



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

February 16, 2022





**Site Drone Map  
February 9, 2022**





# Construction Progress – Site Electrical

- Jumpers Installed at 080 Server Room
- Servers Installed and Computers at 080
- Installed Caution PPE Tape in Facilities 111,272,281
- Starting Duct Bank at 601



## Jumpers Installed at 080 Server Room





## Servers and Computers Installed at 080



# Installed Caution PPE Tape in Facilities 111,272,281





# Starting Duct Bank at 601





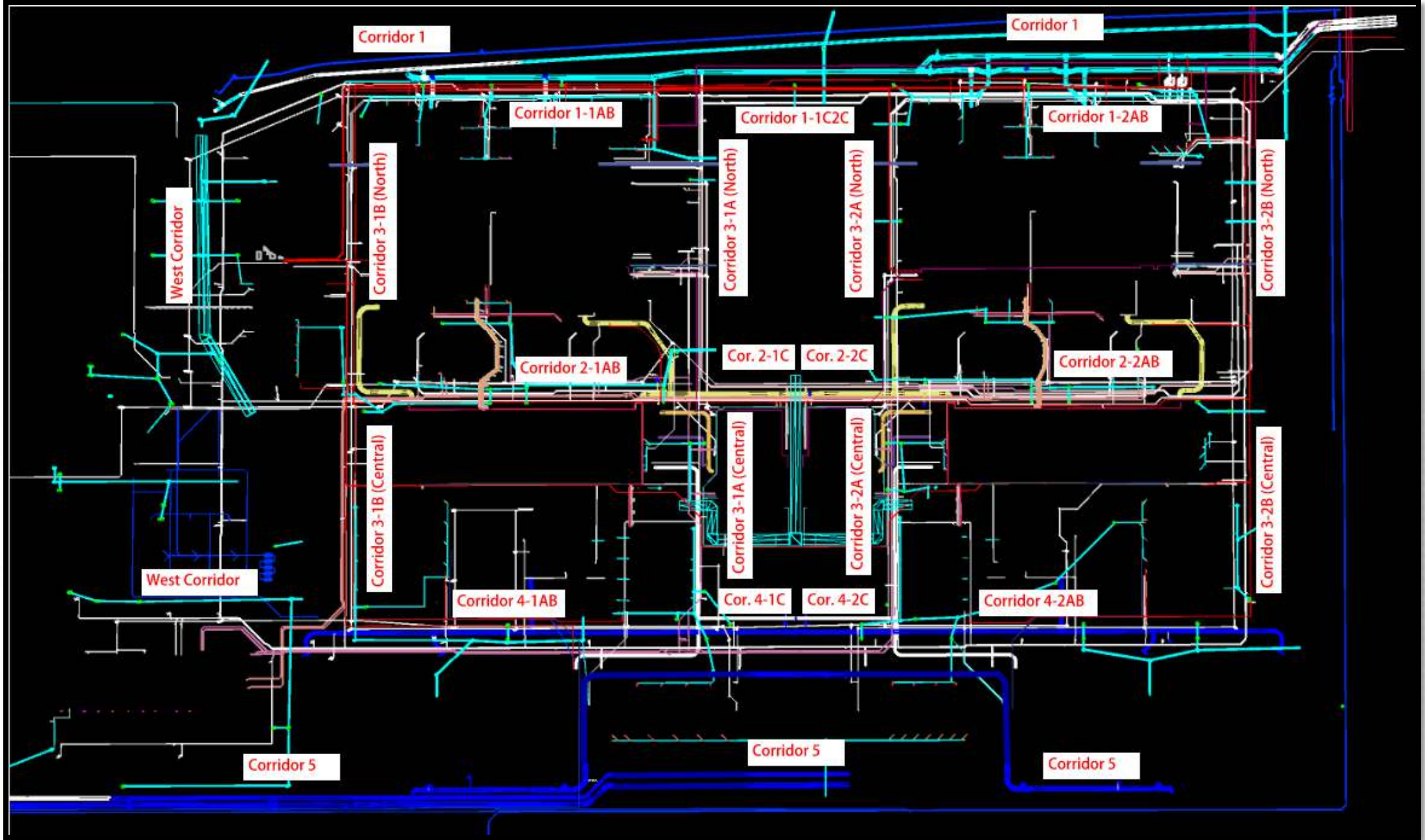


# Construction Progress – Yard Piping

- Corridor 1 – Installing Natural Gas lines and valves
- Corridor 1 – Started building the foundation for the CRCY Meter vaults
- Corridor 1 – Welded the 30" tapping sleeve and tapped the 66" RW main, and setting the line-stop equipment
- Corridor 2-2C – Installing piping and valve supports for the air gap monitoring system on the 96" OZW line
- Corridor 4 – Denso wrapping the BFVs and installing 4" piping for the air gap monitoring on the 60" BWS line
- Corridor 4 – Installing 4" piping for the air gap monitoring system and welding the 96" FW line
- West Corridor – Building rebar and sinking Lift Station 704
- West Corridor – Installing PW line and fire hydrant by Dewatering Building
- West Corridor – Pulling steel sheets and trench boxes from the existing 84" FW main tie-in excavations
- West Corridor – Grouting the 84" and 60" FW piping









# Corridor 1 – Installing Natural Gas Lines and valves





# Corridor 1 – Started building the foundation for the CRCY Meter vaults



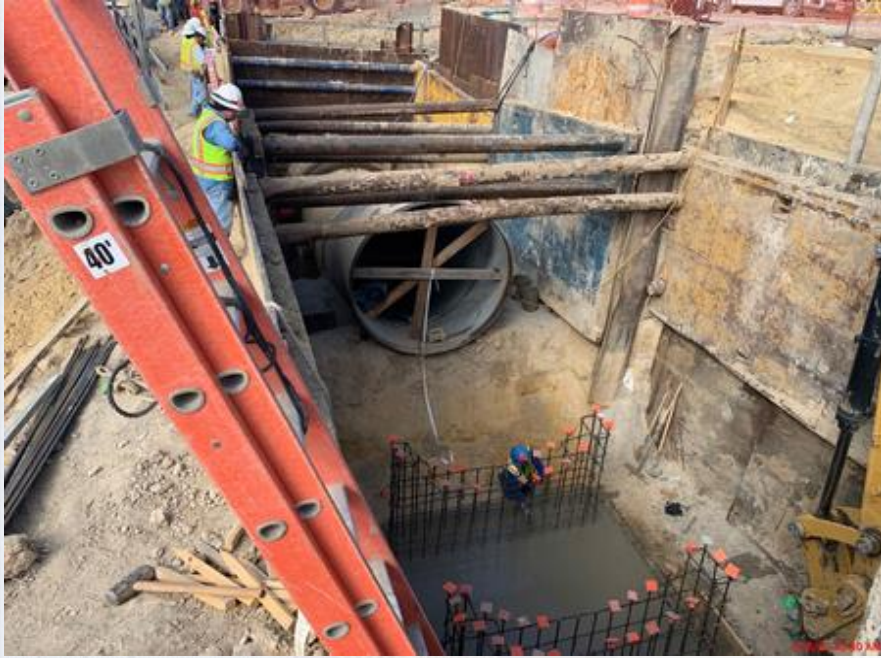


# Corridor 1 – Welded the 30" tapping sleeve and tapped the 66" RW main, and setting the line-stop equipment





# Corridor 2-2C – Installing piping and valve supports for the air gap monitoring system on the 96" OZW line





# Corridor 4 – Denso wrapping the 60" BFVs and installing 4" piping for the air gap monitoring on the 60" BWS line





# Corridor 4 – Installing 4" piping for the air gap monitoring system and welding the 96" FW line





# West Corridor – Building rebar and sinking Lift Station 704



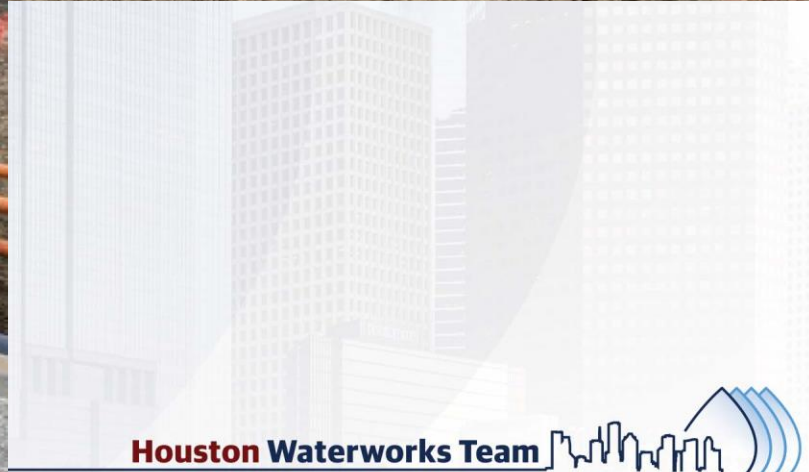
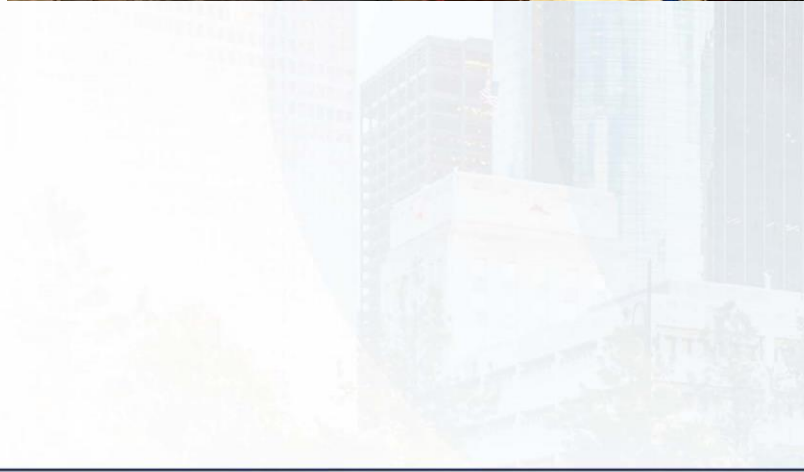


# West Corridor – Installing PW line and fire hydrant by Dewatering Building





# West Corridor – Pulling steel sheets and trench boxes from the existing 84" FW main tie-in excavations





# West Corridor – Grouting the 84" and 60" FW piping







# Construction Progress – Central Plant 1

## 281-FILTER MODULE 1 :

- Reinforcing Access Ramp(East)
- Final Coating of Pipes

## 291-TRANSFER PUMP STATION 1:

- Replaced Interior 84" BFVs' Gaskets

## 311 – POST CHEMICAL FACILITY SH/CS :

- Continue Installation of Process Mechanical piping
- FRP Handrail system installation.

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

- Installation Chemical Metering Pumps piping system inside building.
- Installation of Exterior LCP and HVAC unit.





# CENTRAL PLANT- PHASE 1 OVERALL





# 281-FILTER MODULE- Access Ramp and Walls Construction





# 281-FILTER MODULE- Final Coating of Pipes





# 291-TPS – Aerial View (01/04/2022)





# 291-TPS – Replace Interior 84" BFVs Gaskets



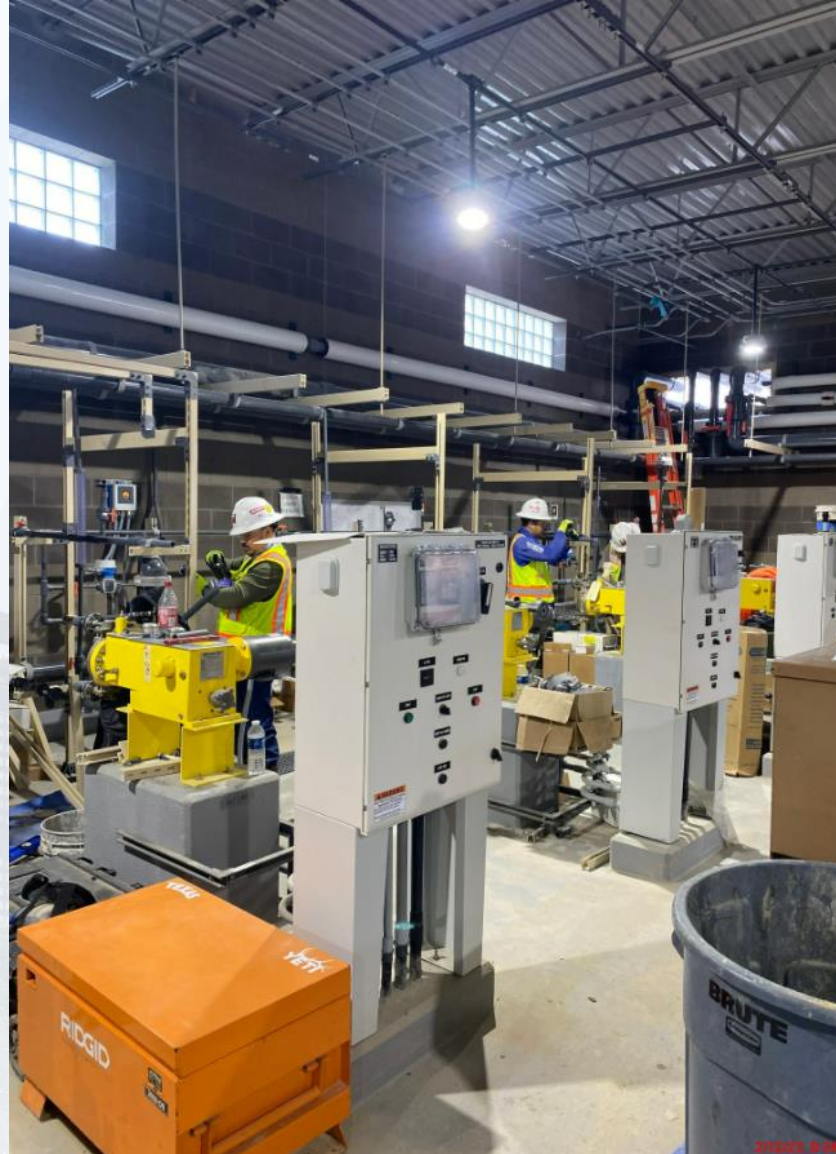


# 311 – Aerial view –02/09/2022





# 311 –Chemical Process Mechanical installation





# 311- Containment handrail and platforms installation



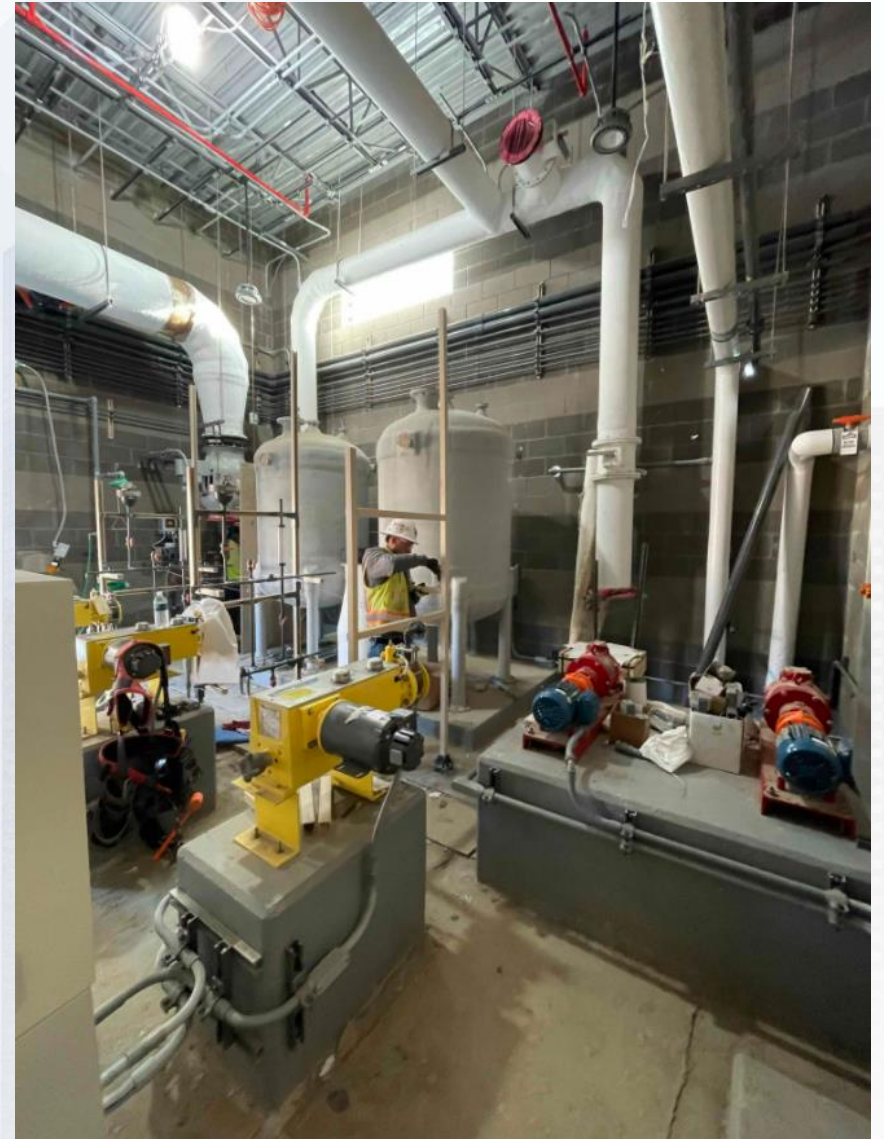
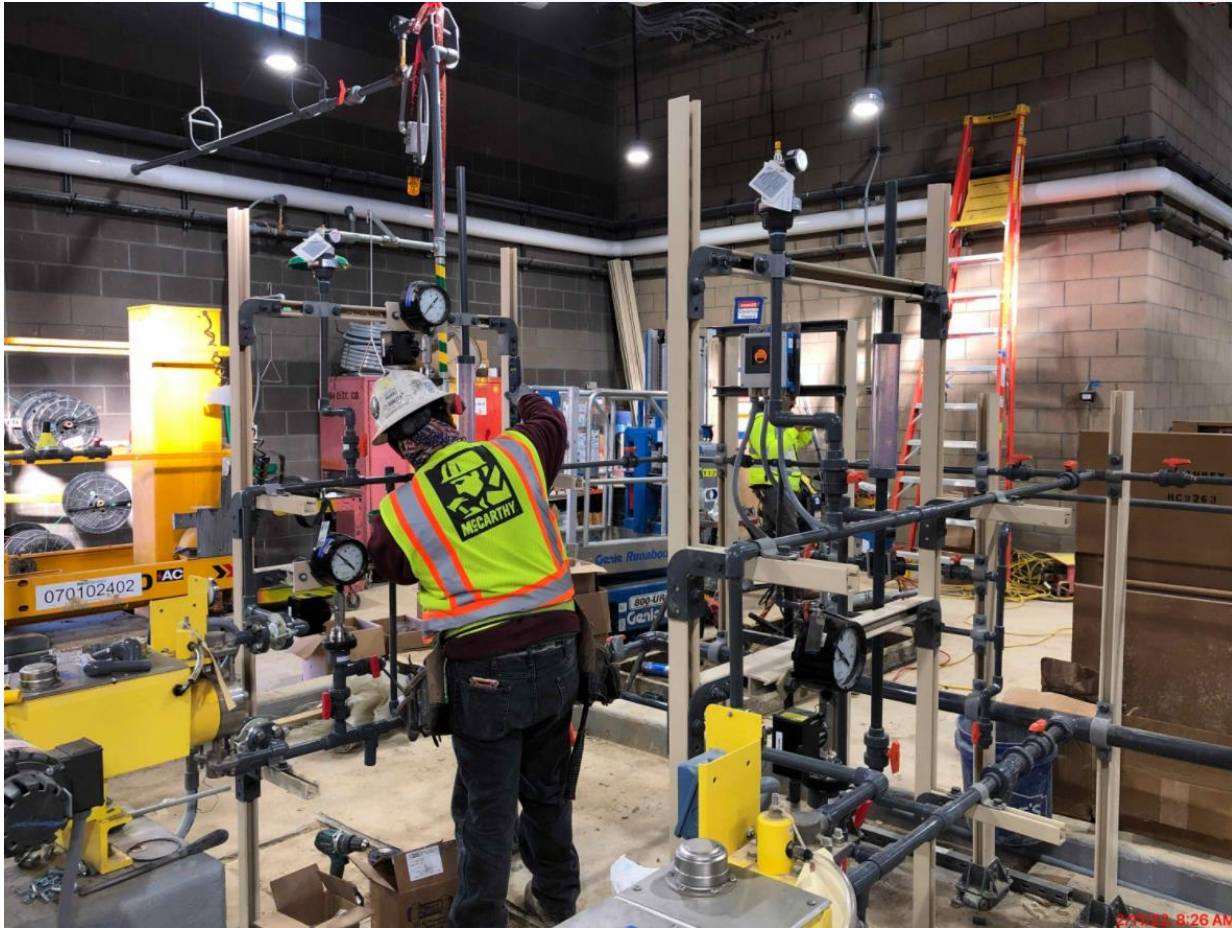


# 312 - Overall view 02/09/22





# 312 – Chem pipe system Installation





# 312 –Exterior LCP and HVAC Installation.







# Construction Progress – Central Plant 2

## ● 282 -FILTER MODULE 2:

- Continuing Masonry & Steel Deck Install.
- Continuing Trough Installation.
- Access Ramp Excavation
- Leak Testing
- BWA Pipe installation
- Pipe Supports Installation

## ● 292-TRANSFER PUMP STATION 2:

- FRP Top Deck Sections A3 & B1
- Reinforcement of West Stair Landing & Deck Sections
- Hydrotesting Embedded PDR and SSA Lines under Analyzer Room

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

- F/R/P Slab on grade containment and bldg.

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

- Field installation of SH and CS Metal Tank.
- Installation of Metal Deck and TPO.





# CENTRAL PLANT- Phase 2





# 313- Overall view 02/09/22





# 313 –F/R/P SOG Chem buildings and containment area.





# 314- Aerial view 02/09/22





# 314 –Installation of Metal Deck and TPO Membrane





# 314 –SH and CS Steel tank fabrication





# 282-FILTER MODULE 2- Continuing Masonry & Structural Steel Install



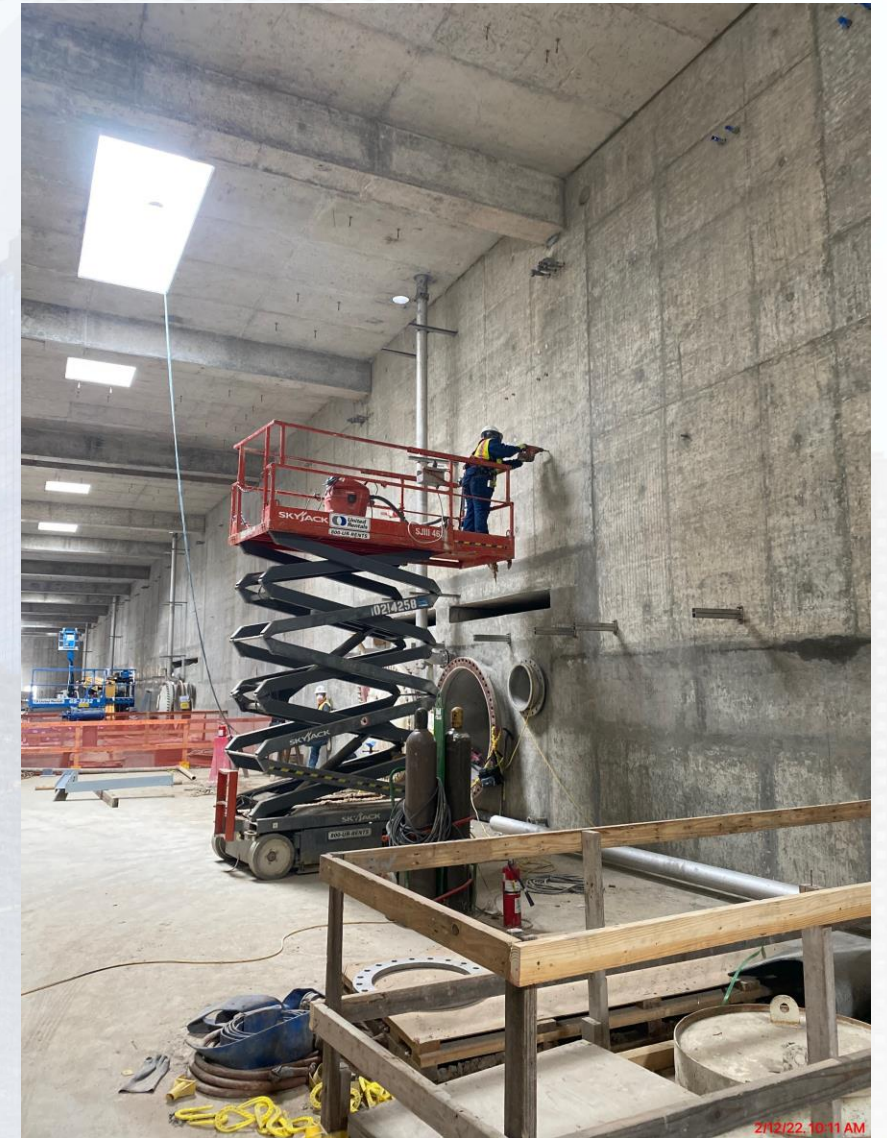
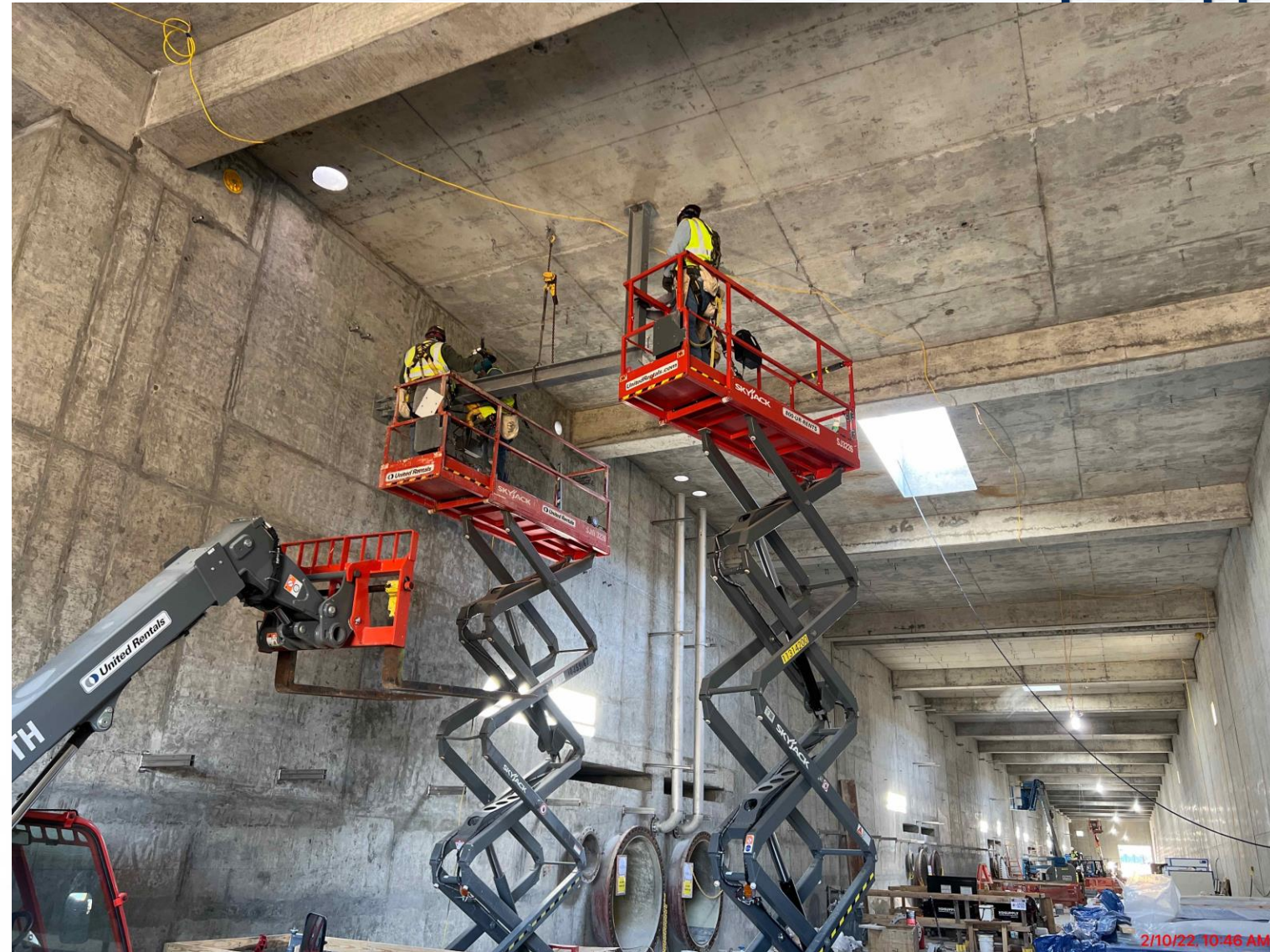


# 282-FILTER MODULE 2- Trough Collars & Troughs Install





# 282-FILTER MODULE 2- Pipe supports Installation





# 282-FILTER MODULE 2- BWA Pipe Installation





# 282-FILTER MODULE 2- Access Ramp Excavation





## 292-TPS – Aerial View (02-09-2022)





# 292-TPS – FRP Top Deck Sections A3 & B1





# 292-TPS – West Stair Landing & Deck Sections Reinforcing





# 292-TPS – Hydrotesting of Embedded PDR and SSA Lines Under Analyzer Room







# Construction Progress – LREQ Basins Facilities 601/602

- **601 – SECO Install Duct Bank**
- **601/602 – Install Storm Culvert**
- **602 – FRP 72" BWW Wall Pipe**





# 601 – SECO Install Duct bank





# 601/602 – Install Storm Culvert





# 602 – FRP 72" BWW Wall Pipe







# Construction Progress – North Plant

- **201-Chlorine Dioxide Facility 1:**
- Continued painting decking/Texas Moisture joint sealant
- **211-Pretreatment Chemical Facility 1:**
- Continued CMU block installation
- **213-Pretreatment Chemical Facility 3:**
- Installing ASD Cabinets / Pipe and Pipe Supports
- **214-Pretreatment Chemical Facility 4:**
- Permanent lighting / Pipe install
- **242-Flocculation & Sedimentation Train 2:**
- SB3 Trough Progress
- **241-Flocculation & Sedimentation Train 1:**
- FBDC Channel SL placement / Top Deck EL-Slabs FRP
- **252-Ozone Contactor 2:**
- Installation of West area stairs, work on destruct unit enclosure
- **261-Ozone Generation Facility 1:**
- Ongoing HVAC, electrical piping install
- **216-Pretreatment Chemical Facility 6:**
- Installation of electrical duct banks
- **243-Flocculation & Sedimentation Train 3:**
- Continued Rebar install
- **501/502-Gravity Sludge Thickener Complex 2:**
- GT2 Excavation / 502 TSSB Roof Steel





# 201-Chlorine Dioxide Facility 1: Continued painting decking/Texas Moisture joint sealant





# 211-Pretreatment Chemical Facility 1: Continued CMU block installation



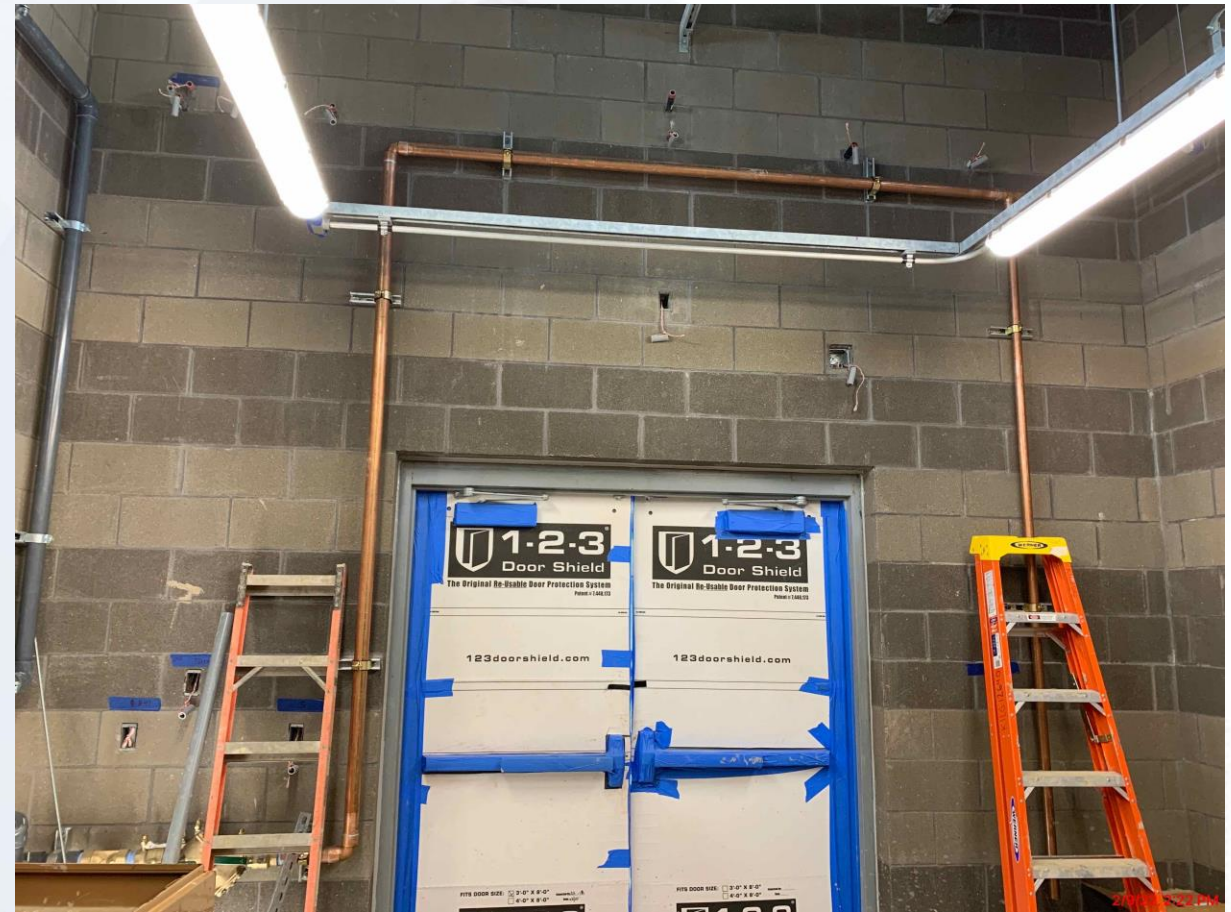


# 213-Pretreatment Chemical Facility 3: Installing ASD Cabinets / Pipe and Pipe Supports



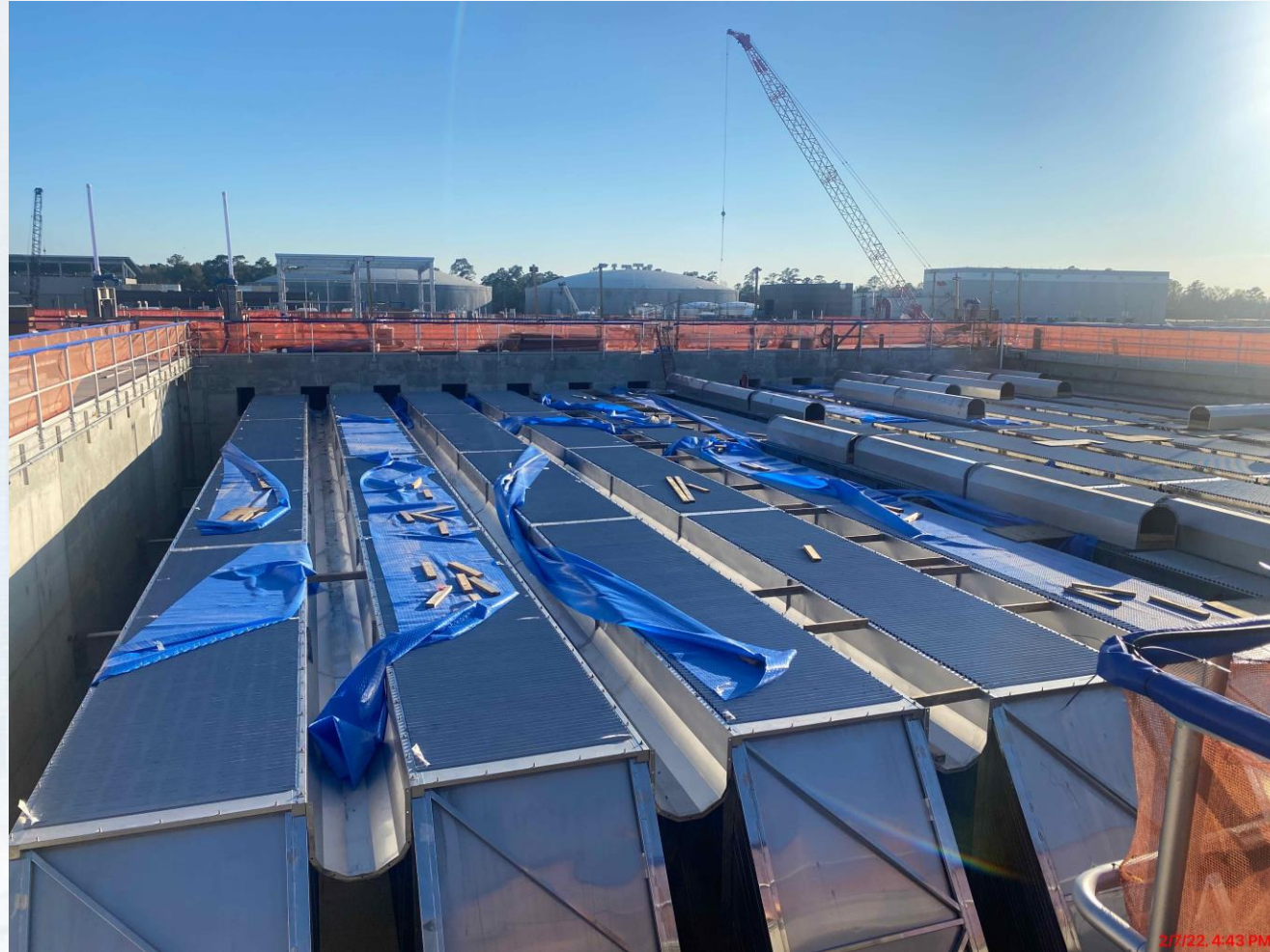


## 214-Pretreatment Chemical Facility 4: Permanent lighting / Pipe install





# 242-Flocculation & Sedimentation Train 2: SB3 Trough Progress





# 241-Flocculation & Sedimentation Train 1: FBDC Channel SL placement / Top Deck EL-Slabs FRP





# 252-Ozone Contactor 2: Installation of West area stairs, work on destruct unit enclosure





# 261-Ozone Generation Facility 1: Ongoing HVAC, electrical piping install





# 216-Pretreatment Chemical Facility 6: Installation of electrical duct banks





# 243-Flocculation & Sedimentation Train 3: Continued Rebar install





# 501/502-Gravity Sludge Thickener Complex: GT2 Excavation / 502 TSSB Roof Steel







# Construction Progress – South Plant

- Continued filling water at GST 361.
- Filled water at GST 362.
- Resumed overflow box finishes (pipe, concrete invert, and valves).
- Commenced installation of hose racks and hose bibs.
  
- Continued louvers and dampers installation at Fac 401.
- Continued installation of high roof at Fac 401.
- Continued precast wall repairs at Fac 401.
- Delivery of motor for pump 3 & 4 at Fac 401.
- Continued installation of aboveground plumbing rough-in at the mechanical room and restroom at Fac 401.
- Continued 60" BWS connection at Fac 401.
- Continued backfilling at Fac 402.
- Continued top of pump can encasement at Fac 402.
  
- Continued installing plumbing, process pipe, and electrical conduit on levels 1, 2, and 3 at Fac 520.
- Continued wire pulling at Fac 520.
- Continued door and window frames installation at Fac 520.
- Continued overhead (O/H) coiling door installation at Fac 520.
- Continued bus duct installation at Fac 520.
- Continued fire-resistant joint system installation at Fac 520.
- Commenced terminating power to wiring sludge mixers, LCP's, and MCS's at Fac 510.
- Continued process pipe installation at Fac 510.





# GST 361 & 362 AERIAL VIEW



**GST 361**

**GST 362**



# GROUND STORAGE TANK 361 & 362



Commenced installation of hose racks and hose bibs



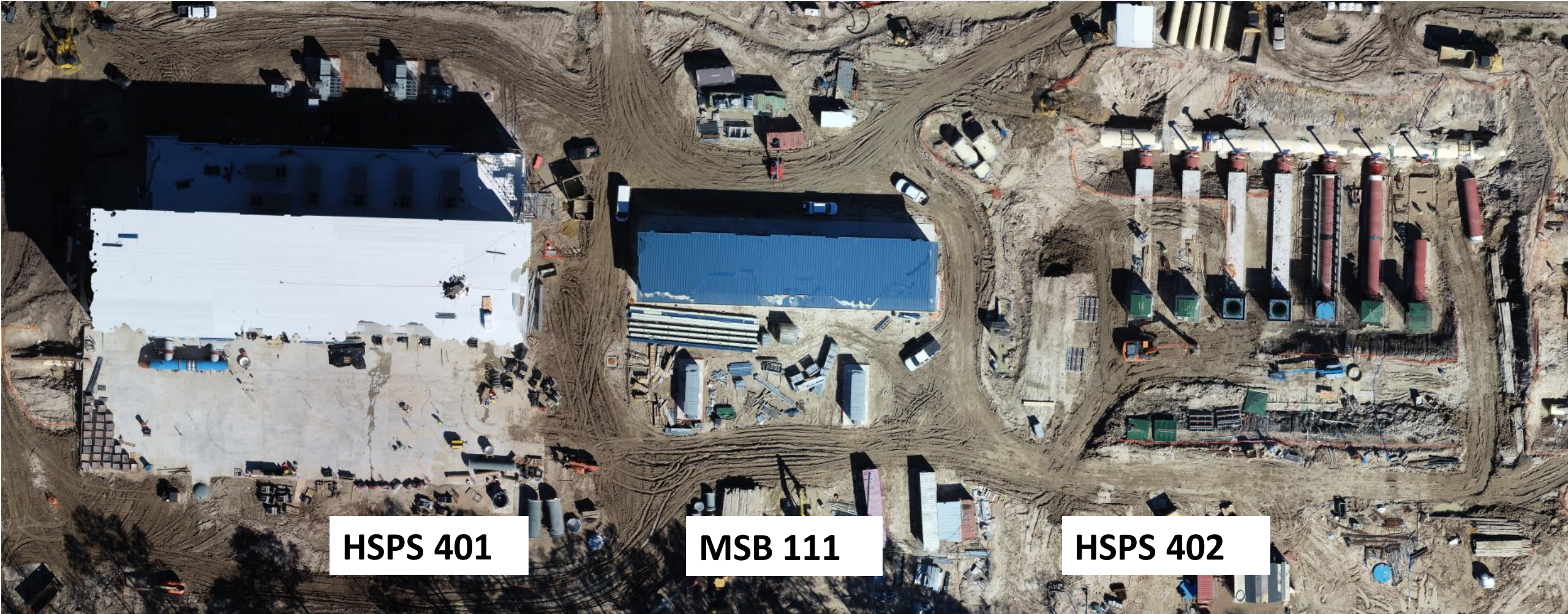
# GROUND STORAGE TANK 362



Passed watertightness test GST 362.



# HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



**HSPS 401**

**MSB 111**

**HSPS 402**



# HIGH SERVICE PUMP STATION 401



Motor deliver and installation



# HIGH SERVICE PUMP STATION 401



Continued 60" BWS connection and motor installation at Fac 401



# HIGH SERVICE PUMP STATION 401



Continued roof installation at Fac 401



# HIGH SERVICE PUMP STATION 402



Continued backfilling and continued top of pump can encasement at Fac 402



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



520

510



# DEWATERING BUILDING 520



Continued installing plumbing, process pipe, and electrical conduit on levels 1, 2, and 3 at Fac 520.



# THICKENED SLUDGE & EQ BASIN 510



Continued process pipe installation at Fac 510.





# Construction Progress – Administration & Maintenance Building

- Regrading of Pond 4
- Installation of Gypsum Ceilings
- Installation and Grouting of Tile Flooring
- Installation of Millwork
- Installation of Metal Wall Panels





# Regarding of Pond 4





# Installation of Gypsum Ceilings





# Installation and Grouting of Tile Flooring





# Installation of Millwork





# Installation of Corrugated Metal Wall Panels







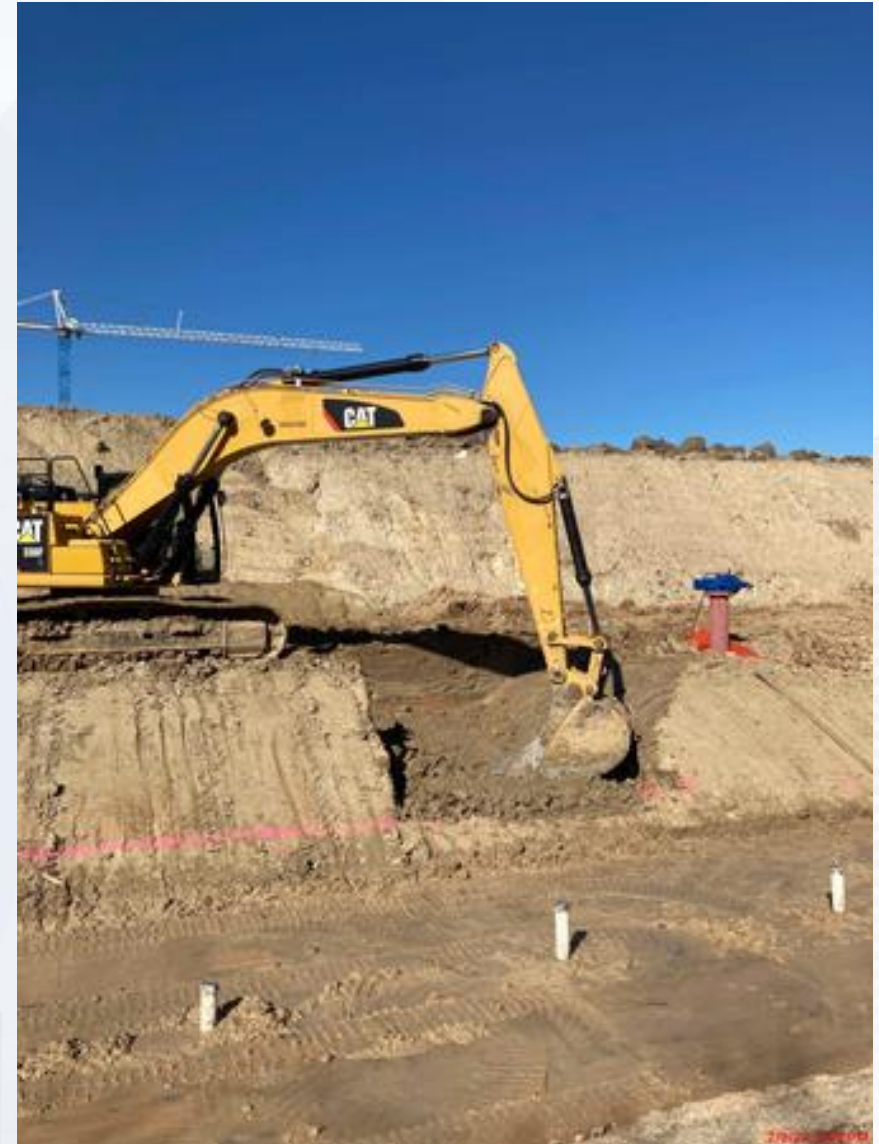
# Construction Progress – Site Civil

- **Continue installing rebar and excavation of the overflow concrete channel at STA 16+50**
- **Sidewalk Concrete Installation at North Plant - 214**





# Continue installing rebar and excavation of the overflow concrete channel at STA 16+50





# Sidewalk Concrete Installation at North Plant - 214





