



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

January 12, 2022







# Site Drone Map January 4, 2022





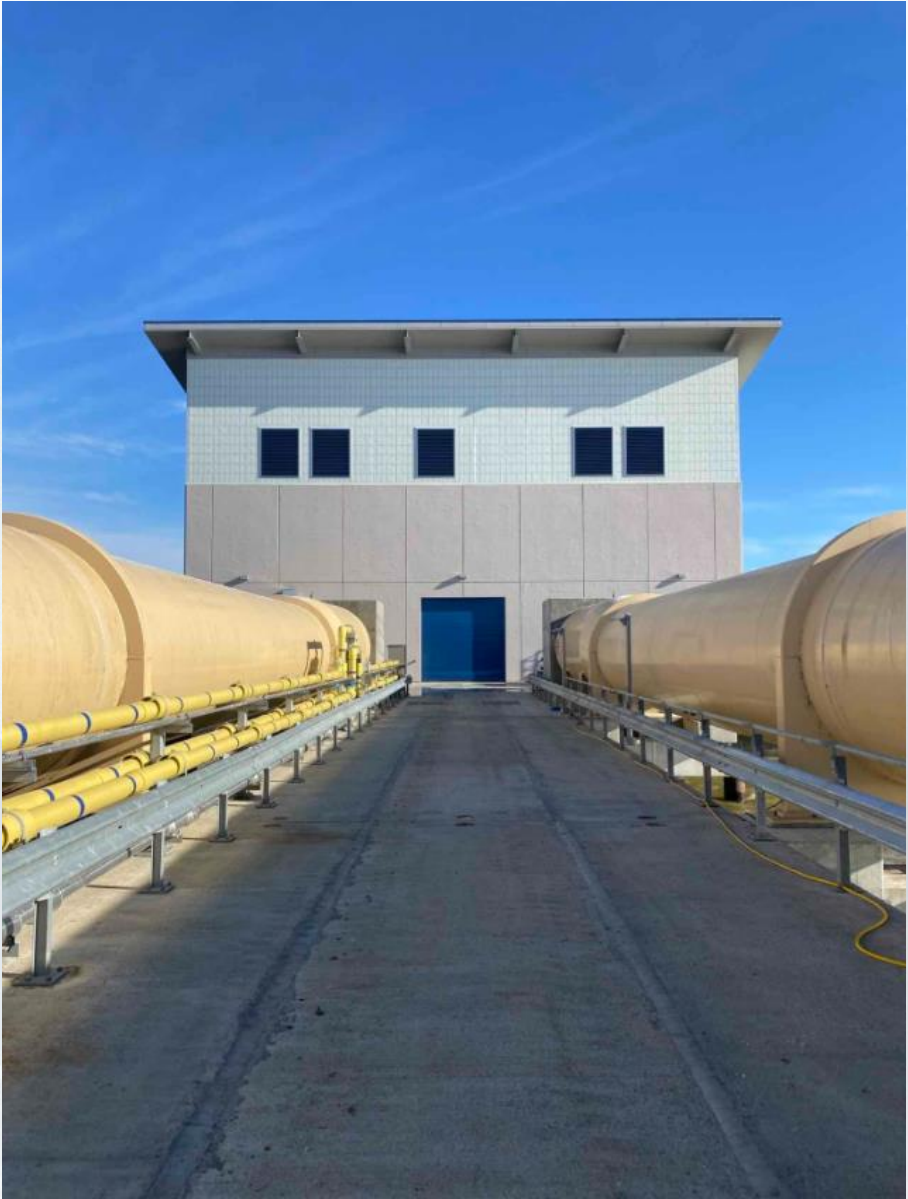
# Construction Progress – Intake Pump Station (IPS)

- **Completed Precast Concrete Wall Panel Repair**
- **Installing Motor Control Panels**





# Completed Precast Concrete Wall Panel Repair



# Installing Motor Control Panels





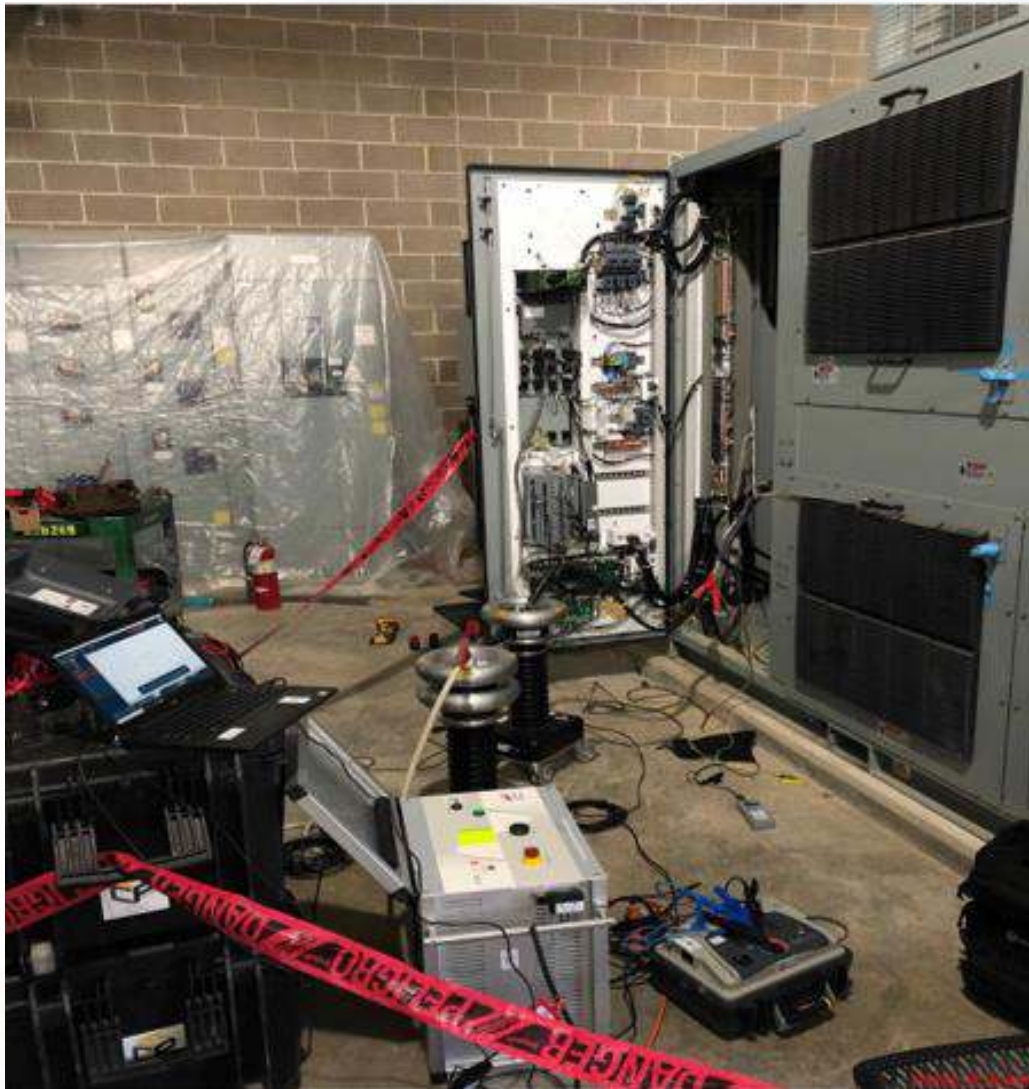


# Construction Progress – Site Electrical

- Third Party Testing at 401
- Lindsey Electric Installed Temporary Fused Switch at 401 West Transformer



# Third Party Testing at 401





# Lindsey Electric Installed Temporary Fused Switch at 401 West Transformer



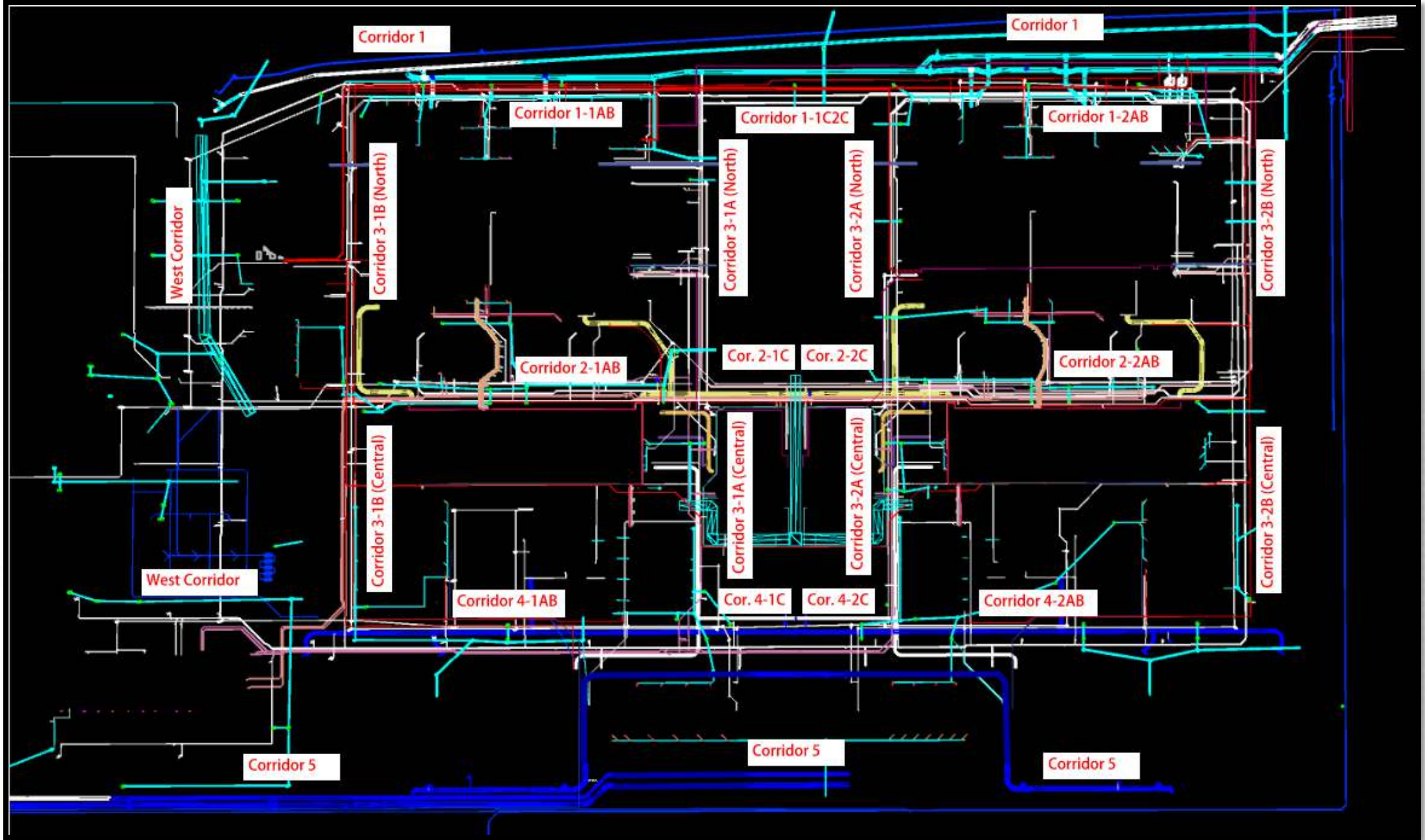


# Construction Progress – Yard Piping

- Corridor 4 – Installing cathodic protection on 60" BFVs and piping for the air gap on 60" BWS line
- Corridor 4 – Installing second BFV and piping for the air gap monitoring system on the 96" FW line
- West Corridor and Corridor 4 – Installing SSG lines to Dewatering Bldg and Central Plant
- West Corridor - Welding and grouting the 120-inch FW distribution piping
- West Corridor – Removed forms from valve support pedestals and installed forms for grouting under the two 60" Gate valves and for backfilling under existing 84" FW main









# Corridor 4 – Installing cathodic protection on 60" BFVs and piping for the air gap on 60" BWS line





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





# West Corridor and Corridor 4 – Installing SSG lines to Dewatering Bldg and Central Plant





# West Corridor - Welding the 120-inch FW distribution piping





# West Corridor – Removed forms from valve support pedestals and installed forms for grouting under the two 60" Gate valves and for backfilling under existing 84" FW main







# Construction Progress – Central Plant 1

## 281-FILTER MODULE 1 :

- Finish grouting Filters Under-drains.
- Reinforcing Access Ramp(East)

## 291-TRANSFER PUMP STATION 1:

- Finished Energizing Electrical Equipment
- Continue Installing Conduits from ASD's to VTP Motors and along Discharge Piping
- Finished Pulling Wire for Analyzers
- Finished Installation of Chemical Piping Supports
- Finished Installation of Chemical Piping on Mixer Deck

## 311 – POST CHEMICAL FACILITY SH/CS :

- Continue Installation Chemical Metering Pump piping
- Process Mechanical Pipe installation.

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

- Installation Chemical Metering Pumps piping system inside building.
- Testing of PPW, PW and TW Piping system.





# CENTRAL PLANT- PHASE 1





# 281-FILTER MODULE- Finish grouting Filter UD





# 281-FILTER MODULE- Reinforcing Access Ramps(East)





# 291-TPS – Aerial View (01/04/2022)





# 291-TPS – Finished Energizing Electrical Equipment





# 291-TPS – Continue Installation of Conduits from ASD's to VTP Motors and Along Discharge Piping





## 291-TPS – Finished Pulling Wires for Analyzers





# 291-TPS – Finished Installation of Chemical Piping Supports





## 291-TPS – Start Installing Chemical Piping on Mixer Deck





# 311 – Aerial view –01/04/2022



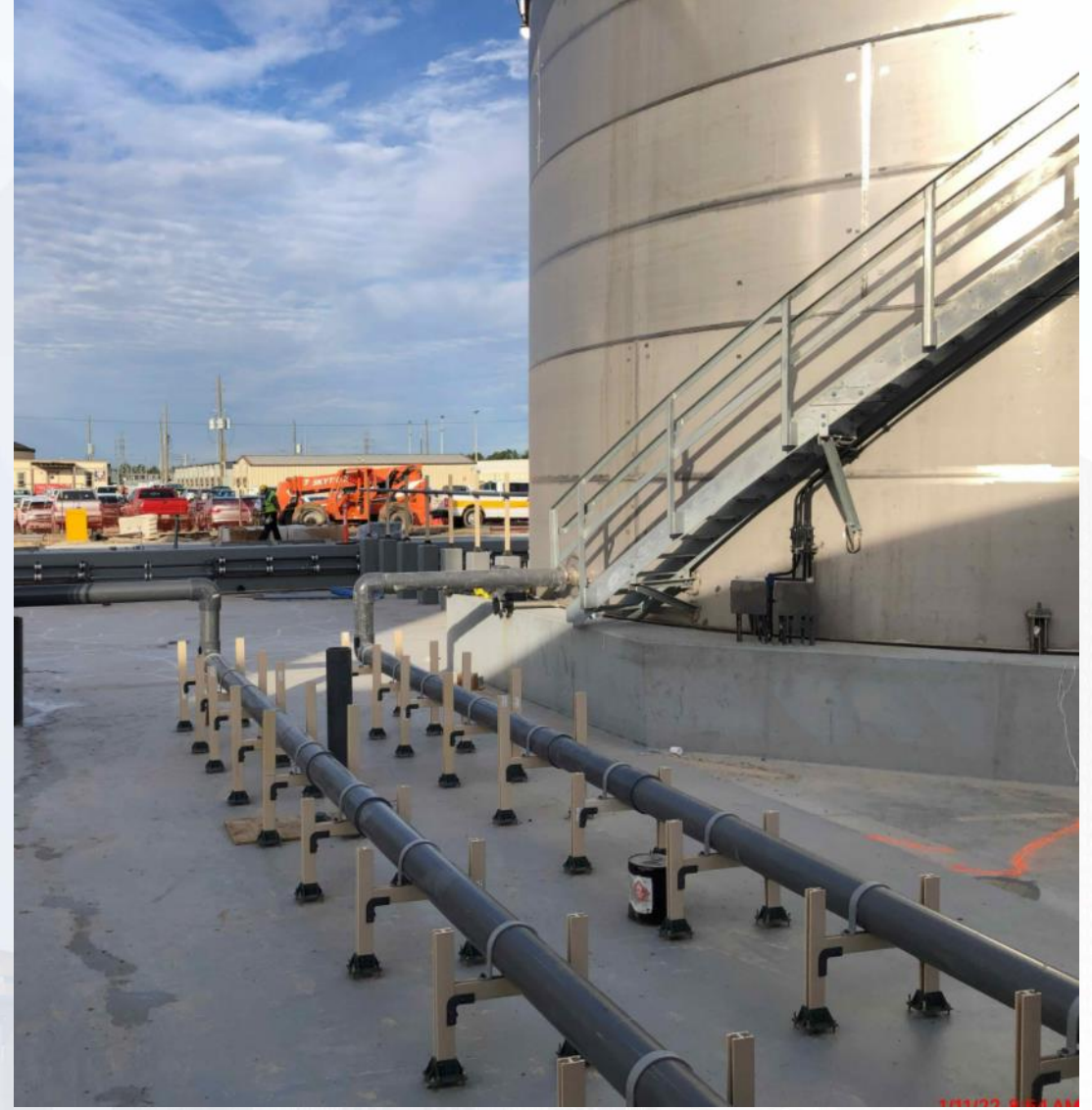


# 311 –Chemical Metering Pumps and LCPs Installation





# 311- Containment Process mechanical Piping





# 312 - Overall view 01/04/22



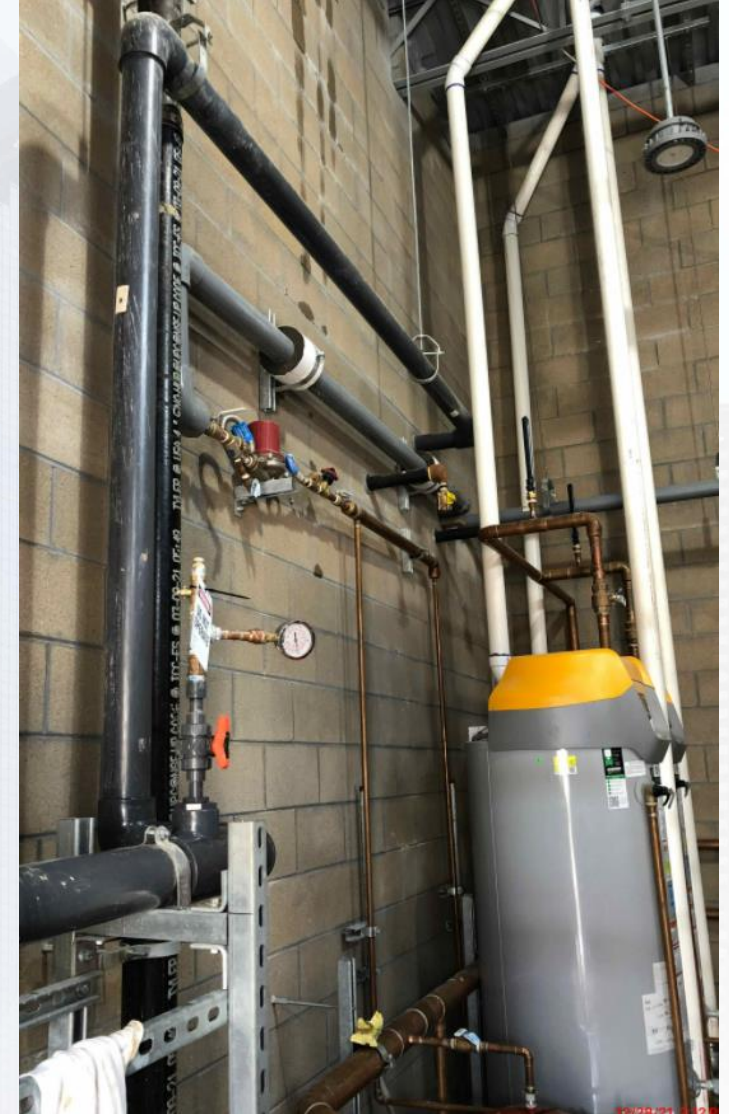


# 312 – Chem pipe system Installation





# 312 – PPW, PW and TW Pipe testing







# Construction Progress – Central Plant 2

- **282 -FILTER MODULE 2:**

- Continuing Masonry Structures.
- Continuing Structural Steel Install.
- Trough Collar and Troughs Install.

- **292-TRANSFER PUMP STATION 2:**

- Forming Top Deck Block-outs
- Top Deck Beams Reinforcement

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

- F/R/P Slab on grade.
- Backfill chem building.

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

- Field installation of SH Metal Tank.
- F/R/P Equipment pads
- Installation of Joist System.





# CENTRAL PLANT- Phase 2





# 313- Overall view 01/05/22





# 313 –F/R/P SOG Chem buildings.





# 313 –Backfill chem building.





# 314- Aerial view 01/04/22





# 314 – Installation Joist System





# 314 –SH Steel tank fabrication





# 314 –F/R/P Equipment pads.



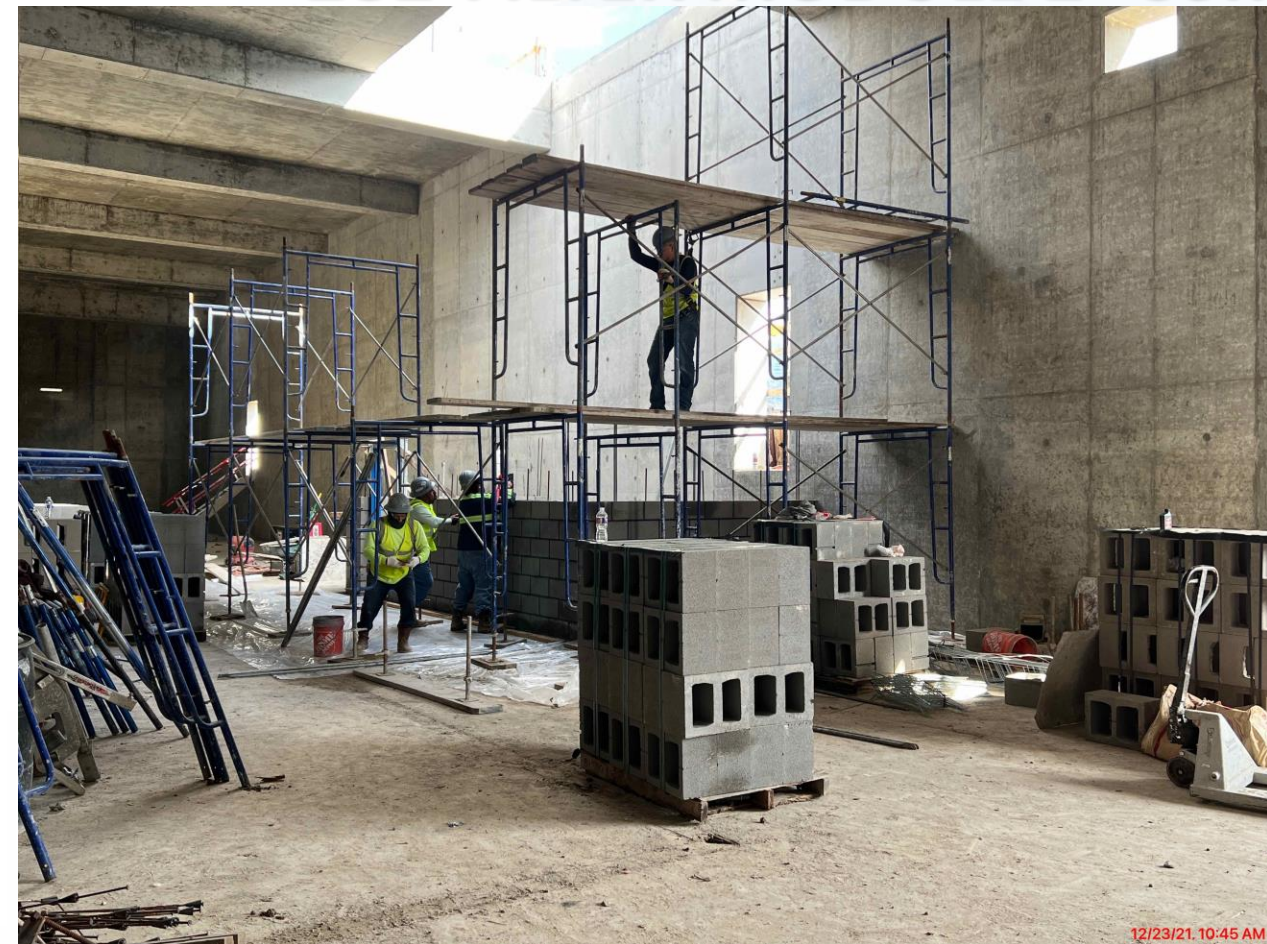


# 282-FILTER MODULE 2- Structural Steel Installation





# 282-FILTER MODULE 2- Continuing Masonry Structures





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



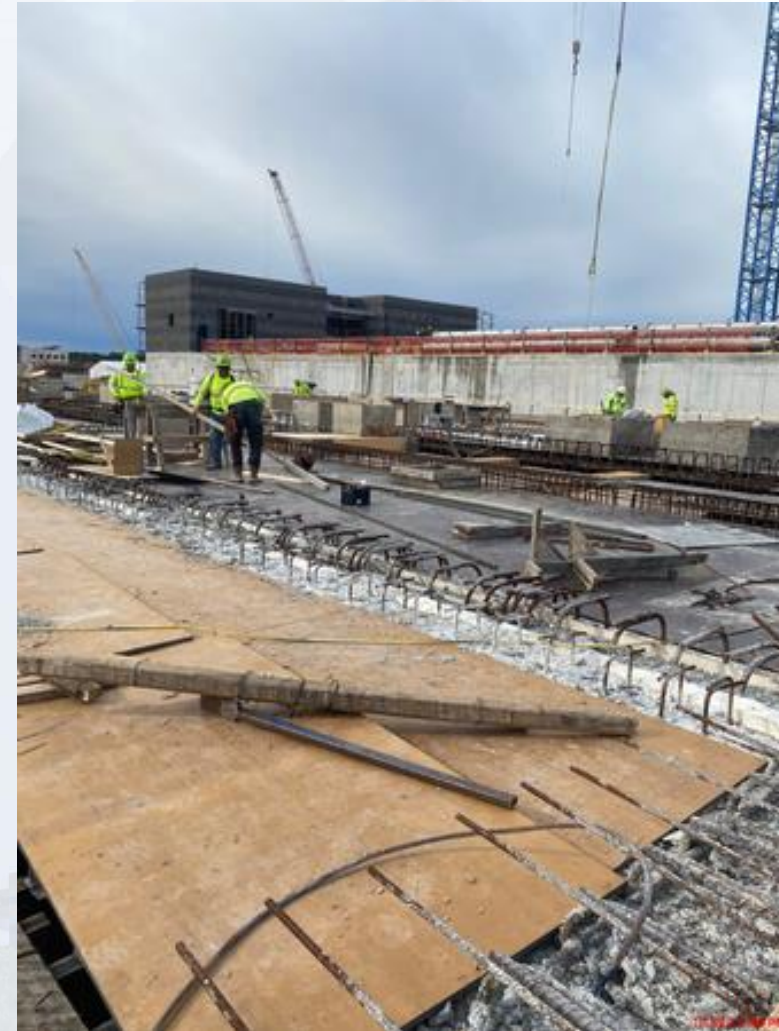


## 292-TPS – Aerial View (01-04-2022)





## 292-TPS – Forming Block-outs





# 292-TPS – Top Deck Beams Reinforcement







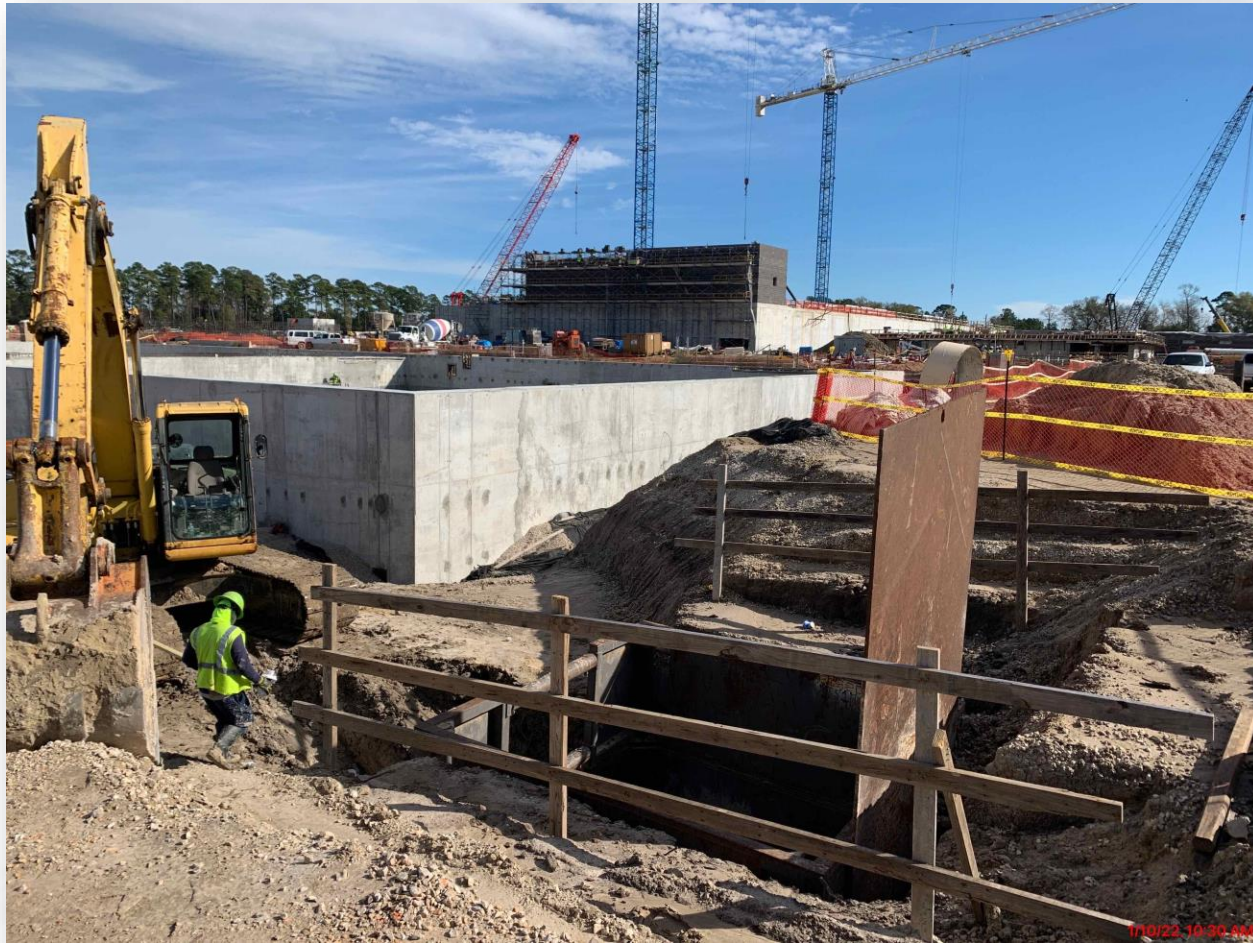
# Construction Progress – LREQ Basins Facilities 601/602

- **601 – Begin excavation for underdrain pump station, concrete placement for slab**
- **601/602 – Continued work on 24" RCY interconnect pipe**
- **602 – Continue interior wall finish**





# 601 – Begin excavation for underdrain pump station, concrete placement for slab





# 601/602 – Continued work on 24" RCY interconnect pipe





## 602 – Continue interior wall finish







# Construction Progress – North Plant

- **201-Chlorine Dioxide Facility 1:**
- **Continued Joist System and Roofing Installation**
- **211/212-Pretreatment Chemical Facility 1/2:**
- **CMU First Course**
- **213-Pretreatment Chemical Facility 3:**
- **Placement of Rio-213, Continued installation of overhead conduit**
- **214-Pretreatment Chemical Facility 4:**
- **TPO Roofing Installation**
- **242-Flocculation & Sedimentation Train 2:**
- **Continued Mixers Installation**
- **241-Flocculation & Sedimentation Train 1:**
- **Continued Vertical Rebar Installation West Wall**
- **252-Ozone Contactor 2:**
- **Handrails Installation North Area**
- **261-Ozone Generation Facility 1:**
- **Concrete Placement for Equipment pads, Welding of the 4" GOX pipe**
- **501-Gravity Sludge Thickener Complex 1:**
- **Gravity Thickener 1 Walls Vertical Rebar Installation**
- **262-Ozone Generation Facility 2:**
- **Duct bank from Facility 262–274**
- **243-Flocculation and Sedimentation Train 3:**
- **Concrete Placement for Mud mat**





# 201-Chlorine Dioxide Facility 1: Continued Joist System and Roofing Installation





# 211-Pretreatment Chemical Facility 1: CMU First Course





## 212-Pretreatment Chemical Facility 2: CMU First Course





# 213-Pretreatment Chemical Facility 3: Placement of Rio-213, Continued installation of overhead conduit





# 214-Pretreatment Chemical Facility 4: TPO Roofing Installation





# 242-Flocculation & Sedimentation Train 2: Continued Mixers Installation



1/10/22, 5:04 PM





# 241-Flocculation & Sedimentation Train 1: Continued Vertical Rebar Installation West Wall





# 252-Ozone Contactor 2: Handrails Installation North Area





# 261-Ozone Generation Facility 1: Concrete Placement for Equipment pads, Welding of the 4" GOX pipe





# 501-Gravity Sludge Thickener Complex 1: Gravity Thickener 1 Walls Vertical Rebar Installation





## 262-Ozone Generation Facility 2: Duct bank from Facility 262-274





# 243-Flocculation and Sedimentation Train 3: Concrete Placement for Mud mat







# Construction Progress – South Plant

- Continued installation of miscellaneous metals at GST 361.
- Commenced interior pipework at GST 361.
- Continued installation of miscellaneous metals at GST 362.
- Commenced painting of the dome at both GST's.
- Commenced tank filling at GST 362.
- Continue GST's cathodic protection.
- Commenced GST's perimeter french drain.
- Resumed overflow box finishes (pipe, concrete invert, and valves).
  
- Continued installation of high roof at Fac 401.
- Continued precast wall repairs at Fac 401.
- Delivery and installation of the motor for BWS pump 1 at Fac 401.
- Commenced pulling permanent cable from switchgear to ASD's at Fac 401.
- Commenced installation of aboveground plumbing rough-in at the mechanical room and restroom at Fac 401.
- Continued installation of 78-inch buried pipe and encasement to pump cans at Fac 401.
- Completed outdoor pipeslab at Fac 401.
- Backfilling at outdoor slab at 401
- Completed slab on grade outside of the south side of 401 and installed underslab conduits at Fac 401.
- Completed electrical conduit installation at the pump room at Fac 401.
- Continued backfilling 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.
- Delivery and installation of Swaby centrifuge feed pumps at Fac 520.
- Continued fire-resistant joint system installation at Fac 520.
- Near completion for the installation of upper and lower conveyors at Fac 520.
- Delivery and installation of Swaby centrifuge feed pumps 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



Commenced painting of dome and interior pipework at GST 361.



# GROUND STORAGE TANK 362



Commenced tank filling at GST 362.



# HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



**HSPS 401**

**MSB 111**

**HSPS 402**



# HIGH SERVICE PUMP STATION 401



Completed slab on grade outside of the south side of 401 and installed underslab conduits at Fac 401.



# HIGH SERVICE PUMP STATION 401



Commenced installation of aboveground plumbing rough-in at the mechanical room and restroom at Fac 401.



# HIGH SERVICE PUMP STATION 402



Continued backfilling at Fac 402.



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



520

510



# DEWATERING BUILDING 520



Continued overhead (O/H) coiling door installation at Fac 520.



# DEWATERING BUILDING 520



Delivery and installation of Swaby centrifuge feed pumps at Fac 520.



# DEWATERING BUILDING 520



Near completion for the installation of upper and lower conveyors at Fac 520.



# THICKENED SLUDGE & EQ BASIN 510



Continued process pipe installation at Fac 510.





# Construction Progress – Administration & Maintenance Building

- Installation of Hard Ceilings
- Installation of Door Canopies
- Installation of Plumbing Fixtures
- Installation of Floor Tiles



# Installation of Hard Ceilings





# Installation of Door Canopies





# Installation of Plumbing Fixtures





# Installation of Floor Tiles







# Construction Progress – Site Civil







# Construction Progress – Intake Pump Station (IPS)

- **Continue Excavating and Pouring Mud Slab for the Overflow Channel**





# Continue Excavating and Pouring Mud Slab for the Overflow Channel





