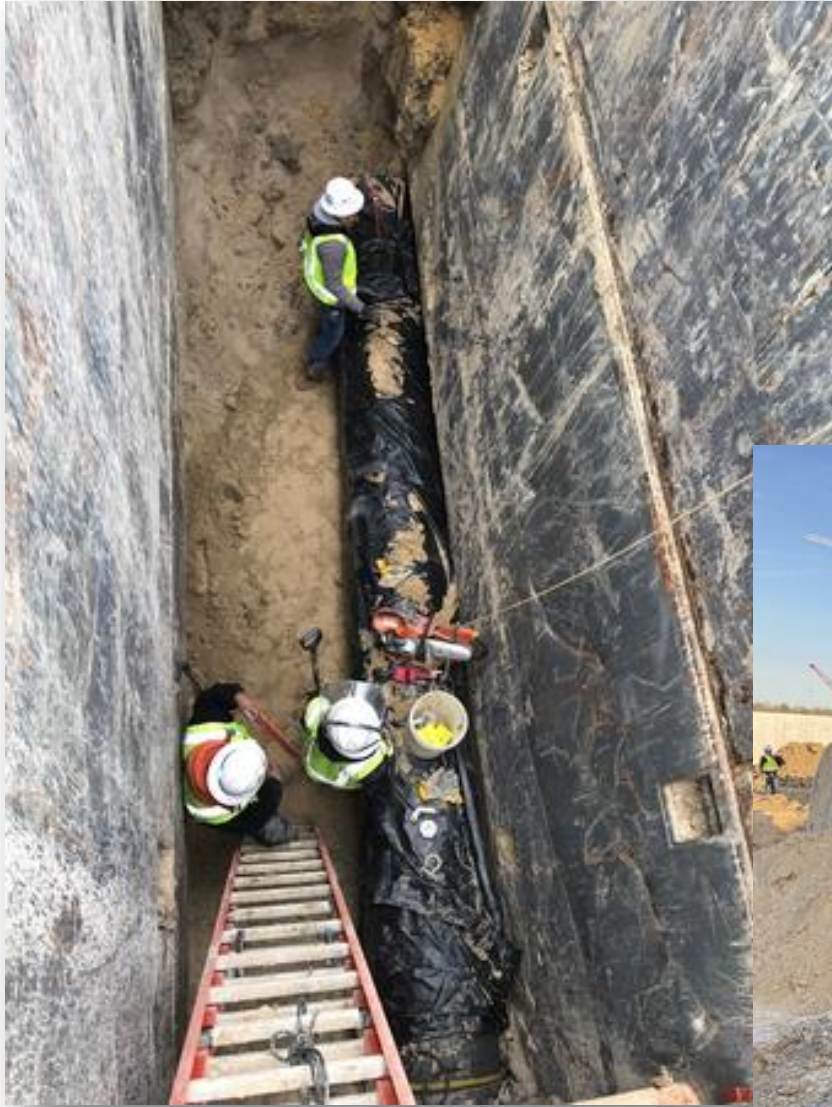


Construction Progress – Yard Piping

- **Installing 24" DEC piping in Corridor 2-1AB**
- **Installing 16" CEN line in Corridor 2-1AB**
- **Installing 6" PW line in Corridor 2-1AB and 3-1A**
- **Installing 30" RCP Storm and manholes in Corridor 2-1AB**
- **Installing 2-16" & 20" TSL lines in Corridors 2-1AB & 3-1B**
- **Installing 10" SSG and manholes in Corridor 3-1B**
- **Setting the 96" Victaulic Coupling in Corridor 3-1B**
- **Laying the 96" OZW pipe in Corridor 3-1B**
- **Backfilling and welding the 108" FW steel pipe in Corridor 5**
- **Laying the 84" & 120" FW distribution lines in Corridor 5**
- **Laying 84" FW steel pipe in Corridor 4 - Phase 2**



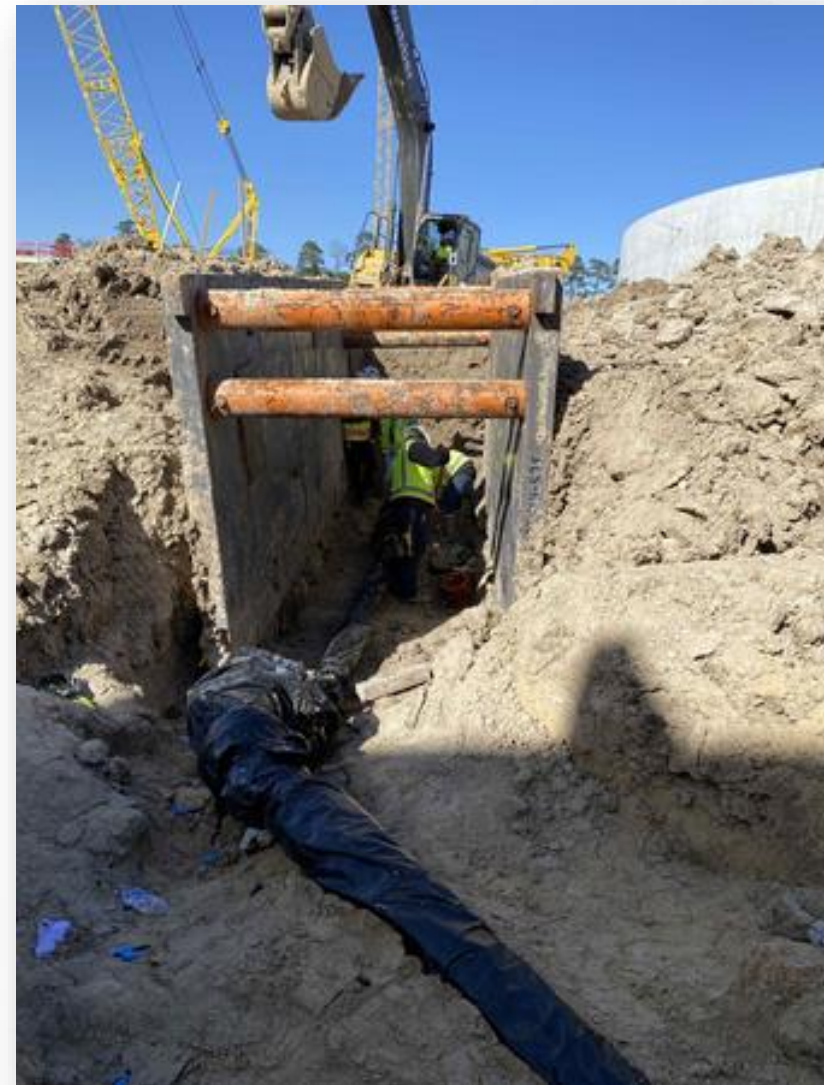
Installing 24" DEC piping in Corridor 2-1AB



Installing 16" CEN line in Corridor 2-1AB



Installing 6" PW line in Corridors 2-1AB & 3-1B



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



Installing 2-16" & 20" TSL lines in Corridors 2-1AB & 3-1B



Installing 10" SSG and manholes in Corridor 3-1B



Setting the 96" Victaulic Coupling in Corridor 3-1B



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



Backfilling and welding the 108" FW steel pipe in Corridor 5



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



Laying 84" FW steel pipe in Corridor 4 – Phase 2





Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Trough Installation & Grouting
- Setting BWA Pipes –Manifold 7.
- East Stairway Installation

291-TRANSFER PUMP STATION 1:

- Backfilled East and West of Facility
- Pour Pump's Mud Slab
- Scaffolding for CMU Walls
- Place first course of CMU Walls
- Pump Slab Reinforcement

292-TRANSFER PUMP STATION 2:

- Wall Section A4 Concrete pour
- FRP Overflow Channel Walls

311-POST CHEMICAL FACILITY 1 SH/CS :

- CMU Installation at Chem Building.
- FRP –Equipment Pads
- Fabrication of SST CS Tanks.

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

- FRP –Post Chem Building SOG
- FRP – Containment Area SOG B1 & B2

282 -FILTER MODULE 2:

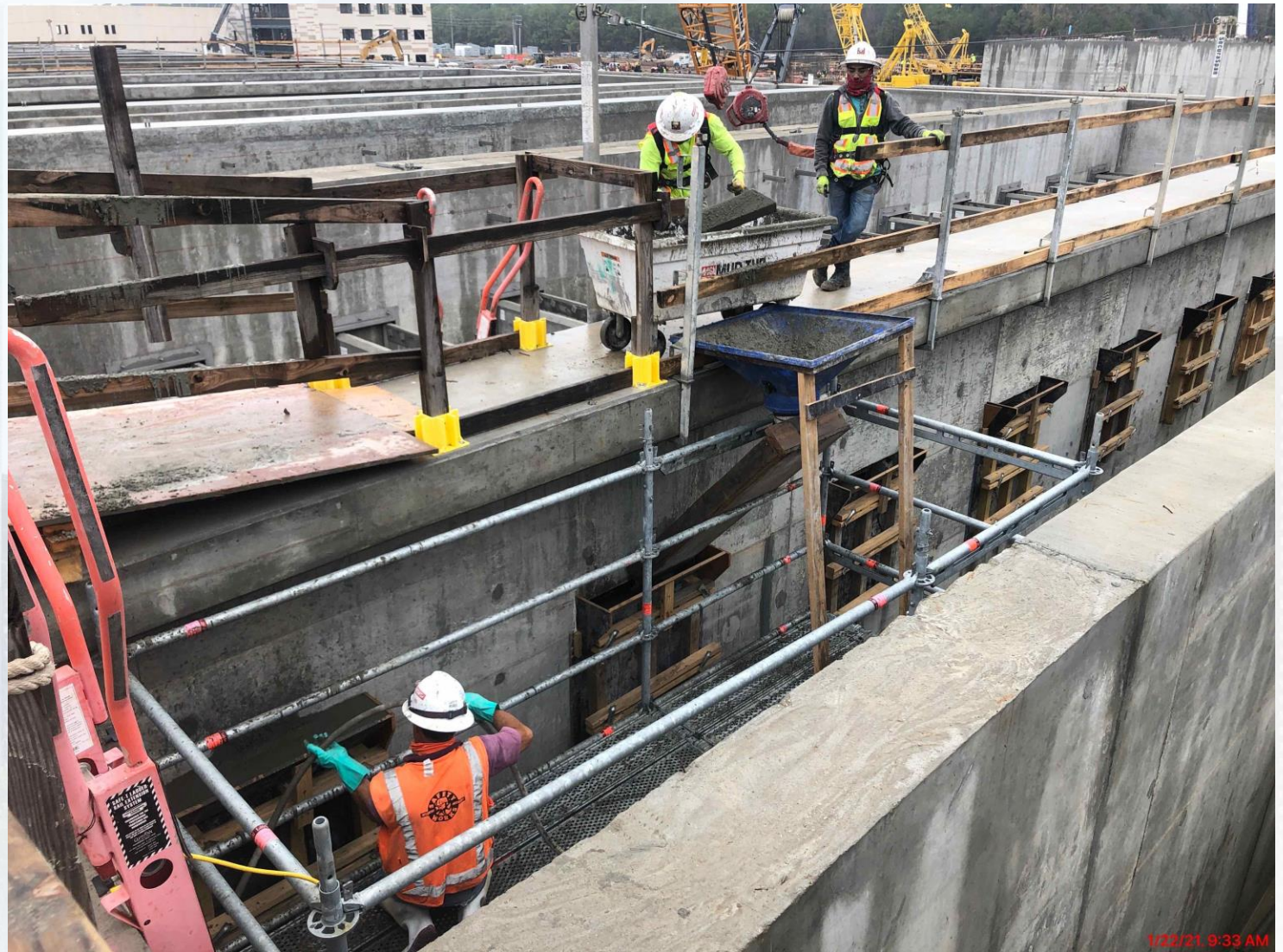
- Reinforcing/Forming/Pouring Walls
- Reinforcing Filter Slabs 15 , 16/17(North Half)
- Forming/Reinforcing Lower Manifold Decks 13/14.
- Pouring Filter 14 Slab.



281-FILTER MODULE- Filter Troughs Set for Filters 7-12



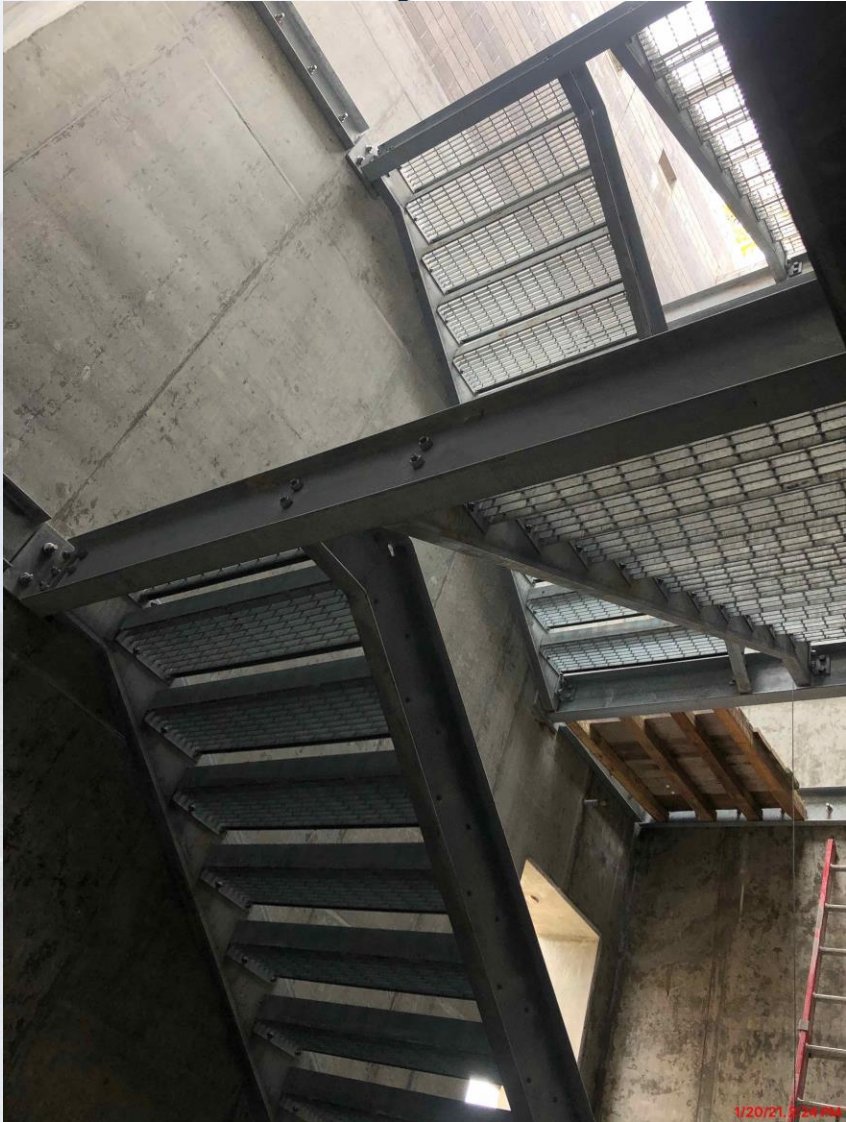
281-FILTER MODULE- Grouting Filter Troughs



281-FILTER MODULE – Installing BWA Pipe (Manifold 7)



281-FILTER MODULE – East Stairway



291-TPS – Aerial View (01/04/2021)



291-TPS – Backfilled East and West of the Facility



291-TPS – Pour Pump's Mud Slab



291-TPS – Scaffolding for CMU Walls



291-TPS – Place First Course of CMU Walls



291-TPS – Pump Slab Reinforcement



CMU Installation – Pump Building



FRP –Equipment Pads



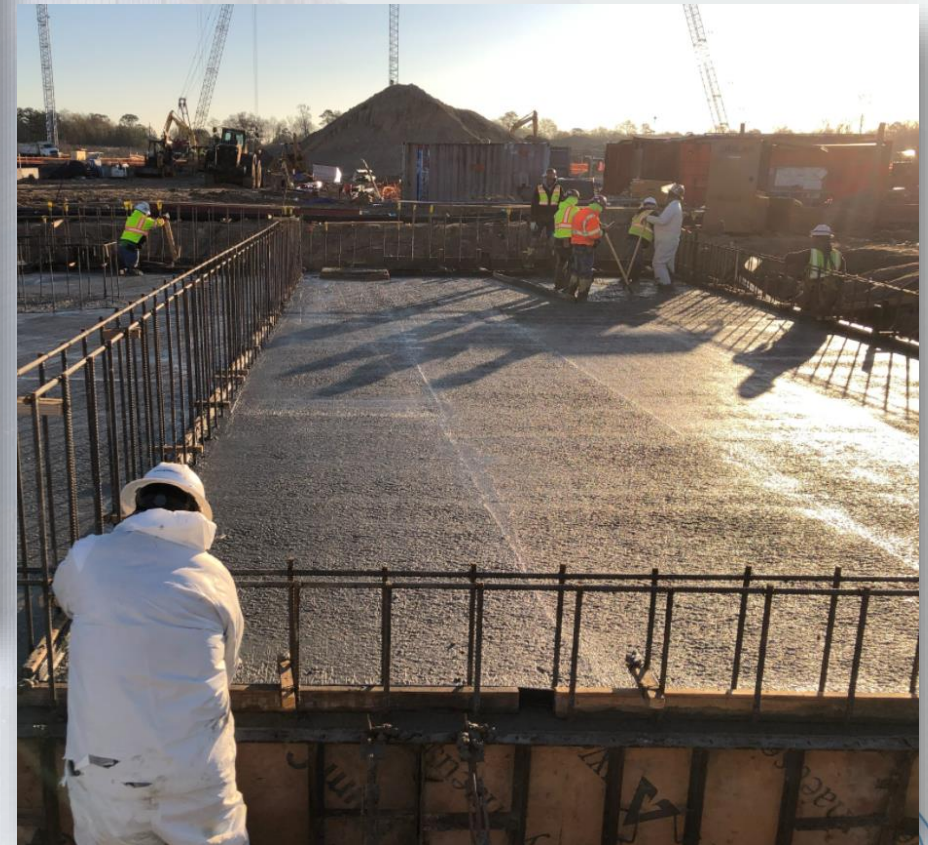
311 - Fabrication of SST CS Tanks



311 – Aerial view –01/04/2020



312 - FRP SOG Containment Area: Concrete pour B2



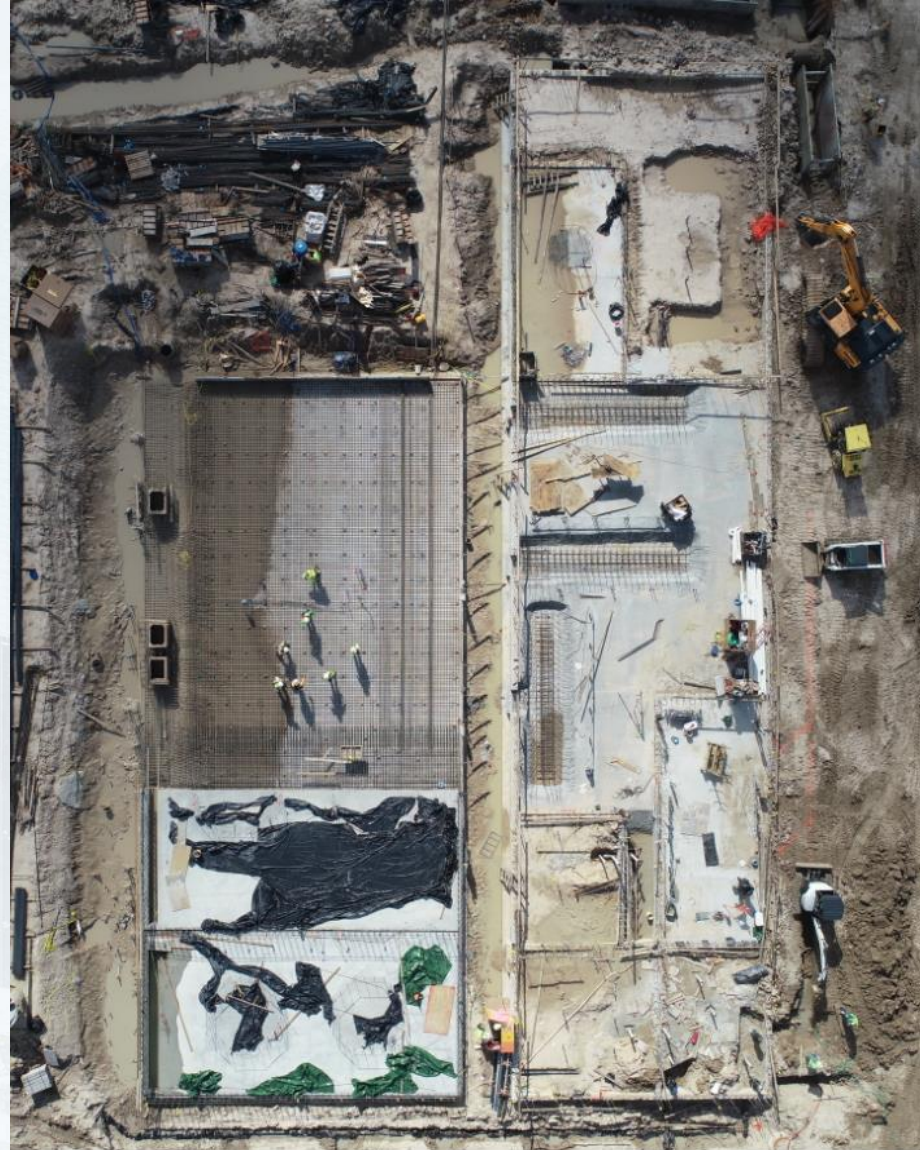
312 - FRP Tank Pads Containment Area:



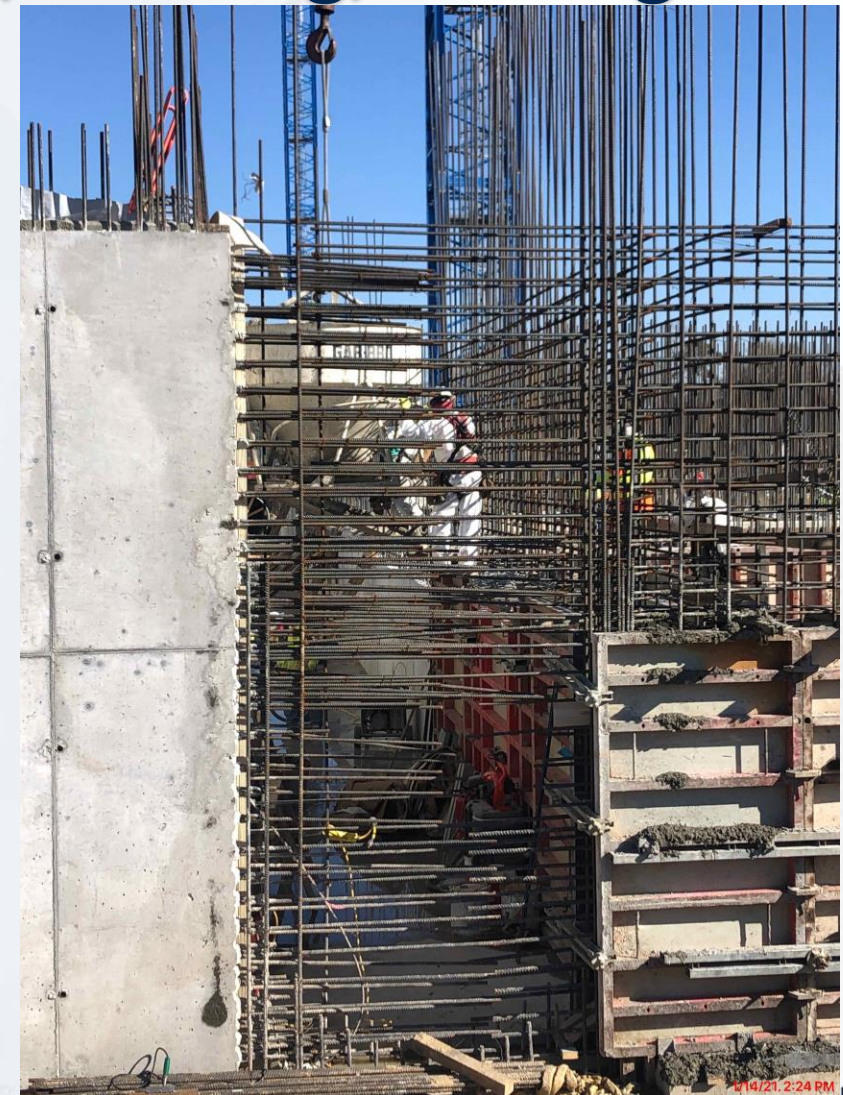
312 - FRP SOG Chem Building:



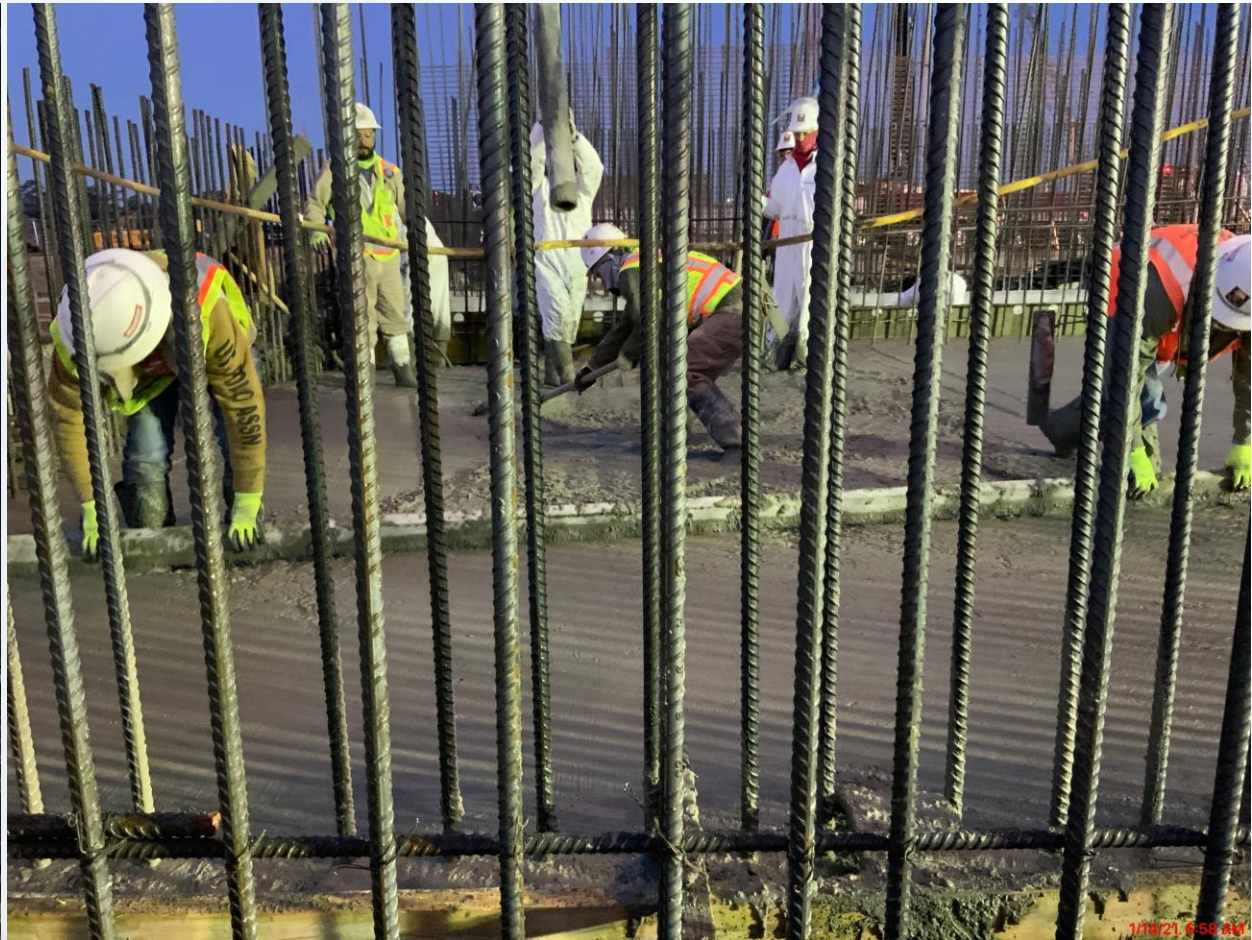
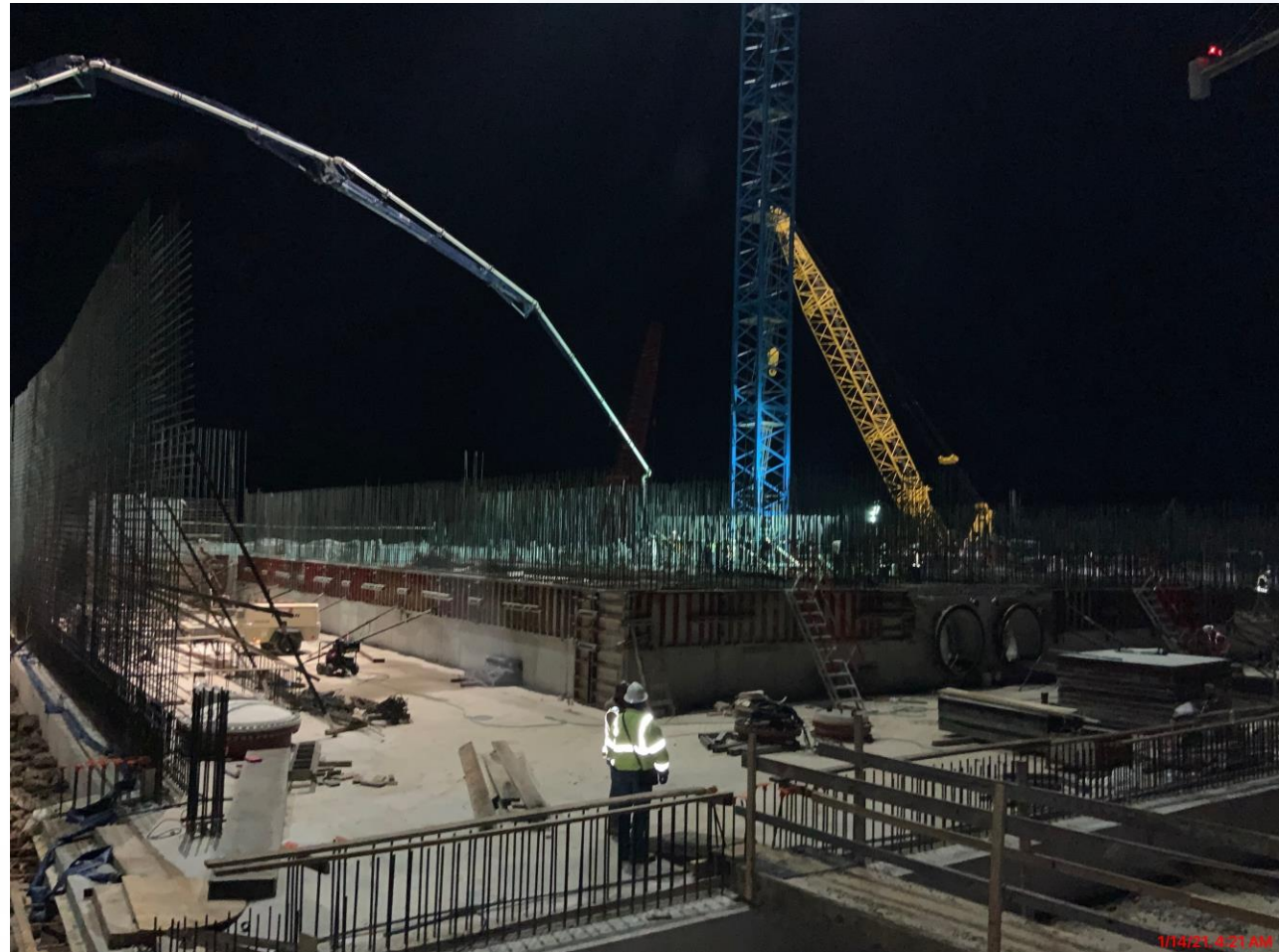
312 - Overall view 12/01/2020



282-FILTER MODULE 2- Reinforcing/Forming/Pouring Walls



282-FILTER MODULE 2- Filter 14 Slab Pour



282-FILTER MODULE 2- Backfilling Filter 18/19



282-FILTER MODULE 2- Filter 15, 16/17(North Half) Slab Rebar



282-FILTER MODULE 2- Forming/Reinforcing Lower Manifold Decks

13/14



292-TPS – Pour Wall Section A4



292-TPS – FRP OverFlow Channel Wall Sections

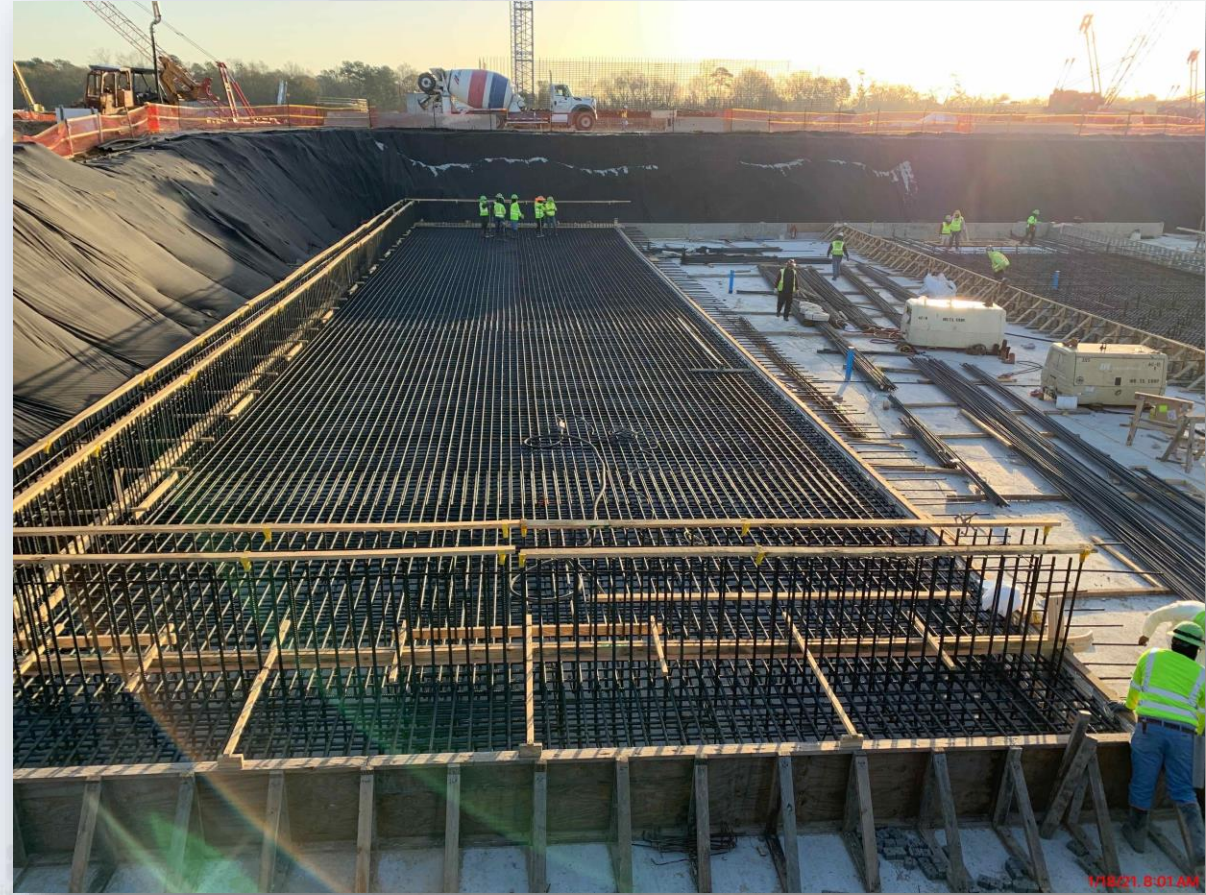




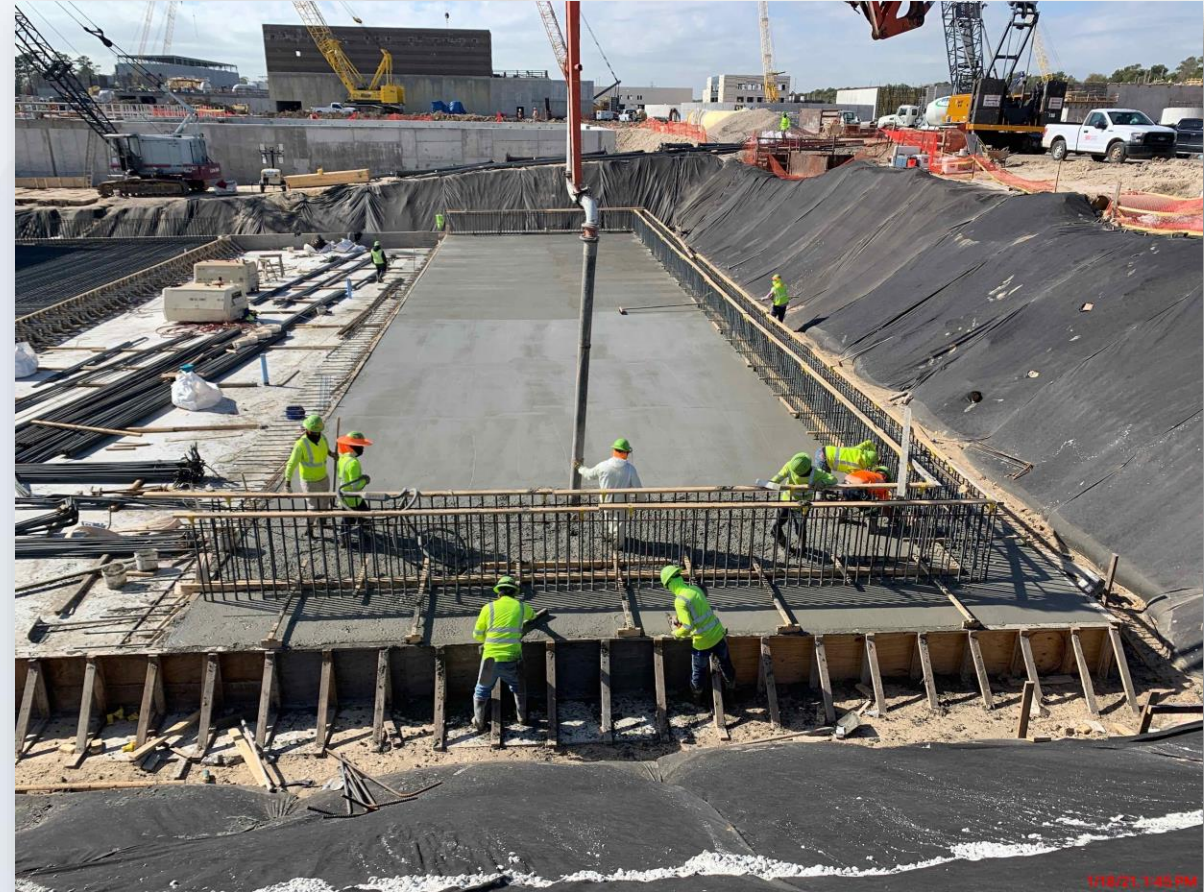
Construction Progress – LREQ Basins Facilities 601/602

- **602 – Continue Rebar Installation Main Base Slab (1)**
- **602 – Concrete Pour Main Base Slab (1)**
- **602 – Rebar Installation Main Base Slab (3)**
- **602 - Concrete Pour Main Base Slab (3)**

602 – Continue Rebar Installation Main Base Slab (1)



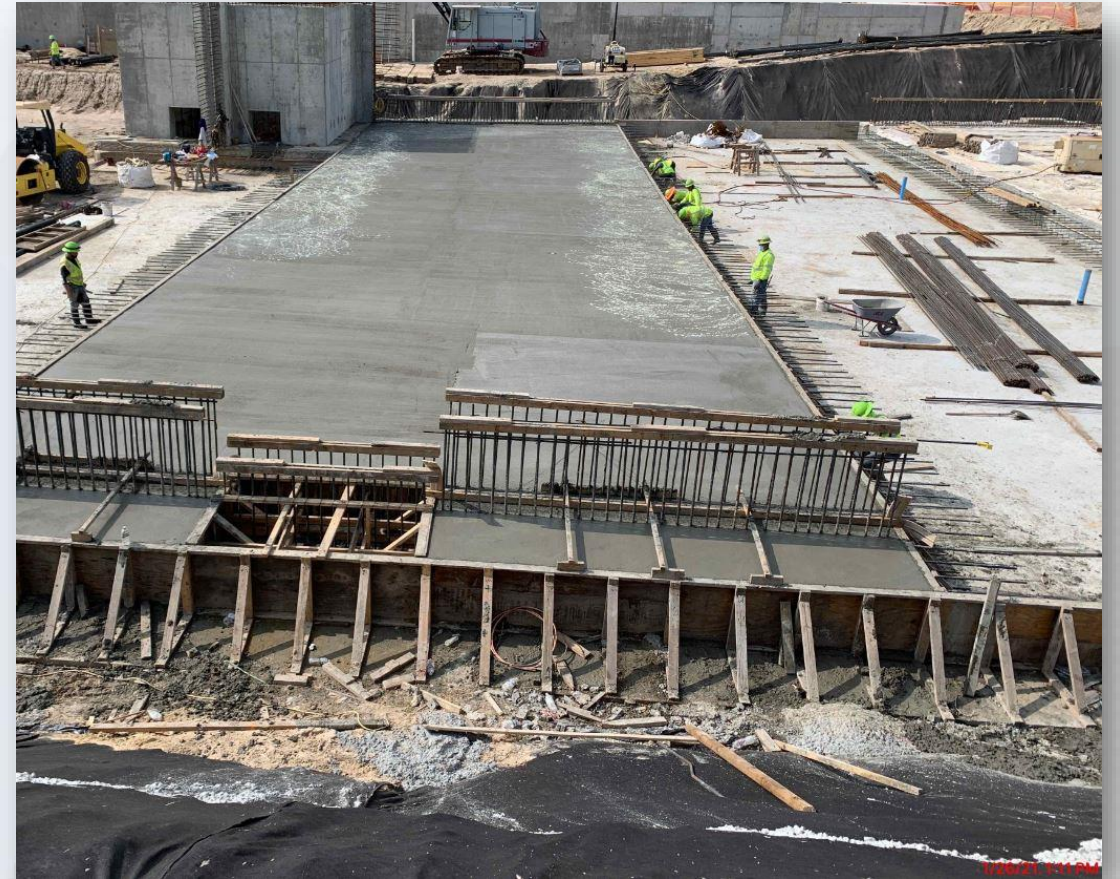
602 – Concrete Pour Main Base Slab (1)



602 – Rebar Installation Main Base Slab (3)



602 - Concrete Pour Main Base Slab (3)





Construction Progress – North Plant

211-Pretreatment Chemical Facility 1:

- Area-A UG Electrical Ductbank

213-Pretreatment Chemical Facility 3:

- Lime Slurry Tank Installation

214-Pretreatment Chemical Facility 4:

- PC Tanks Installation Complete

221-Rapid Mix Train 1:

- 16" PDR Install

251-Ozone Contractor Train 1:

- 96-Inch Clarified Water Intake Pipe

261-Ozone Generation Facility 1:

- Stem Walls F/R/P

241-Flocculation & Sedimentation Train 1:

- Slab On Grade F/R/P

242-Flocculation & Sedimentation Train 2:

- CWC Elevated Slab(s) F/R/P

502-Gravity Thickener Complex 2:

- USDS Walls Second Lift F/R/P

503-Gravity Thickener Complex 3:

- TSSB Walls-1&3 Concrete Pour

611-Liquid Residuals Clarifier Facility 1:

- Elevated Deck F/R/P

802-Basin Drain Pump Station 2:

- Caisson First Lift F/R/P

211-Pretreatment Chemical Facility 1: Area-A UG Electrical Ductbank



1/15/21 1:22 PM

213-Pretreatment Chemical Facility 3: Lime Slurry Tank Installation



12/3/21, 8:39 AM

Houston Waterworks Team



214-Pretreatment Chemical Facility 4: PC Tanks Installation Complete



1/15/21 1:16 PM

221-Rapid Mix Train 1: 16" PDR Install



241-FlocSed Train 1: Slab On Grade F/R/P



242-FlocSed Train 2: CWC Elevated Slab F/R/P



251-Ozone Contractor Train 1: 96-Inch Clarified Water Intake Pipe



1/23/21 9:06 AM

Houston Waterworks Team



261-Ozone Generation Facility 1: Stem Walls F/R/P



502-Gravity Thickener Complex 2: USDS Walls Second Lift F/R/P



1/22/21 3:57 PM

Houston Waterworks Team



503-Gravity Thickener Complex 3: TSSB Walls-1&3 Concrete Pour



611-Liquid Residuals Clarifier Facility 1: EL-SL F/R/P



802-Basin Drain Pump Station 2: Caisson First Lift





Construction Progress – South Plant

- Pad prep is underway at GST 361.
- Continued wall panel pouring at GST 362.
- Continued dome shoring erection at GST 362.
- Continued under slab electrical and plumbing at Fac 401.
- Continued 48” bypass installation at Fac 401.
- Pouring footers and forming walls (Pump room) at Fac 401.
- Completed flowable fill for the locking slab at Fac 402 pump cans.
- Commenced FRP can encasement for the first 4 cans at Fac 402.
- Continued to install steel closure pieces at Fac 111 roof framing.
- Completed installation of all 4 centrifuges at the 3rd floor at Fac 520.
- Continued installation of masonry at 3rd floor (Control room) at Fac 520.
- Commenced installation of fire sprinkler piping 2nd floor at Fac 520.
- Commenced ductwork rough-in at Fac 520.
- Rebar installation at the transformer pads at Fac 520.
- Continued installation of concrete walls and columns at Sludge Equalization Tank 510.
- Prefab platform steel at the Sludge Equalization Tank 510.



GST 361 & 362 AERIAL VIEW

January 15, 2021



Pad prep is underway at GST 361



Continued wall panel pouring at GST 362



Continued dome shoring erection at GST 362



HSPS 401, MSB 111, HSPS 402 AERIAL VIEW

January 15, 2021



HSPS 401

MSB 111

HSPS 402

Continued under slab electrical and plumbing at Fac 401



Continued 48" bypass installation at Fac 401



Pouring footers and forming walls (Pump room) at Fac 401



Completed flowable fill for the locking slab at Fac 402 pump cans



1/25/21, 2:03 PM

Commenced FRP can encasement for the first 4 cans at Fac 402



Install steel closure pieces at Fac 111 roof framing



**DEWATERING BUILDING 520 &
THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW**

January 15, 2021



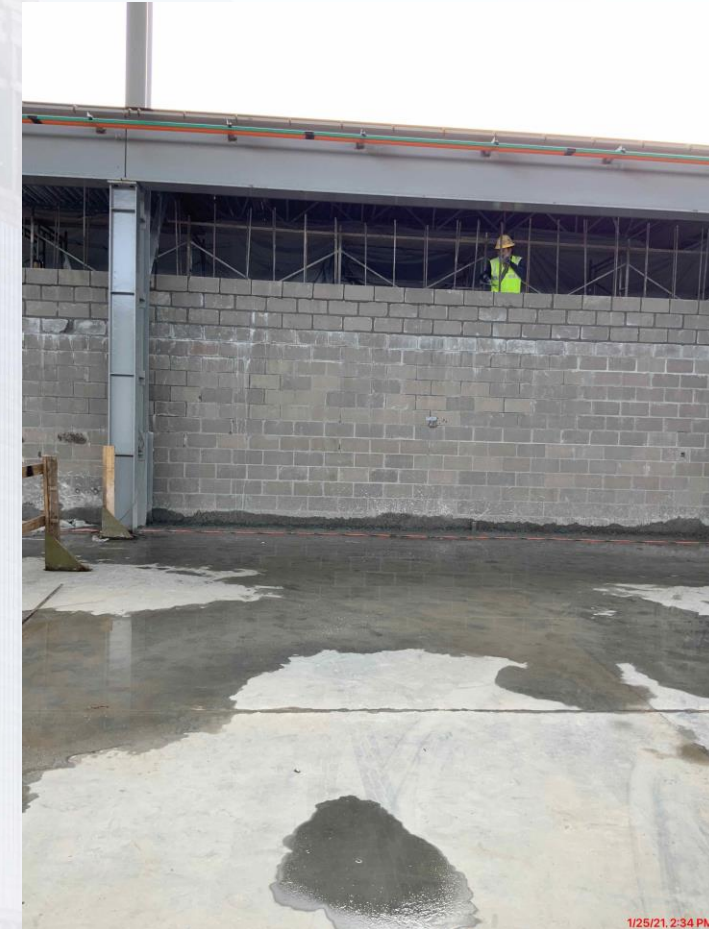
520

510

Completed installation of all 4 centrifuges at the 3rd floor at Fac 520



Continued installation of masonry at 3rd floor (Control room) at Fac 520



Installation of fire sprinkler piping 2nd floor at Fac 520



11/25/21 12:30 PM

Houston Waterworks Team



Commenced ductwork rough-in at Fac 520



Rebar installation at the transformer pads at Fac 520



11/25/21 2:35 PM

Houston Waterworks Team



Continued Installation of concrete walls, columns, and Prefab platform steel at Sludge Equalization Tank 510





Construction Progress – Administration Building

- Completed Installation of Precast Panels
- Installation of CFMF for Parapet Wall
- Continued Installation of Plumbing Piping
- Installed and Insulated HVAC Ductwork
- Installed Electrical Rough-in
- Installed BW Columns Beams

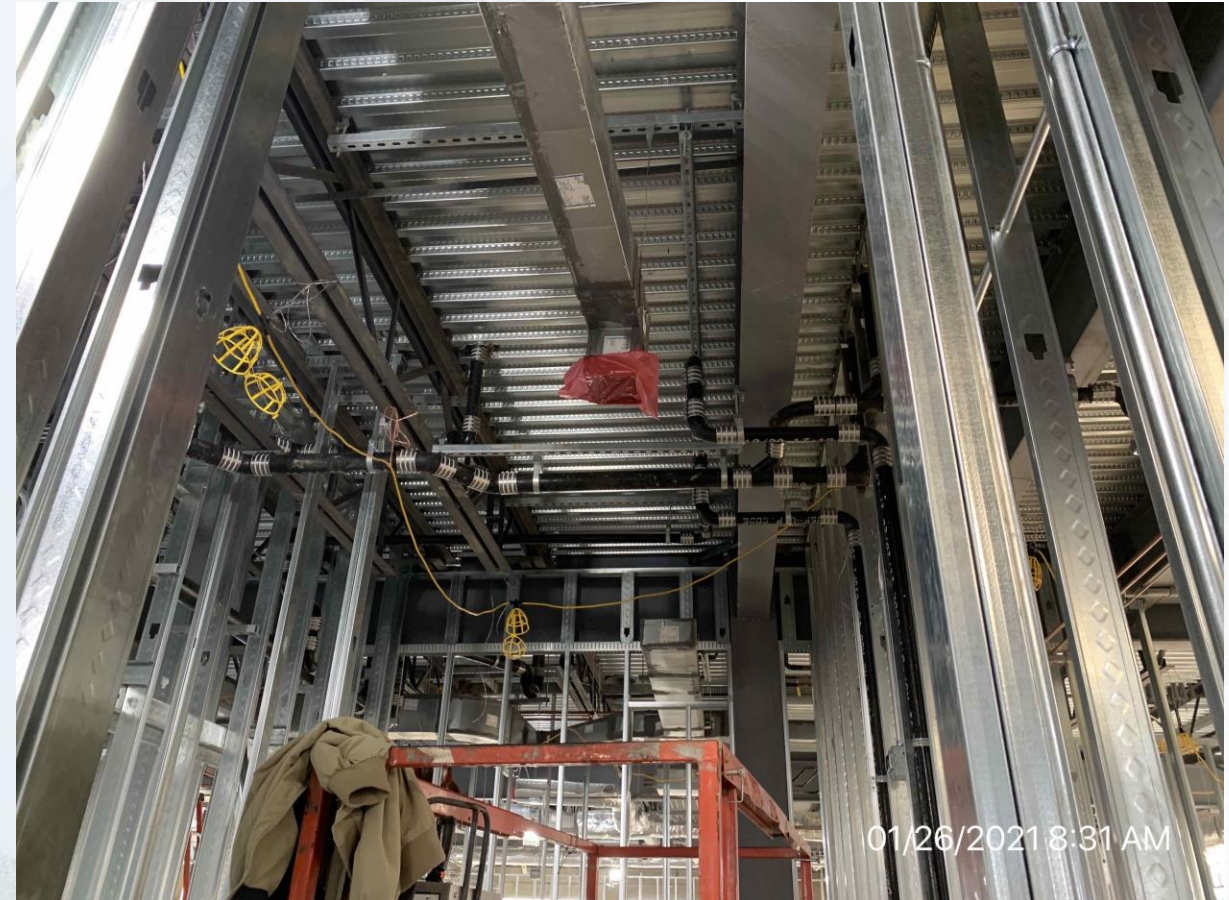
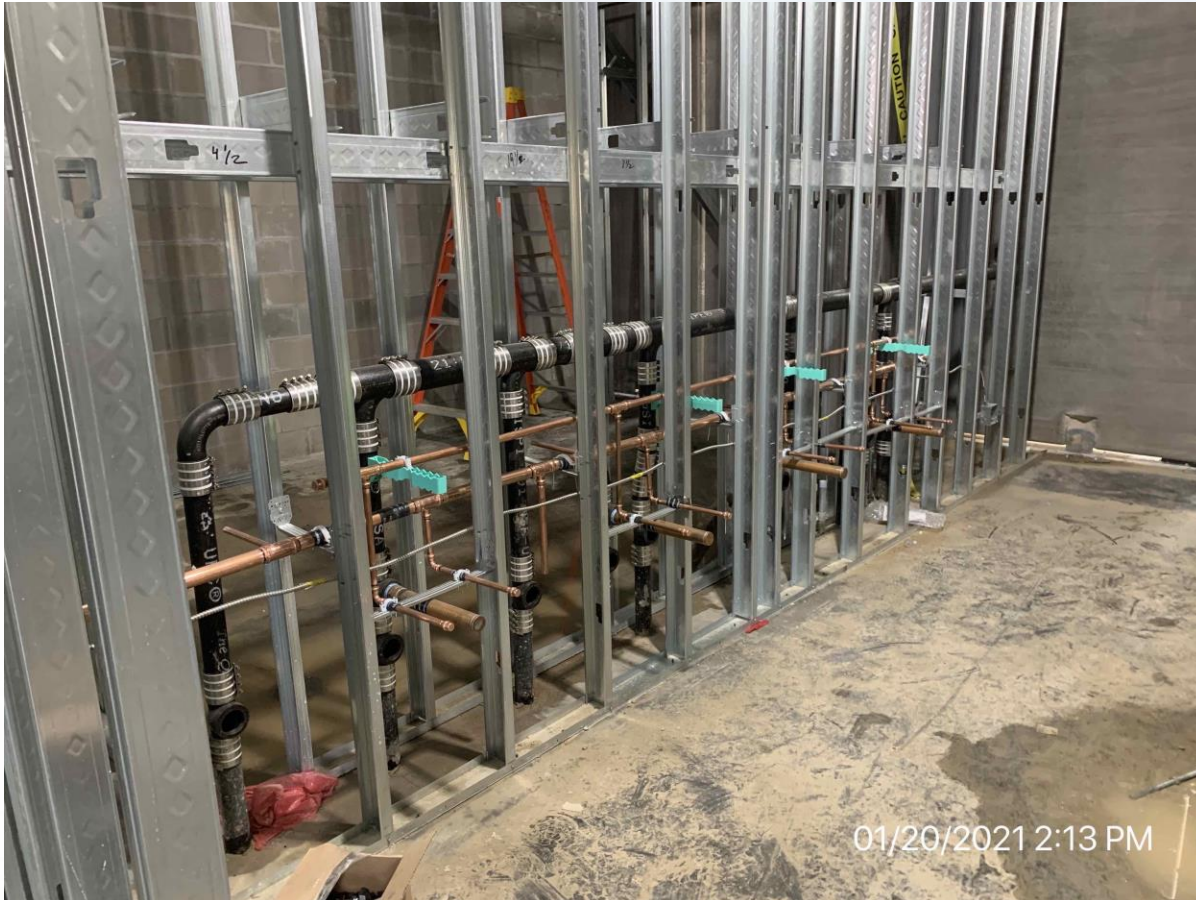
Complete Installation of Precast Panels



Installation of CFMF for Parapet



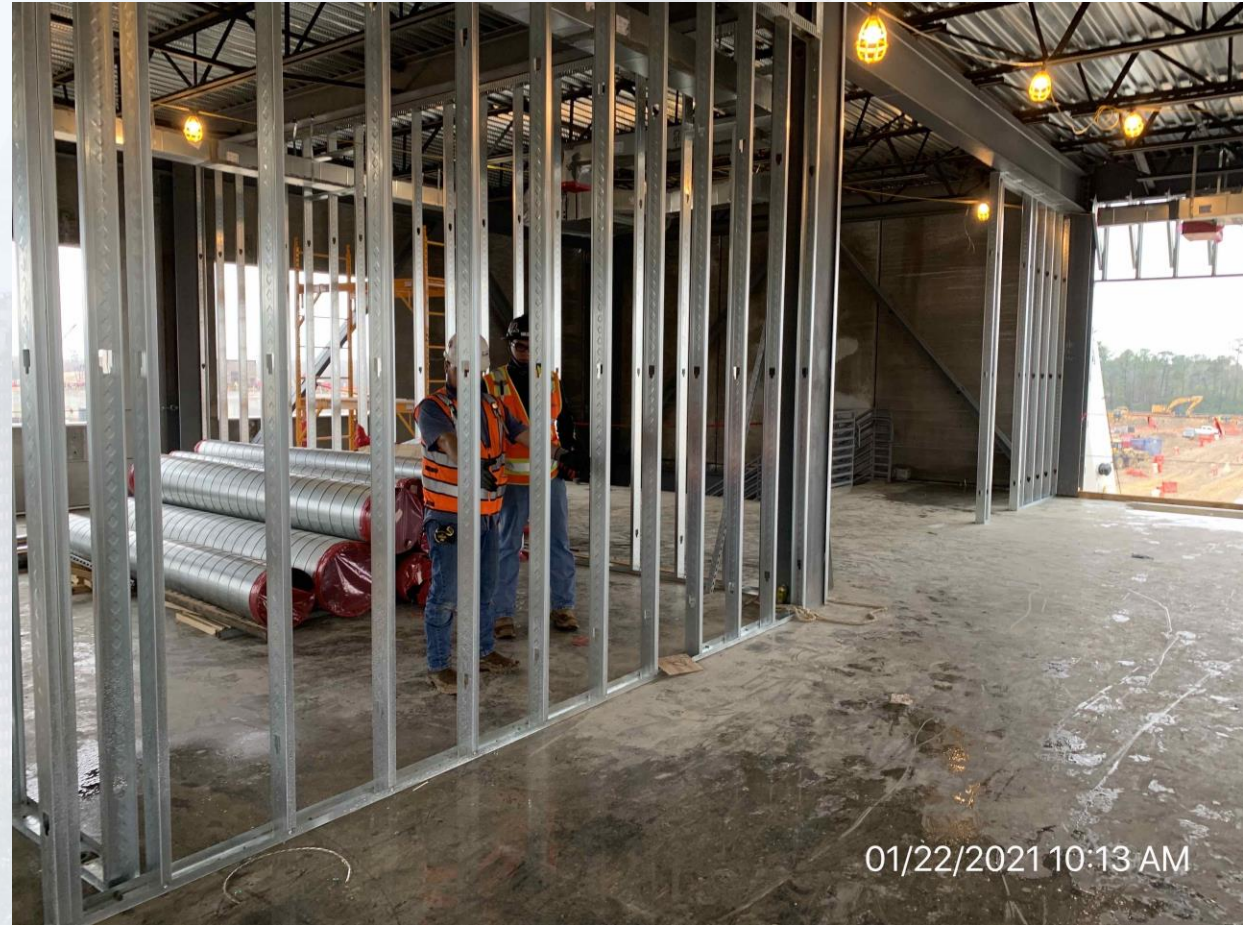
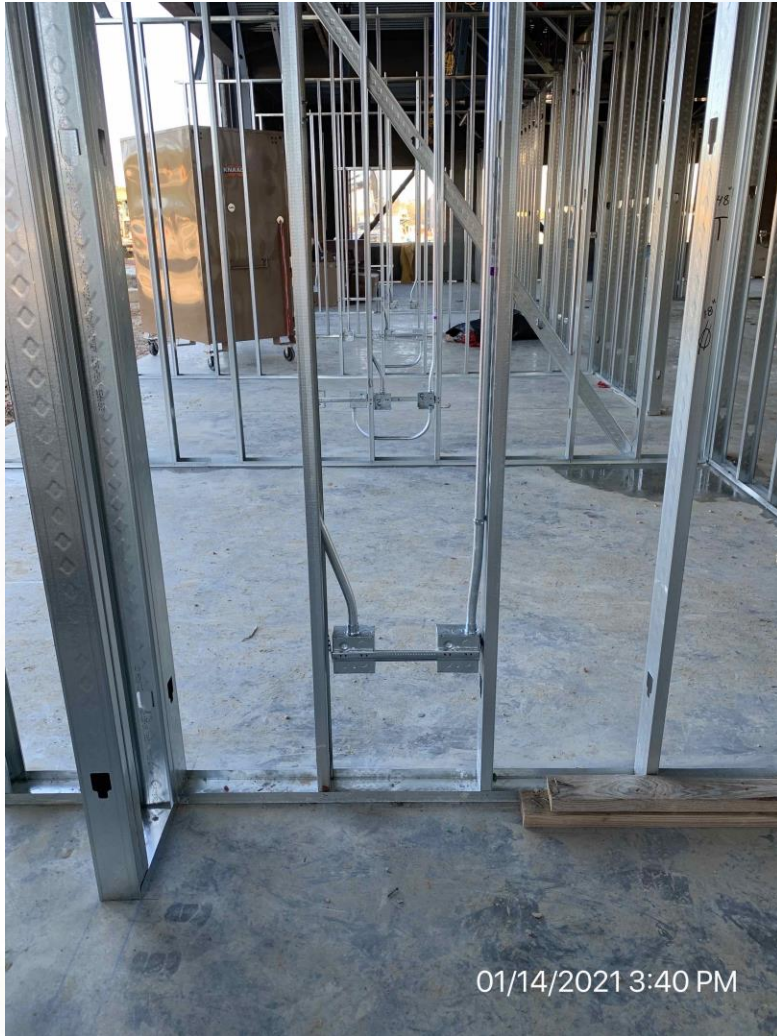
Installation of Plumbing Piping



Installation and Insulation of HVAC Ductwork



Installation of Electrical Rough-in



Installation on Beams and Columns at BW



