



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

**September 22, 2021**





# Site Drone Map September 16, 2021





# Construction Progress – Intake Pump Station (IPS)

- Installing water booster skid
- Installing metal soffit panels
- Overhead door and double door installed at Building 152





# Electrical cable installation inside Building 152





# Welding guard rail on the access bridge





# Cathodic protection rectifiers installed by building 152







# Construction Progress – Site Electrical

- Third Party Testing at Facility 142
- Fiber Duct Bank Installation
- Cable Pulling at Corridor



# Third Party Testing at Facility 142





# Fiber Duct Bank Installation





# Third Party Testing





# Cable Pulling at Corridor

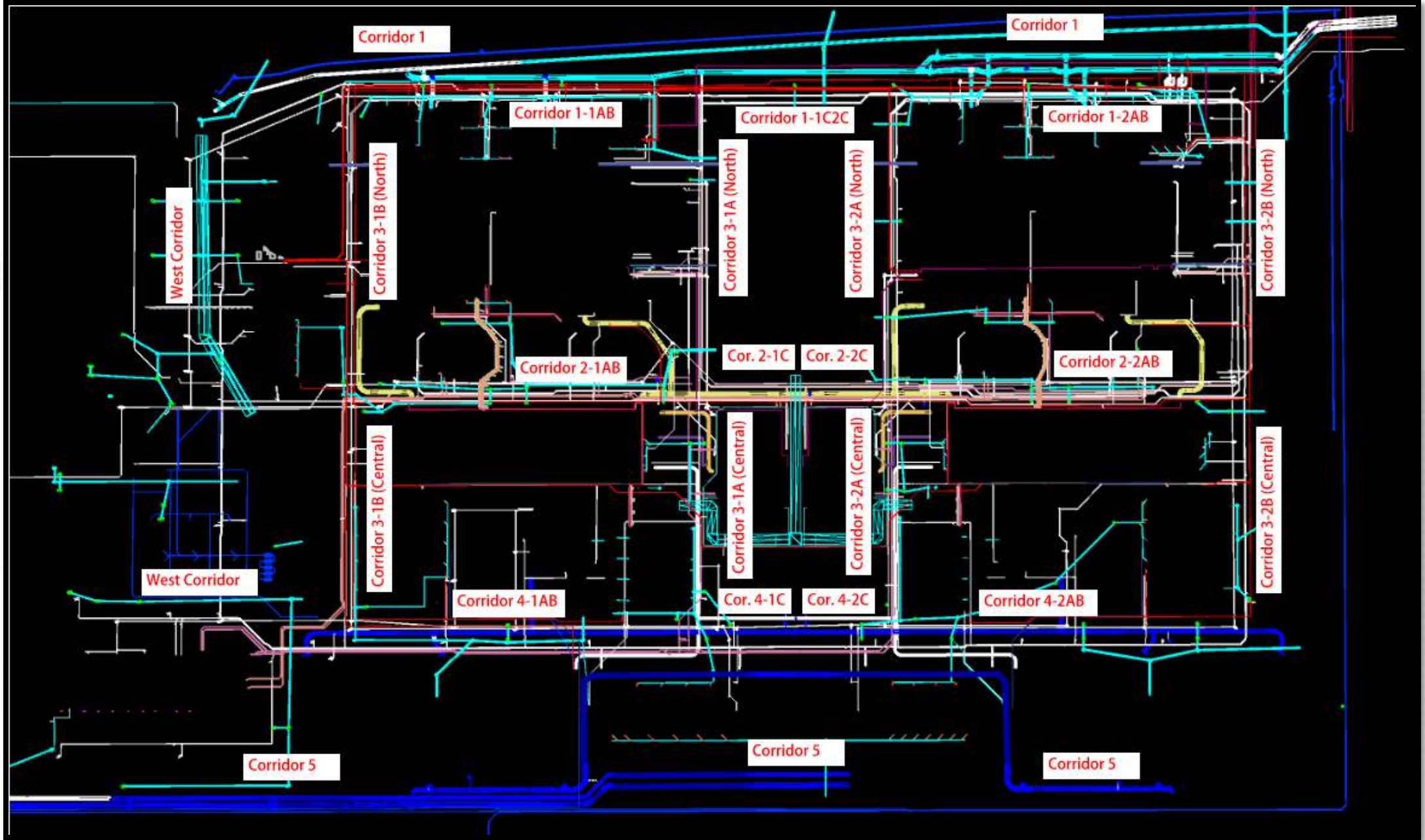




# Construction Progress – Yard Piping

- Fusion welding the 42” HDPE bypass piping for RW tie-ins along north fence in Corridor 1
- Installing dual 108” RW line in Corridor 1
- Completed and backfilled the 108” RW wye and KGVs in Corridor 1
- Installing the 36” CRCY line and valves in Corridor 1-1AB
- Installing 4” Natural Gas (NG) line in Corridor 1-1AB
- Installing 4-¾” Sample (SA) lines in Corridor 1-1AB
- Reinstalling the 60” OF pipe to Pond 4 in West Corridor
- Installing PW piping to Admin Building in West Corridor
- Constructing the bypass road for the 120” FW distribution line installation
- Hydro excavating and setting shoring for the 84” FW tie-ins in the West Corridor
- Installing the 120” FW line in Corridor 5 – Phase 2







# Fusion welding and stringing the 42" HDPE bypass piping for RW tie-ins along north fence in Corridor 1





# Installing dual 108" RW lines in Corridor 1





# Completed and backfilled the 108" RW wye and KGVs in Corridor 1





# Installing the 36" CRCY line and valves in Corridor 1-1AB





# Installing the 4" Natural Gas (NG) line in Corridor 1-1AB





# Installing 4-¾" Sample (SA) lines in Corridor 1-1AB





# Installing the 60" OF pipe to Pond 4 in West Corridor





# Installing PW piping to Admin Building in West Corridor





# Constructing the bypass road for the 120" FW distribution line installation





# Hydro excavating and setting shoring for the 84" FW tie-ins





# Installing the 120" FW line in Corridor 5 – Phase 2







# Construction Progress – Central Plant 1

## 281-FILTER MODULE 1 :

- Under-drain Installation
- OZW Inlet Slide Gates Installation
- LIT Installation

## 291-TRANSFER PUMP STATION 1:

- Conduit Installation Southwest of Building
- Install lighting Fixtures in Electrical Room
- Deliver and Install DC Batteries, Switchboards, Breaker Control Station, and LV ASDs
- Install Overhead Coiling Door & Man Doors
- Install Analyzers in the Analyzer Room
- Install LITs on the Top Deck
- Install Wall-Mounted HVAC Unit
- Install Supports for West Misc Metal Platform

## 282 -FILTER MODULE 2:

- Reinforcing/Pouring East Tall Walls.
- Setting Shoring for Top Deck
- Setting Storm Water Pump Station

## 292-TRANSFER PUMP STATION 2:

- FRP Overflow Channel Walls Ongoing
- Backfill South of Pump Cans



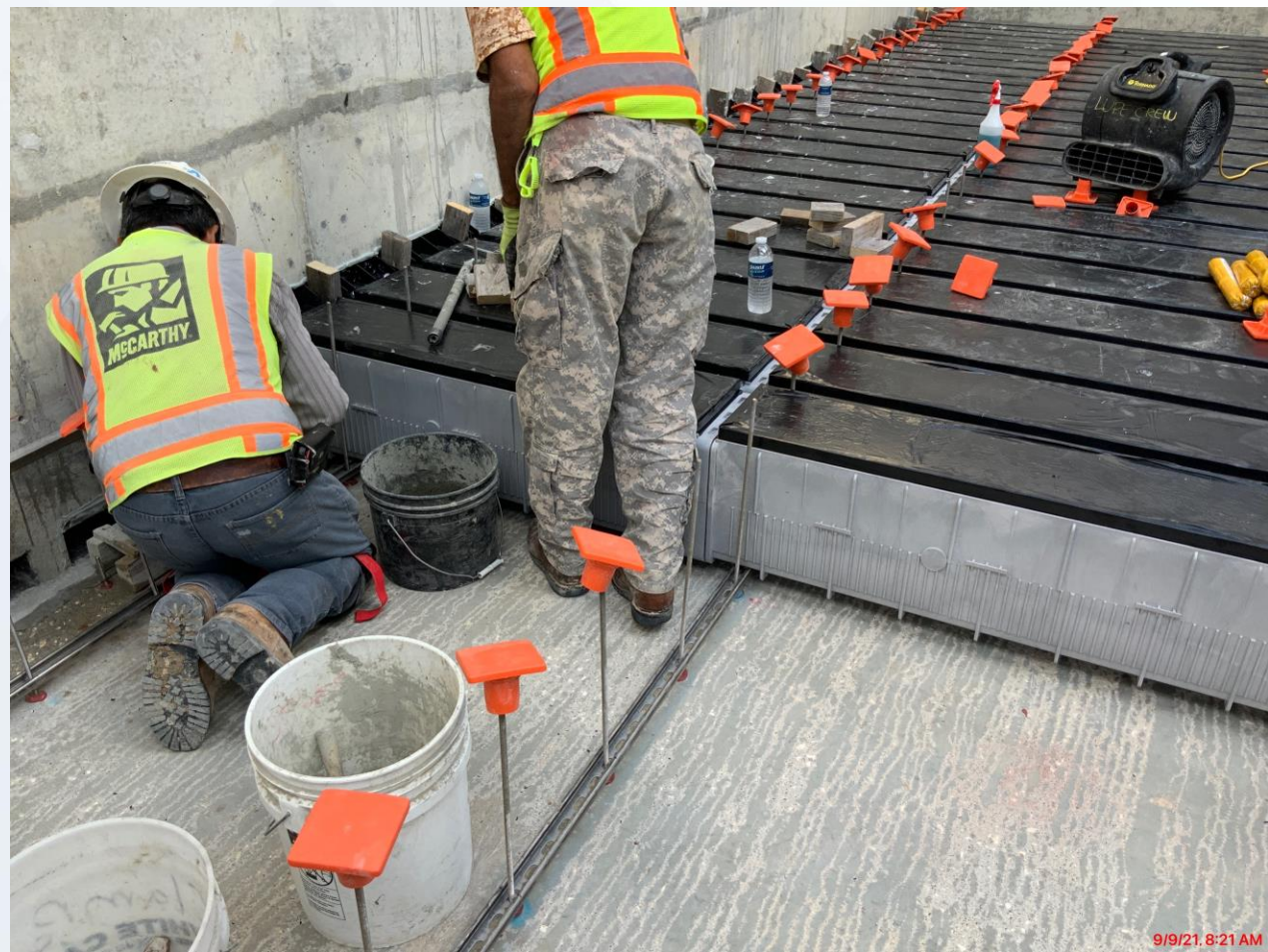
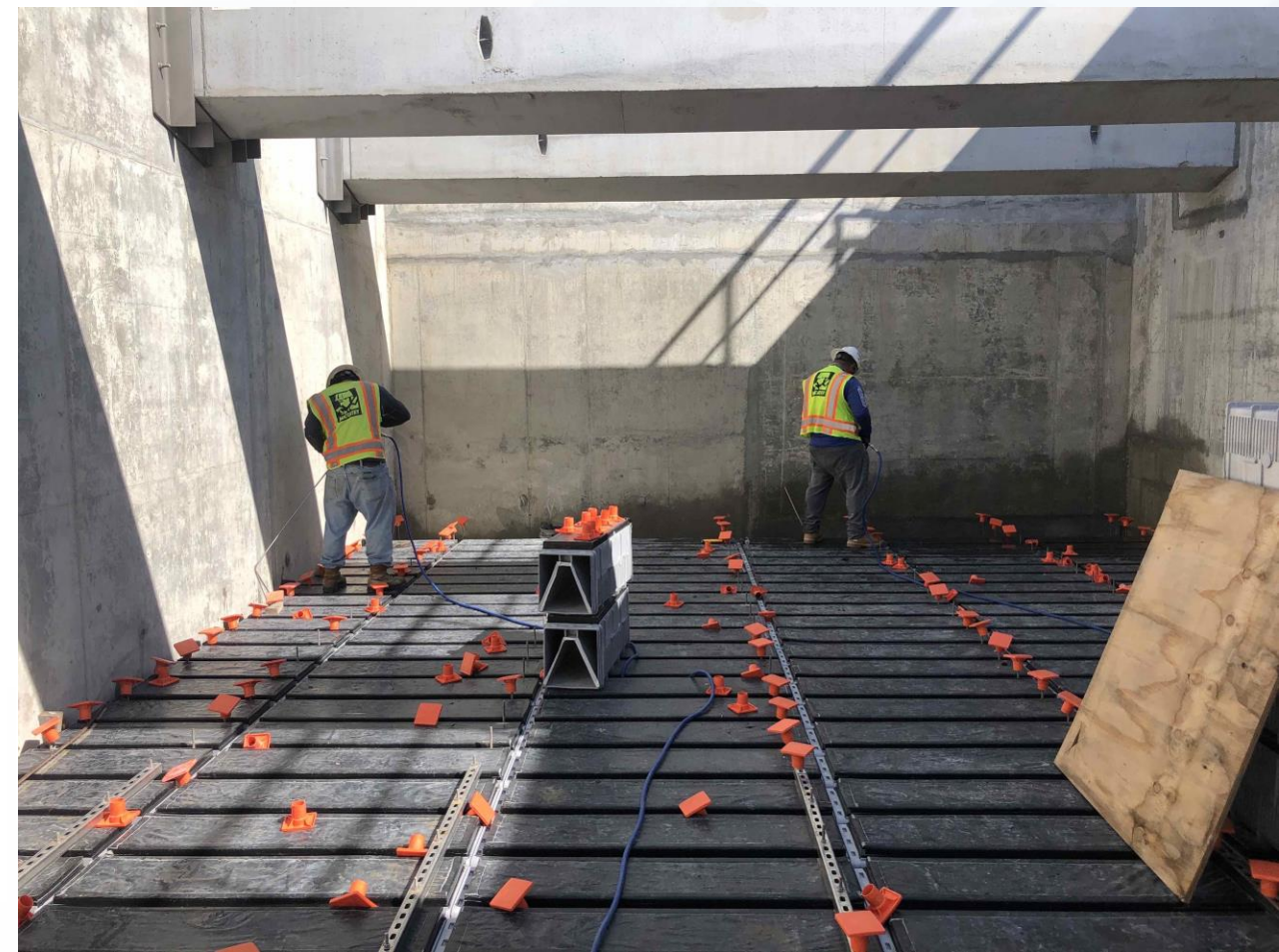


# CENTRAL PLANT- PHASE 1





# 281-FILTER MODULE- Continued Under-drain Installation





# 281-FILTER MODULE – OZW Inlet Slide Gates Installation





# 281-FILTER MODULE- LIT Installation





# 291-TPS – Aerial View (09/03/2021)





# 291-TPS – Conduit Installation Southwest of Building



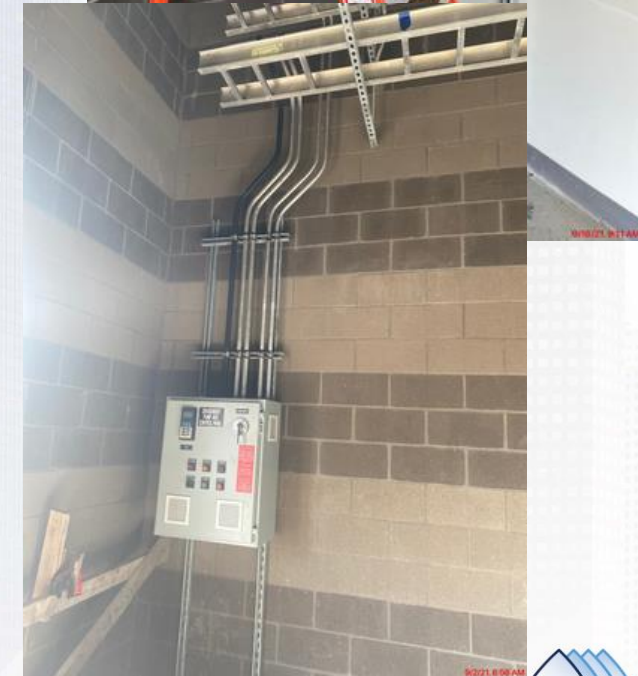


# 291-TPS – Install lighting Fixtures in Electrical Room





# 291-TPS – Deliver and Install DC Batteries, Switchboards, Breaker Control Station, and LV ASDs





# 291-TPS – Install Overhead Coiling Door & Man Doors





# 291-TPS – Install Analyzers in the Analyzer Room





# 291-TPS – Install LITs on the Top Deck





# 291-TPS – Install Wall-Mounted HVAC Unit





# 291-TPS – Install Supports for West Misc Metal Platform



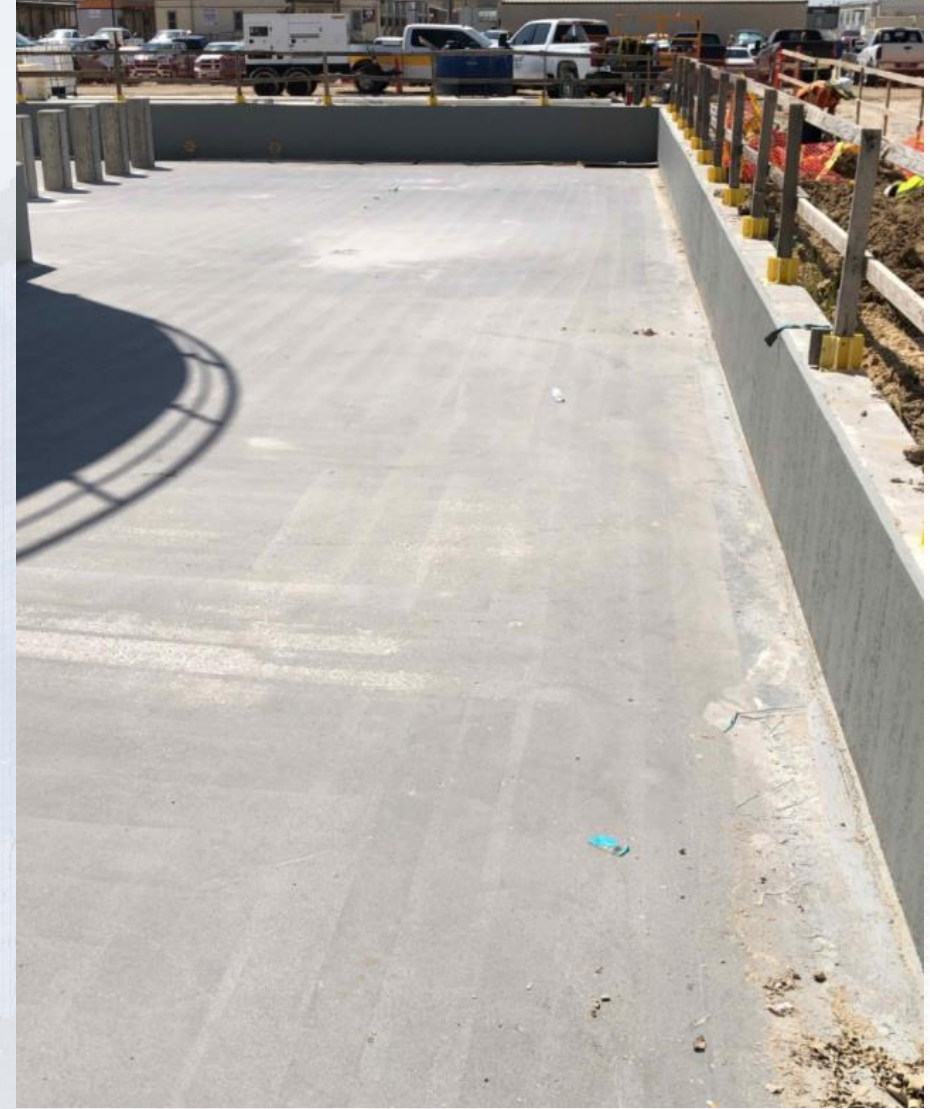


# 311 – Aerial view –09/03/2021



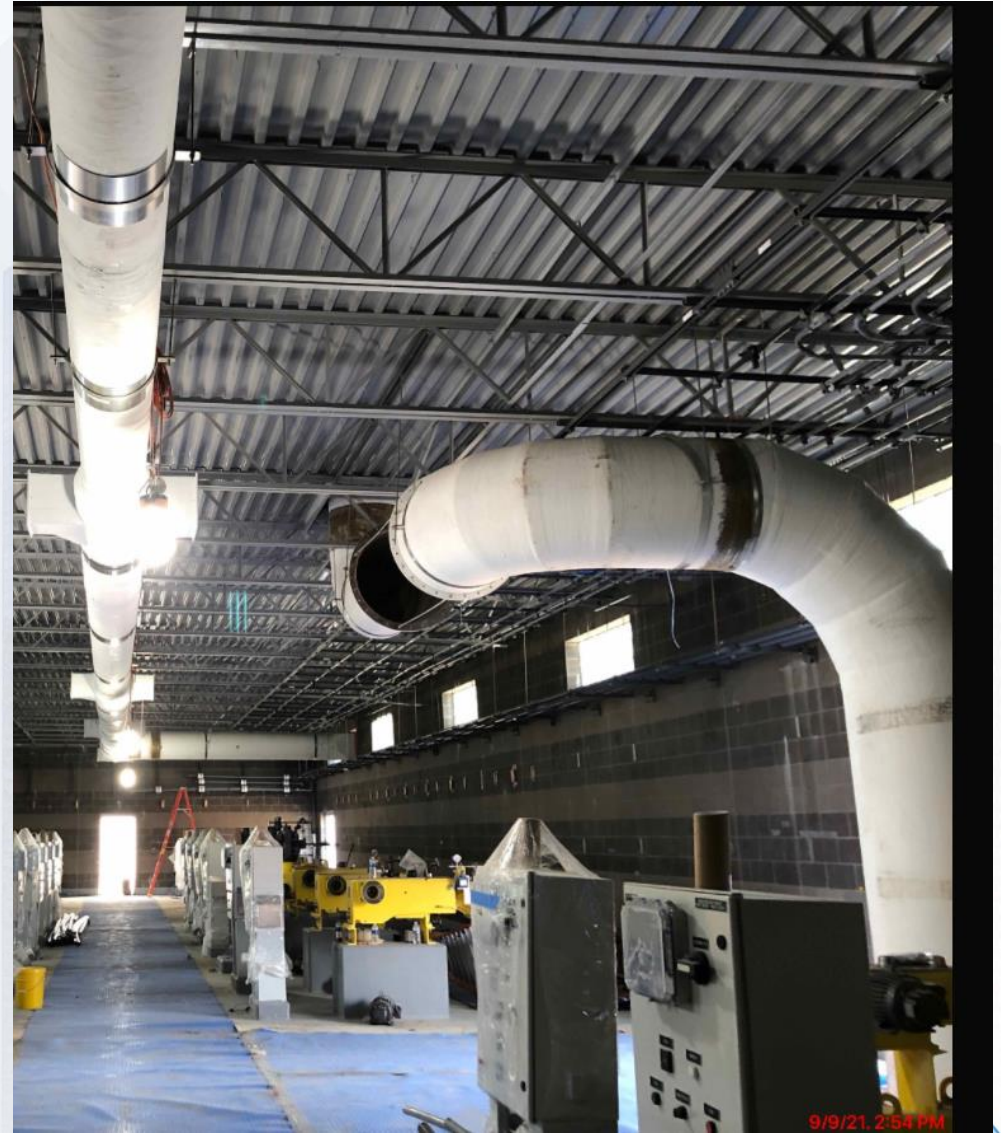


# 311 – CRC Surface Preparation





# 311 – Install FRP Ductwork



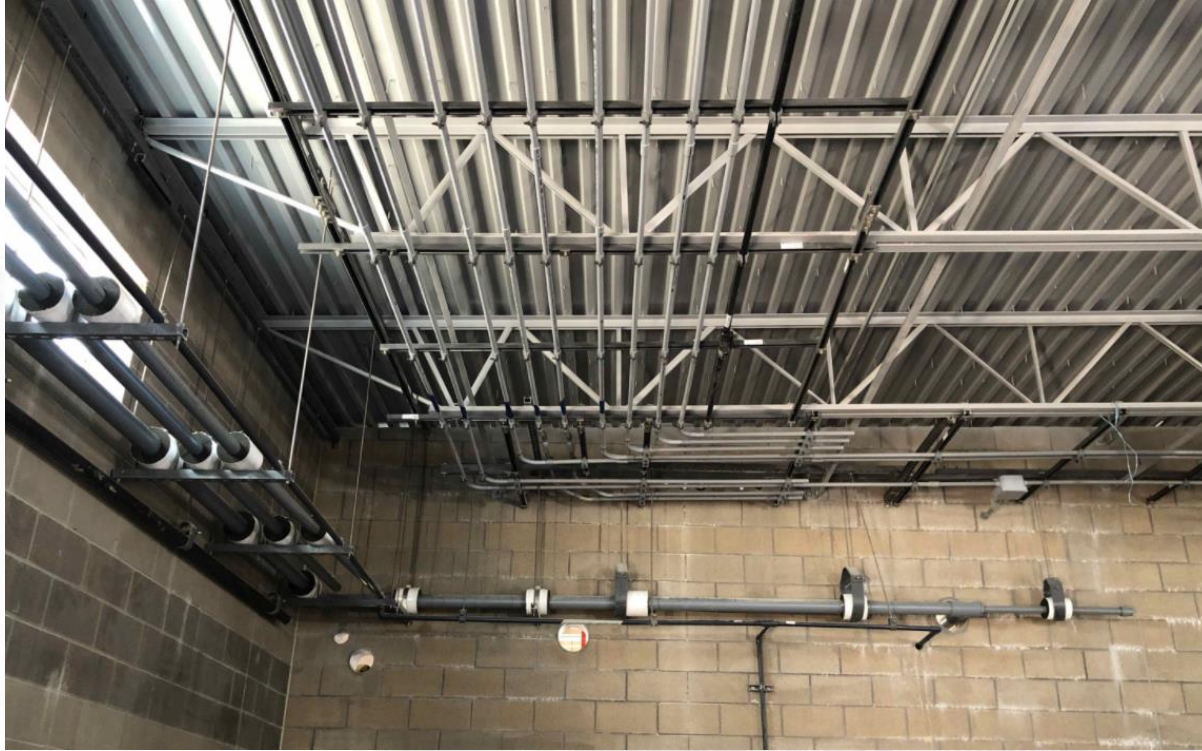


# 311 –Chemical Metering Pumps and LCPs Installation



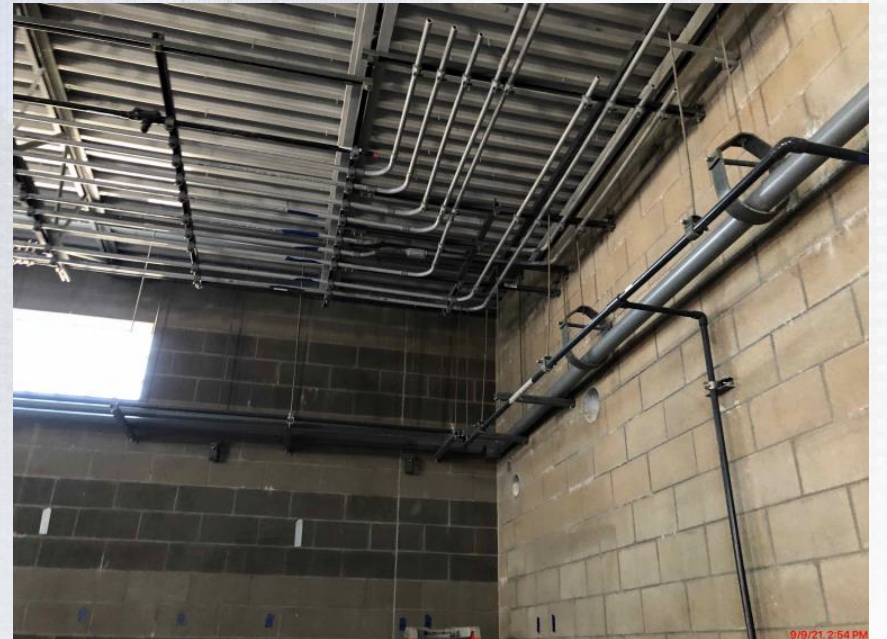
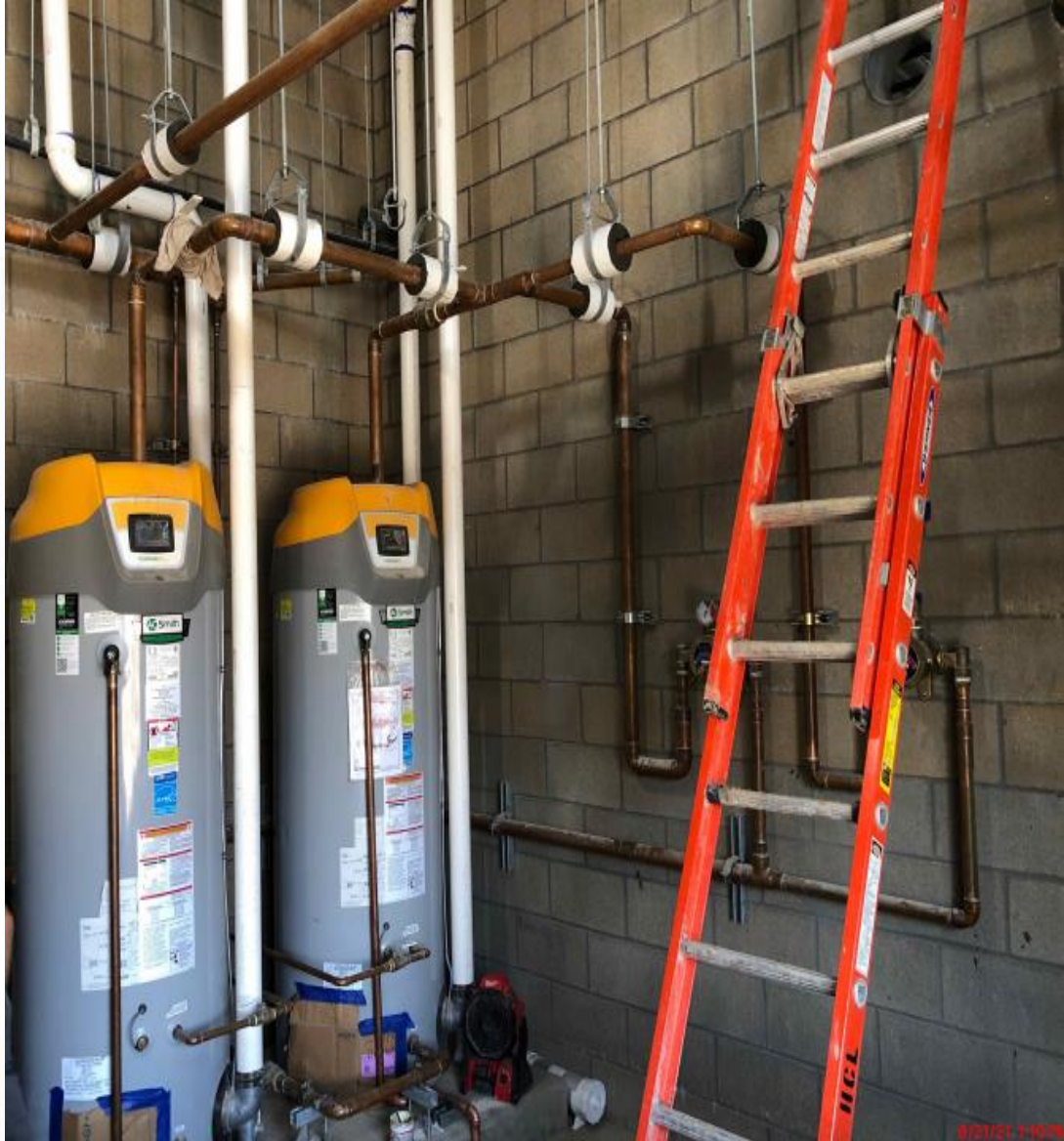


# 311 –Aboveground Electrical conduit Installation.





# 311 –Plumbing Lines Installation.





# 312 - Overall view 09/03/21





# 312 – Fire Sprinkler System Installation



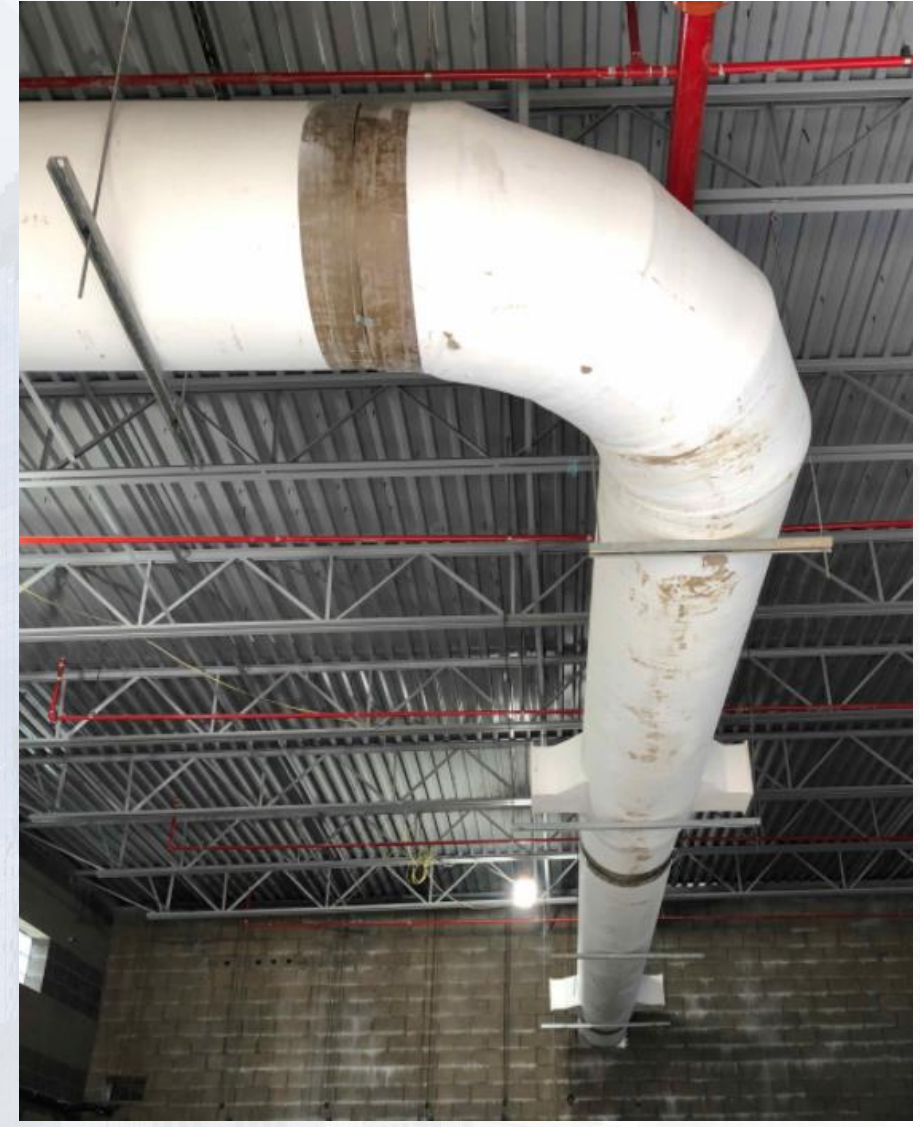


# 312 – Installation of Chemical Metering Pumps





# 312 – Installation of FRP Ductwork







# Construction Progress – Central Plant 2

## **311 – POST CHEMICAL FACILITY SH/CS :**

- CRC Surface Preparation
- Continue Installation of FRP Duct Work.
- Continue Installation Chemical Metering Pumps.
- Continue Installation of above ground electrical conduits.
- Continue Installation of aboveground Plumbing lines.

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

- Installation of Fire Sprinkler System.
- Installation of Chemical Metering Pumps.
- Installation of FRP Ductwork.

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

- Underground Electrical Conduit Installation

## **314 – POST CHEMICAL FACILITY 4 SH/CS :**

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





# CENTRAL PLANT- Phase 2





# 313- Overall view 09/03/21





# 313 – Underground Electrical Conduit





# 314- Aerial view 09/03/21





# 314 –F/R/P Tank Pads





# 314 – Installation of CMU Blocks





# 282-FILTER MODULE 2- Reinforcing/Pouring East Tall Walls





# 282-FILTER MODULE 2- Forming/Reinforcing Top Deck





# 282-FILTER MODULE 2- Pouring Top Deck





# 282-FILTER MODULE 2- Setting Storm Water Pump Station





# 292-TPS – Aerial View (09-03-2021)





# 292-TPS – FRP Overflow Channel Walls Ongoing





## 292-TPS – Backfill South of Pump Cans







# Construction Progress – LREQ Basins Facilities 601/602

- **601 – Continue installation of 42" FTW**
- **602 – Formwork on walls P11 and P15**
- **602 – Concrete placement on walls P11 and P15**
- **602 – Formwork on wall P17**



# 601 – Continue installation of 42" FTW





# 602 – Formwork on walls P11 and P15





# 602 – Concrete placement on walls P11 and P15





# 602 – Formwork on wall P17







# Construction Progress – North Plant

## **201-Chlorine Dioxide Facility 1:**

- Area-B North-West CMU Wall

## **212-Pretreatment Chemical Facility 2:**

- Area-B LS Tanks Painting

## **213-Pretreatment Chemical Facility 3:**

- Area-B Roof Deck

## **214-Pretreatment Chemical Facility 4:**

- Area-B East CMU Wall

## **242-Flocculation & Sedimentation Train 2:**

- North Wall Electrical and Drilling for Chemical Pipe Supports

## **243-Flocculation & Sedimentation Train 3:**

- Cross Collector Mudmat

## **252-Ozone Contactor 2:**

- Exterior South Wall Finishing

## **272-Pretreatment Service Building 2:**

- Roof Complete/RTU Rough Set

## **611-Liquid Residuals Clarifier Facility 1**

- Rough Setting Plate Settlers

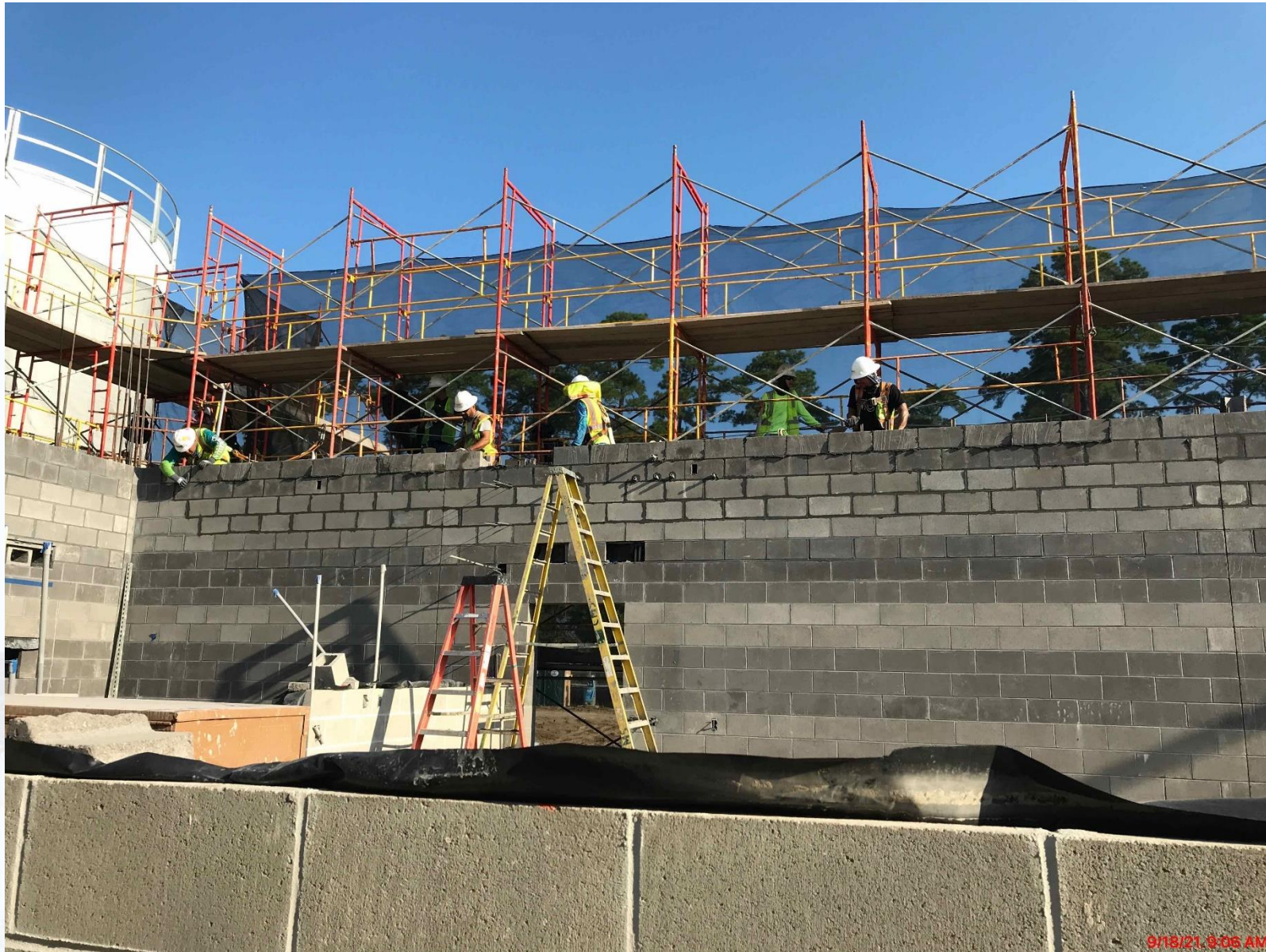
## **Chemical Pipe Bridge**

- Structural Steel Set





# 201-Chlorine Dioxide Facility 1: Area-B North-West CMU Wall





# 212-Pretreatment Chemical Facility 2: Area-B LS Tanks Painting





# 213-Pretreatment Chemical Facility 3: Area-B Roof Deck





# 214-Pretreatment Chemical Facility 4: Area-B East CMU Wall





# 242-Flocculation & Sedimentation Train 2: North Wall Electrical/Pipe Support Drilling





# 243-Flocculation & Sedimentation Train 3: Cross Collector Mudmat





# 252-Ozone Contactor 2: Exterior South Wall Finishing



9/7/21, 2:36 PM



# 272-Pre-treatment Service Building 2: Roof Complete/RTU Install





# 611-Liquid Residuals Clarifier Facility 1: Plate Settlers Installation





# Chemical Pipe Bridge – Structural Steel Install Ongoing / All Piers Complete







# Construction Progress – South Plant

- 361 - Prestress & Shotcrete.
- 362 - Stripping formwork.
- 401 – Installation of CMU and detailing of structural steel.
- 402 – Continued installation of 78” buried pipe laterals to pump cans.
- 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 – Commenced conveyor installation at the 2nd floor.
- 520 – Completed installation of translucent wall panels.
- 520 – Completed installation of metal wall panels.
- 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 - Stripping formwork



# HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



**HSPS 401**

**MSB 111**

**HSPS 402**



# HIGH SERVICE PUMP STATION 401



401 – Installation of CMU and detailing of structural steel



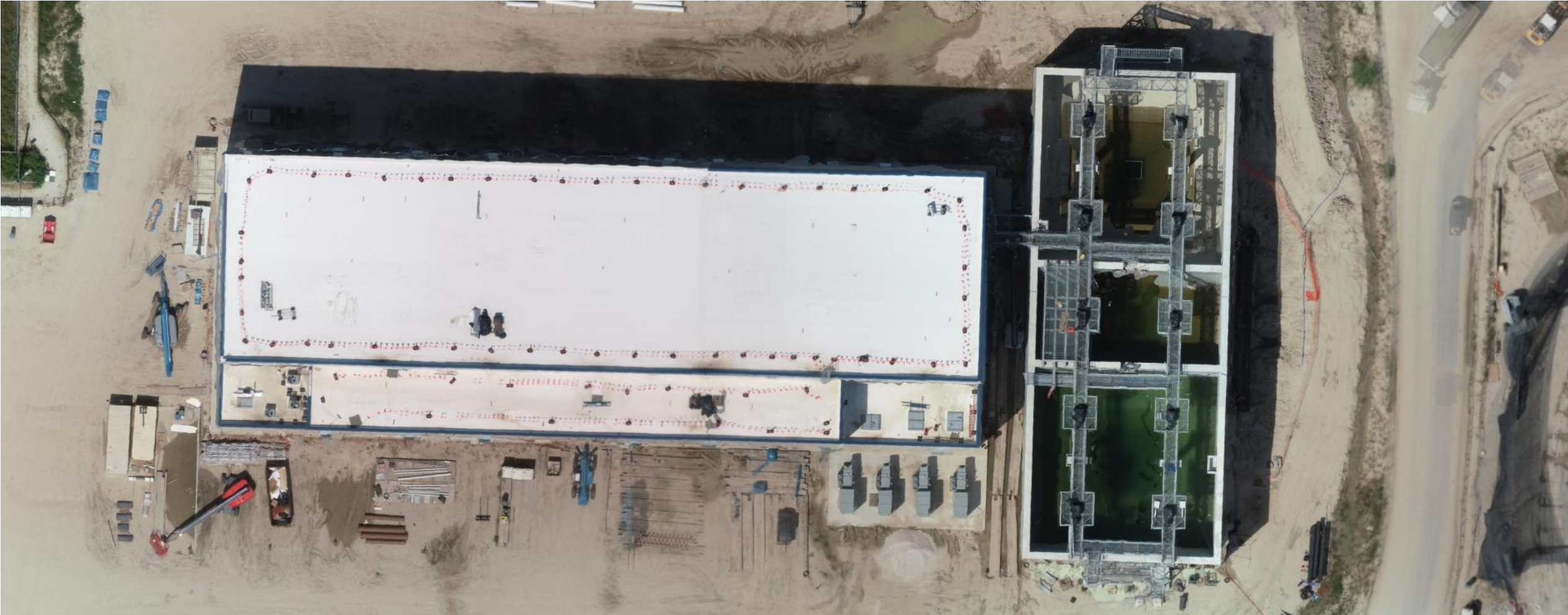
# HIGH SERVICE PUMP STATION 402



402 – Continued installation of 78” buried pipe laterals to pump cans & continued pipe encasement of 78” buried pipe laterals to pump cans

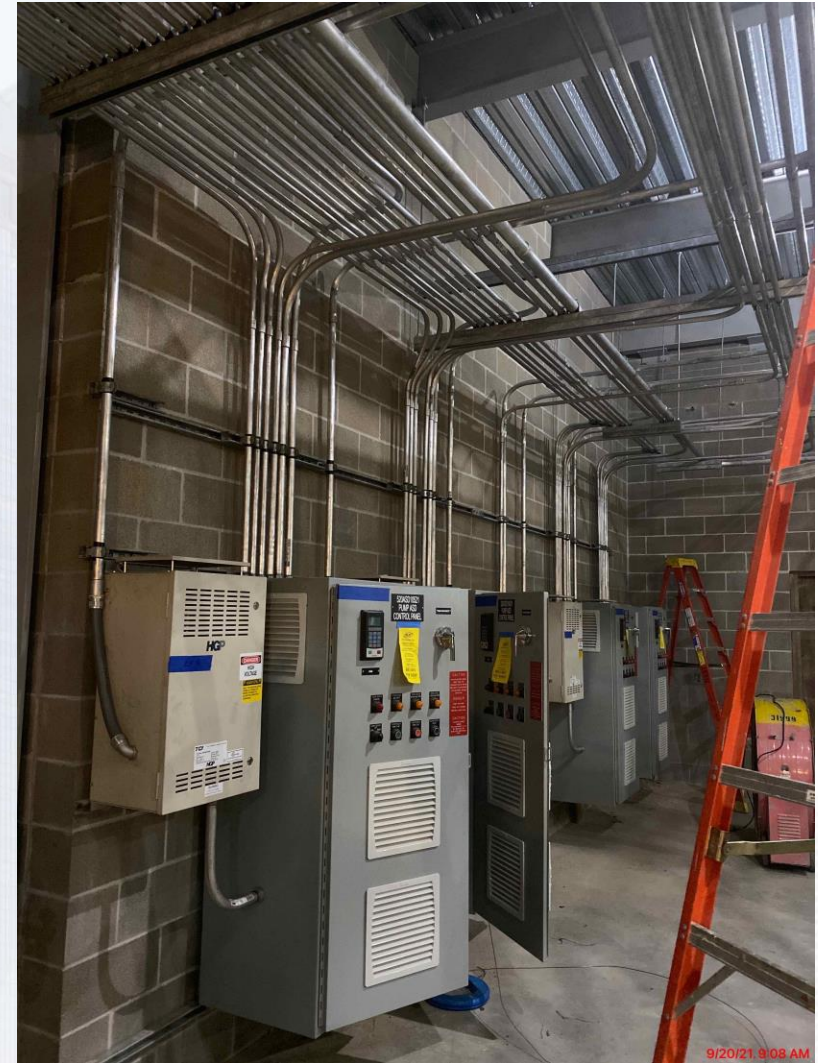


# DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION TANK 510 AERIAL VIEW





# 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 – Completed installation of translucent wall panels & completed installation of metal wall panels



# THICKENED SLUDGE & EQ BASIN 510



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





# Construction Progress – Administration & Maintenance Building

- Installed curtain wall glazing
- Installed insulated metal wall panels/soffit
- Installed epoxy flooring
- Installed lighting fixtures
- Installed HM doors and hardware



# Installation of Curtain Wall Glazing



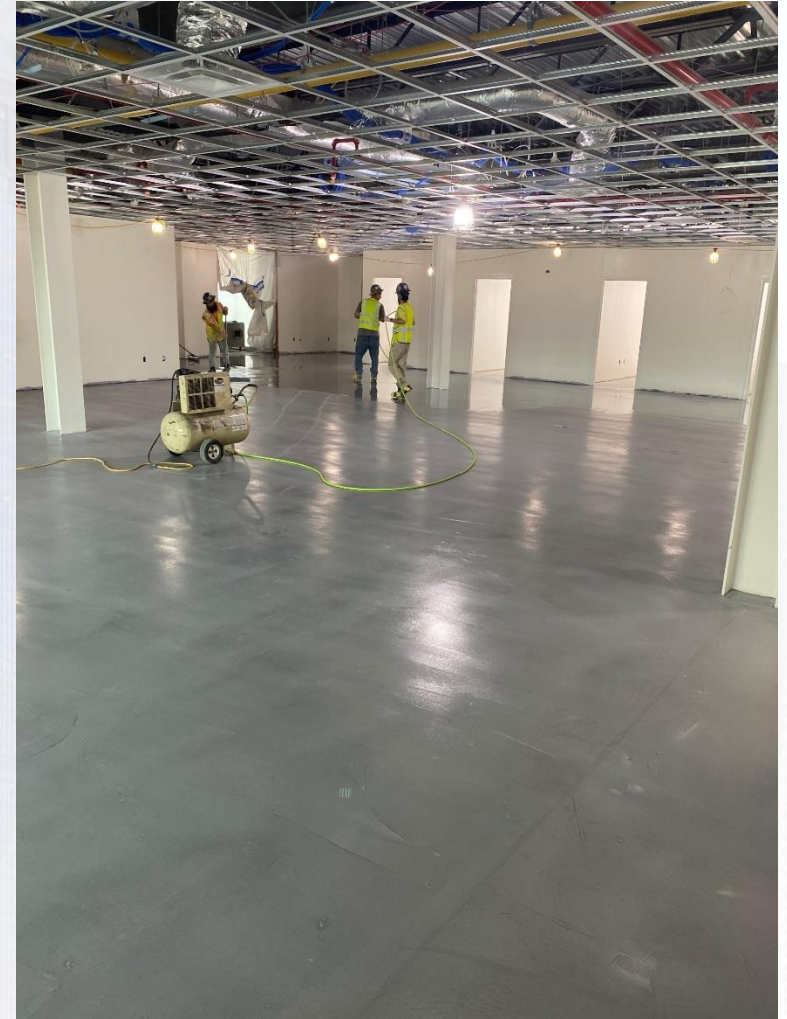


# Installation of Insulated Wall Panels/Soffit





# Installation of Epoxy Flooring





# Installation of Lighting Fixtures





# Installation of HM Doors and Hardware





