



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

**October 21, 2020**



**Houston Waterworks Team**







# Drone Site Map: October 15, 2020





# Construction Progress – Intake Pump Station (IPS)

- Welding the 108" Southside bridge pipe
- Installing 72" valve and pipe support
- Continue installing 108" bridge pipe connecting to the platform
- Continue installing 108" underground piping and pouring CLSM

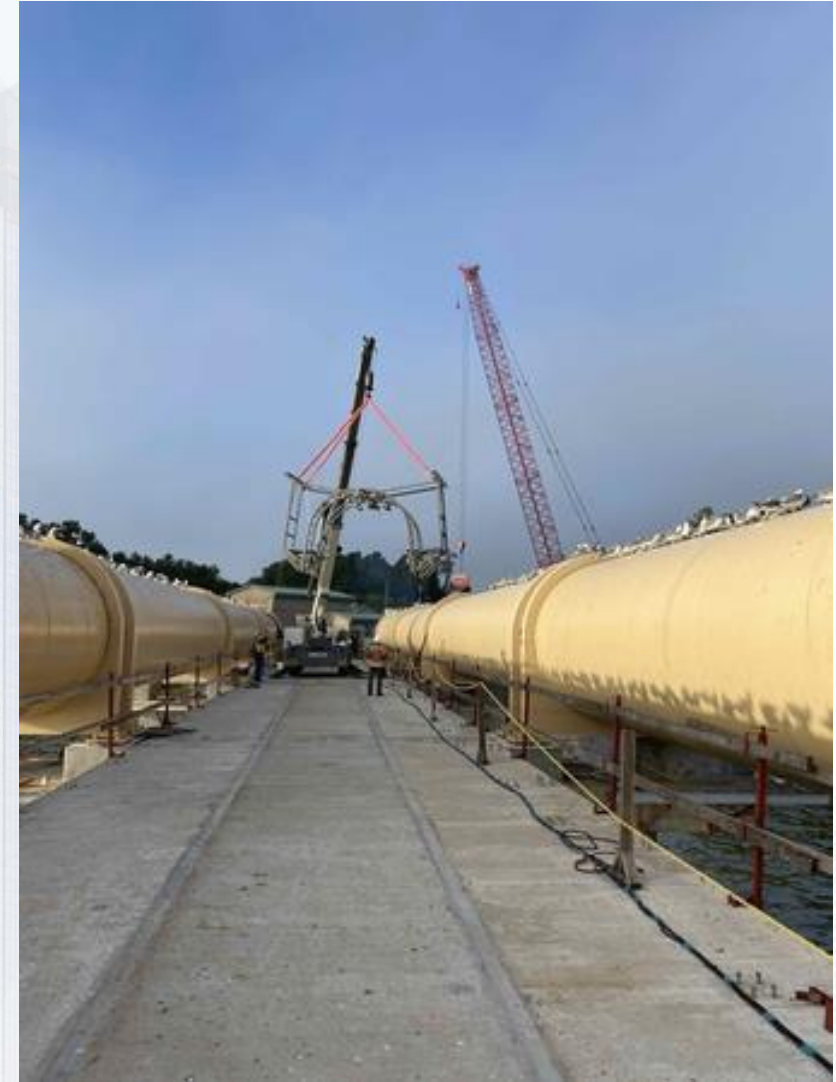






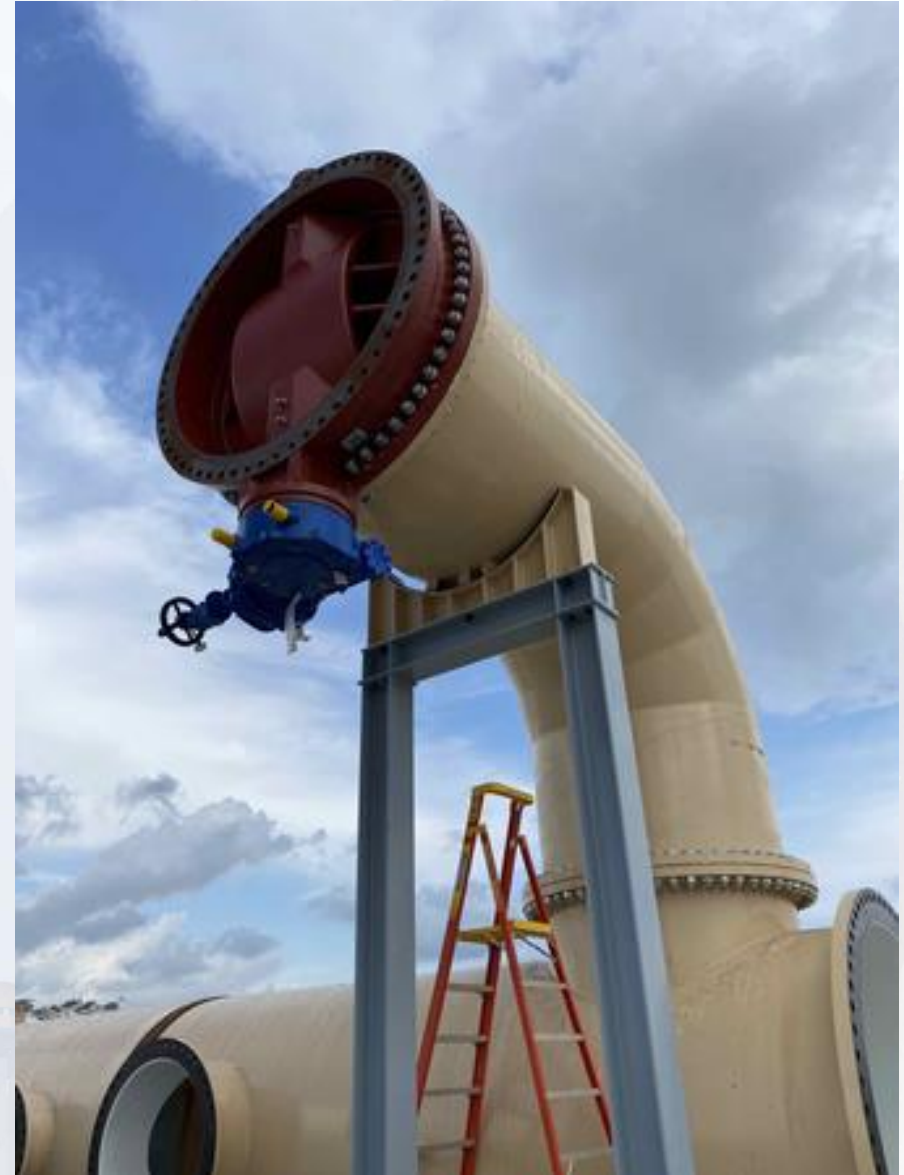


# Welding the 108" Southside bridge pipe





# Installing 72" valve and pipe support





# Continue installing 108" bridge pipe connecting to the platform





# Continue installing 108" RW underground piping and pouring CLSM





# Construction Progress – Site Electrical

- Fiber Duct Bank Installation
- Existing Plant Duct Bank Installation





# Fiber Duct Bank Installation





# Existing Plant Duct Bank Installation






# Existing Plant Duct Bank Installation







# Construction Progress – Substation Facility 102

- Continue installing the busduct
- Installing rock in the Substation Yard
- Continue installation of cable tray and cable





# Continue installing the busducts





# Installing rock in the Substation yard





# Continue installation of cable tray and cable

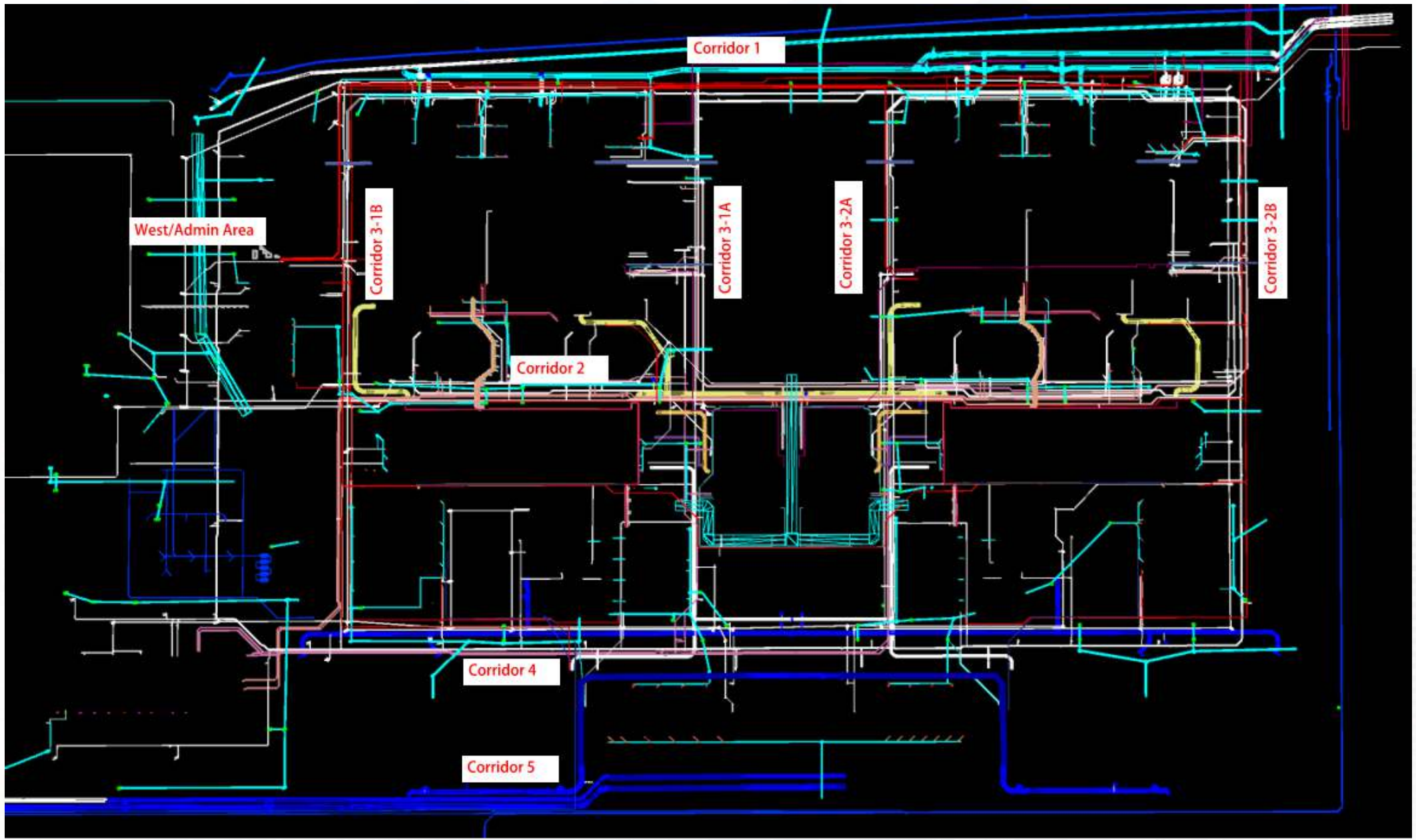




# Construction Progress – Yard Piping

- **Installing 60” OF steel pipe from Fac 242 in Corridor 3-1A**
- **Installed and air tested the 96” Victaulic Coupling in Corridor 3-1A at Fac 252**
- **Installing 96” OZW Steel pipe in Corridor 3-1A from Fac. 252**
- **Installing 6” & 12” PW pipe in Corridor 3-1A**
- **Welding the 96” FW steel pipe and header in Corridor 4**
- **Installing a 60” BFV on the BWS line in Corridor 4**
- **Placing 8x4' Storm box culverts in Corridor 4 (by Fac 601)**
- **Laying the 84” & 120” FW distribution lines in Corridor 5**
- **Set the 102” FW BFV and 102x120” Tee and building valve supports in Corridor 5**







# Installing 60" OF steel pipe from Fac 242 in Corridor 3-1A





# Installed and air tested the 96" Victaulic Coupling in Corridor 3-1A at Fac 252





# Installing 96" OZW Steel pipe in Corridor 3-1A from Fac. 252





# Installing 6" & 12" PW pipe in Corridor 3-1A





# Welding the 96" FW steel pipe and header in Corridor 4





# Installing a 60" BFV on the BWS line in Corridor 4





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





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





# Set the 102" FW BFV and 102"x120" Tee and building valve supports in Corridor 5







# Construction Progress – Central Plant

## 281-FILTER MODULE 1 :

- Forming/Reinforcing Walls.
- Pouring Walls.
- East Side Masonry.
- Installing FD VTP.
- West Side Walkways.

## 291-TRANSFER PUMP STATION 1:

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

## 292-TRANSFER PUMP STATION 2:

- Install Pump Cans
- Place Underdrain Material under Main Slab
- Install Manhole

## 311-POST CHEMICAL FACILITY 1 SH/CS :

- Backfilling and Compacting Footing, Stem Walls –Building Area
- Surface Preparation and CRC application CS Tank Pads
- Fabrication of SH Tank –Carbon Steel
- Backfilling Fill Station Area
- Installation of Plumbing Lines/STM lines

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

- Footing, Stem Walls RFP – Building Area

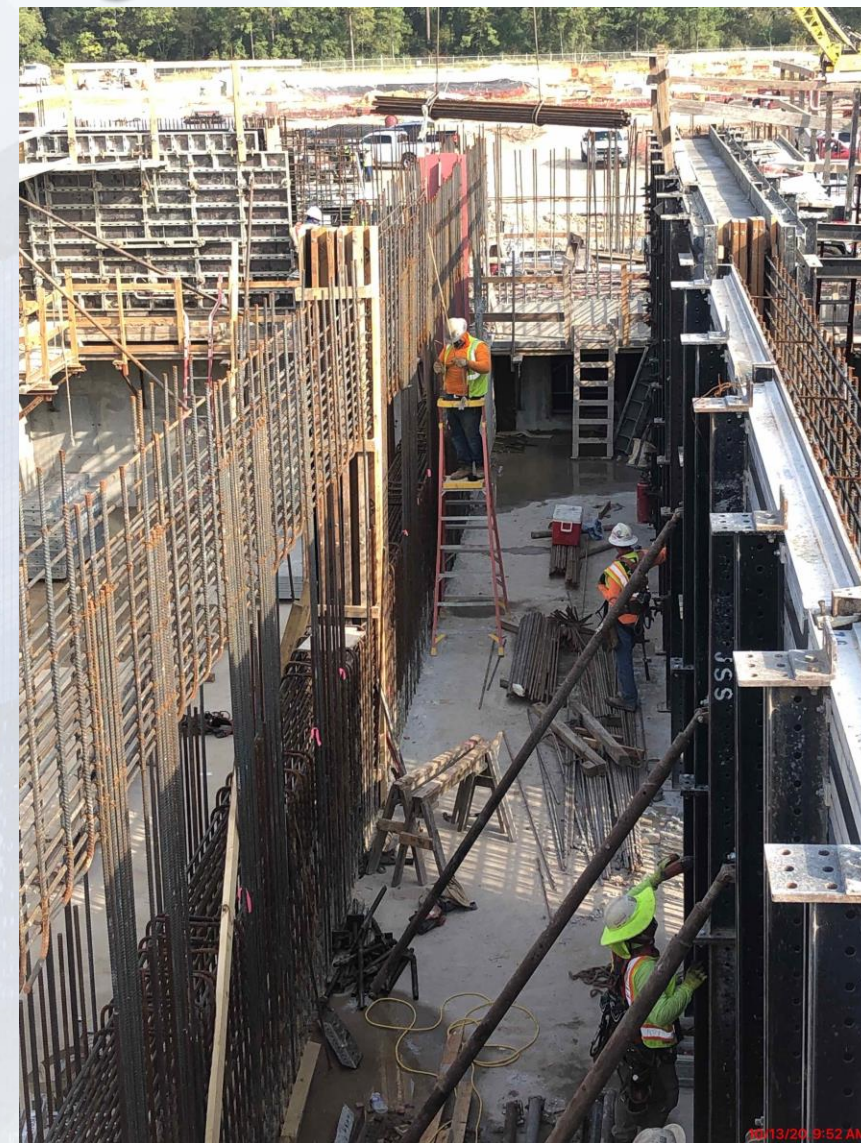
## 282 -FILTER MODULE 2:

- Forming/Reinforcing Base Slabs.
- Forming Base Slabs 2/8/4.





# 281-FILTER MODULE-Forming/Reinforcing West Filter Walls





# 281-FILTER MODULE-Pouring Walls



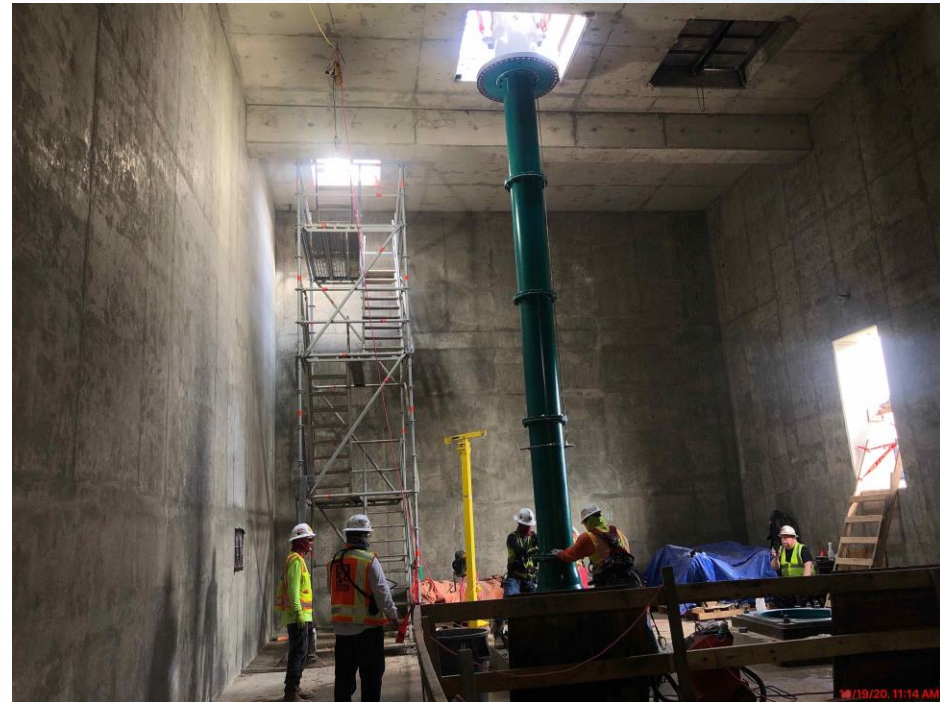


# 281-FILTER MODULE- East Side Masonry





# 281-FILTER MODULE- Installing FD VTPs





# 281-FILTER MODULE - Forming/Reinforcing/Pouring Walkways





# 291-TPS – Top View 10/15/2020





# 291 – Interior 84" BFVs Installation





# 291-TPS – Remove Shoring





# 291-TPS – Installing 96" FW Header





# 311 – Post Treatment Chemical Facility - Overall view 10/01/2020





# 311 - Backfilling and Compacting Footing, Stem Walls –Building Area





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





# 311 - Backfill of Fill Station Area





# 311 - Installation of Plumbing and STM Lines





# 312 - Footings and Stem Wall –RFP





# 312 - Footings and Stem Wall –RFP



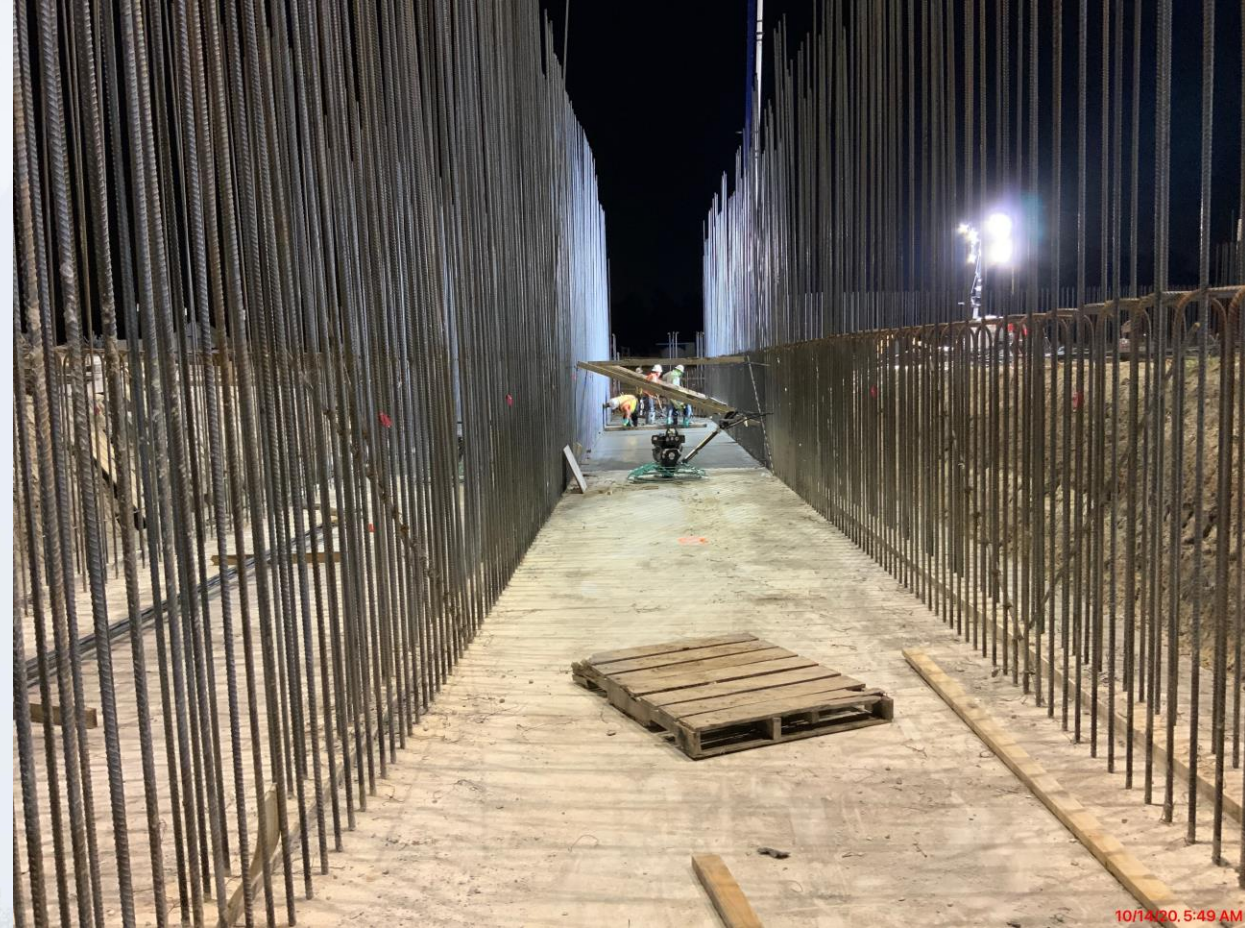


# 282-FILTER MODULE 2- Reinforcing Base Slabs





# 282-FILTER MODULE 2- Pouring Base Slabs 2,8,4





# 292-TPS - Install Pump Cans





# 292-TPS – Place Underdrain Material under Main Slab





# 292-TPS – Installing Manhole







# Construction Progress – LREQ Basins Facilities 601/602

- **601 – Installation of rebar and ductbank for elevated walkway and deck**
- **601 – Grout placement on interior walls of Basin**
- **602 – Pump Station: Pour wall P19**





# 601 – Installation of rebar and ductbank for elevated walkway and deck





# 601 – Grout placement on interior walls of Basin





# 602 – Pump Station: Pour wall P19







# Construction Progress – North Plant

## 211-Pretreatment Chemical Facility 1:

- SOG F/R/P

## 212-Pretreatment Chemical Facility 2:

- Mudmat
- Sump 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

- Trench Walls F/R/P

## 242-FlocSed Train 2

- Structural Concrete Work

## 244-FlocSed Train 4

- E/W Corridor Backfill

## 251-Ozone Contactor Train 1

- Influent Sump F/R/P

## 252-Ozone Contractor Train 2:

- WL-3 & WL-5 F/R/P
- Victaulic Coupling Install

## 502-Gravity Thickener Complex 2

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

## 504-Gravity Thickener Complex 4

- Basin #7 SL-2 F/R/P
- Basin #8 Encasement, Gravel, SL-1 F/R/P

## 611-Liquid Residuals Clarifier Facility 1:

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





# Facility 211 – Slab On Grade F/R/P





# Facility 212 – Mudmat & Sump F/R/P





# Facility 213 – SOG SL-4, SL-5, SL-6 F/R/P, Underground Electrical, COL Base(s), ESL-1





# Facility 214 – Tank Pads Completion, Underground Electrical, Area B Foundation Walls





# Facility 241 – Trench Walls F/R/P





# Facility 242 – Knife Wall 1-D, ESL Columns, FBDC WL-5, -7, -8 F/R/P



10/20/20, 11:49 AM



10/20/20, 11:48 AM



# Facility 242 – ESSW 4/4a, ESSW 5/5a F/R/P





# Facility 244 – E/W Corridor Encasement/Backfill





# Facility 251 – Influent Sump F/R/P



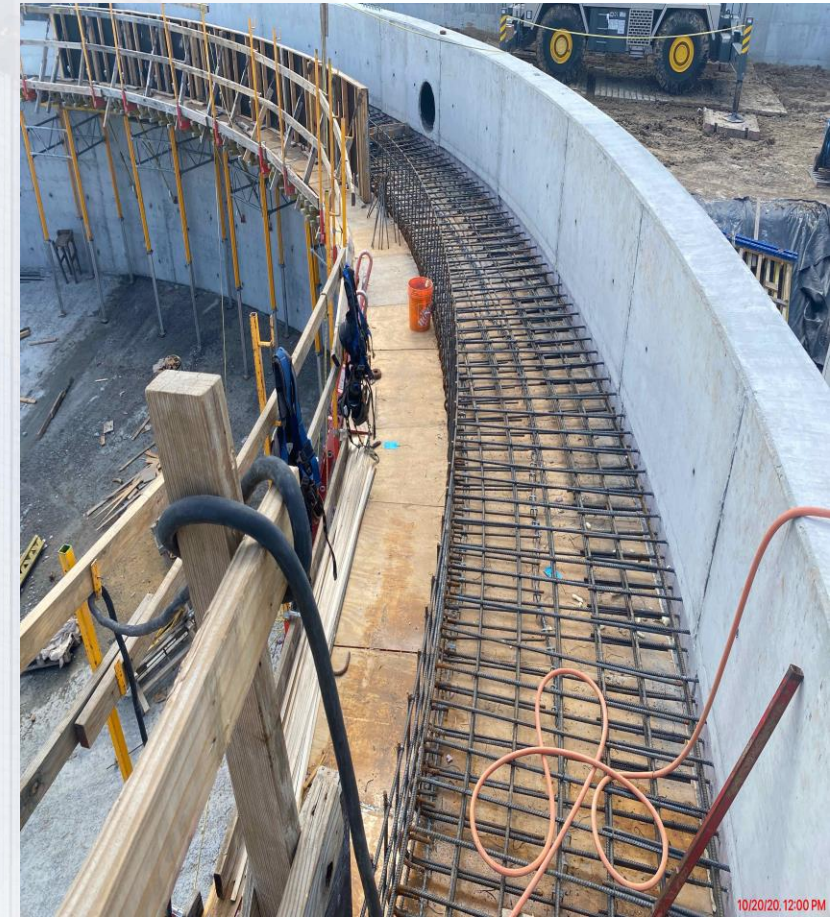


# Facility 252 – WL-3 & WL-5 F/R/P, Effluent Victaulic





# Facility 502 – GT#3 Walls F/R/P, USDS, GT#4 Elevated Slabs/Weir Walls





# Facility 504 - GT#7 SL-2 F/R/P & GT#8 Encasement, Gravel, and SL-1 F/R/P





# Facility 611 – PSW-1, WDW-4, & WDW Walls F/R/P







# Construction Progress – South Plant

- **102” outlet pipe at GST 362 installation.**
- **Load transfer platform installation at GST 362 awaits final lift.**
- **MSB 111 is ready for standing seam metal roof installation.**
- **MSB 111: MEP and concrete pads installation.**
- **Installation of 78” inlet pipes and their encasement at HSPS 401.**
- **Preparation for pump can installation at HSPS 402.**
- **Rebar installation at 3<sup>rd</sup> Floor, grating installation at 2nd floor, and welding structural steel at the Dewatering Building 520.**
- **Installation of masonry block wall at dewatering building 520 continues.**
- **Concrete slab pours at Sludge Equalization Building 510.**
- **Forming walls at Sludge Equalization Building 510.**





# GST 361 & 362 AERIAL VIEW



GST 361

GST 362





# 102" Outlet Pipe at GST 362 installation

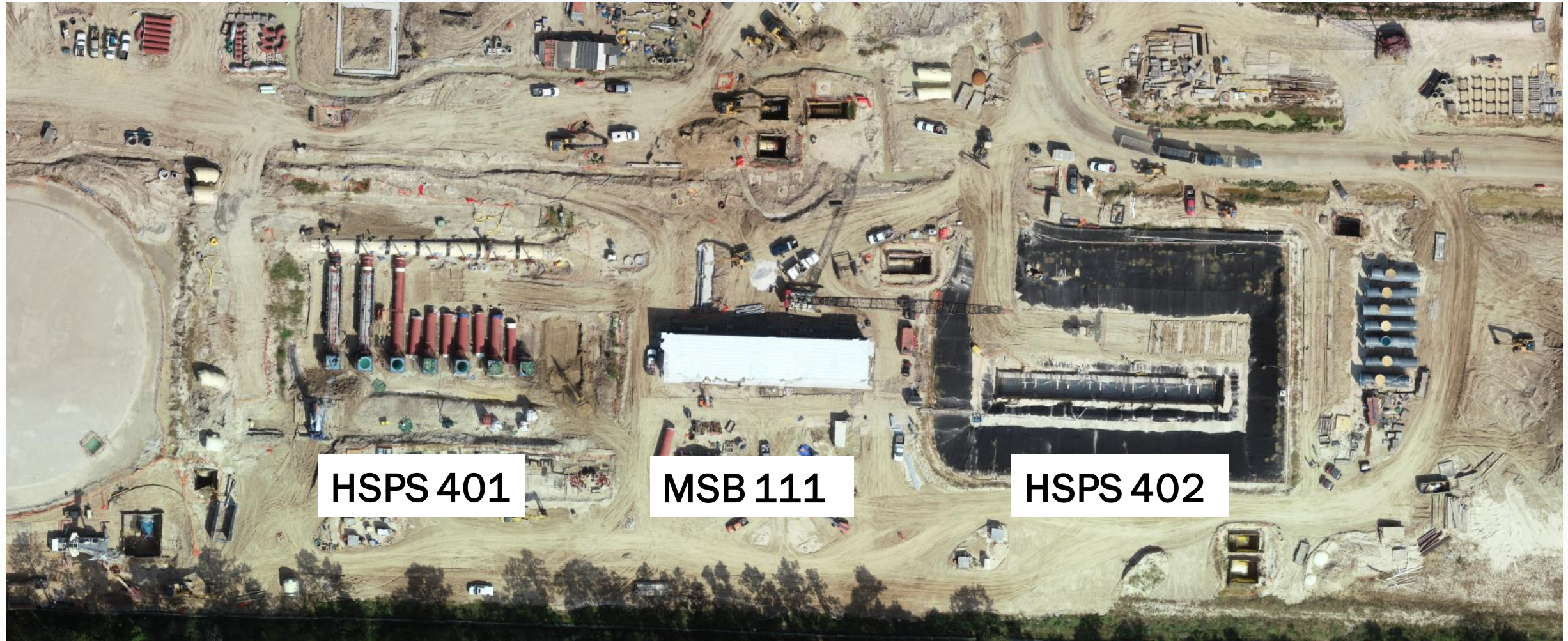


# Load Transfer Platform Installation at GST 362 Awaits Final Lift





# HSPS 401, MSB 111, HSPS 402 AERIAL VIEW



HSPS 401

MSB 111

HSPS 402

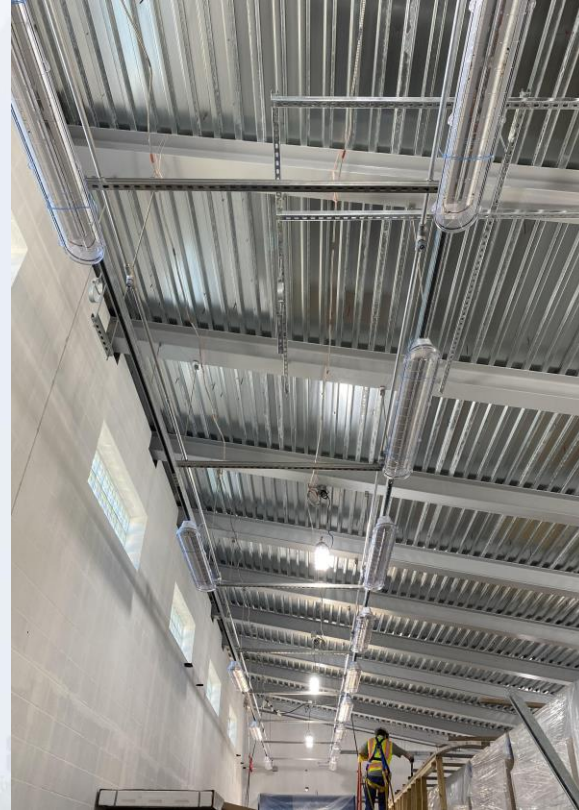


# MSB 111 is ready for standing seam metal roof Installation





# MSB 111 MEP and Concrete Pads installation





# Installation of 78" Inlet Pipes, Encasement, and hydro-testing at HSPS 401







**Preparation  
for pump can  
installation  
at HSPS 402**



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







**Rebar Installation at 3<sup>rd</sup> Floor, grating installation at 2nd floor, and structural steel welding at the Dewatering Building 520**





**Installation of  
Masonry Block  
Walls at  
Dewatering  
Building 520  
Continues**





**3rd Floor at Dewatering Building 520**





**Concrete Slab Pour at Sludge Equalization Building 510**







**Forming walls at Sludge Equalization Building 510**





# Construction Progress – Administration Building

- Continued erecting structural steel at AB
- Placed structural fill at the BW
- Placed Mezzanine decking at MB
- Reinforced Mezzanine SOMD at MB





# Erection of Structural Steel at AB





# Placement of Structural Fill at the BW





# Placement of the Mezzanine Decking at MB





# Reinforcement of the Mezzanine SOMD





