



**CITY OF HOUSTON**  
Houston Public Works

# DESIGN-BUILD SERVICES

# Northeast Water Purification Plant Expansion

Mar 11, 2020



# Drone Site Map: Mar 3, 2020



# Construction Progress – EWP 1/3 & 6 Site Development

## DCN-04/Pond 1 Expansion - J. Simmons Group:

- Installed drainage swale



# DCN-04/Pond 1 – Installed swale along access road 1





# Construction Progress – Site Electrical

- Main Fiber Duct Bank Installation at 101 in Existing Plant
- Duct Bank Installation at 080 - Admin Building
- Fiber Duct Bank Installation at 311



# Building 111 Progress



# Main Fiber Ductbank Installation at 101 in Existing Plant



# Duct Bank Installation at 080 – Admin Building





# Fiber Duct Bank Installation at 311





# Construction Progress – EWP 4 Raw Water Corridor

- **Removing shoring at STA 128+50**
- **Setting ARV's near STA 142+50**
- **Preparing to place ARV's near STA 134**



# Removing shoring at STA 128+50



# Setting ARV's Near Sta 142+50



# Preparing to place ARV's near STA 134





# Construction Progress – Central Plant

## **281-FILTER MODULE 1 :**

- **Stripping Gallery Deck, Area D.**
- **Backfilling Filter Slab 4&5 Area.**
- **Pouring Walls.**
- **Forming/Reinforcing Walls.**
- **Reinforcing/Pouring Filter 6 Slab.**
- **Backfilling outside Filter Building.**

## **291-TRANSFER PUMP STATION 1:**

- **Poured CLSM under Overflow Channel**
- **Top Dack Shoring over Wet Well**

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

- **Trenching for Underslab Electrical Conduit.**
- **Staking stub ups.**
- **Removal of existing 20" C900 pipe.**
- **Installation of Underslab Electrical Conduit.**

## **282 -FILTER MODULE 2:**

- **Tower Crane erection.**
- **Setting FD Pump Cans.**
- **Laying West Under-Slab 36" FTW.**

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

- **Driving Sheet Piles**



# 281-FILTER MODULE- Stripping Gallery Deck , Area D



# 281-FILTER MODULE- Backfilling Filter 4&5 Area





# 281-FILTER MODULE-Pouring Walls



# 281-FILTER MODULE- Reinforcing/Forming Walls



# 281-FILTER MODULE- Reinforcing/Pouring Filter 6 Slab



# 281-FILTER MODULE- Backfilling outside of Filter Building



# TPS – Poured CLSM under Overflow Channel



# TPS – Top Deck Shoring and Forming Over Wet Well



# 311-PostChemical:Trench for underslab Electrical Conduit



# 311-Post Chemical Facility: Staking stub ups

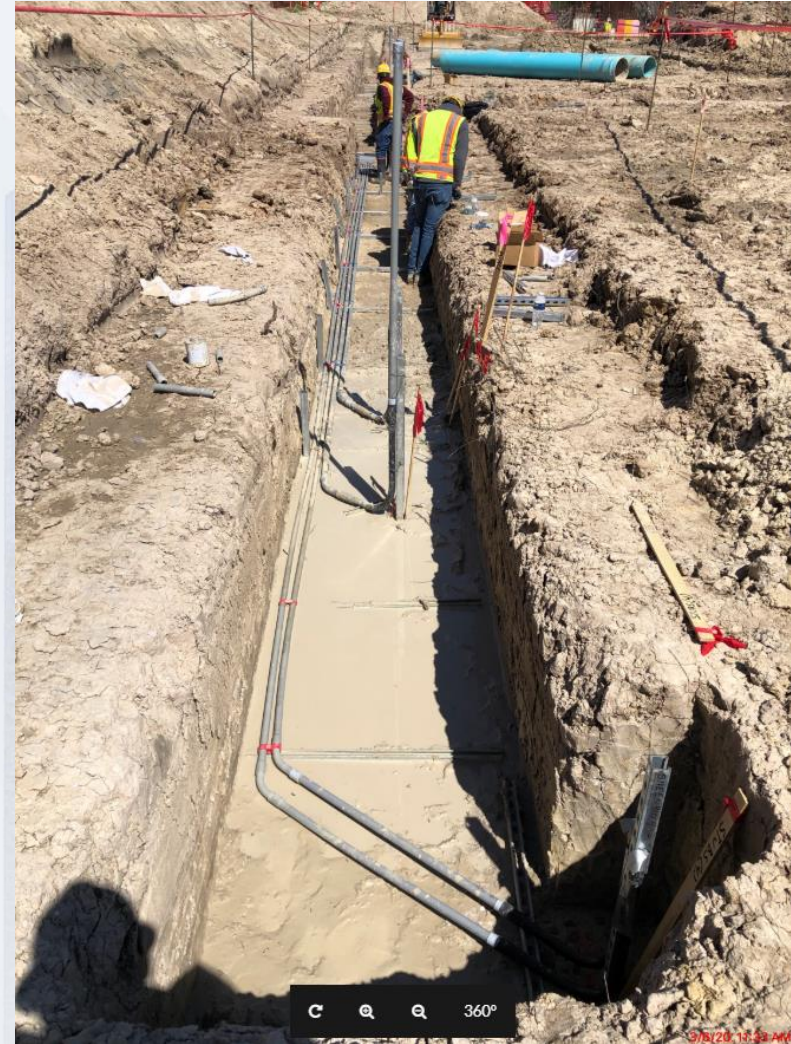




# 311-PostChemical:Removal of Existing C900 pipe



# 311-PostChemical: Inst. Underslab Electrical Conduit.



# CENTRAL PLANT- 1st PHASE



# 282-FILTER MODULE 2- West Tower Crane Erection



# 282-FILTER MODULE 2- Setting FD Pump Cans



# 282-FILTER MODULE 2- Laying West Under-slab 36" FTW



# 292 – Driving Sheet Piles



# CENTRAL PLANT - 2nd PHASE







# Construction Progress – EWP 6 North Plant

- **Facility 213 Walls F/R/P**
- **Facility 221 Mass Excavation**
- **Facility 241 PDR Piping Installation**
- **Facility 242 PDR Piping, Flocculation Wall F/R/P**
- **Facility 252 Inlet and Outlet Boxes F/R/P, Setting Victualic W257 Coupling**
- **Facility 611 RCYS Valve Vault and Overflow Sump F/R/P**
- **Facility 502 Excavation and GT#3 and Service Bldg F/R/P**



# Facility 213 WL-9 Striping Wall Formwork



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**Houston Waterworks Team**



# Facility 242 FBDC and East Walls



# Facility 242 96 inch CW Victaulic W257 Coupling



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# Facility 252 Striping Formwork for Inlet Box



# Facility 252 Outlet Box FRP



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# Facility 502 GT#3 FRP



# Facility 502 Service Bldg Mud Slab





# Facility 611 SL-4 Concrete Placement



# Facility 611 8 inch RCYS Encasement



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Houston Waterworks Team





# Construction Progress – EWP 6 IPS

- **Preparing Rebar For Area H Beam Pour**
- **Removing False Work And Friction Collars**
- **Driving Last Bridge Piles**

# Preparing Rebar For Area H Beam Pour



# Removing False Work And Friction Collars





## Driving Last Bridge Piles




# Construction Progress – EWP 6 Substation Facility 102

- **Continue to install Building Foundation**

# Continue to Install Building Foundation







# Construction Progress – BOP LREQ Basins Facilities 601/602

- **Facility 601 Excavation Progress**
- **Underdrain Pipe Installation**
- **Limestone Rock Placement for 601 Underdrain**
- **Continue Mass Excavation South end of 601**

# Facility 601 Excavation Progress



# Underdrain Pipe Installation



# Limestone Rock Placement for 601 Underdrain



# Continue Mass Excavation South end of 601



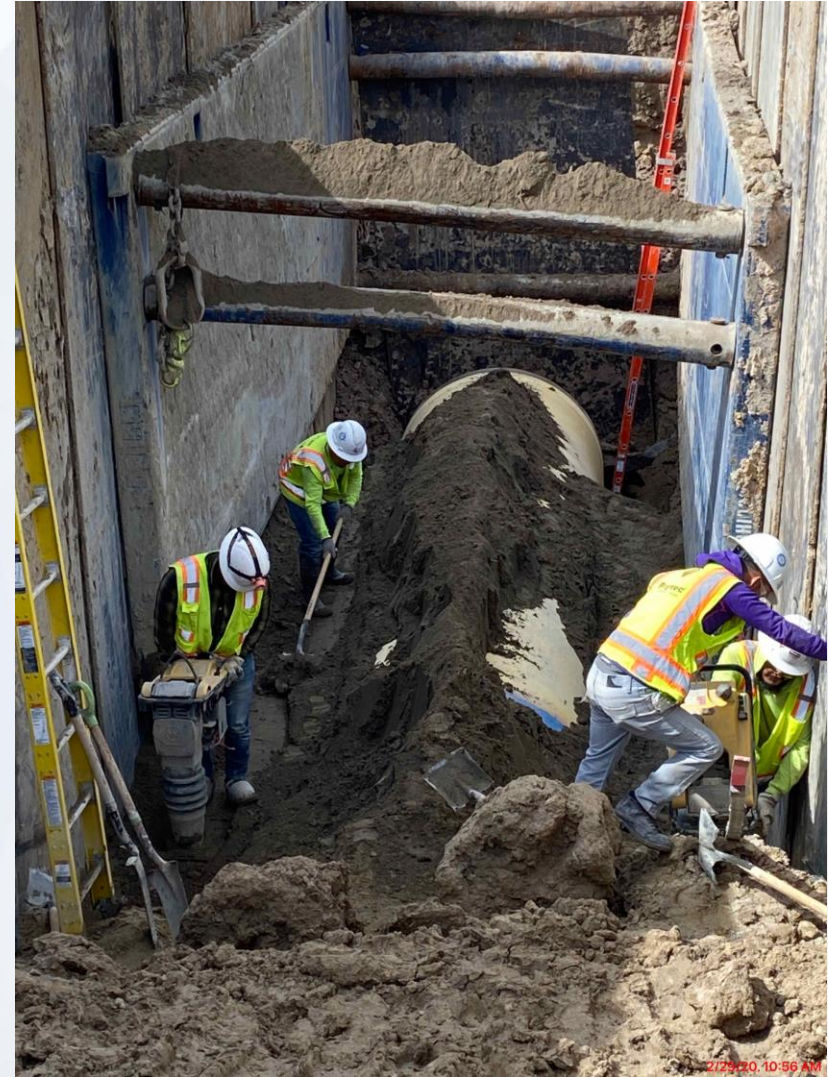


# Construction Progress – Yard Piping

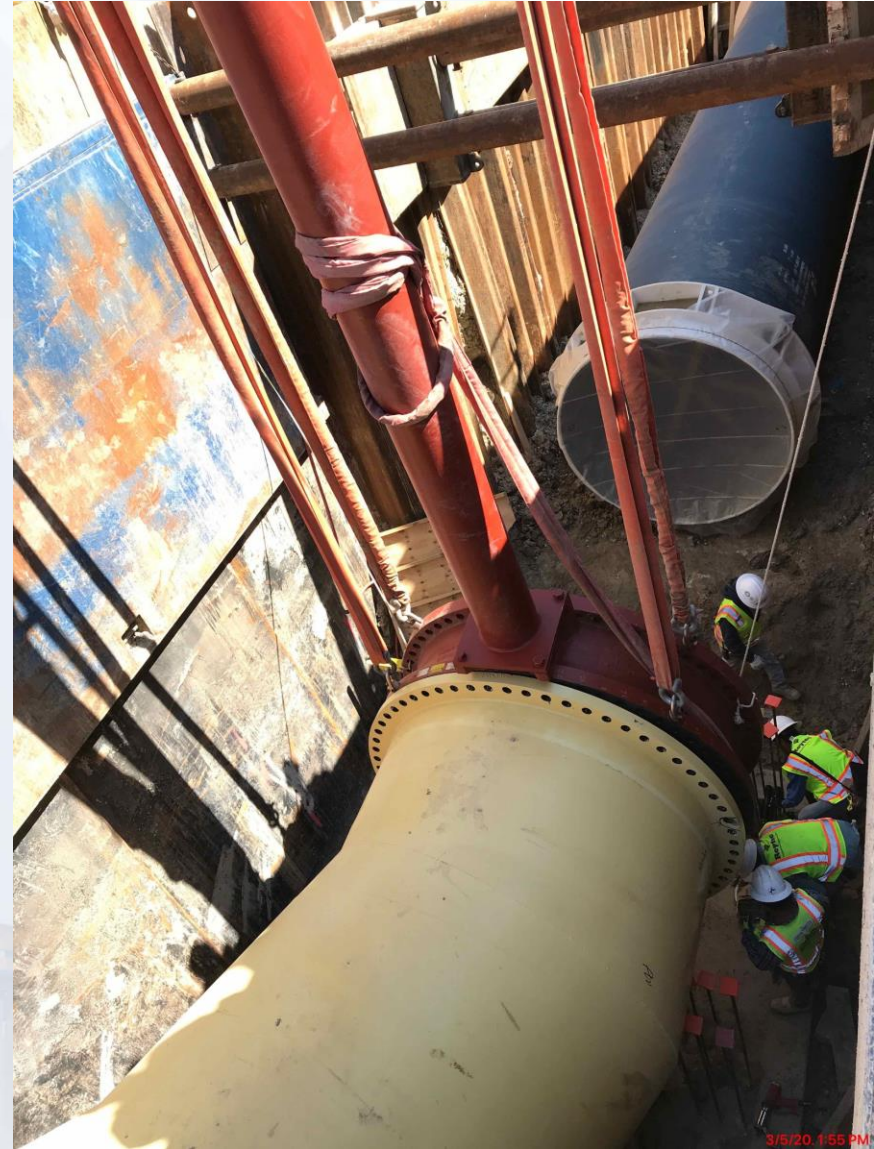
- **Installing and welding 66” RW steel pipe line in Corridor 1**
- **Installing and welding 84” & 96” FW steel pipe in Corridor 4**
- **Installing 16” SPD ductile iron pipe line in Corridor 3**
- **Installing Double 8’x4’ storm box culverts in Admin area**
- **Installing 12” PW in Corridor 3, and 24” PW in Corridor 4**



# Installing 66" RW steel pipe line in Corridor 1



# Installed 84"BFV at GST 1

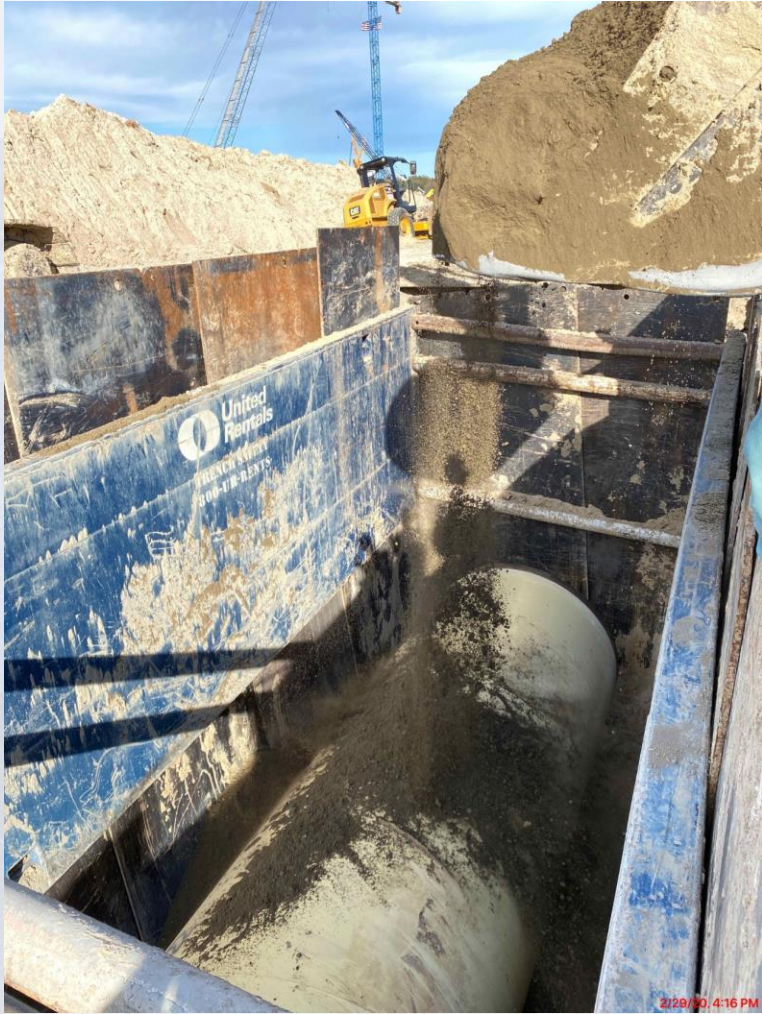


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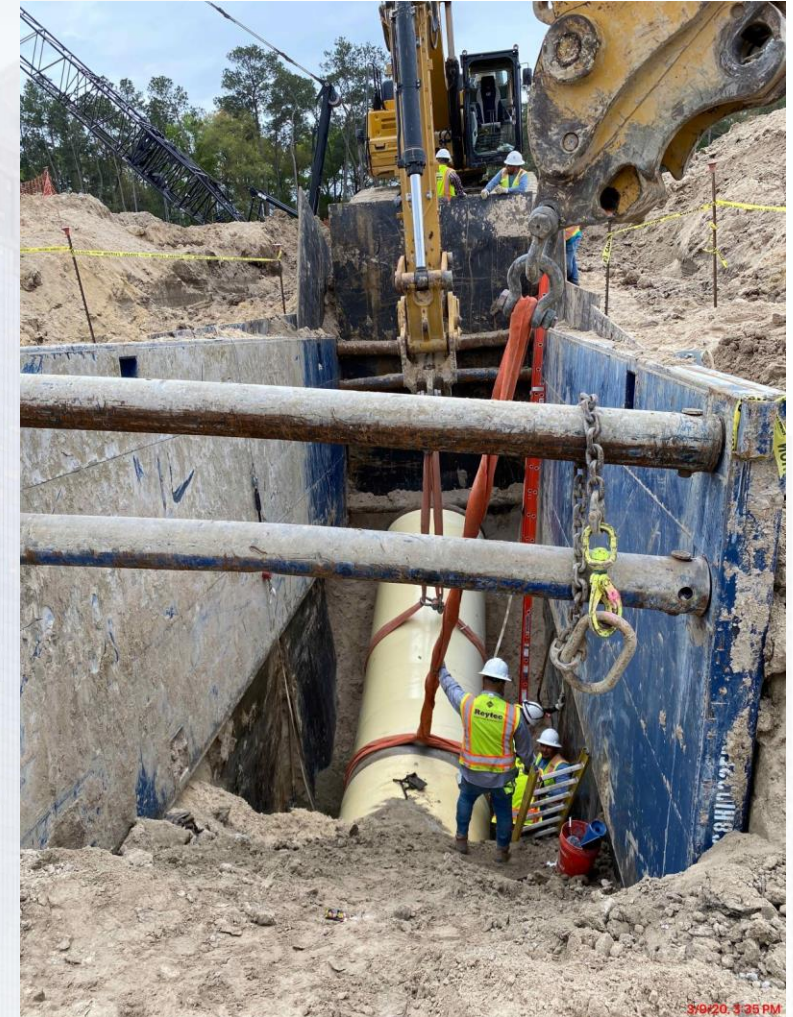




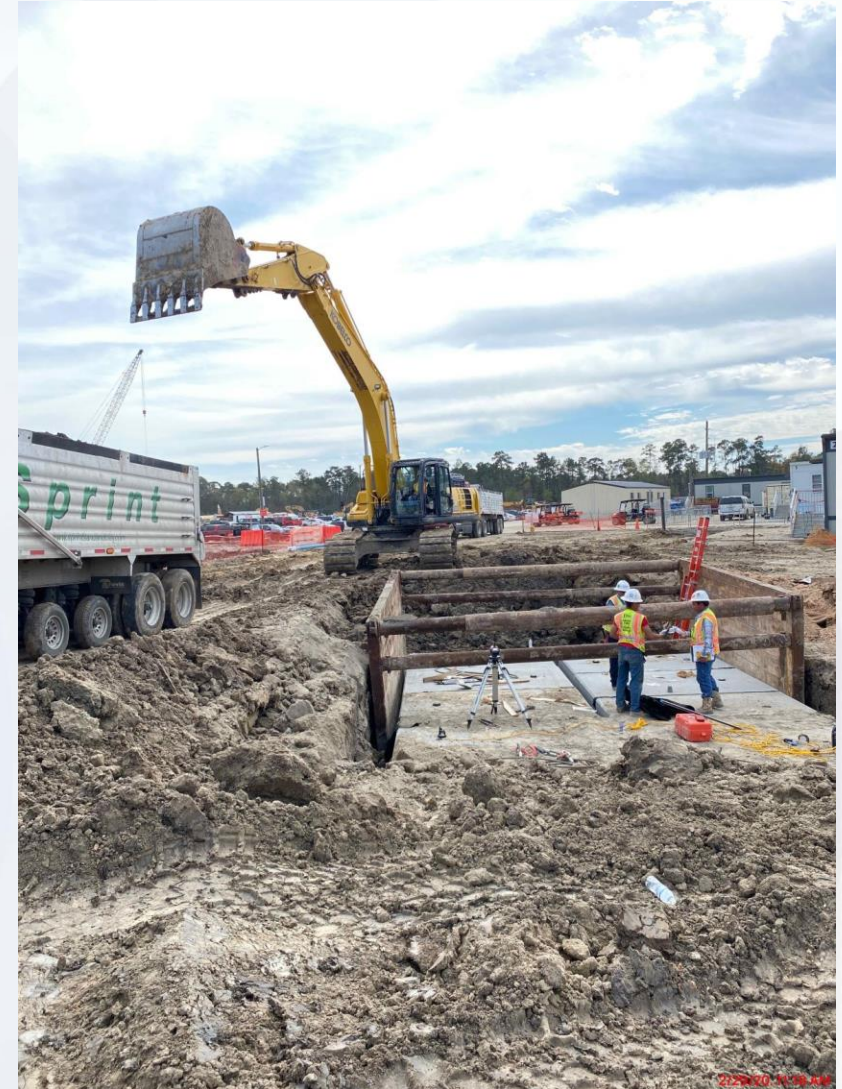
# Installing 96" FW steel pipe in Corridor 4



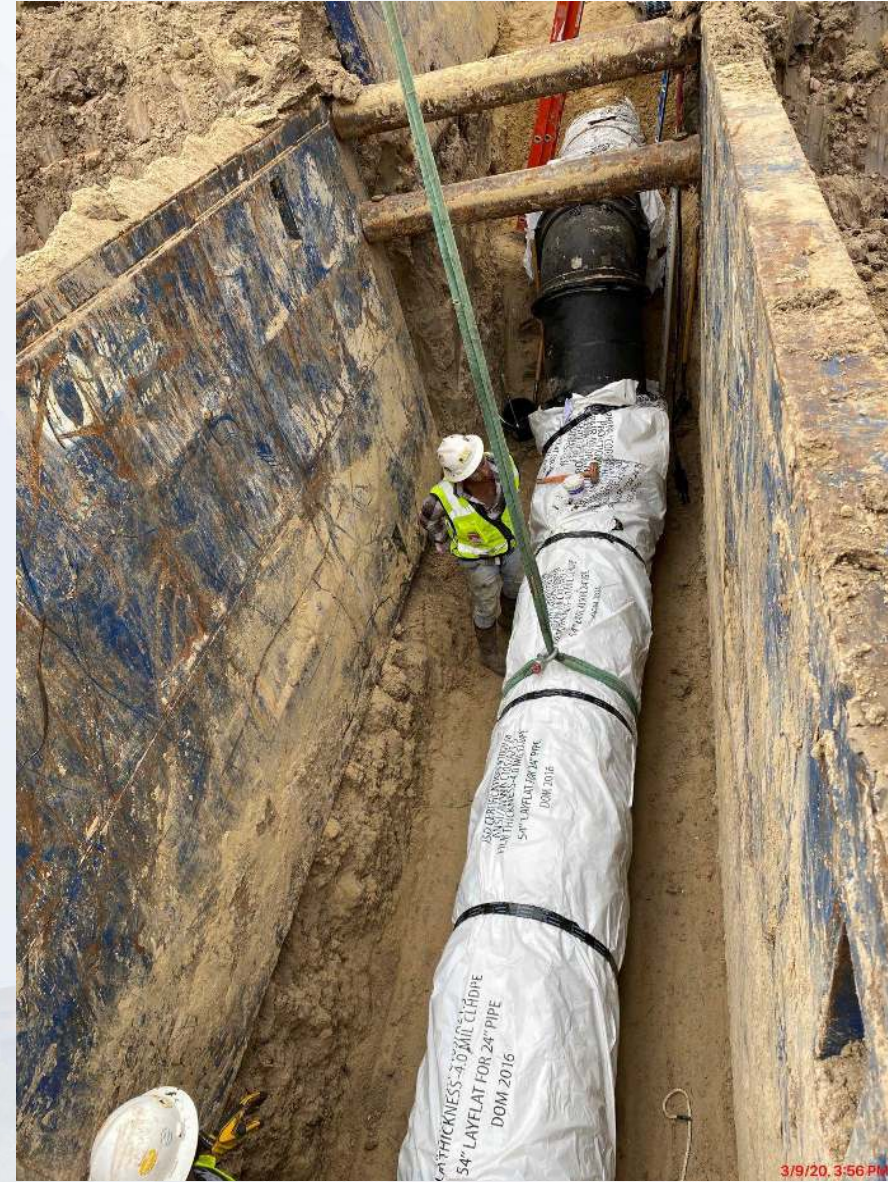
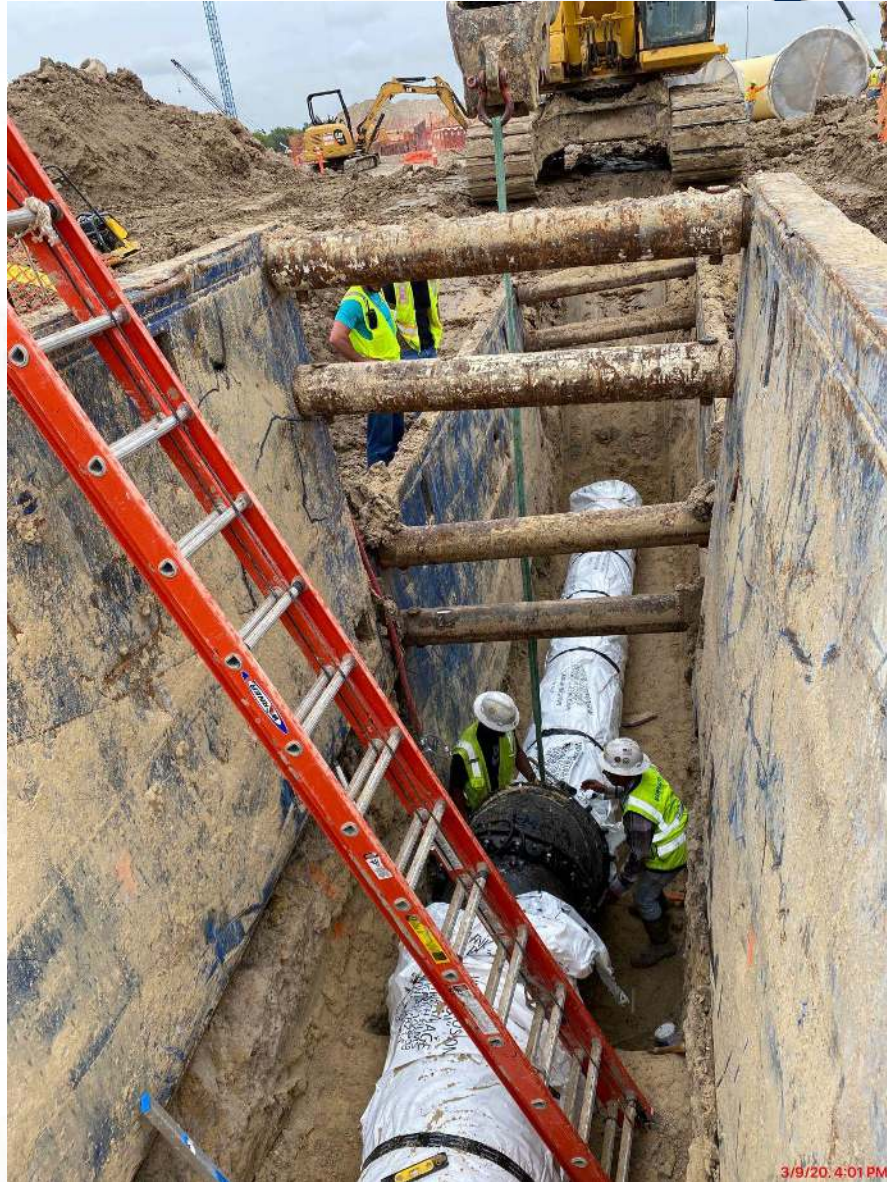
# Installing 60" BWS steel pipe in Corridor 4



# Installing Double 8'x4' storm box culverts in Admin area



# Installing 24" PW in Corridor 4





# Construction Progress – Administration Building

- **Achieved Backfill to EL 50**
- **Completed Density Tests on 14 Lifts**



# AMB Progress Photos



Achieved Backfill and Compaction to EL 51 in Admin

# AMB Progress Photos



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Compaction & Density Test of 15th Lift in Admin

# AMB Progress Photos



Placement of Communication Fiber Duct Bank





# Construction Progress – South Plant

- **84" pipe butterfly valve installed at GST 361**
- **Installing 24" pipe at the overflow box at GST 361 and 362**
- **Placing reinforcement at Facility 520**
- **Placing reinforcement at Facility 111**
- **Pump can foundation concrete poured at HSPS 401**



# 84" pipe butterfly valve installed at GST 361



# Installing 24" pipe at the overflow box at GST 361 and 362



# Placing reinforcement at Facility 520



# Placing reinforcement at Facility 111



# Pump can foundation poured at HSPS 401



