



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

**July 15, 2020**

**Houston Waterworks Team**



# Drone Site Map: July 9, 2020



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# Construction Progress – Intake Pump Station (IPS)

- Under deck pump can steel welding
- Installing platform pull box rebar



# Under deck pump can steel welding



# Installing platform pull box rebar



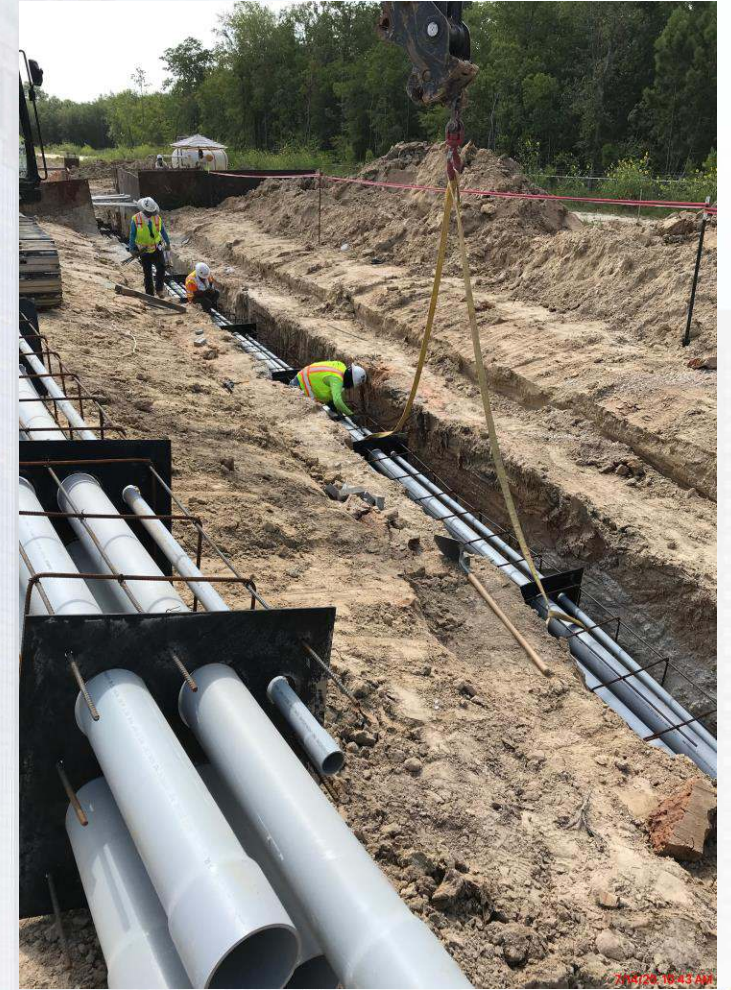
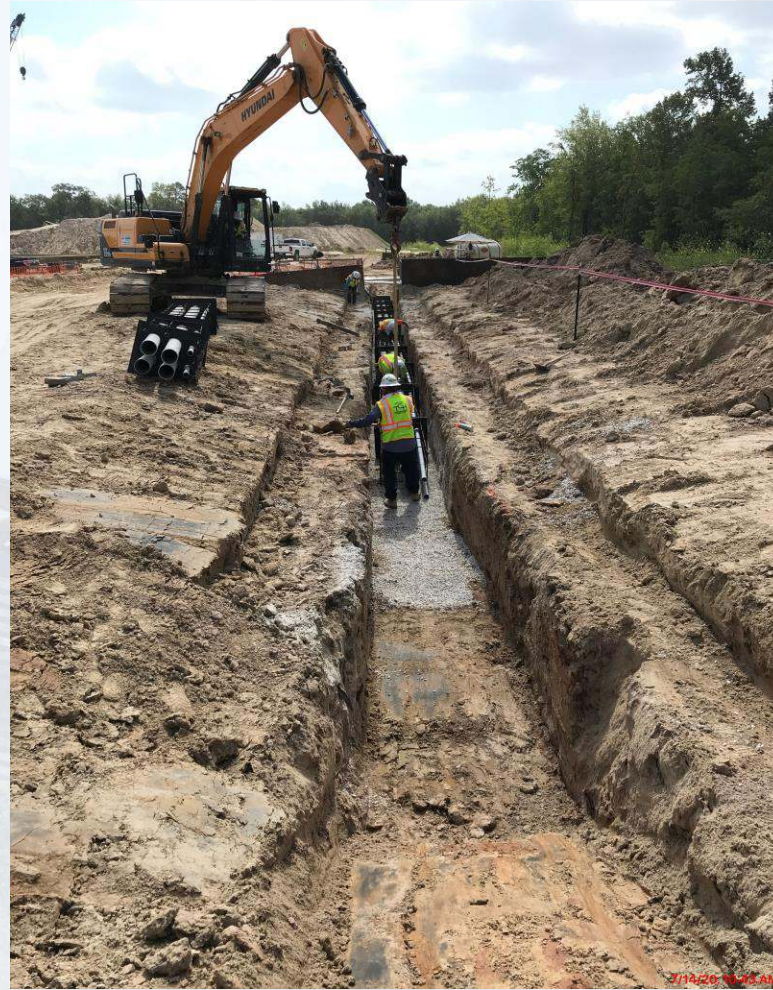


# Construction Progress – Site Electrical

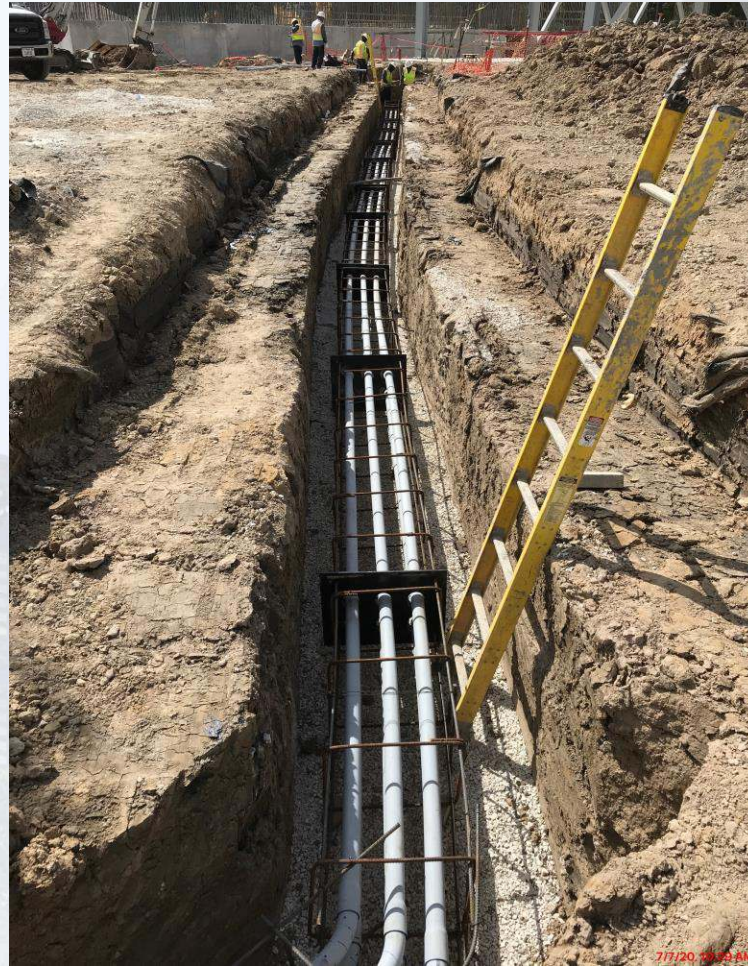
- 152 Duct Bank Installation South of 111
- Duct Bank Installation at 520 (Dewatering)
- Existing Plant – North/South Finish Road Resurface (Zone 1)



# 152 Duct Bank Installation South East of 111

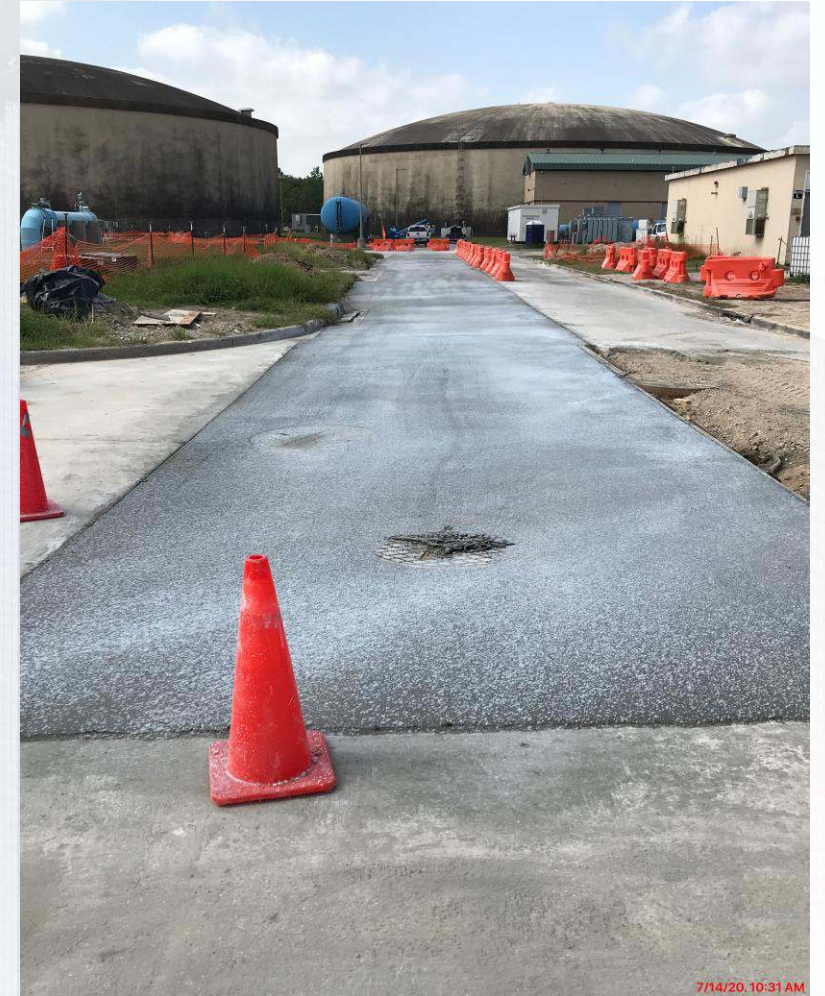
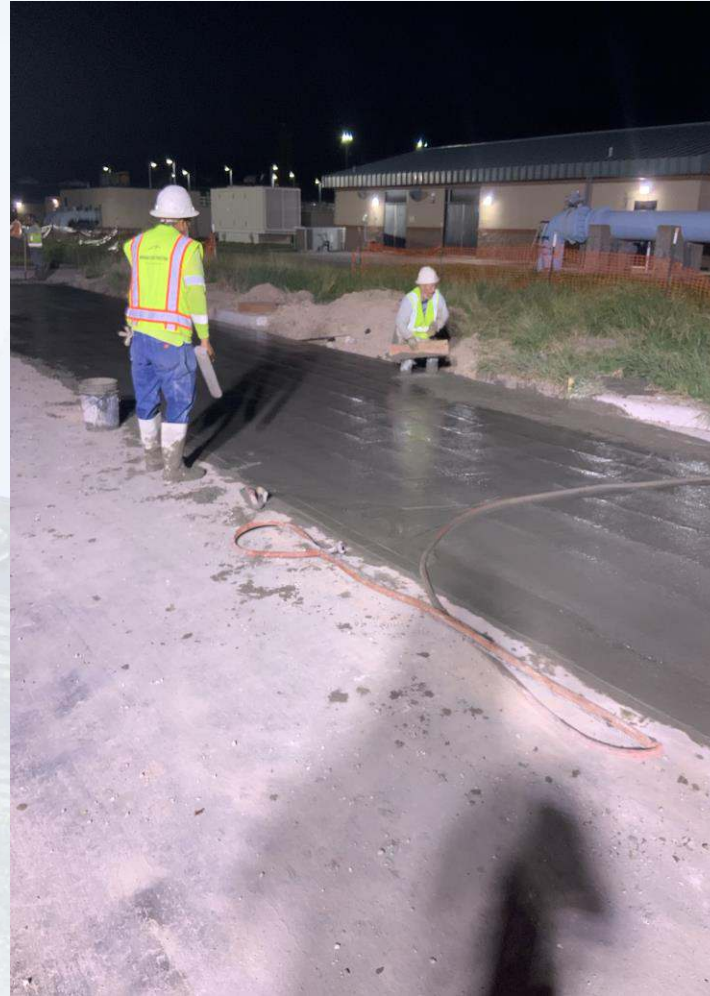


# Duct Bank Installation at 520 (Dewatering)






# Existing Plant – North/South Finish Road Resurface (Zone 1)



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# Construction Progress – Substation Facility 102

- **Installation of Formwork, Rebar and Concrete for Building Stair Foundations**
- **Finishes on SOG and clean around the area**
- **Installation of block and door frames**



# Installation of Formwork, Rebar and Concrete for Building Stair Foundations



# Finishes on SOG and clean around the area



# Installation of block and door frames

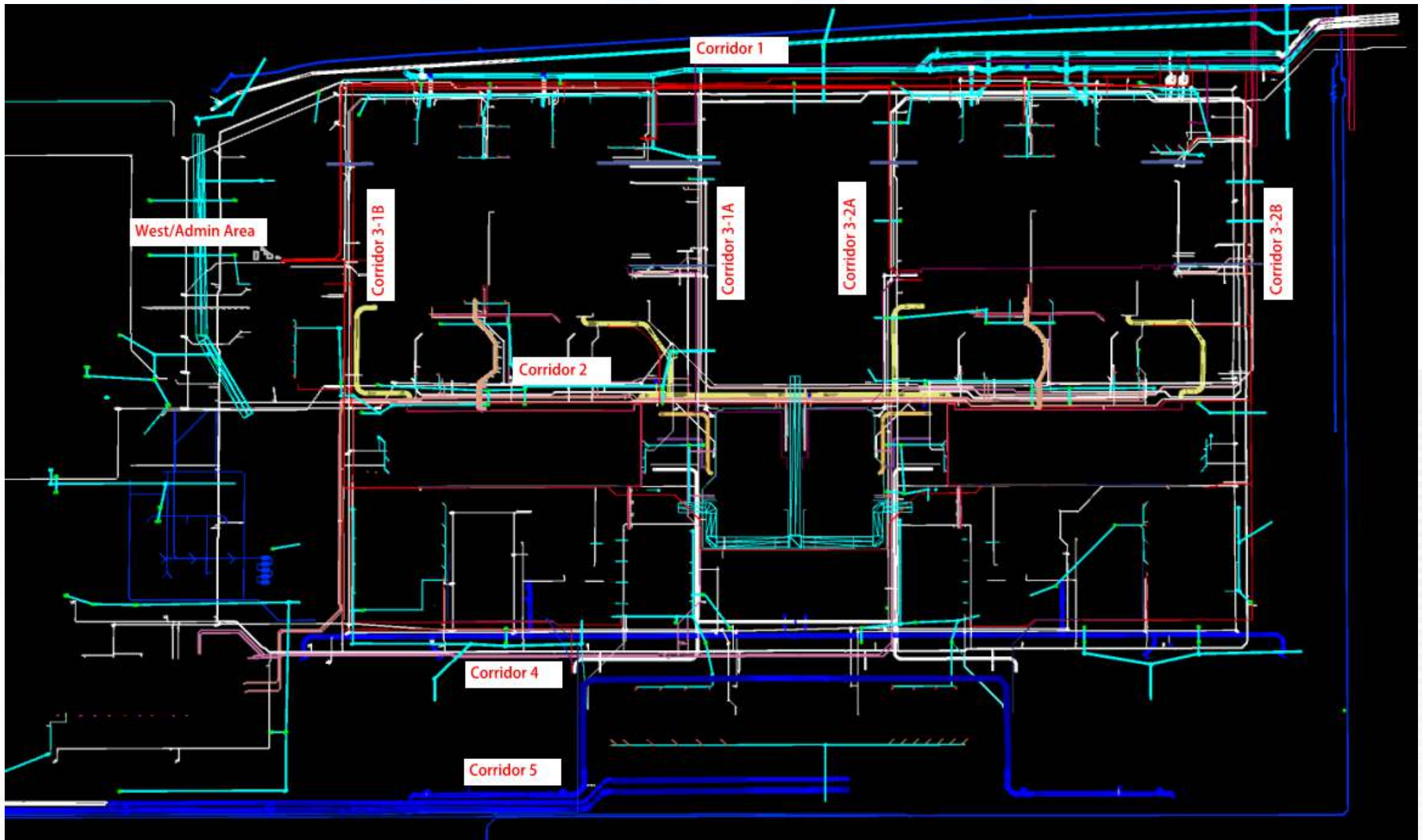




# Construction Progress – Yard Piping

- **Installing and welding dual 108” and 78” RW steel pipe in Corridor 1 and 78” BFV’s**
- **Installing 36” CRCY and 24” PW ductile iron pipe in Corridor 1**
- **Installing and welding 60” BWS steel pipe in Corridor 4**
- **Set MH122, and installing 10” SSG and 12”PDR pipe in Corridor 4**
- **Installing 6” PW line crossing Road 1 in Corridor 4**
- **Installing and welding 84” FW steel pipe in Corridor 5**
- **Delivery of 108"KGV to site**





# Formed and poured 78" valve supports and installed BFVs in Corridor 1





# Installing 36" CRCY and 24" PW pipe in Corridor 1



# Installing 60" BWS steel pipe and BFV in Corridor 4



# Set MH122, and installing 10" SSG and 12" PDR pipe in Corridor 4



# Installing ARV Manholes on dual 16" CEN lines and 6" PW line crossing Road 1 in Corridor 4



# Installing 84" FW steel pipe in Corridor 5



# Delivery of 108" KGV to site





# Construction Progress – Central Plant

## 281-FILTER MODULE 1 :

- Forming/Reinforcing Walls.
- Pouring Walls.
- Patching Walls.

## 291-TRANSFER PUMP STATION 1:

- Top Deck Middle Sections Reinforcement
- Plumbing Drain Lines Encasement Reinforcement Under Analyzer Room
- Pump Can Area Backfill and Compaction

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

- Underground Conduit Installation –Building Area
- Installation of Rebar for SOG A2 & A3

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

- Mass Excavation continue
- Installation of Underground Conduit –Building Area

## 282 -FILTER MODULE 2:

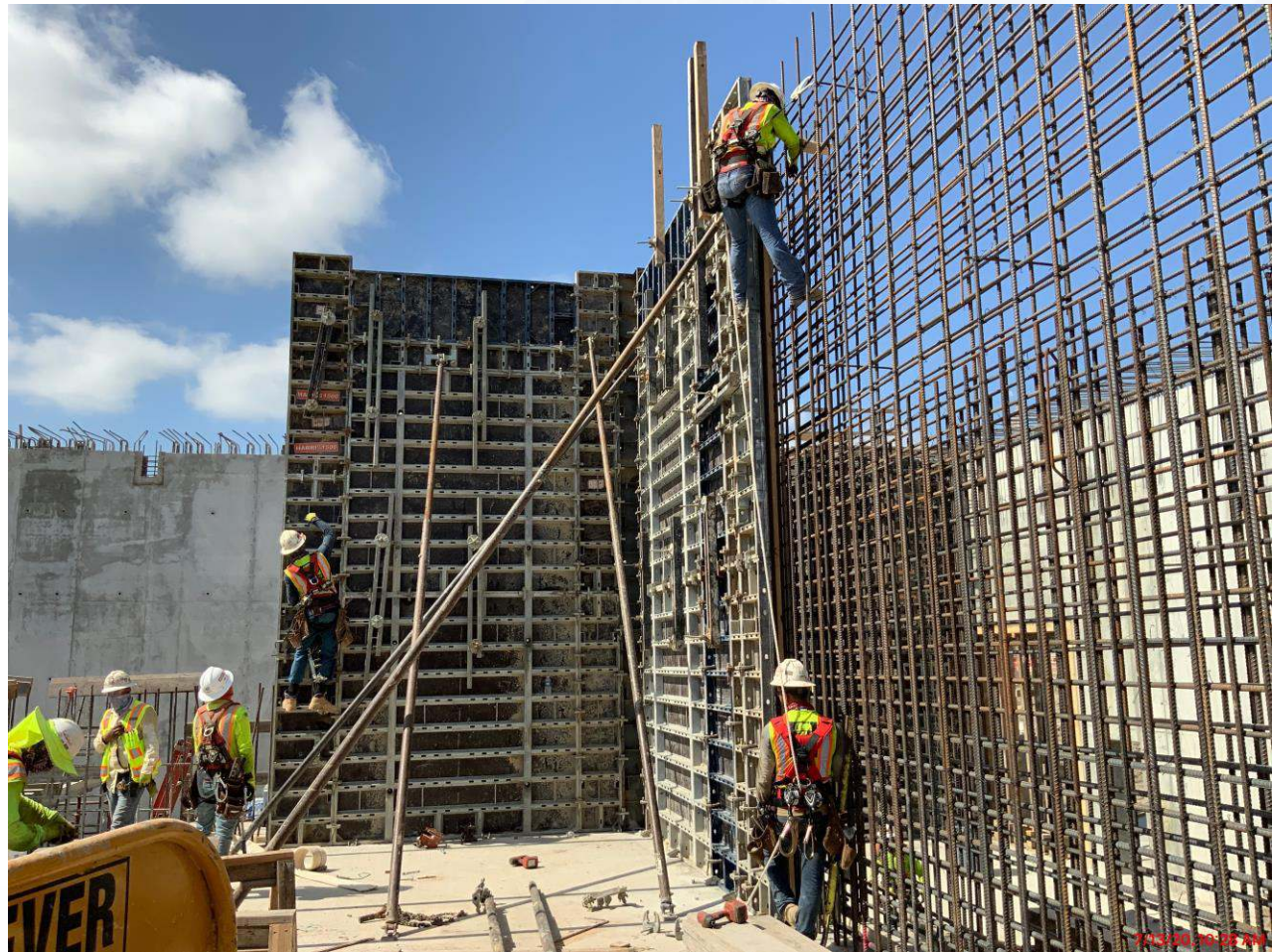
- Pouring Underlab CFE/FTW Pipe Encasement (Lift 2)
- Setting Underslab BWS Pipe.
- Setting FTW outside Bypass Vault
- Setting Underslab DR line

## 292-TRANSFER PUMP STATION 2:

- Pump Can Slab Pour Concrete



# 281-FILTER MODULE-Forming/Reinforcing Walls





# 281-FILTER MODULE-Pouring Walls



# 281-FILTER MODULE- Patching walls



# 291– Top View



# 291– Top Deck Middle Sections Reinforcement



# 291– Plumbing Lines Encasement Reinforcement under Analyzer Room



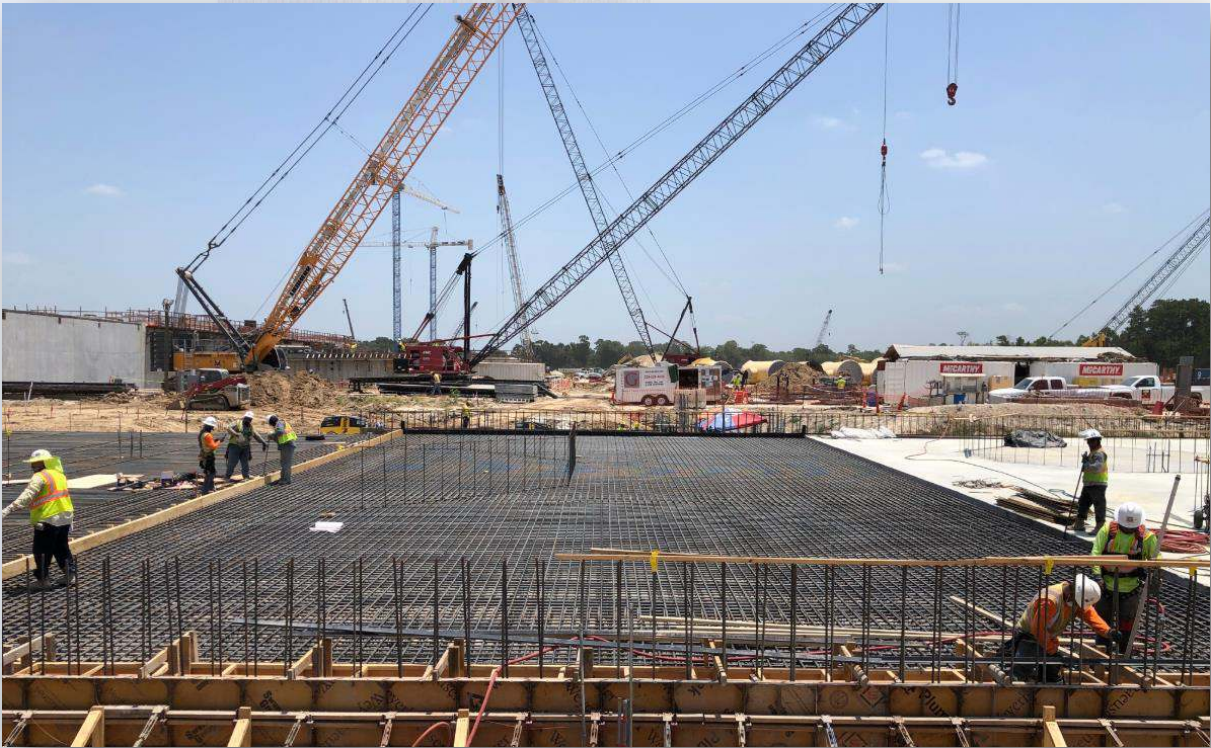
# 291– Pump Can Area Backfill and Compaction



# 311-PostChemical: Underground Conduit installation - Building



# 311-PostChemical: Installation of Rebar Slab A2, A3 –Tank farm





# 311-PostChemical: Concrete pour SOG A2 –Tank farm



# 312-PostChemical: Mass Excavation



# 312-PostChemical: Inst. Of underground Conduit – Building area



# 282- Installing/Forming Reinforcing Under-slab BWS Pipe



# 282-FILTER MODULE 2- Installing FTW Outside Bypass Vault



# 282-FILTER MODULE 2- Pouring Under-slab CFE/FTW Encasement (Lift 2)



# 282-FILTER MODULE 2- Under-slab DR line



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# 292 – Pump Can Slab Concrete Pour







# Construction Progress – LREQ Basins Facilities 601/602

- **601 - Concrete pour for walls P7 and P20**
- **601 - Formwork installation for walls P9 and P13**
- **601 - Concrete pour for walls P9 and P13**

# 601 - Concrete pour for walls P7 and P20



# 601 - Formwork installation for walls P9 and P13



# 601 - Concrete pour for walls P9 and P13





# Construction Progress – North Plant

## 213-Pretreatment Chemical Facility 3:

- Structural Concrete Work with Galan
- U/G Electrical

## 214-Pretreatment Chemical Facility 4:

- Structural Concrete Work with Galan
- U/G Electrical

## 221-Rapid Mix Train 1:

- RM-WL-1 F/R/P
- 78 inch RW pipe Installation

## 222-Rapid Mix Train 2:

- ESL-1 F/R/P
- EWL-1 F/R/P

## 242-FlocSed Train 2

- Slab-on-Grade
- Elevated Slab Column Formwork
- Short Wall Column Stripping

## 244-FlocSed Train 4

- East/West Corridor Excavation
- 8 inch RCYS and 24 inch PDR Installation

## 252-Ozone Contractor Train 2:

- Structural Concrete Work on OZ WL-1

## 502-Gravity Thickener Complex 2

- Basin #4 Slab-On-Grade and Walls F/R/P
- Service Bldg Walls F/R/P

## 504-Gravity Thickener Complex 4

- Service Building Foundation Rebar

## 611-Liquid Residuals Clarifier Facility 1:

- Slab-On-Grade F/R/P

## 612-Liquid Residuals Clarifier Facility 2:

- RCYS and PDR Excavation



# Facility 213 UG Elec Encasement



# Facility 214 SL-2 and -4 F/R/P



# Facility 214 UG Fiber Ductbank





# Facility 221 78" RW Install



# Facility 242 & Facility 222 & Facility 213



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# Facility 244 8 inch RCYS



# Facility 244 24 inch PDR



# Facility 252 SL-2 F/R/P



# Facility 252 OZ WL-1 F/R/P



# Facility 502 Service Building



# Facility 502 GT Basin #3





# Facility 502 WL-5 and -6 Formwork Erection



# Facility 502 WL-5 and -6 Formwork Erection



# Facility 504 Service Building SL-2 F/R/P





# Construction Progress – South Plant

- **Backfilling of 102” Outlet Pipe at GST 361**
- **Load Transfer Platform Installation at GST 362**
- **Switchgear Pads Formwork and CMU Installation at MSB 111**
- **Backfilling up to elevation 38 at HSPS 401**
- **Stem Wall Placement at Sludge Equalization Building 510**
- **Installation of Polymer Tanks & Structural Steel Sequence 03 & 04 at Dewatering Building 520**



# Backfilling of 102" Outlet Pipe at GST 361



# Load Transfer Platform Installation at GST 362



# Switchgear Pads Formwork and CMU Installation at MSB 111



# Backfilling up to elevation 38 at HSPS 401





# Stem Wall Placement at Sludge Equalization Building 510



# Installation of Polymer Tanks & Structural Steel Sequence 03 & 04 at Dewatering Building 520





# Construction Progress – Administration Building

- Backfill and Compaction to EL 55' in AB
- Formed AB SOG
- Installation and Backfill of Plumbing above EL 53'
- Delivery of Steel Joist and Metal Decking



# Backfill and Compaction to EL 55' in AB



# Forming of AB SOG



# Installation and Backfill of Plumbing above EL 53'



# Delivery of Steel Joist and Metal Decking

