



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

November 16, 2021



Site Drone Map November 5, 2021



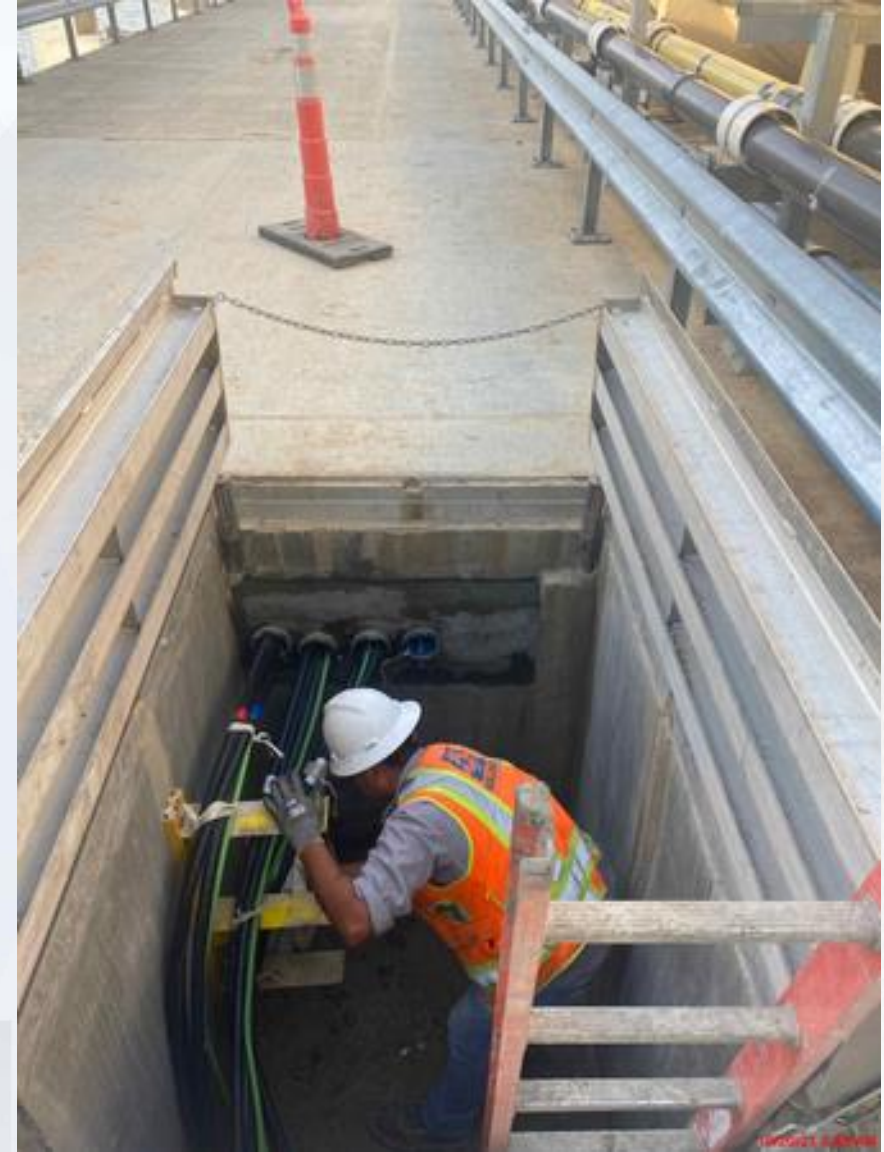
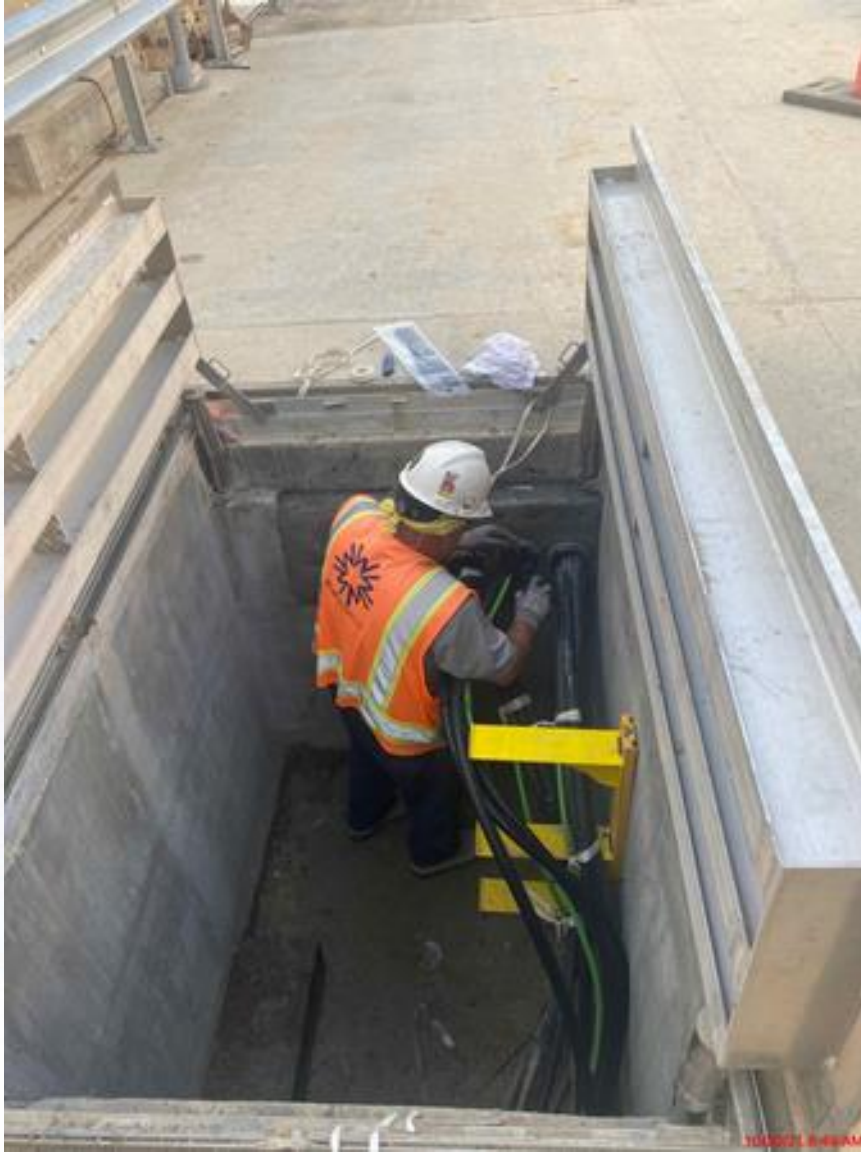


Construction Progress – Intake Pump Station (IPS)

- Running cables through electrical hatch boxes
- Continue work inside the pump room
- Continue coating repair of the precast concrete wall



Running cables through electrical hatch boxes



Continue work inside the pump room



Continue coating repair of the precast concrete wall





Construction Progress – Site Electrical

- North Run Fiber Duct Bank Installation
- 401 Transformer Installation
- Relocation of Trailers

North Run Fiber Duct Bank Installation



401 Transformer Installation



Relocation of Trailers





Construction Progress – Yard Piping

Work in Progress – Support Activities

- Ongoing receipt and staging of small and large bore piping and components required for complete process piping system installations, including HWT procured Large Diameters and Flexible Couplings.
- Ongoing Preparatory and Initial Phase Meeting for Key Definable Features of Work
- Ongoing meetings with other HWT Package Teams and Tier I Subcontractor to coordinate access in to Work areas to install process piping, given site density and phasing of activities.

Critical Work Activities

- 120-inch Finished Water (FW) Distribution installation in-process in Road No. 1, to terminate at NETL (by others) tie-in location at NEWPP Site entrance.
- Performed 36-inch Wet Taps on the existing 66-inch RW Main and flange connected the 42-inch HDPE Bypass piping in preparation of the line stop insertion and bypass activation.

Corridor 1

- Small-bore piping installations on North Road; 1-inch Sump Pump Drain (SPD), 8-inch and 4-inch Process Drain Recycle (PDR), ¾-inch Sample (SA) lines, 24-inch Potable Water (PW).
- Continued installation of 24-in Potable Water (PW) ductile-iron piping trunk lines north of North Plant Facilities #201 to #211.

Corridor 3

- Completed official hydro-static pressure test for 24-inch Process Drain (PDR) and 8-inch Plant Process Water systems.
- Completed official air-pressure test for the 4-inch Natural Gas line north south run from Facility 221 interface point to Facility 312 interconnecting point
- Installed 6-inch PVC Roof Drain piping east of Facility 312

Corridor 4 (South):

- Installed Reinforced Concrete Pipe (RCP) as part of storm sewer system, as well as Manhole#34 north of Ground Storage Tank 4 east to tie-in to the proposed overflow channel outfall

Administration and Maintenance

- Installed Sanitary Sewer Gravity piping and manholes east of PMT trailer

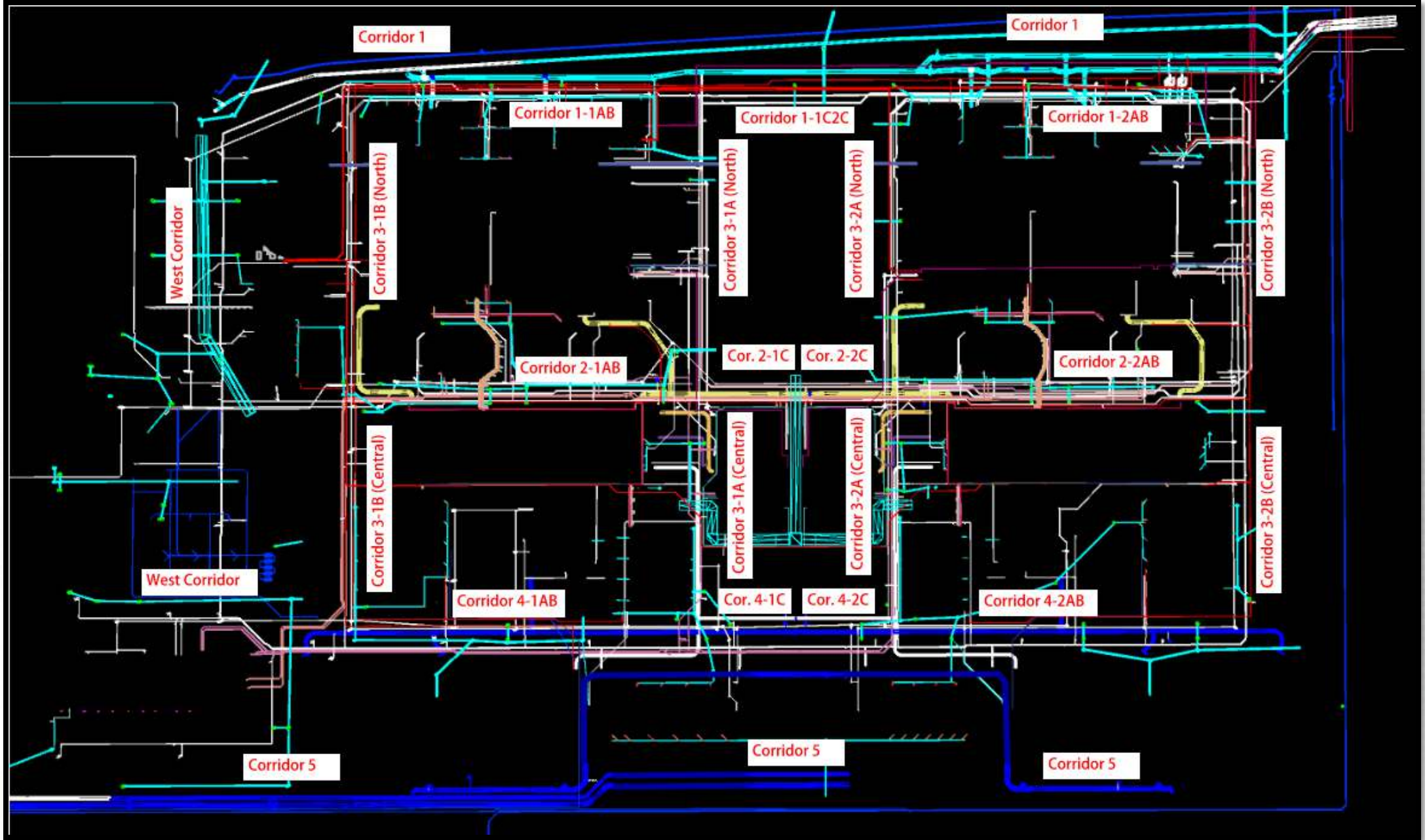
Corridor 5

- Completed weld of butt-strap and 90-degree bend at north-east corner of Facility 402 of the 120-inch FW suction piping from Fac 402 to Fac 363 inlet pipe.
- Continued welding, grouting and cleaning of 120-inch Finished Water distribution piping west of butterfly valve Tag#035BFV40103 working west to southwest corner of the site

West Corridor

- Began installing 24-inch Reinforced Concrete Piping (RCP) from storm sewer manhole #5 working north to Grate Inlet #11 west of Ground Storage Tank #1





Corridor 1 – Connected the 42-inch HDPE bypass piping in preparation of the line stop, bypassing, and wet connection activities



Existing 66-inch Raw Water West by-pass location



Existing 66-inch Raw Water East by-pass location

Corridor 1-2AB – Installation of 42-inch knife gate valve on 66-inch Raw Water Main and butt-fusion welded 36-inch HDPE pipe joints



Corridor 1 – Installing 36-inch Clarified Recycle ductile iron piping



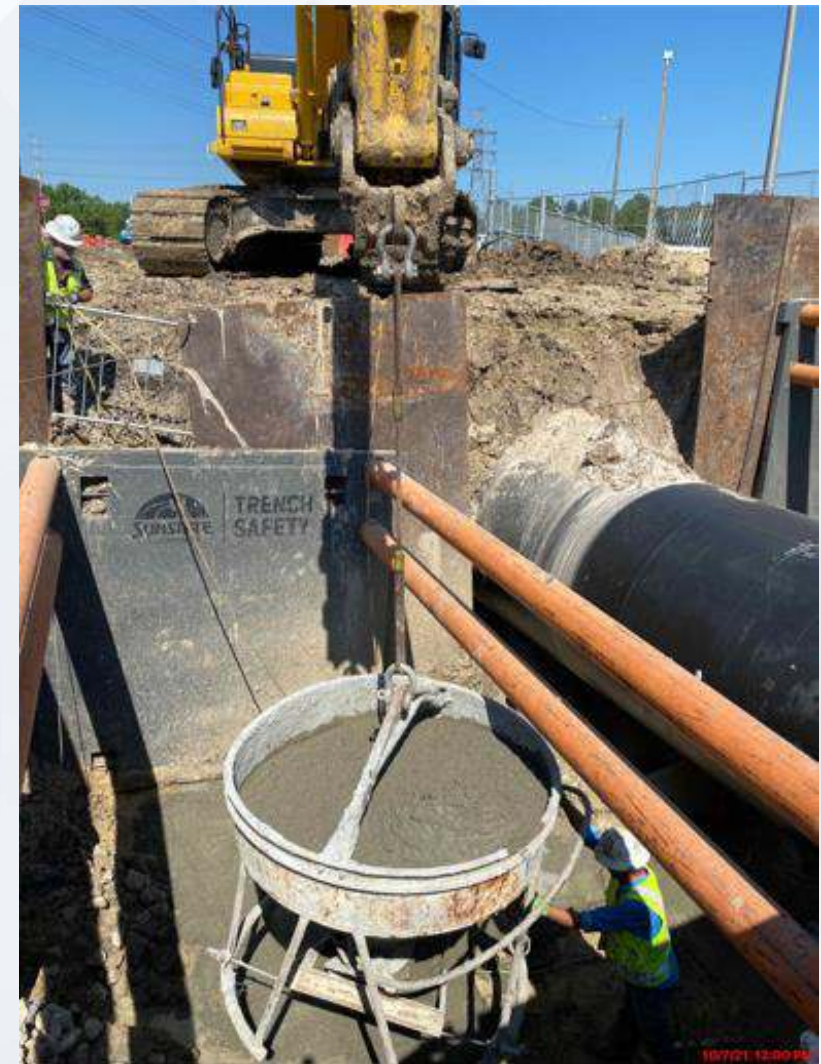
Corridor 5- Installing the 120-inch FW distribution piping along site access entrance road



Corridor 5 – Existing 84-inch FW distribution Main hot-tap



Corridor 5 – hydro excavating existing 84-inch FWM and poured seal slab



Corridor 5 – Placed and welded 60-inch tapping saddle on the north tie-in location of the existing 84-inch FWM





Construction Progress – Central Plant 1

281-FILTER MODULE 1 :

- Continue grouting Filters
- Pulling Cable onto Cable Tray
- Filter 12 Panel installation

291-TRANSFER PUMP STATION 1:

- Top Deck Conduit Installation
- Install lighting Fixtures in Analyzer Room
- Transfer Pumps' Motors Installation
- Drain Pans Installation in Electrical Room
- Chemical Injection & Seal Water Panels Installation
- 42" FW Piping Supports Form Up and Reinforcement
- Sample Pumps Installation at Mechanical Building
- Deliver and Install CO2 Skids

282 -FILTER MODULE 2:

- Leak Testing Filters
- Concrete Placement for Top Deck
- Backfilling West of 282

292-TRANSFER PUMP STATION 2:

- Pump Cans Upper Level Encasements Pour
- 36" Piping Installation and Form up Black-outs





Construction Progress – Central Plant 2

311 – POST CHEMICAL FACILITY SH/CS :

- **CRC Surface Application at containment areas.**
- **Pipe support installation at containment areas.**
- **Continue Installation Electrical and Plumbing lines.**
- **Continue Installation Chemical Metering Pumps.**
- **Bridge Installation between 311/281.**

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

- **Mock up for Chem Systems.**
- **CRC Coating preparation**
- **Installation of Electrica lines above ground**
- **F/R/P footings for metal bridge between 312/281.**

313 – POST CHEMICAL FACILITY 3 FA/LAS/PEC/SB :

- **F/R/P Footings and Stem walls at chem building**

314 – POST CHEMICAL FACILITY 4 SH/CS :

- **F/R/P Concrete Slabs for containment and building.**
- **Installation of CMU Blocks.**



CENTRAL PLANT- PHASE 1



281-FILTER MODULE- Continue grouting Filters



281-FILTER MODULE – Pulling Cable onto Cable Tray



281-FILTER MODULE- Filter 12 Panel installation



291-TPS – Aerial View (11/05/2021)



291-TPS – Top Deck Conduit Installation



291-TPS – Install lighting Fixtures in Analyzer Room



291-TPS – Transfer Pumps' Motors Installation



291-TPS – Drain Pans Installation in Electrical Room



291-TPS – Chemical Injection & Seal Water Panels Installation



291-TPS – 42" FW Piping Supports Form Up and Reinforcement



291-TPS – Sample Pumps Installation at Mechanical Building



291-TPS – Deliver and install CO2 Skids



October 22, 2021

311 – Aerial view – 11/05/2021



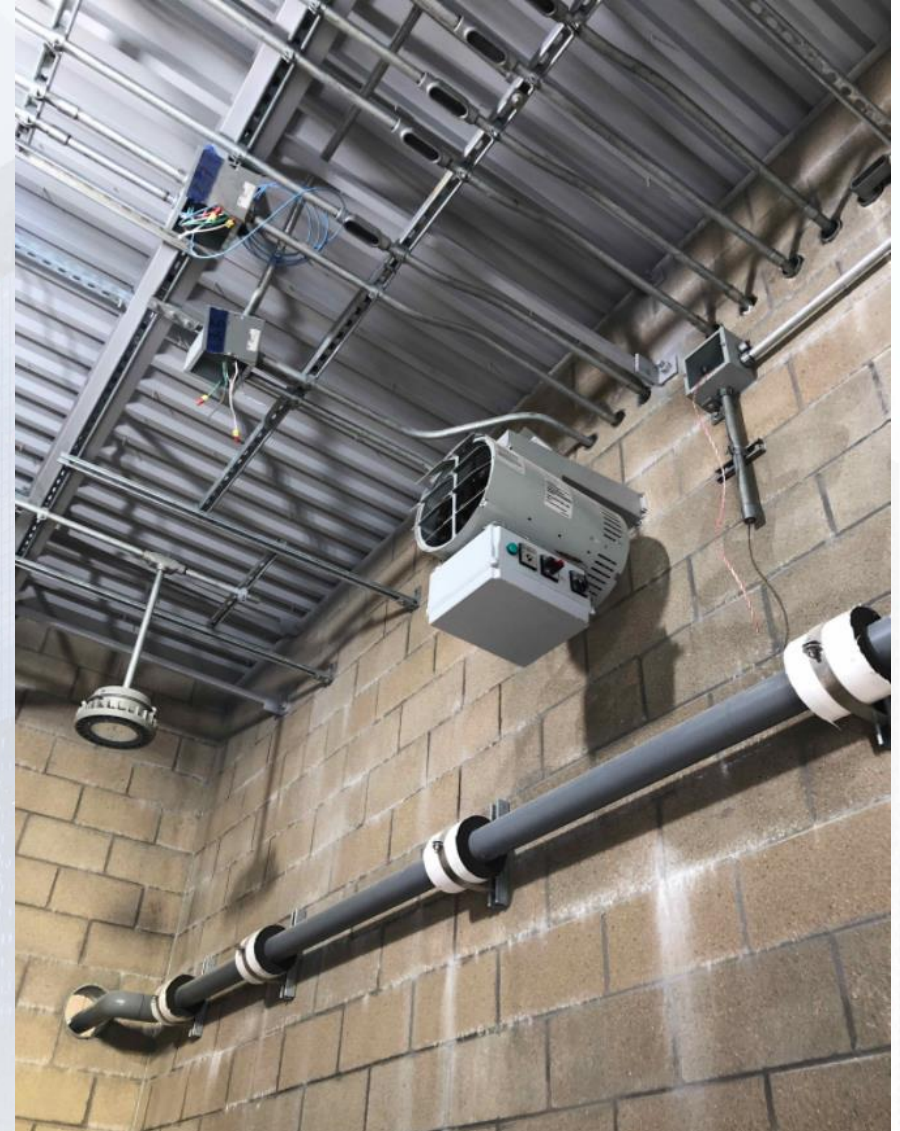
311 – CRC Surface Application



311 – Install FRP Ductwork



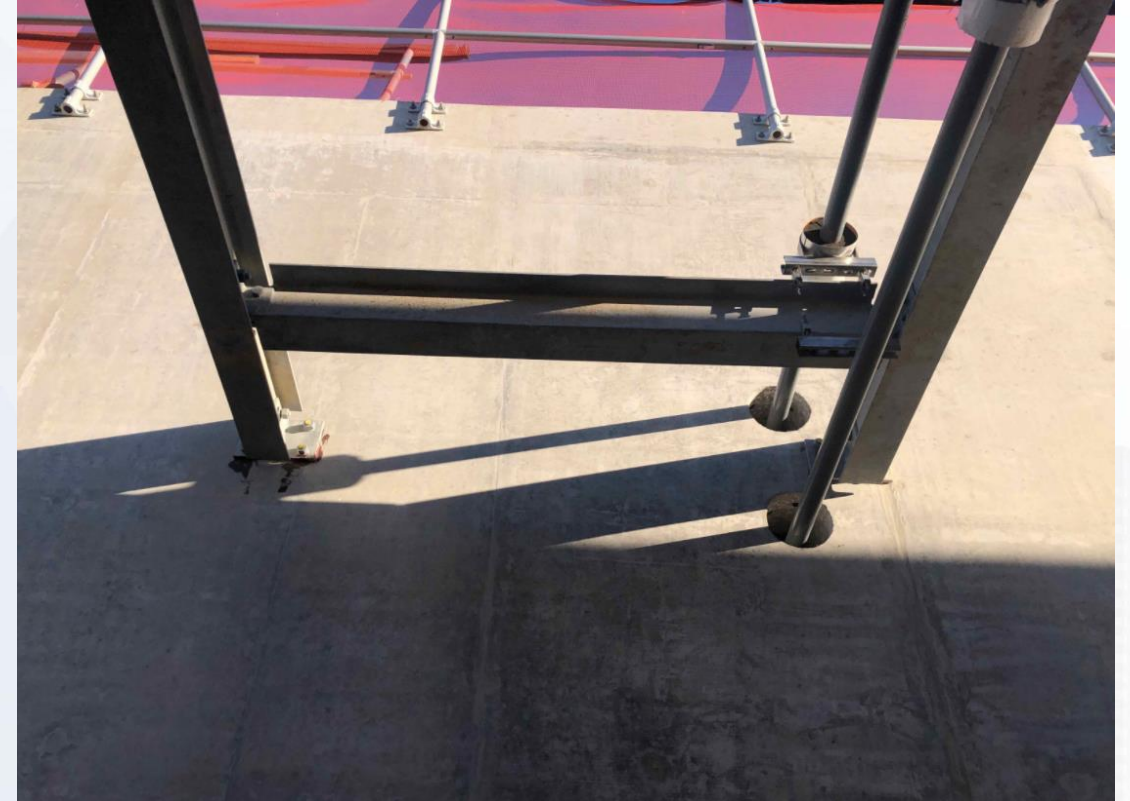
311 –Aboveground Electrical and Plumbing Installation.



311 –Chemical Metering Pumps and LCPs Installation



311 – Bridge Installation between 311 and 281.



312 - Overall view 11/05/21



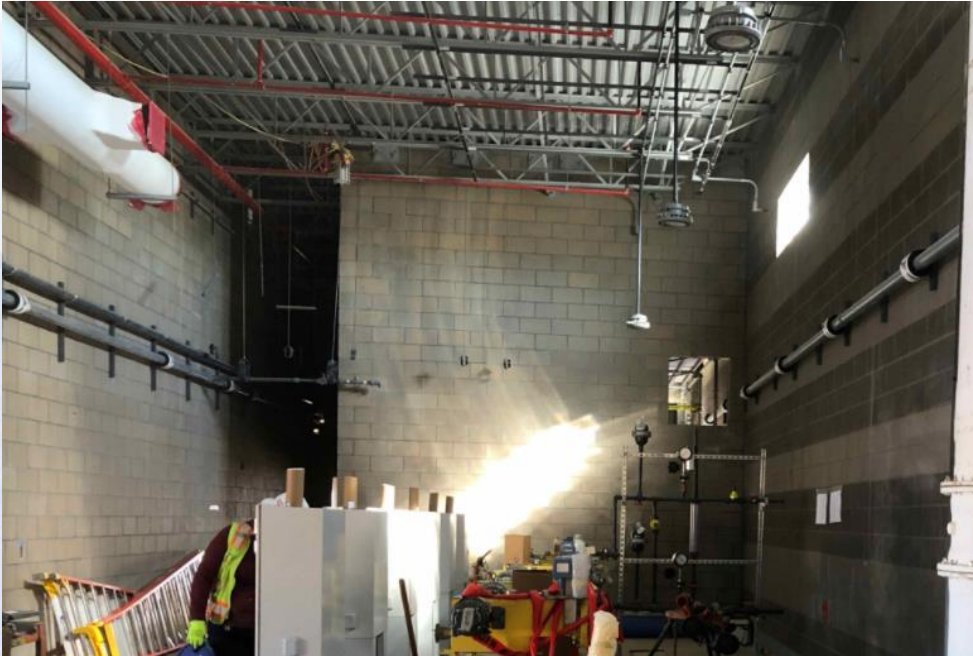
312 – Mock up for Chem Systems



312 – CRC Application at containment



312 – Installation of electrical lines



312 – F/R/P Metal Bridge footings connecting 312 and 281



CENTRAL PLANT- Phase 2



313- Overall view 11/01/21



313 –F/R/P Footings Stem walls at chem building.



314- Aerial view 10/05/21



314 – Installation of CMU Blocks



282-FILTER MODULE 2- Leak Testing Filters



282-FILTER MODULE 2- Concrete Placement for Top Deck



282-FILTER MODULE 2- Backfilling West of 282



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292-TPS – Aerial View (11-05-2021)



292-TPS – Pump Cans Upper Level Encasements Pour



292-TPS – 36" Piping Installation and Form up Black-outs





Construction Progress – LREQ Basins Facilities 601/602

- **601 – Installation of 42" Butterfly valves**
- **602 – Grouting Exterior Walls of Structure**
- **602 – Installation of 24" RCY wall pieces**

601 – Installation of 42" Butterfly valves



602 – Grouting Exterior Walls of Structure



602 – Installation of 24" RCY wall pieces





Construction Progress – North Plant

201-Chlorine Dioxide Facility 1:

- Area-B Steel Joist Installation

212-Pretreatment Chemical Facility 2:

- Area-B Tempered Water Room Backfill-Excavation

213-Pretreatment Chemical Facility 3:

- Area-B Lower Roof TPO Roofing

242-Flocculation & Sedimentation Train 2:

- Sed Basin 3: Leak Test Filling
- Sed Basin 4: Plate Pack Installation

243-Flocculation & Sedimentation Train 3:

- Cross Collector Channel Walls

253-Ozone Contactor 3:

- Inlet Box F/R/P Ongoing

261-Ozone Generation Facility 1:

- Structural Steel Installation

271-Pretreatment Service Building 1:

- Structural Steel Install

272-Pretreatment Service Building 2:

- Permanent Lighting & HVAC

501-Gravity Sludge Thickener Complex 1:

- Gravity Thickener 1 Slabs

502-Gravity Sludge Thickener Complex 2:

- Service Building CMU



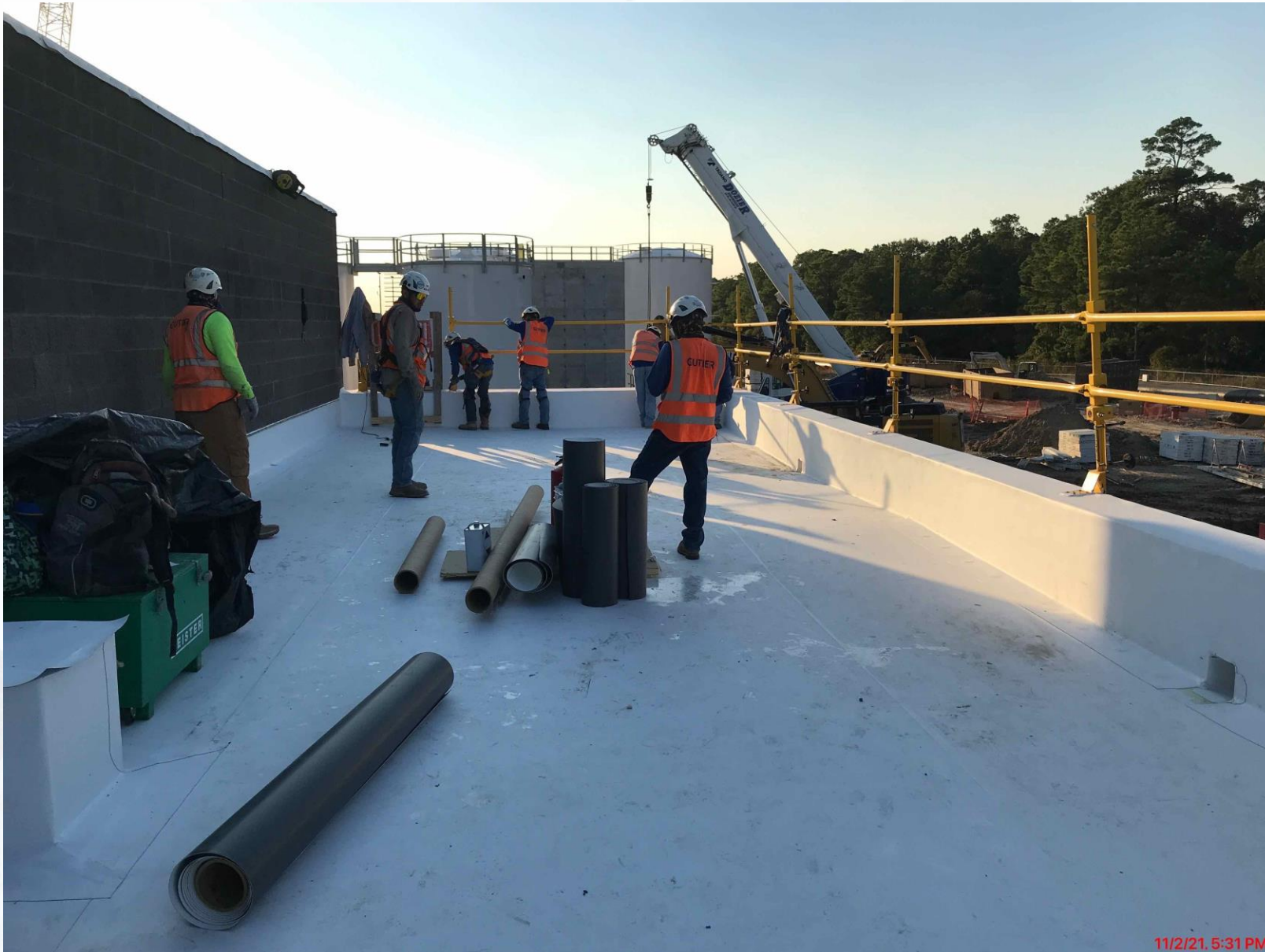
201-Chlorine Dioxide Facility 1: Area-B Steel Joist Installation



212-Pretreatment Chemical Facility 2: Area-B Tempered Water Room Backfill-Excavation



213-Pretreatment Chemical Facility 3: Area-B Lower Roof TPO Roofing



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242-Flocculation & Sedimentation Train 2: Sed. Basin 3 – Leak Test Fill / Sed. Basin 4 – Plate Pack Installation



243-Flocculation & Sedimentation Train 3: Cross Collector Channel Walls



253-Ozone Contactor 3: Inlet Box F/R/P Ongoing



261-Ozone Generation Facility 1: Structural Steel Installation



271-Pretreatment Service Building 1: Structural Steel Installation



272-Pre-treatment Service Building 2: Permanent Lighting/HVAC



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501-Gravity Sludge Thickener Complex 1: Gravity Thickener 1 Slab Placements



502-Gravity Sludge Thickener Complex 2: Service Building CMU





Construction Progress – South Plant

- 361 - Prestress & Shotcrete.
- 362 – Interior tank work, and exterior scratch coat.
- 401 – Commenced TPO roof installation at the electrical room.
- 401 – Completed concrete equipment pads.
- 402 – Continued installation of 78" inlet pipes, and hydro-testing.
- 402 – Continued pipe encasement of 78" buried pipe laterals to pump cans.
- 520 – Continued process pipe installation.
- 520 – Continued electrical support & conduit installation at 1st, 2nd and 3rd floor.
- 520 – Continued conveyor installation at the 2nd floor.
- 520 – Continued installation of LIT's and other instruments.
- 510 – Installation of LIT's and continued process pipe installation.

GST 361 & 362 AERIAL VIEW



GST 361

GST 362

GROUND STORAGE TANK 361



361 – Prestress & Shotcrete

GROUND STORAGE TANK 362



362 - Interior tank work, and exterior scratch coat.

HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



HSPS 401

MSB 111

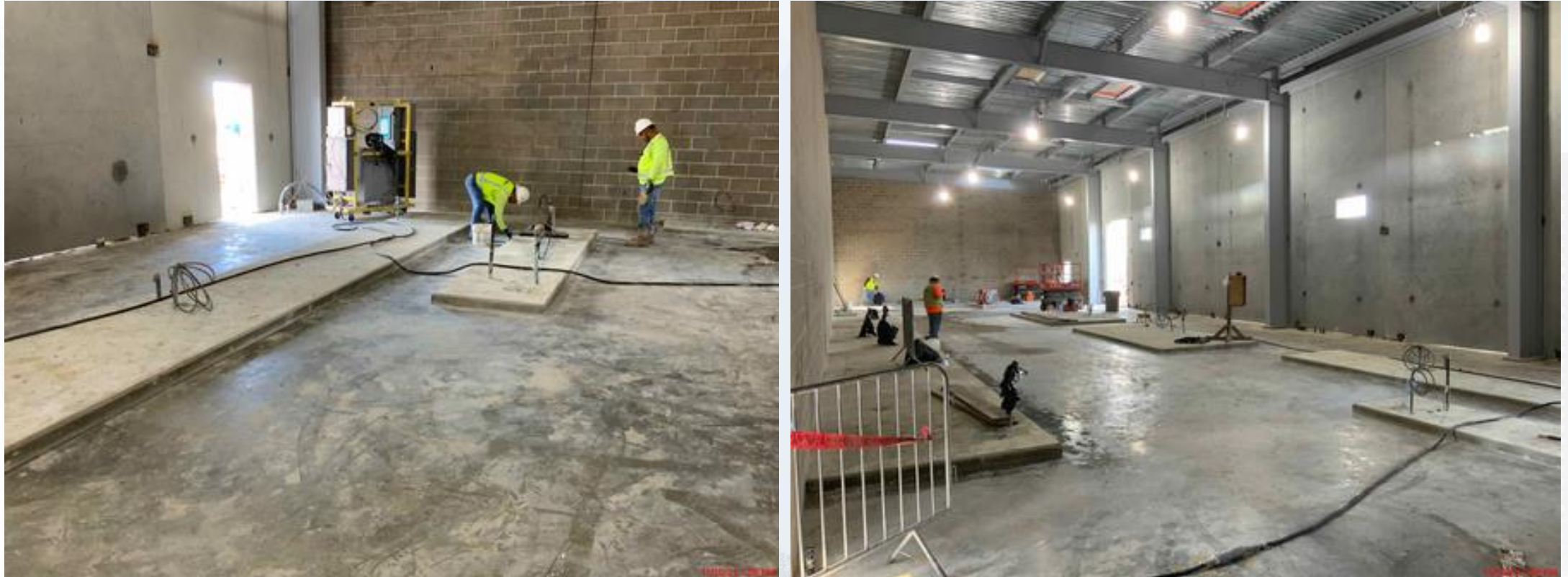
HSPS 402

HIGH SERVICE PUMP STATION 401



401 – Commenced TPO roof installation at the electrical room.

HIGH SERVICE PUMP STATION 401



401 – Completed concrete equipment pads.

HIGH SERVICE PUMP STATION 402



402 – Continued pipe encasement of 78” buried pipe laterals to pump cans.

DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW



520

510

DEWATERING BUILDING 520



520 – Continued process pipe installation & continued electrical support & conduit installation at 1st, 2nd and 3rd floor

DEWATERING BUILDING 520



520 – Commenced conveyor installation at the 2nd floor

DEWATERING BUILDING 520



520 – Continued installation of LIT's, and other instruments.

THICKENED SLUDGE & EQ BASIN 510



510 – Installation of LIT's and continued process pipe installation



Construction Progress – Administration & Maintenance Building

- Completion of curtain wall glazing
- Installation of Elevator
- Installation of interior and exterior light fixtures
- Installation of gypsum walls
- Installation of VCT and tile flooring
- Installation of glass railing



Completion of Curtain Wall Glazing



Installation of Elevator



Installation of Interior/Exterior Lighting



Installation of Gypsum Walls



Installation of Flooring



Installation of Glass Railing



