



CITY OF HOUSTON
Houston Public Works

DESIGN-BUILD SERVICES

Northeast Water Purification Plant Expansion

October 7, 2020



Houston Waterworks Team



Muster Point
2

Drone Site Map: October 1, 2020





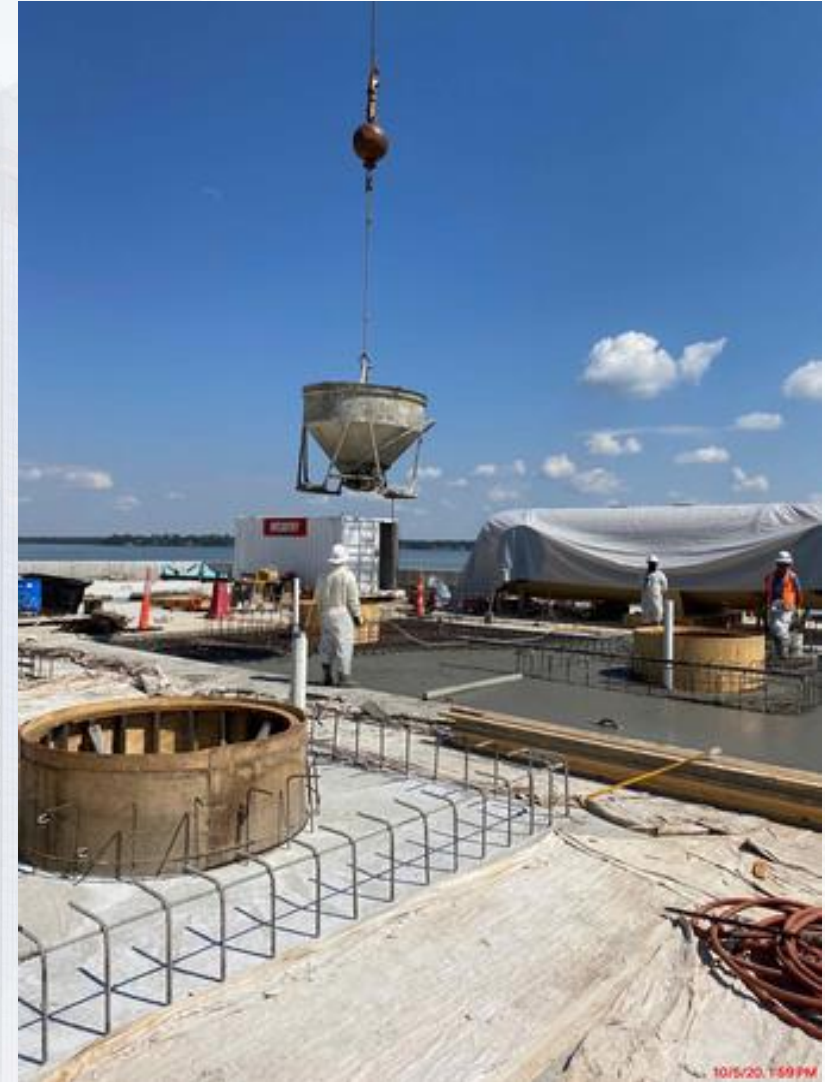
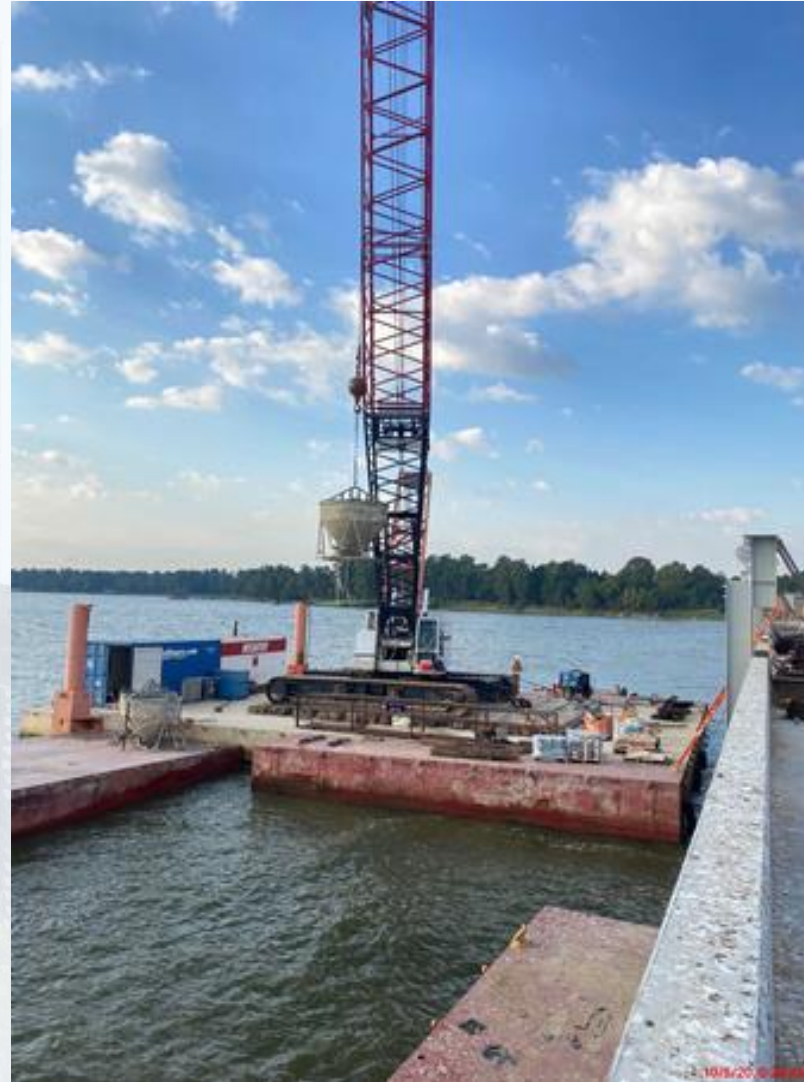
Construction Progress – Intake Pump Station (IPS)

- Pouring concrete on the Southside of the platform
- Placing the 108" underground pipe
- Installing embeds of the 96" discharging pipe





Pouring concrete on the Southside of the platform



Placing the 108" RW underground pipe



Installing embeds of the 96" discharging pipe





Construction Progress – Site Electrical

- MDB520_MDB111A Duct Bank Installation, Concrete Pour and Backfill
- MDB111A Duct Bank Installation
- Existing Plant Duct Bank Installation

MDB520_MDB111A Duct Bank Installation




MDB111A Duct Bank Installation



Existing Plant Duct Bank Installation





Construction Progress – Substation Facility 102

- **Installing the busduct**
- **Ductbank installment and pouring**
- **Continue installation of switchgear and HVAC units**
- **Installation of cable tray and support**



Installing the busducts



Ductbank installment and pouring



Continue installation of switchgear and HVAC units



Installation of cable tray and support

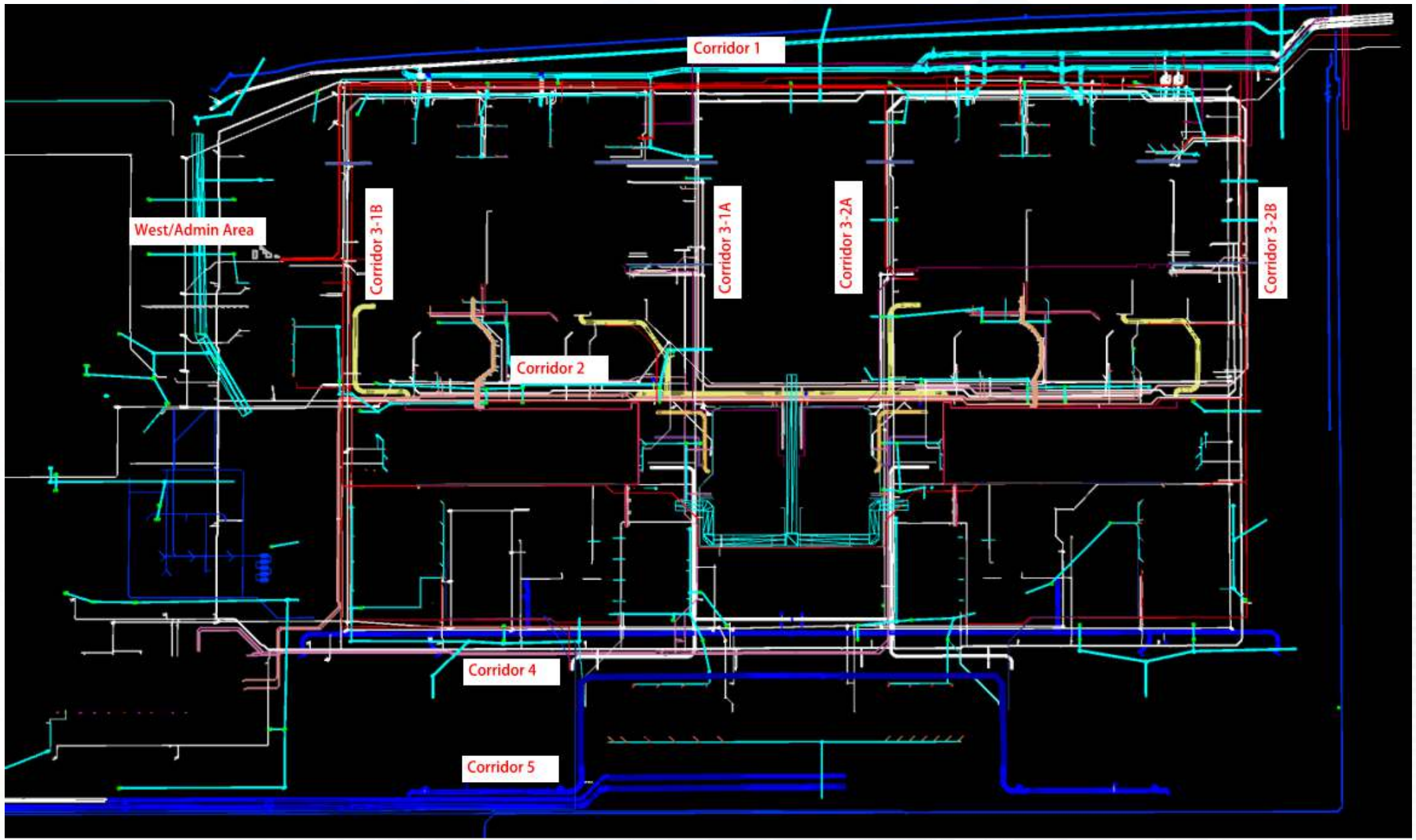




Construction Progress – Yard Piping

- **Installing dewatering system for 66" & 108" RW lines in Corridor 1**
- **Installing Storm Sewer RCP in Corridor 3-1A**
- **Installing 24" PDR line in Corridor 3-1A and tying into Fac 611**
- **Installing 6" PW lateral in Corridor 3-1A**
- **Laying 42" FTW pipe in Corridor 3-1A Central**
- **Restoring construction roads after pipe and electrical ductbanks installed**
- **Laying 96" FW steel pipe and header in Corridor 4**
- **Placing 8x4' Storm box culverts in Corridor 4 (by Fac 601)**
- **Grinding, welding, and grouting the 120" & 84" FW steel pipe joints in Corridor 5**
- **Reinforced and poured the 120" & 84" FW valve supports in Corridor 5**
- **Laying the 84" & 120" FW distribution lines in Corridor 5**
- **Installing 108" FW coupling in Corridor 5 (North of Fac 111)**

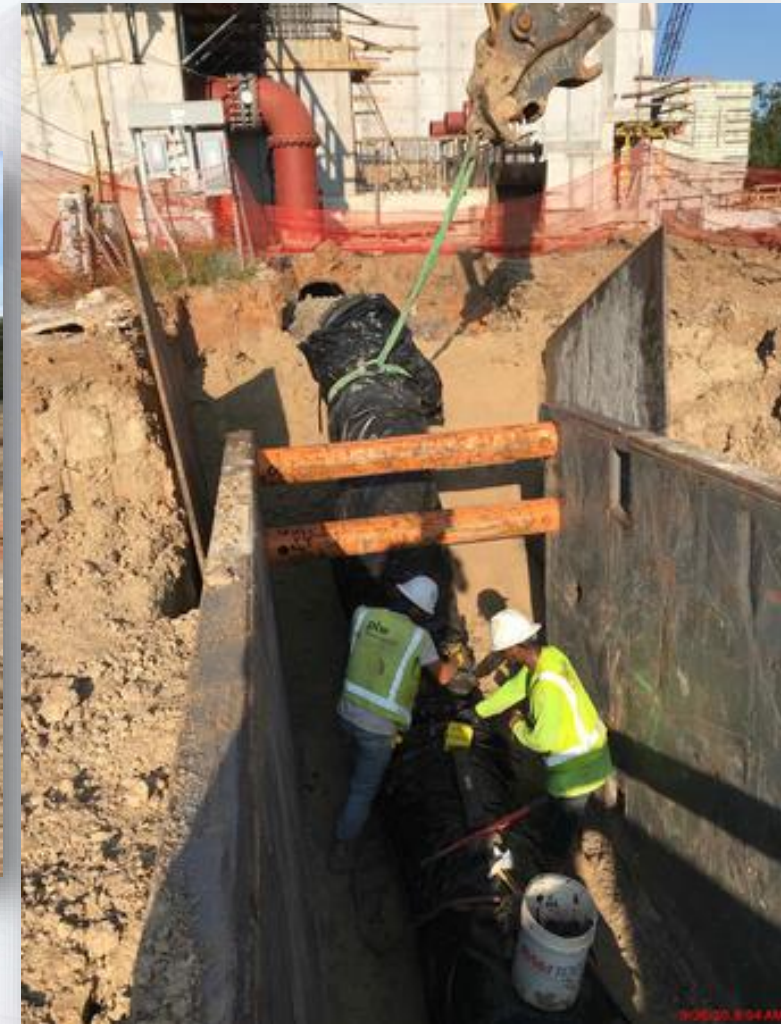




Installing Storm Sewer RCP in Corridor 3-1A



Installing 24" PDR line in Corridor 3-1A and tying into Fac 611



Laying 42" FTW pipe in Corridor 3-1A Central



Restoring construction roads after pipe and electrical ductbanks installed



Placing 8x4' Stm box culverts in Corridor 4 (by Fac 601)



Laying the 84" & 120" FW distribution lines in Corridor 5



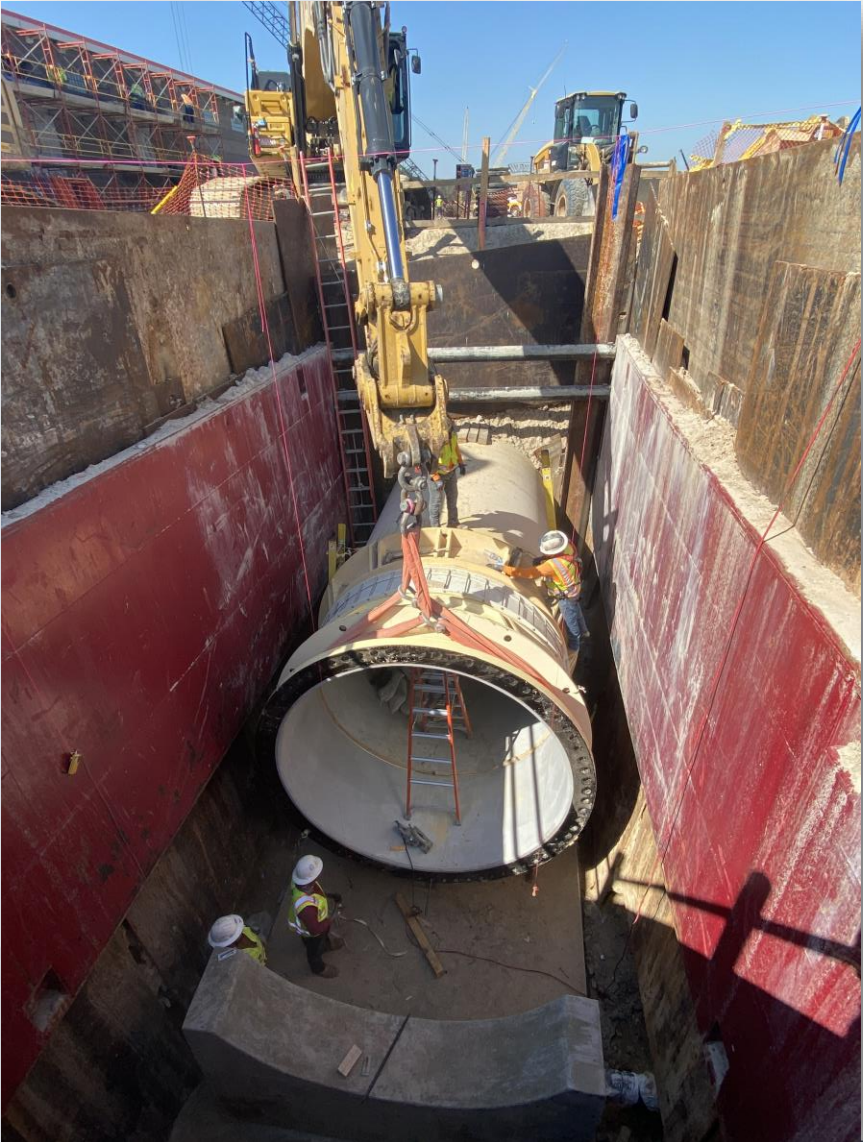
Grinding, welding, and grouting the 120" & 84" FW steel pipe joints in Corridor 5



Reinforced and poured the 120" & 84" FW valve supports in Corridor 5



Installing 108" FW coupling in Corridor 5 (North of Fac 111)



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Construction Progress – Central Plant

281-FILTER MODULE 1 :

- Forming/Reinforcing Walls.
- Pouring Walls.
- East Side Masonry.
- Stripping West Gallery Top Deck Shoring.
- Gallery Deck A2.

291-TRANSFER PUMP STATION 1:

- Interior 84" BFVs Delivery
- Remove Shoring
- 96" Header Installation

292-TRANSFER PUMP STATION 2:

- Backfill and compact at Main Slab
- Install Pump Cans Base Plate Anchor Bolts
- Remove dewatering

311-POST CHEMICAL FACILITY 1 SH/CS :

- Footing, Stem Walls RFP –Building Area
- Surface Preparation and CRC application CS Tank Pads
- Fabrication of SH Tank –Carbon Steel

312 – POST CHEMICAL FACILITY 2 FA/LAS/PEC/SB

- Installation of Underground Conduit –Containment Area
- Soil compaction & Concrete Pour for Seal Slab for footings. -Building Area.

282 -FILTER MODULE 2:

- Forming/Reinforcing Base Slabs.
- Forming Base Slabs 5/6.



Central Plant – Phase 1



281-FILTER MODULE-Forming/Reinforcing West Filter Walls



281-FILTER MODULE-Pouring Walls



9/29/20, 7:27 AM

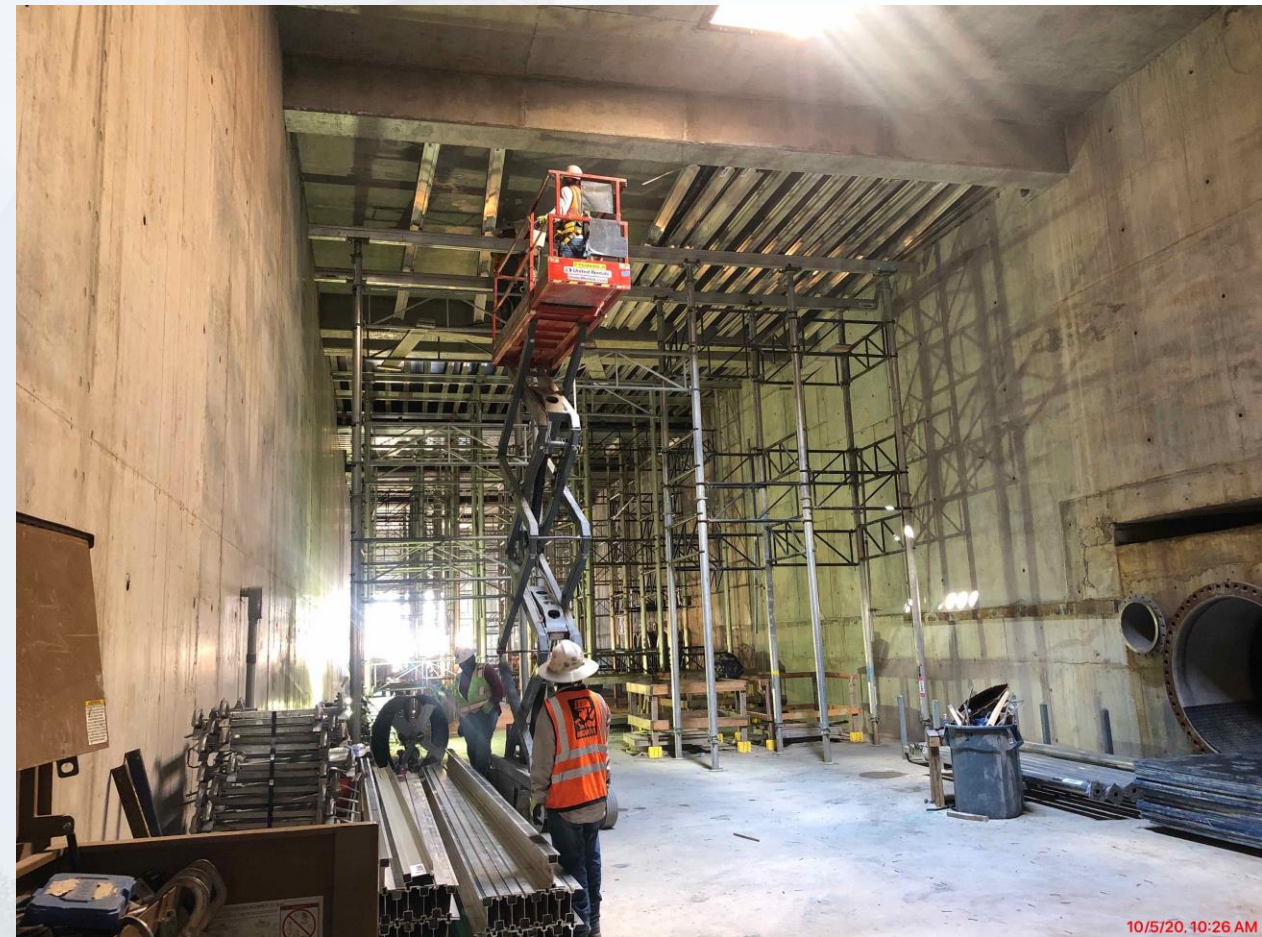
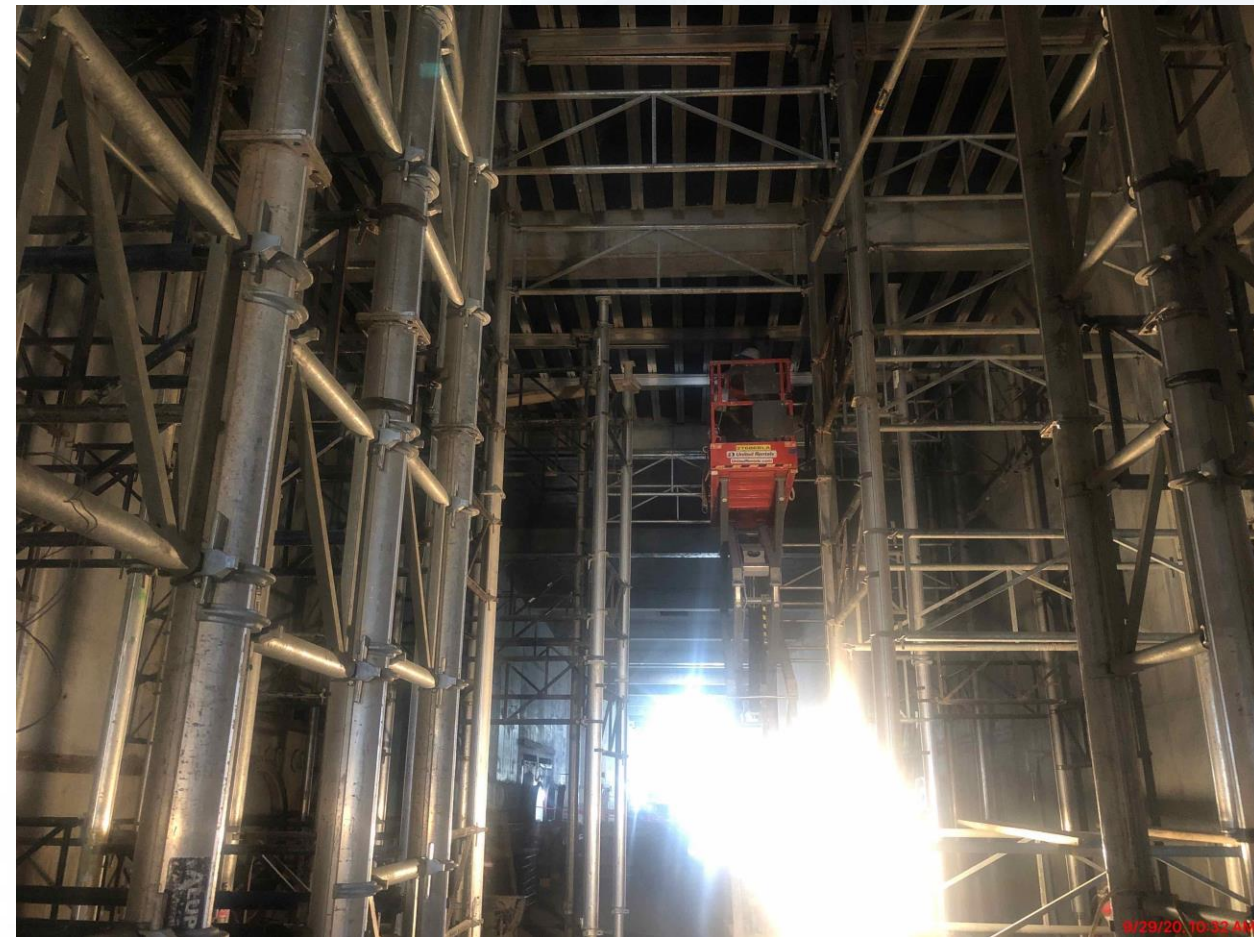
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281-FILTER MODULE- East Side Masonry



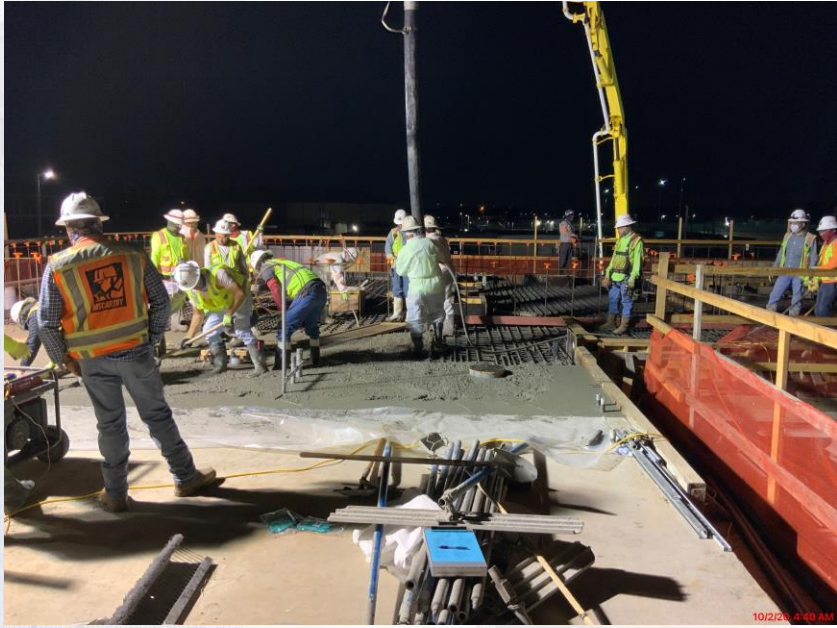
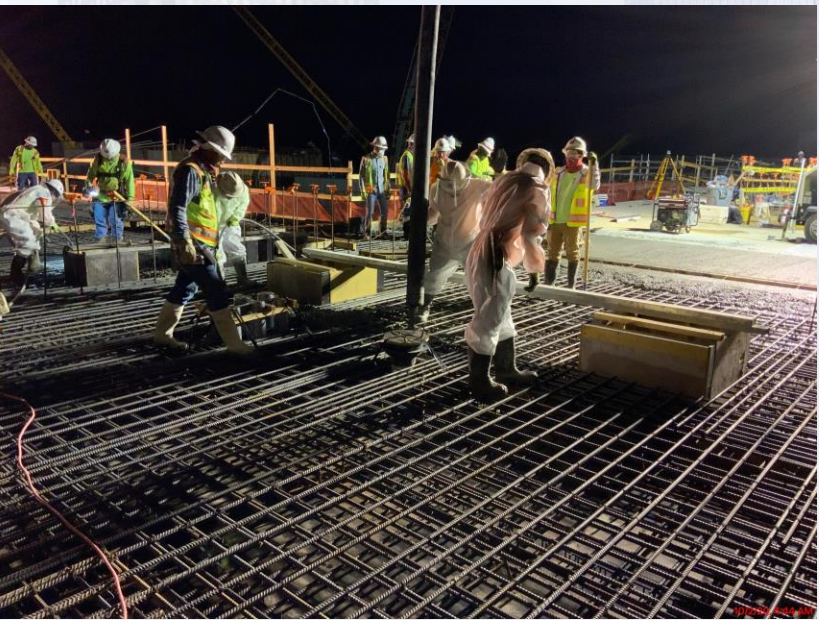
281-FILTER MODULE- Stripping Shoring For West Gallery Deck



281-FILTER MODULE- Gallery Deck A2 Forming/Reinforcing/Pouring



9/24/20, 10:22 AM



10/2/20, 4:40 AM

291-TPS – Top View 10/01/2020



291– Interior 84" BFVs Delivery



291– Remove Shoring



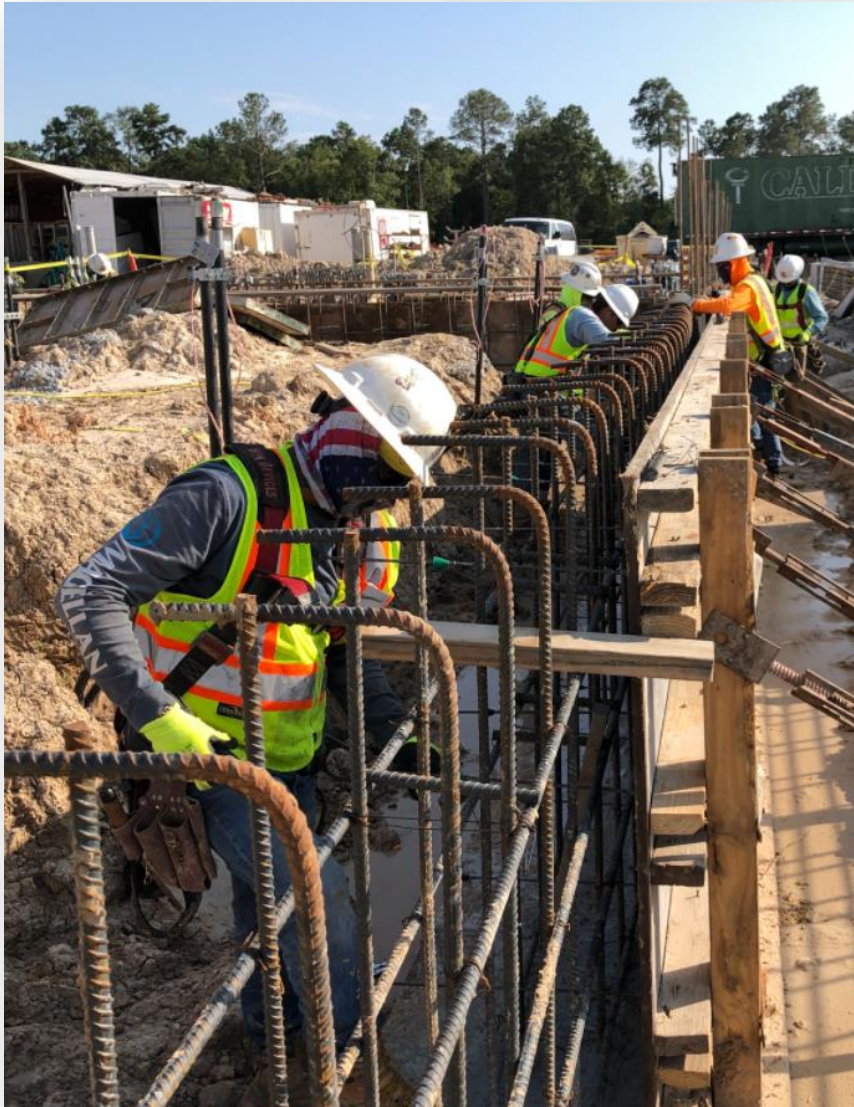
291– Install 96" Header



311 - Overall view 10/01/2020



311-Post-Chem Bldg: FRP - Footing, stem walls.



311-Post-Chem Tank Pads: Fabrication of SH Tanks –Carbon steel



311-Post-Chem CS Tank Pads: Preparation and Application of CRC



312-Post –Chem Tank Farm: Installation UG Conduits



312-Post –Chem Bldg: Compact and Pour Seal Slab for footings



Central Plant – Phase 2



282- FILTER MODULE 2- Reinforcing Base Slabs



9/26/20 9:24 AM



9/26/20 7:28 AM

282-FILTER MODULE 2- Pouring Base Slab 5/6



292 – Backfill and Compact at Main Slab Subgrade



292 – Instal Pump Cans Base Plate Anchor Bolts



292 – Remove Dewatering





Construction Progress – LREQ Basins Facilities 601/602

- **601 – Continue to install rebar and forms for elevated walkway and deck**
- **601 – Backfilling North and South areas**
- **602 – Formwork and Rebar Installation for Pump Station**



601 – Continuing install of rebar and forms for elevated walkway and deck



601 – Backfilling North and South areas



602 – Formwork and Rebar Installation for Pump Station





Construction Progress – North Plant

211-Pretreatment Chemical Facility 1:

- SL-3 F/R/P

213-Pretreatment Chemical Facility 3:

- Structural Concrete Work
- U/G Electrical

214-Pretreatment Chemical Facility 4:

- Structural Concrete Work
- U/G Electrical

241-FlocSed Train 1

- TW-5 F/R/P

242-FlocSed Train 2

- ESL-1, ESL-6, ESL-11 F/R/P
- SL-8 F/R/P
- Knife Wall Placement

251-Ozone Contactor Train 1

- Influent Sump F/R/P

252-Ozone Contractor Train 2:

- WL-2 F/R/P

502-Gravity Thickener Complex 2

- Basin #3 Walls F/R/P
- Basin #4 ESL/Walls F/R/P

504-Gravity Thickener Complex 4

- Basin #7 SOG F/R/P
- Basin #8 SL-1 F/R/P

611-Liquid Residuals Clarifier Facility 1:

- EEW-1 & WDW-4 F/R/P



Facility 211 – SL-3 F/R/P



Facility 213 – CF-1 F/R/P, Underground Electrical, COL Base(s), ESL-1 Placement



Facility 214 – Tank Pads Placement, Underground Electrical



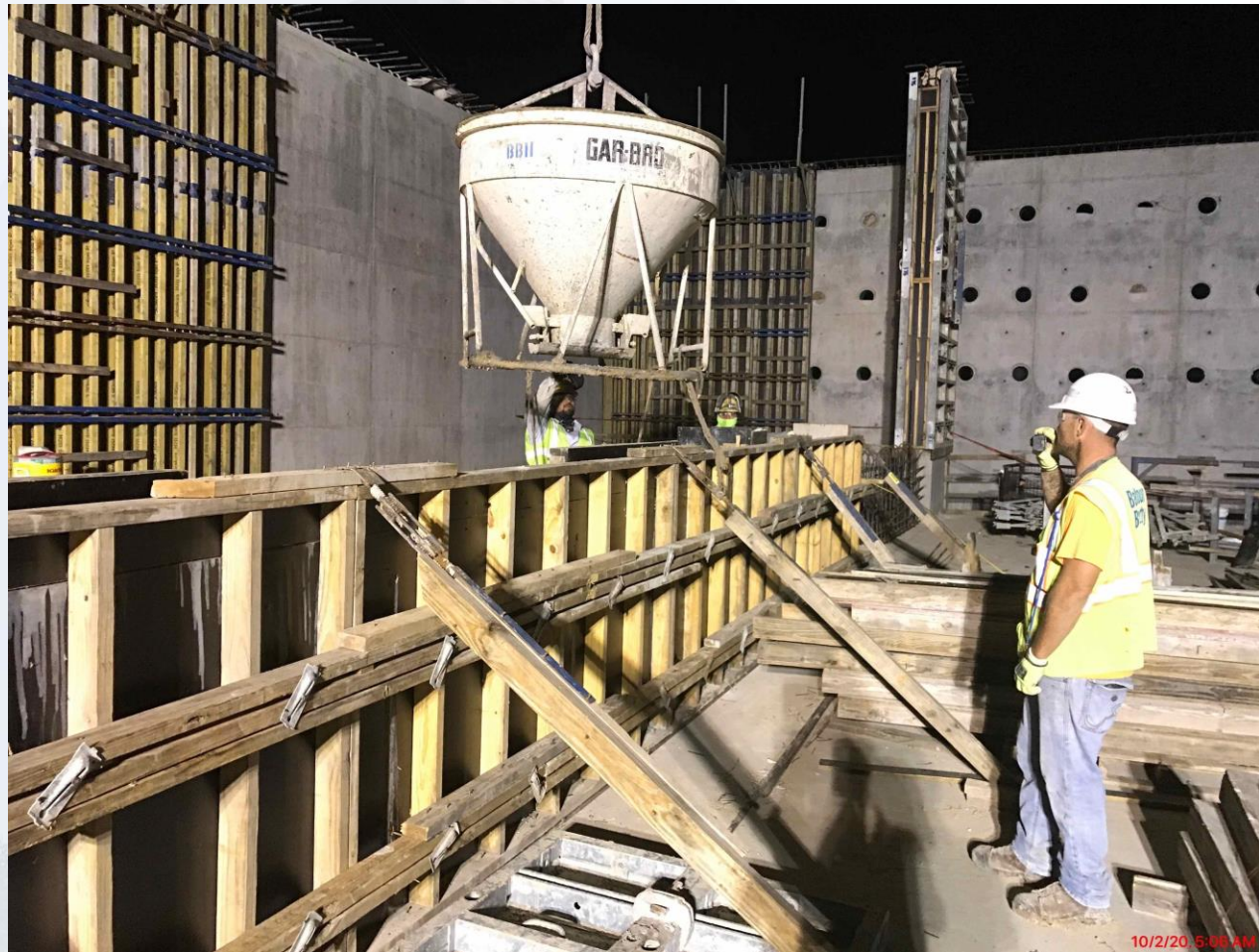
Facility 241 – TW-5 F/R/P



Facility 242 – ESL-1, ESL-6, ESL-11 F/R/P



Facility 242 – SL-8 F/R/P & Knife Wall Placement



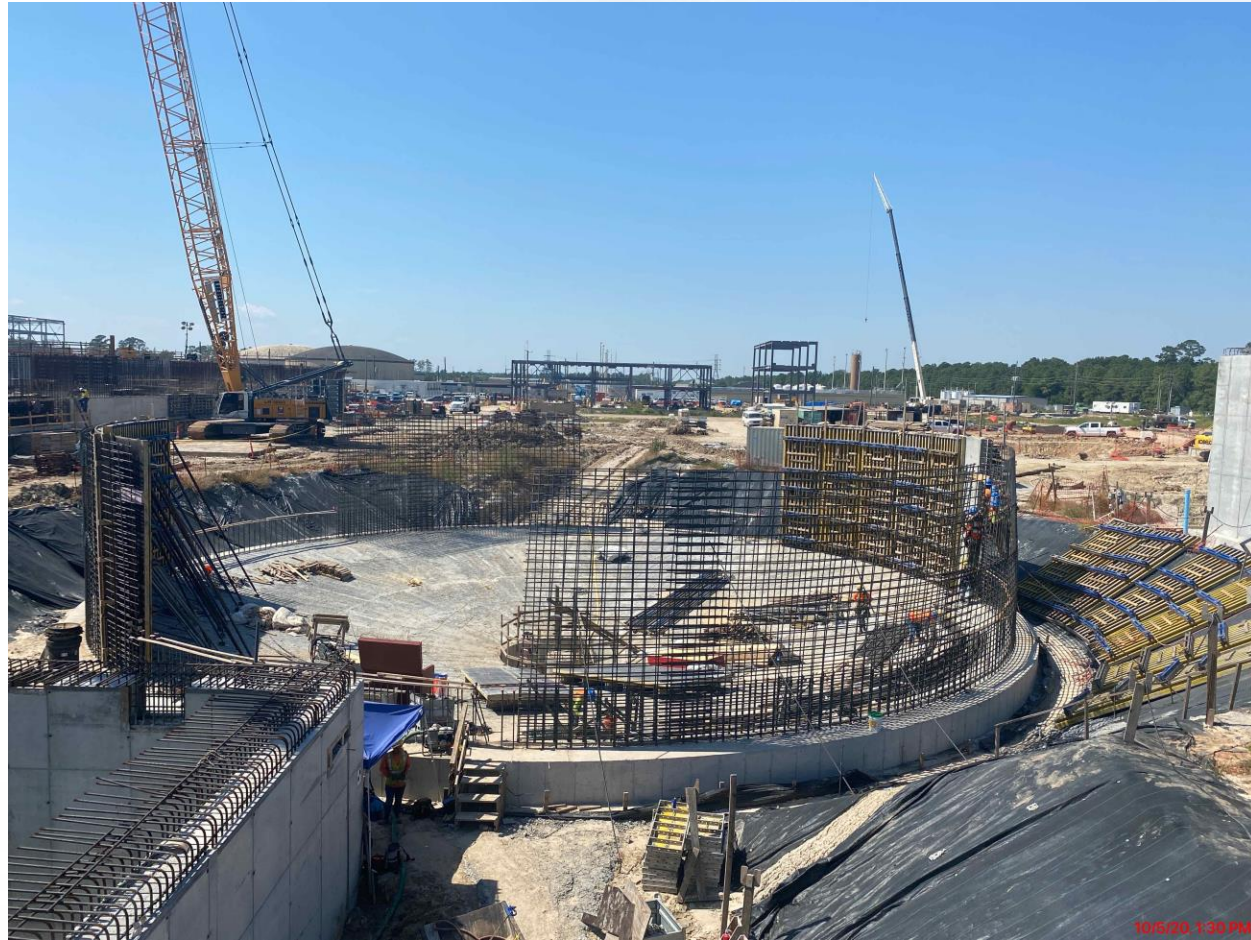
Facility 251 – SOG Influent Sump F/R/P



Facility 252 – WL-2 F/R/P



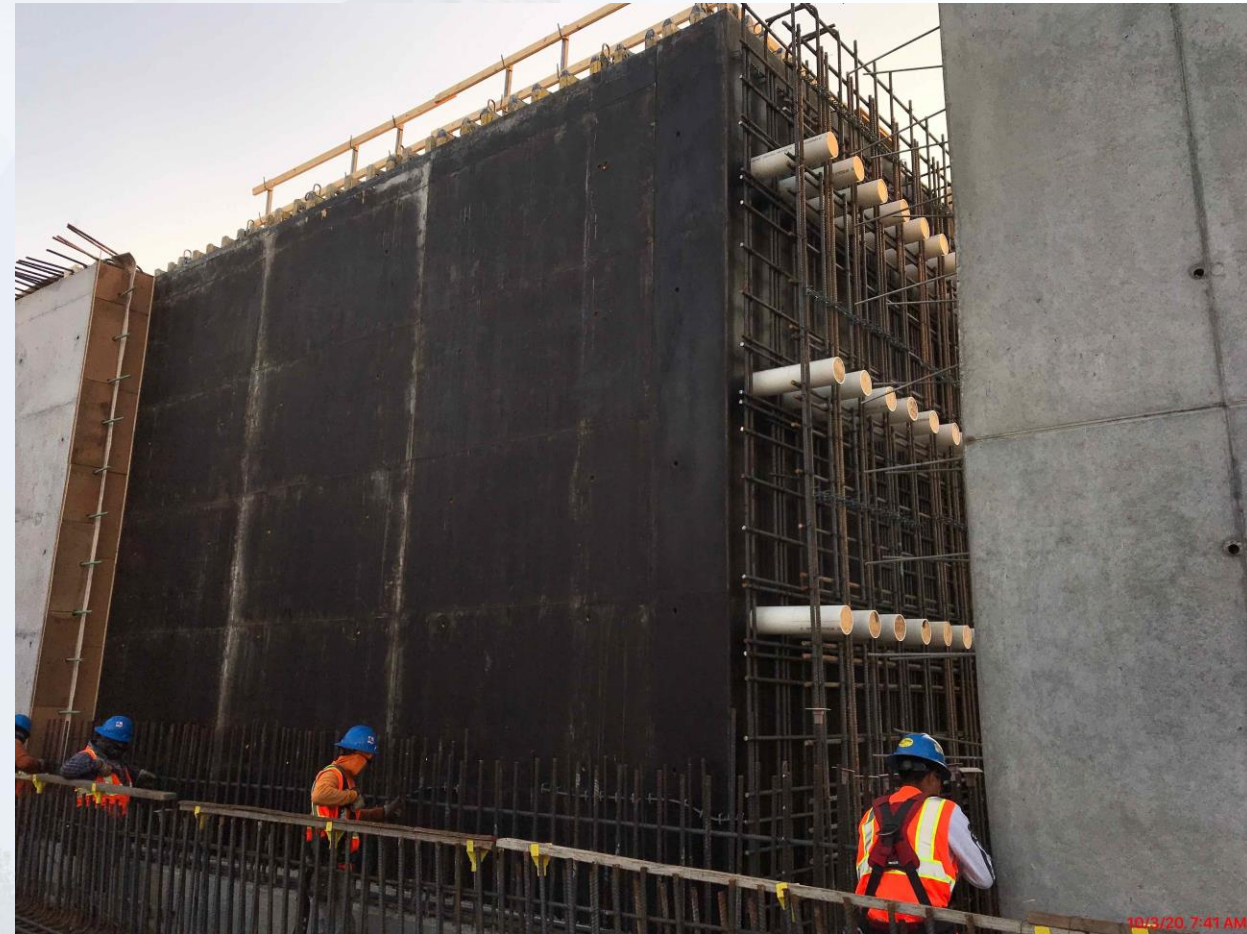
Facility 502 – GT#3 Walls F/R/P GT#4 ESL-3-6 & WL-3a-6a (Weir)



Facility 504 - GT#7 SOG F/R/P & GT#8 SL-1 F/R/P



Facility 611 – EEW-1 & WDW-4





Construction Progress – South Plant

- **Installation of 102” Outlet Pipe at GST 362**
- **Load Transfer Platform Installation at GST 362 Awaits Final Lift.**
- **Installation of 78” Inlet Pipes and their Encasement at HSPS 401**
- **Installation of MSB 111 Roof Blocking Underway.**
- **Installation of Glass Block at MSB 111**
- **Pump Can Base Slab Pour at HSPS 402 is Complete.**
- **Erection of Structural Steel 3rd Floor Roof Framing at the Dewatering Building 520**
- **Installation of Masonry Block Walls at Dewatering Building 520 Continues**
- **Installation of Slab Rebar at Sludge Equalization Building 510**



GST 361 & 362 AERIAL VIEW



GST 361

GST 362

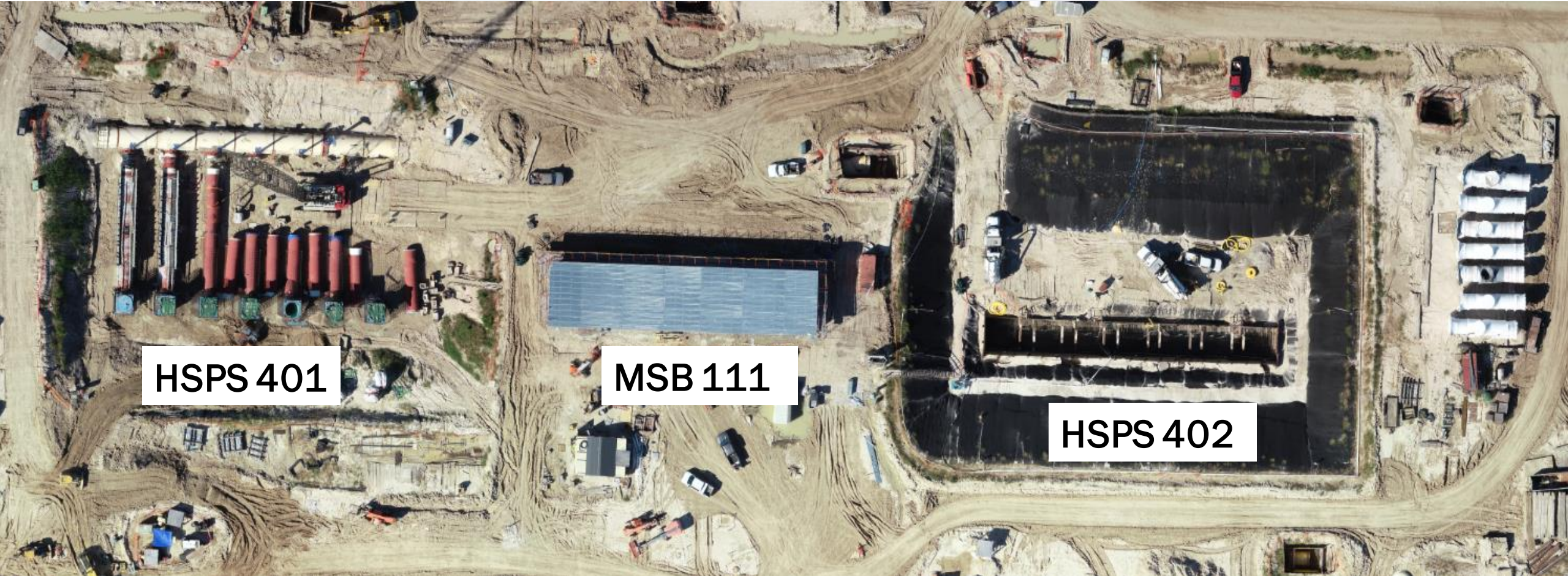
Installation of 102" Outlet Pipe at GST 362



Load Transfer Platform Installation at GST 362 Awaits Final Lift



HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



HSPS 401

MSB 111

HSPS 402

Installation of 78" Inlet Pipes and their Encasement at HSPS 401



Installation of MSB 111 Roof Blocking Underway



Installation of Glass Block at MSB 111



Pump Can Base Slab Pour at HSPS 402 is Complete



DEWATERING BUILDING 520 & THICKENED SLUDGE EQUALIZATION BUILDING 510 AERIAL VIEW



Erection of Structural Steel 3rd Floor Roof Framing at the Dewatering Building 520



Installation of Masonry Block Walls at Dewatering Building 520 Continues



Installation of Slab Rebar at Sludge Equalization Building 510





Construction Progress – Administration Building

- Completed Structural Steel at MB
- Formed and Reinforced Footings and Grade Beam at Breezeway (BW)
- Began Erection of Structural Steel at AB
- Placed Footings and Grade Beam at BW



Completed MB Steel Structure



Forming and Reinforcing of Footings/Grade Beam at BW



Erection of Structural Steel at AB



Placement of Footings and Grade Beam at BW



