



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

March 23, 2022



**Houston Waterworks Team**





Site Drone Map  
February 17, 2022







# Construction Progress – Site Electrical

- **Facility 262 – 272 Cable Pull**
- **Facility 216 - 217 Ductbank**
- **Facility 213 – 214 Cable Pull**
- **Terminating 213SBD00001**

# Facility 262 – 272 Cable Pull





# Facility 216-217 Ductbank



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# Facility 213 – 214 Cable Pull





# Terminating 213SBD00001





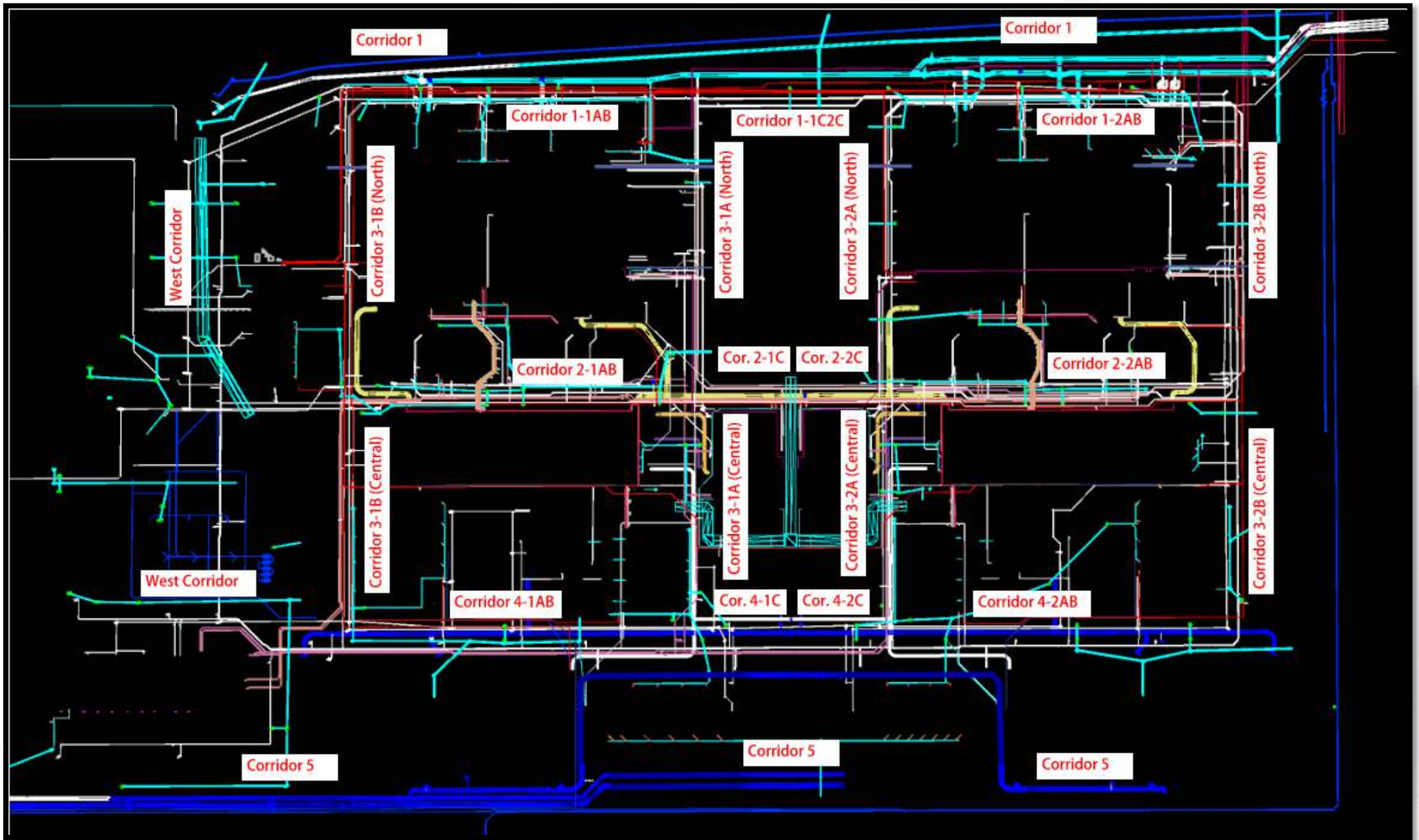


# Construction Progress – Yard Piping

- **Welding 66" dish head and removing a section of the 66" existing line**
- **West tie in location pipe plug and bypass piping**
- **66" RW tie in location pipe plug and bypass piping**
- **Installing RCY meter vault slab**
- **Hydro excavation sinking of 704 pump station**









# Welding 66" dish head and removing a section of the 66" existing line





# West tie in location pipe plug and bypass piping



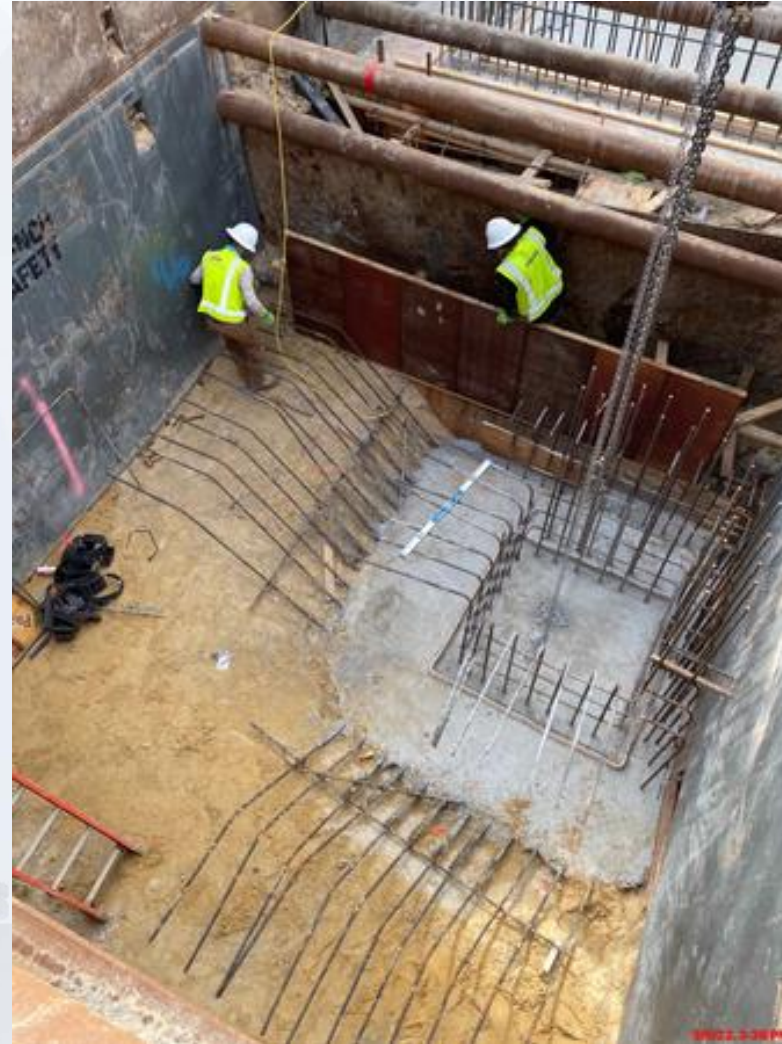


# 66" RW tie in location pipe plug and bypass piping





# Installing RCY meter vault slab





# Hydro excavation sinking of 704 pump station







# Construction Progress – Central Plant 1

## 281-FILTER MODULE 1 :

- Access Ramp Construction
- Double Contained Pipe Install

## 291-TRANSFER PUMP STATION 1:

- Install Corrugated Pipe.
- Install  $\frac{3}{4}$ " SA Line
- Install HVAC System in Mechanical Building

## 311 – POST CHEMICAL FACILITY SH/CS :

- Continue Installation of Process Mechanical piping

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

- Continue Installation of Process Mechanical Piping system.





# CENTRAL PLANT- PHASE 1 OVERALL





# 281-FILTER MODULE- Access Ramp and Walls Construction





# 281-FILTER MODULE- Final Coating of Pipes





# 291-TPS – Aerial View (02/09/2022)





# 291-TPS – Install ¾" SA Lines





# 291-TPS – Continue installation of Chem Lines



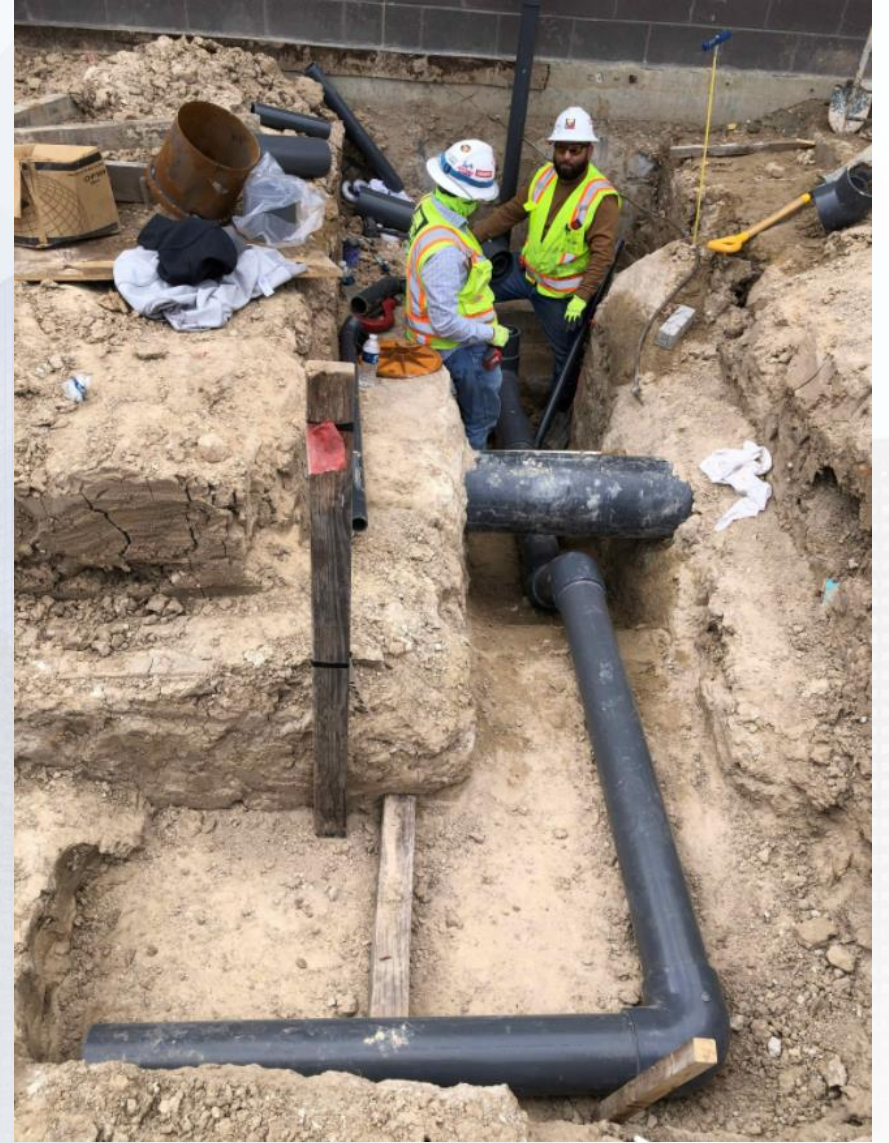


# 311 – Aerial view –02/09/2022





# 311 –Chemical Process Mechanical installation



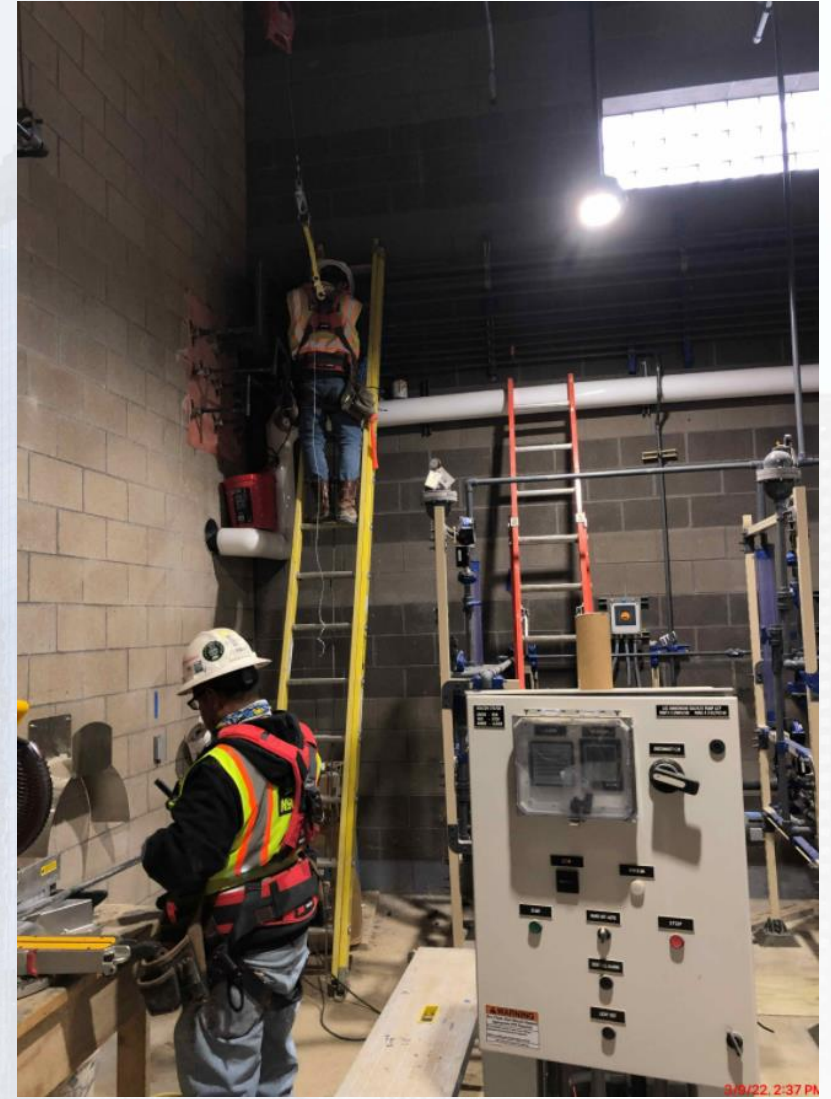
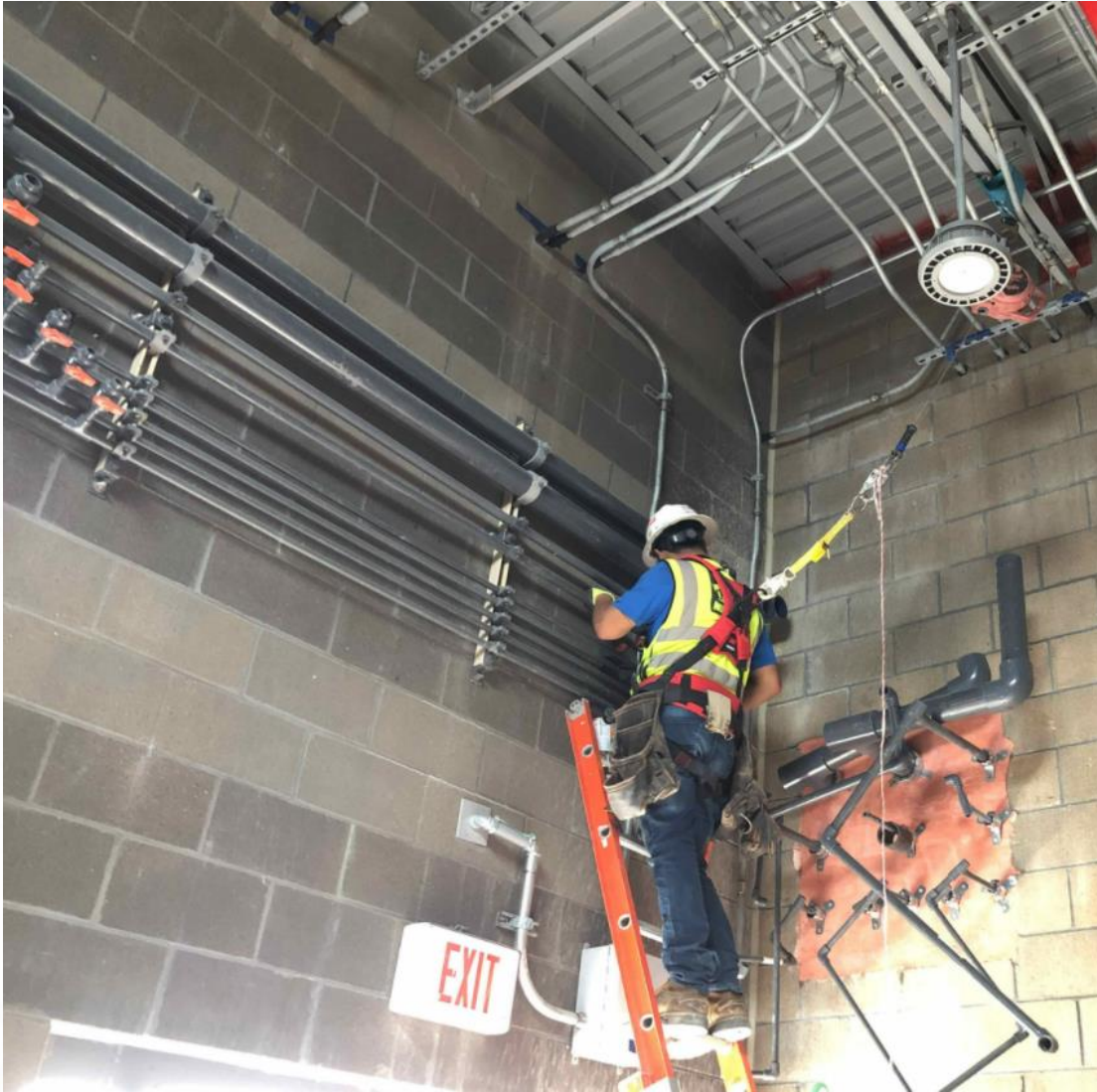


# 312 - Overall view 02/09/22





# 312 – Chem pipe system Installation





# 312 – Chem pipe system Installation



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# Construction Progress – Central Plant 2

## ● 282 -FILTER MODULE 2:

- Continuing Masonry & Steel Deck Install.
- Pipe installation

## ● 292-TRANSFER PUMP STATION 2:

- F/R/P Top decks, C6, B3 and B6
- F/R/P Top deck curbs

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

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

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

- Metal deck coating application
- Field installation of SH and CS Metal Tank.
- SH tank coating application





# CENTRAL PLANT- Phase 2





# 313- Overall view 02/09/22





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





# 313 –CMU block installation





# 314- Aerial view 02/09/22





## 314 –Metal Coating application





# 314 –SH and CS Steel tank fabrication





# 314 –SH tank coating





# 282-FILTER MODULE 2- Pipe installation





# 282-FILTER MODULE 2- Masonry Structures



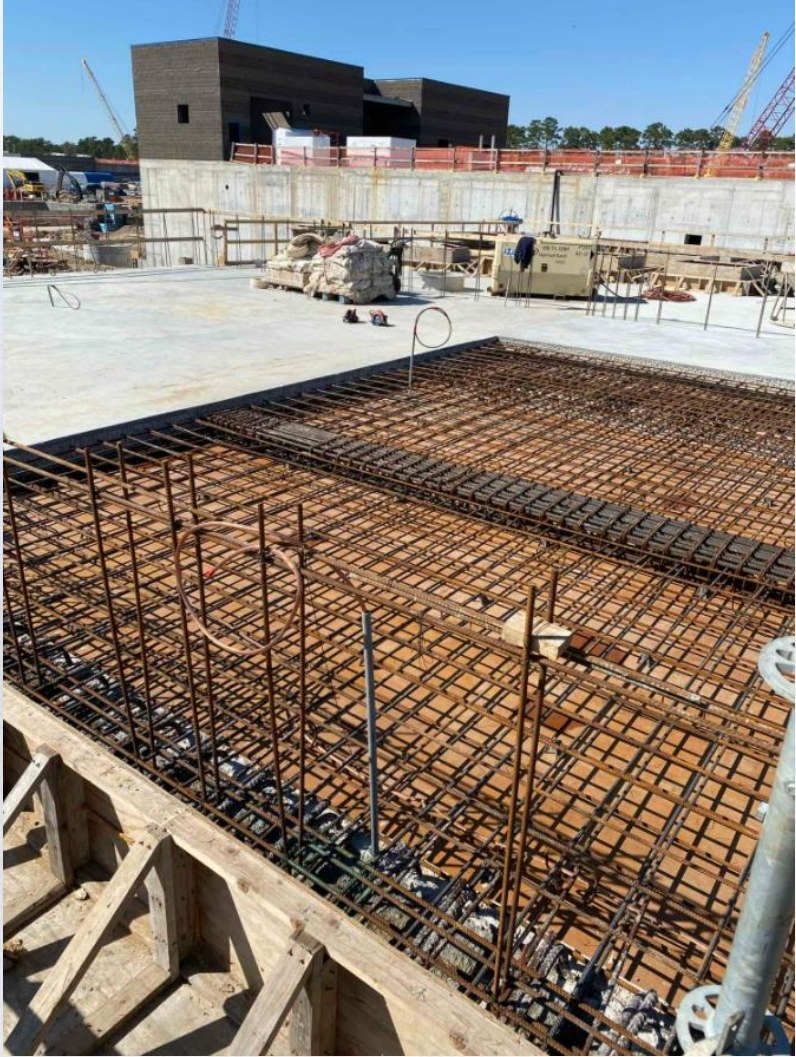


## 292-TPS – Aerial View (02-09-2022)



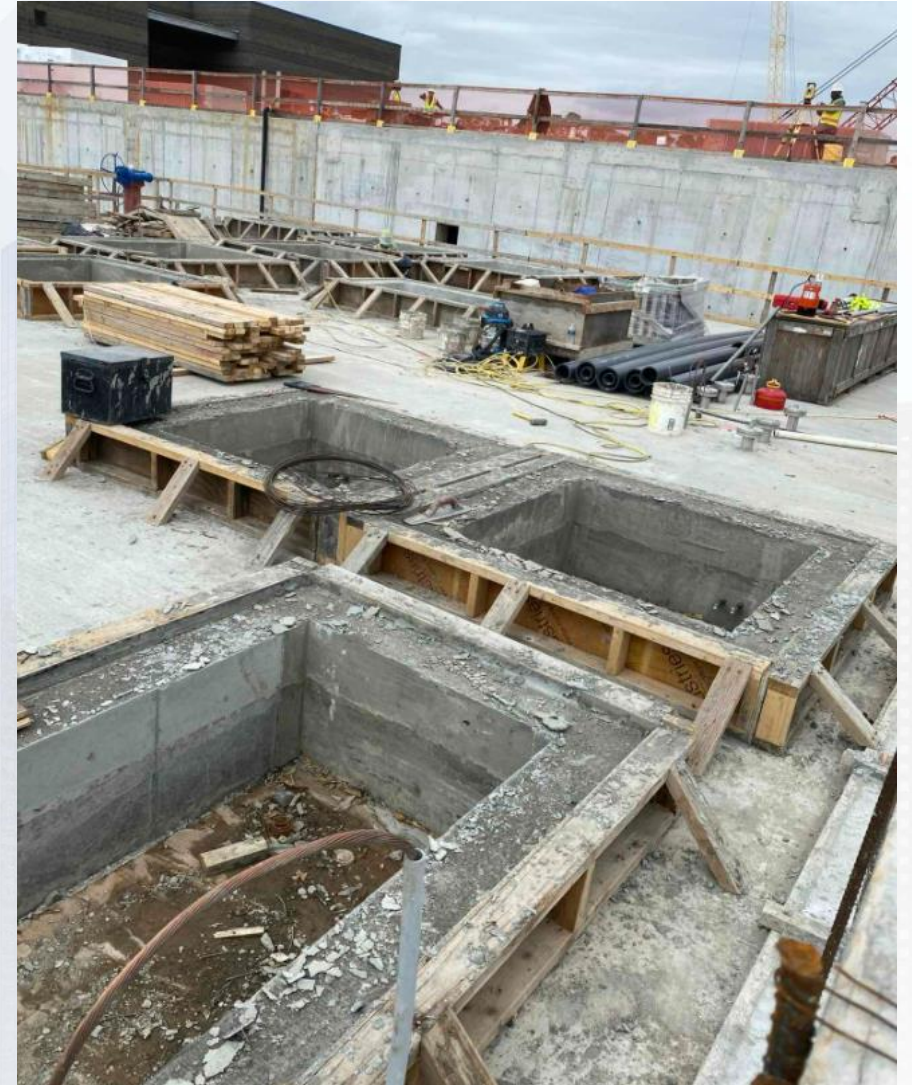


# 292-TPS – F/R/P Top Deck Sections C6, B3 and B6





## 292-TPS – F/R/P Concrete curbs







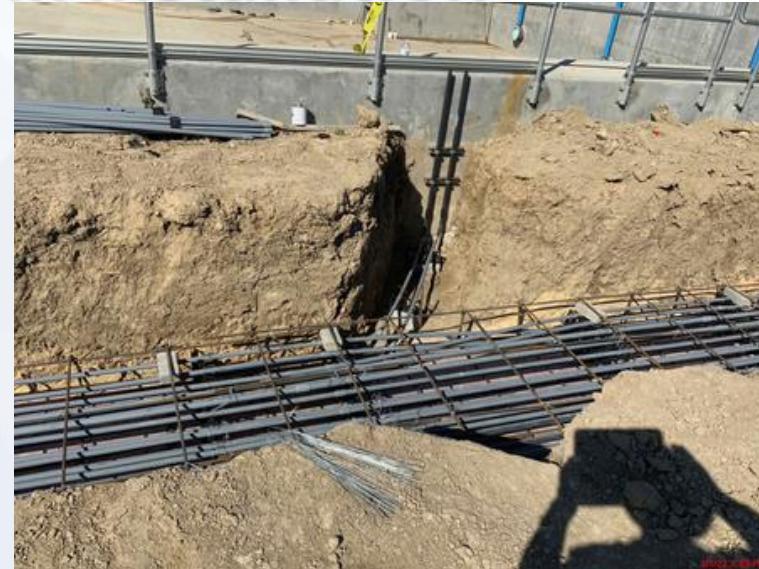
# Construction Progress – LREQ Basins Facilities 601/602

- **601 – SECO Install Duct Bank – Ongoing**
- **601/602 – Install Storm Culvert**
- **602 – Interior Wall Finish - Ongoing**





# 601 – SECO Duct Bank Installation





# 601/602 – Install Storm Culvert





## 602 – Interior Wall Finish - Ongoing







# Construction Progress – North Plant

- **201-Chlorine Dioxide Facility 1:**
- **Permanent Lighting/Truck Fill Station ongoing work**
- **211-Pretreatment Chemical Facility 1:**
- **Continued CMU block installation**
- **213-Pretreatment Chemical Facility 3:**
- **Continued electrical work / Pipe and Pipe Supports**
- **214-Pretreatment Chemical Facility 4:**
- **Mechanical installation / Placement of CRC coating**
- **242-Flocculation & Sedimentation Train 2:**
- **Pulling cable to mixer motors.**
- **PVC/Ductile Iron Pipe Coating**
- **252-Ozone Contactor 2:**
- **Installation of walkway/Backfilling South area**
- **261-Ozone Generation Facility 1:**
- **Ongoing HVAC, Pipe install, and pulling cable**
- **218-Pretreatment Chemical Facility 8:**
- **Continued rebar/concrete placement for slab**
- **243-Flocculation & Sedimentation Train 3:**
- **Floc Basin Area Backfill**
- **244-Flocculation & Sedimentation Train 4:**
- **Slab(s) on Grade F/R/P**
- **501-Gravity Sludge Thickener Complex 1:**
- **GT2 SL-2/8" TSL Encasement Concrete Curing**
- **502-Gravity Sludge Thickener Complex 2:**
- **TSSB Standing Seam Metal Roof Install**





# 201-Chlorine Dioxide Facility 1: Permanent Lighting/Truck Fill Station ongoing work





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





# 213-Pretreatment Chemical Facility 3: Continued electrical work / Pipe and Pipe Supports





# 214-Pretreatment Chemical Facility 4: Continued Mechanical installation / Placement of CRC coating





# 242-Flocculation & Sedimentation Train 2: Pulling cable to mixer motors / Painting PVC (& ductile iron) lines





# 252-Ozone Contactor 2: JSG – Installation of walkway/Backfilling South area





# 261-Ozone Generation Facility 1: Ongoing HVAC, Pipe install, and pulling cable





# 218 Pretreatment Chemical Facility 8: Continued rebar/concrete placement for slab





# 243-Flocculation & Sedimentation Train 3: Floc Basin 5 Area Backfill





# 243-Flocculation & Sedimentation Train 4: Sed Basin 7/8 Slab(s) on Grade F/R/P



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# 501-Gravity Sludge Thickener Complex 1: GT2 SL-2/8" TSL Encasement Concrete Curing





# 502-Gravity Sludge Thickener Complex 2: TSSB Standing Seam Metal Roof Installation







# Construction Progress – South Plant

## 361 & 362:

- Watertightness testing at GST 361.
- Completed tank wall repairs at GST 362.

## 111, 401, & 402:

- Continued installation of high roof at Fac 401.
- Continued installing lightning protection at Fac 401.
- Continued installing electrical rough-in/conduits at Fac 401 pump room.
- Continued precast wall repairs at Fac 401.
- Continued installation of buss duct support pads at Fac 401 electrical room.
- Continued Installation of MOV's and valves at Fac 401.
- Continued installation of aboveground plumbing rough-in at the mechanical room and restroom at Fac 401.
- Continued aboveground piping installation at Fac 401.
- Continued backfilling at Fac 402.
- Continued top of pump can encasement repairs at Fac 402.

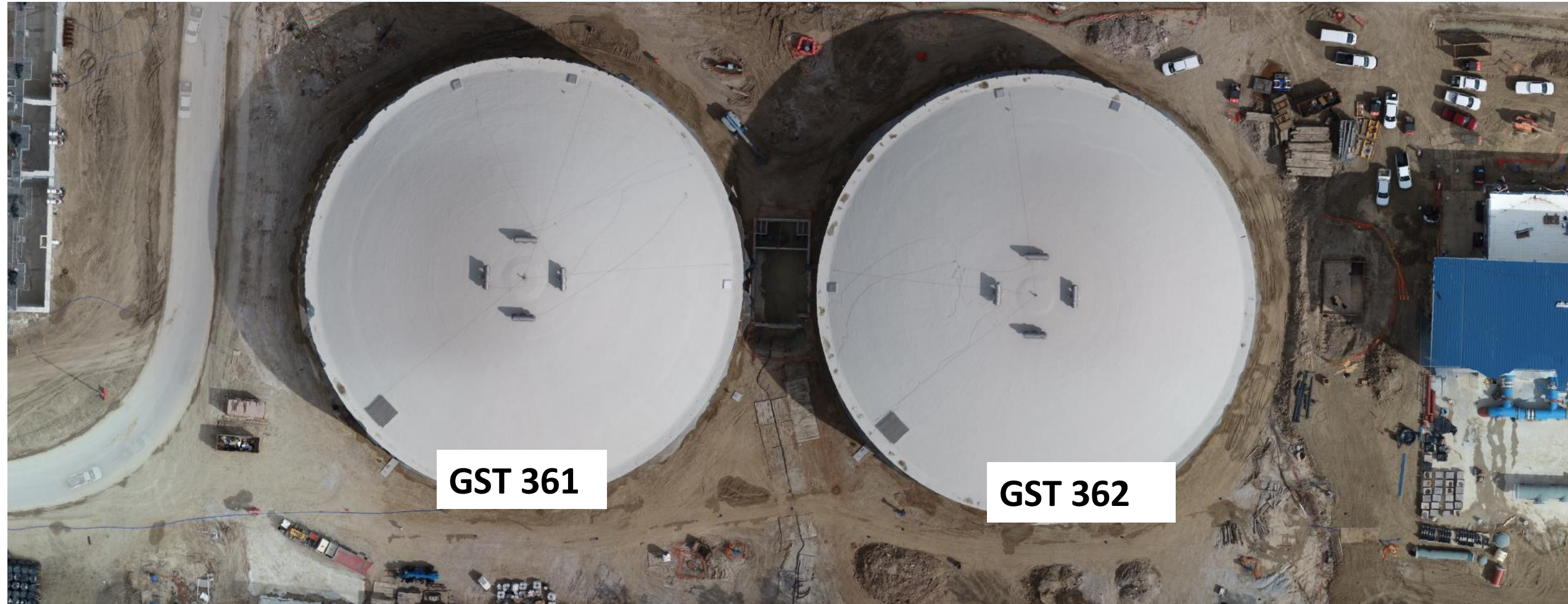
## 510 & 520:

- 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.
- Continued installing truck loading/output conveyors at Fac 520.
- Continued CMU block mortar joint cleaning at Fac 520.
- Continued installing centrifuge thickened sludge pumps seal water 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



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Watertightness testing at GST 361



# GROUND STORAGE TANK 362



Completed tank wall repairs at GST 362



# HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



**HSPS 401**

**MSB 111**

**HSPS 402**



# HIGH SERVICE PUMP STATION 401



Continued installing electrical rough-in/conduits at Fac 401 pump room



# HIGH SERVICE PUMP STATION 401



Continued installation of aboveground piping at Fac 401.



# HIGH SERVICE PUMP STATION 402



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



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





# DEWATERING BUILDING 520



Continued installing overhead doors and 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

- Installation of Countertops
- Installation of Reception Desk
- Placement of Sidewalks
- Installation of Louver Blinds



# Installation of Countertops





# Installation of Reception Desk





# Placement of Sidewalks





# Installation of Louver Blinds







# Construction Progress – Site Civil

- **Continue pouring concrete for the side slope and mud slab up to STA 14+00 and 12+50**





# Continue pouring concrete for the side slope and mud slab up to STA 14+00 and 12+50





