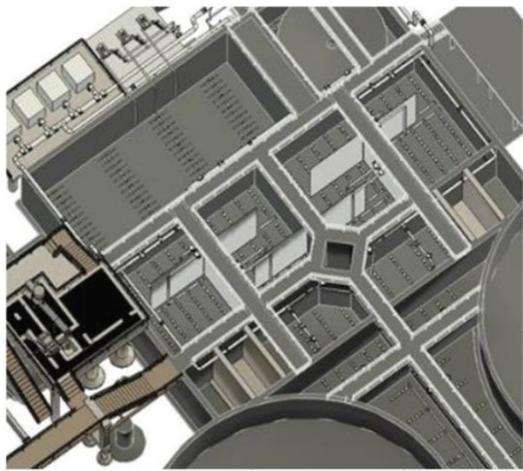


Public Works Director Introduction

- April 27, 2020: WWTP Master Plan approved
- October 25, 2021: Previous council briefing on Preliminary Engineering Report
- September 2, 2022: 60% Design Plans submitted
 - October 21, 2022: TCEQ Discharge Permit comment period ends
 - City of Houston Permit applications in review
- Today: Provide update on WWTP 60% design phase to Council and discuss architecture for the new control building



October 24, 2021
City Council
Meeting



WASTEWATER TREATMENT PLANT 60% PLANS UPDATE

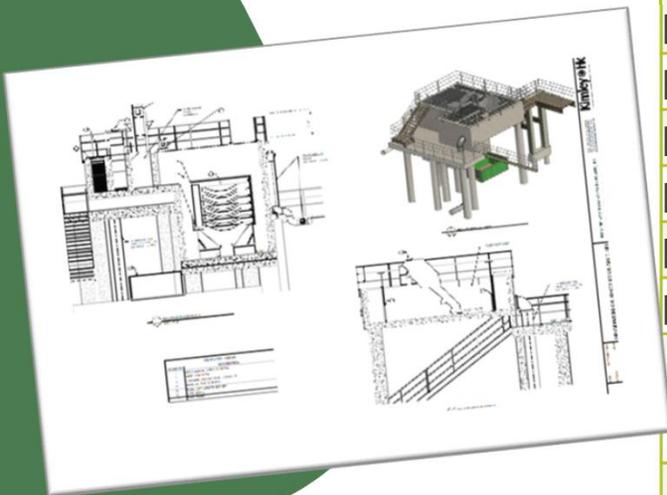
Prepared by
Kimley»Horn

For



- 1. 60% WWTP Improvements**
2. WWTP Location
3. Why upgrade the WWTP?
4. What upgrades are designed?
5. Schedule
6. Next steps

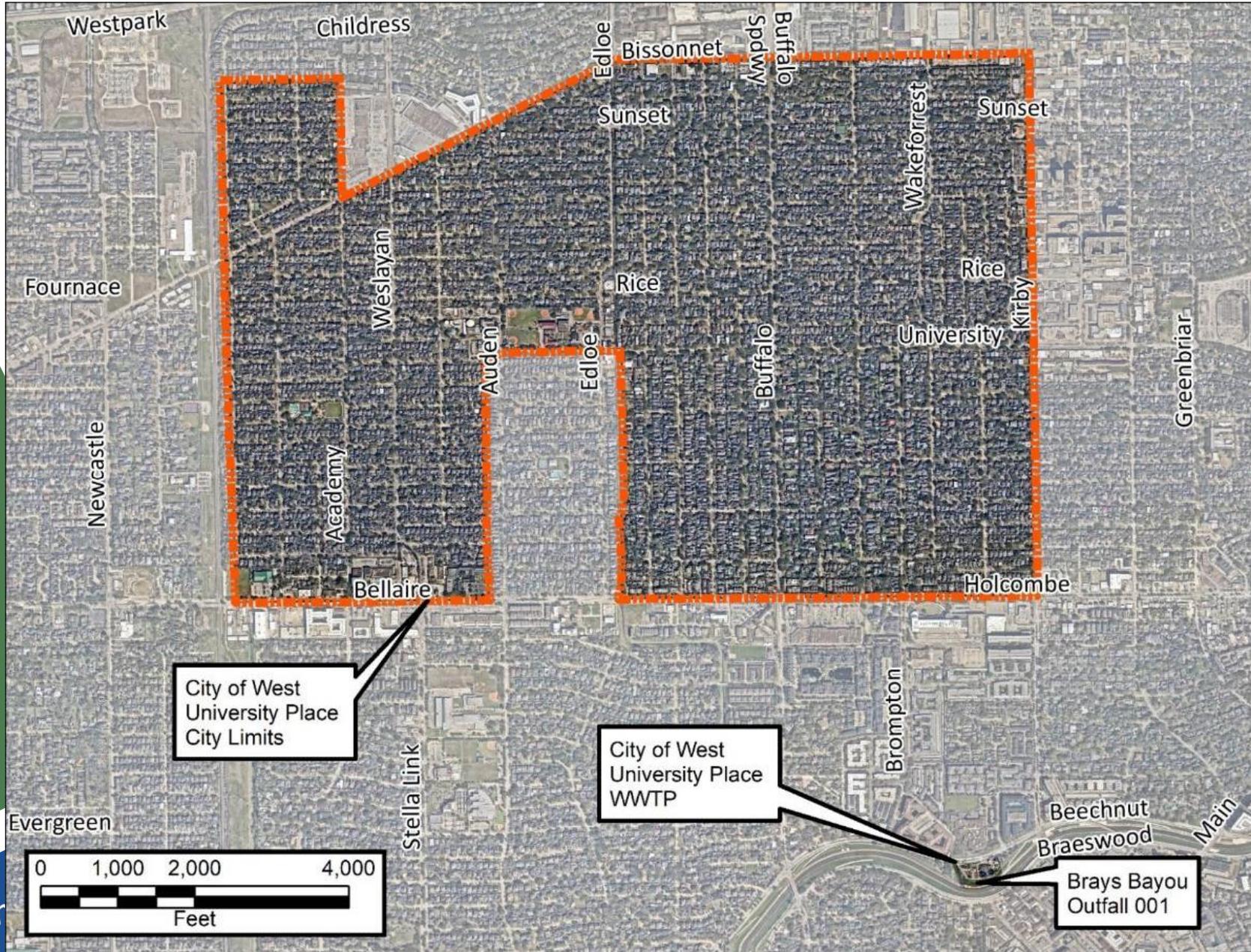
1. 60% WWTP Improvements



PID	Project Name	Total:
P001	Electrical Power Service Improvements	\$595,000
P002	Treatment Process Optimization with Fine Diffusers	\$3,014,000
P003	Motor Control Center and Controls	\$1,068,000
P004	Inflow and Infiltration Study	Completed
P005	Clarifier Rehabilitation	Completed
P006	Disinfection Improvements	\$395,000
P007	Replace Screw Pumps with Submersible Pumps	\$1,579,000
P008	Mechanical Step Screen	\$787,000
P009	Grit Chamber	\$1,176,000
P010	Consolidated Operations and Maintenance Manual	\$52,000
P011	Control Building	\$3,223,000
P012	Site Work	\$1,241,000
P013	WWTP Structural Improvements	\$121,000
P014	Convert Thickener to Digester	\$317,000
P015	Plant Security Cameras	\$164,000
P016	Nonpotable Water System	\$225,000
	Total	\$13,957,000
	Design	\$1,247,200
	Construction Phase	\$346,400
	Project Total	\$15,550,600
	Contingency	10%
	Bond Amount	\$17,340,000

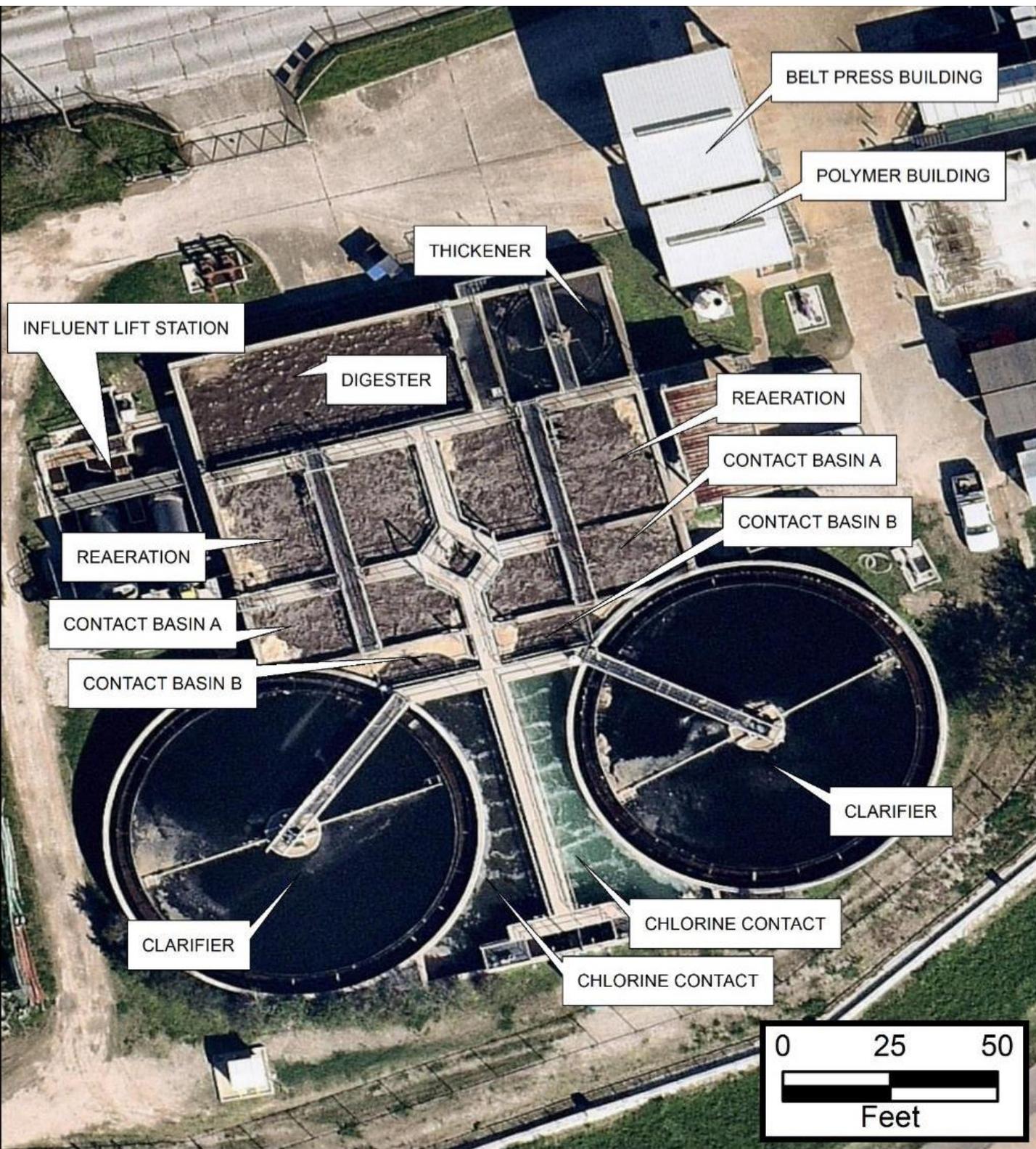
1. 60% WWTP Improvements
2. **WWTP Location**
3. Why upgrade the WWTP?
4. What upgrades are designed?
5. Schedule
6. Next steps

2. WWTP Location



2. WWTP Location





2. WWTP Location

Existing Equipment

1. 60% WWTP Improvements
2. WWTP Location
3. **Why upgrade the WWTP?**
4. What upgrades are designed?
5. Schedule
6. Next steps

3. Why upgrade the WWTP?

Five Purposes

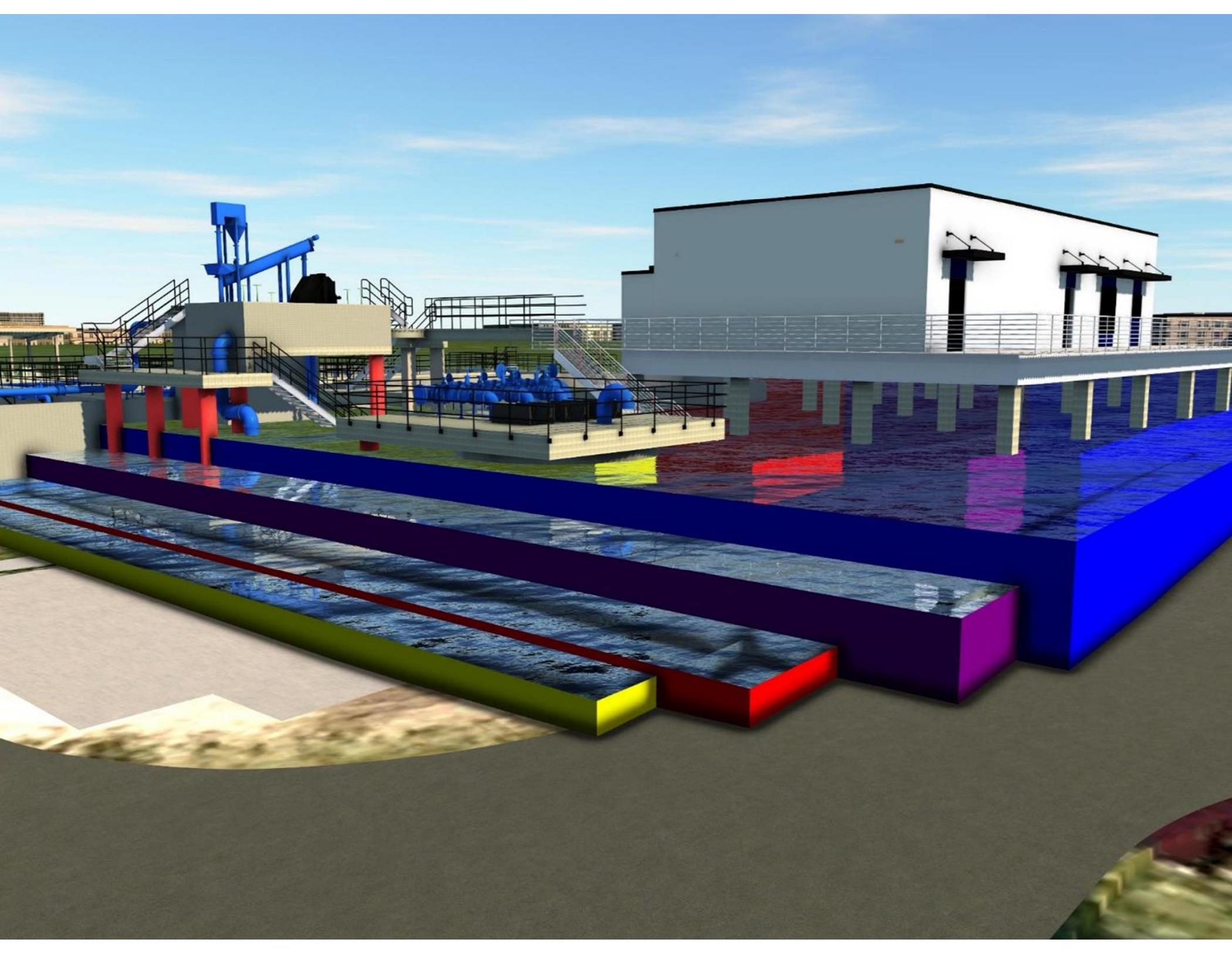
-  Age and Condition
-  Flood Resiliency
-  Safety Improvements
-  Operation & Maintenance
Cost Savings
-  Regulatory Compliance

Matrix of Projects and Purposes 10

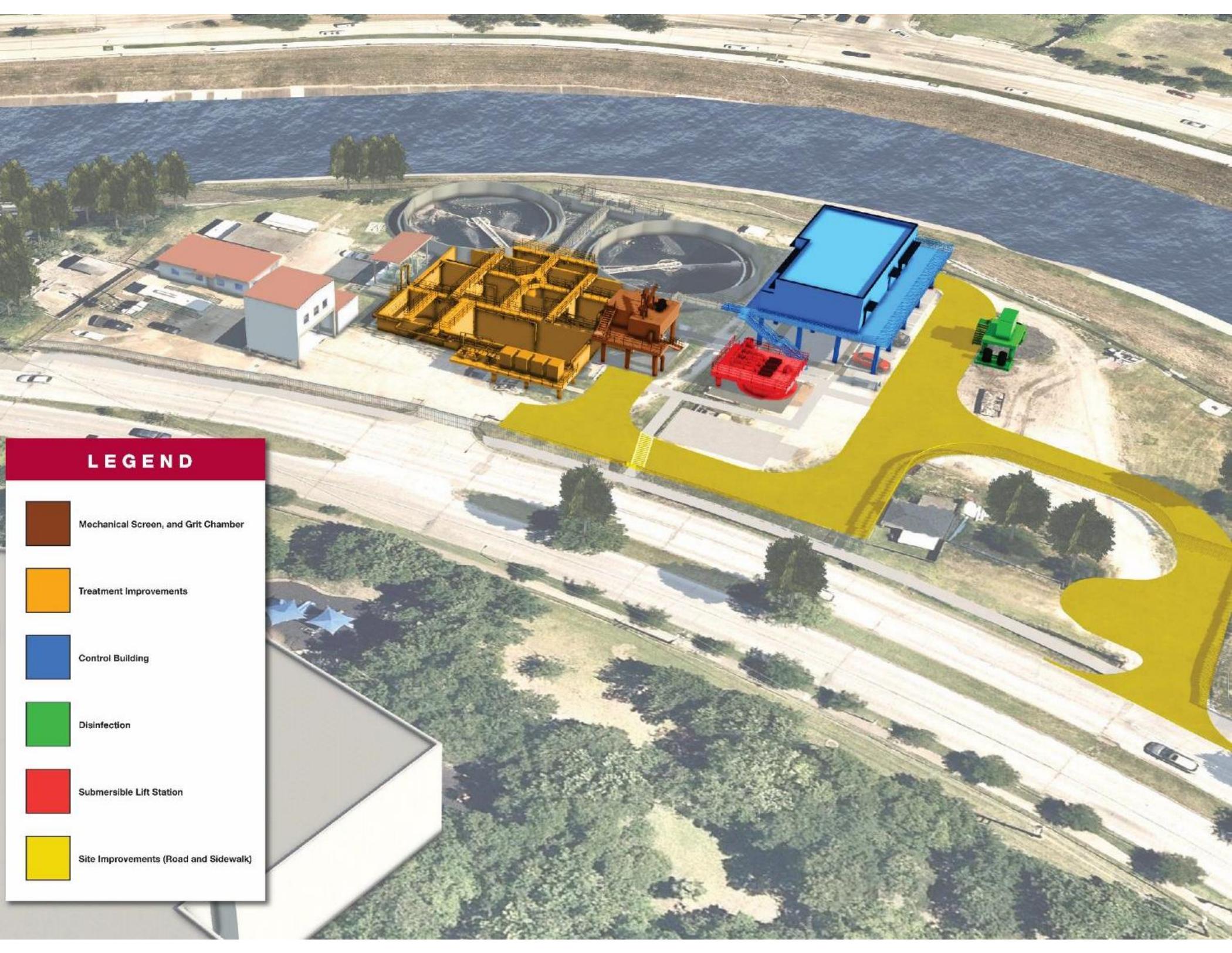
ID	Project	 Age	 Flood	 Safety	 O&M	 Regulatory Compliance
P001	Electrical Power Service	✓	✓	✓		
P002	Treatment Process Optimization	✓	✓	✓	✓	✓
P003	Motor Control Center	✓	✓	✓	✓	
P006	Disinfection Improvements			✓		✓
P007	Submersible Lift Station		✓		✓	✓
P008	Mechanical Step Screen	✓		✓		
P009	Grit Chamber				✓	
P010	Consolidated Operations and Maintenance Manual				✓	✓
P011	Control Building	✓	✓	✓		
P012	Site Work	✓	✓			
P013	WWTP Structural Improvements	✓		✓		
P014	Convert Thickener to Digester			✓	✓	
P015	Security Cameras			✓		
P016	Non-Potable Water System Improvements	✓			✓	



47.5 FT HARVEY FLOODPLAIN



1. 60% WWTP Improvements
2. WWTP Location
3. Why upgrade the WWTP?
4. **What upgrades are designed?**
5. Schedule
6. Next steps



LEGEND



Mechanical Screen, and Grit Chamber



Treatment Improvements



Control Building



Disinfection



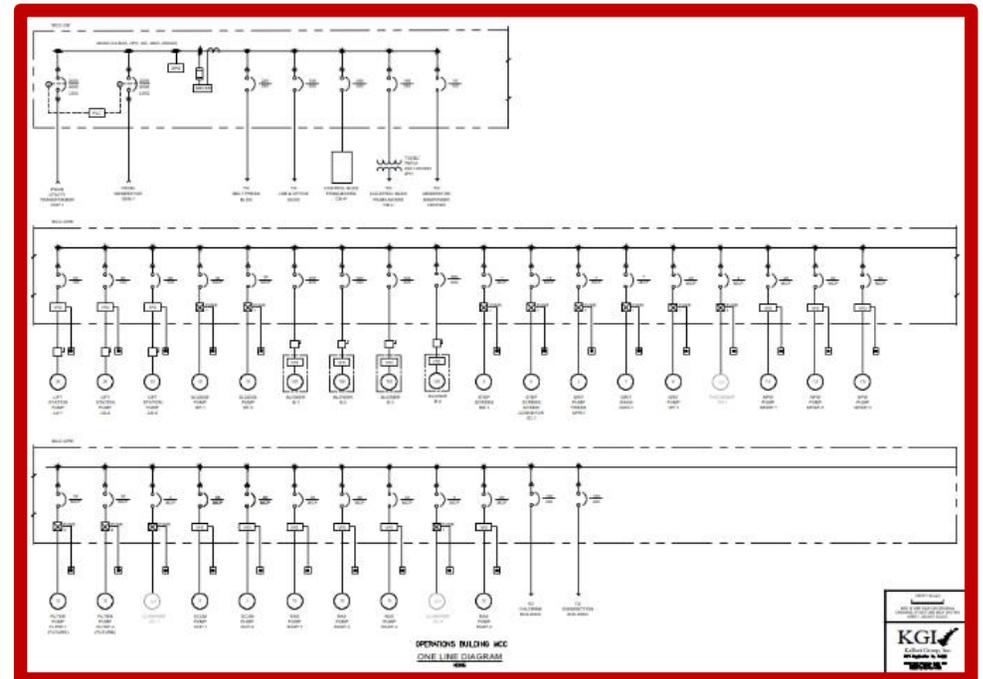
Submersible Lift Station



Site Improvements (Road and Sidewalk)

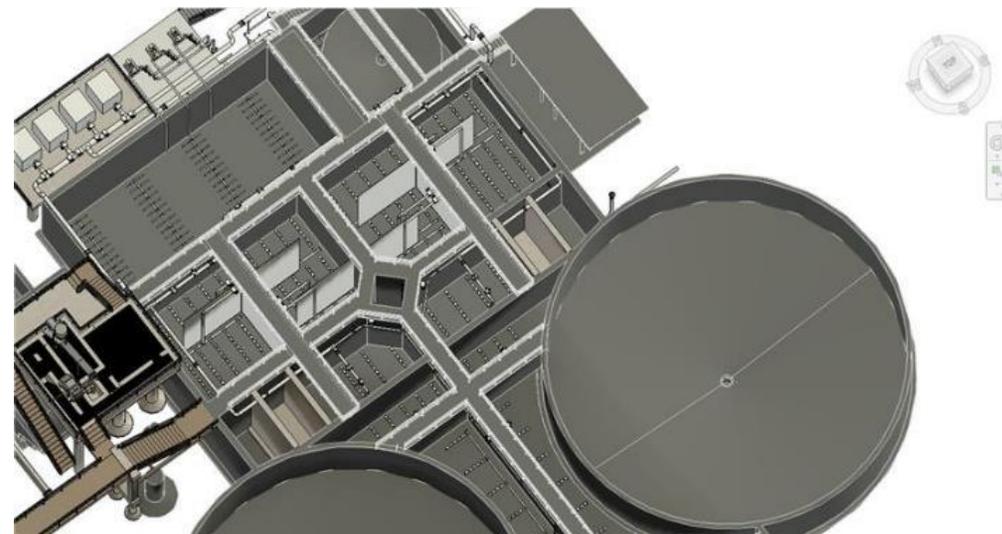
4. What upgrades are designed? ¹⁵

- P001 Electrical Power Service Improvements
- P002 Process / Fine Diffusers / Blowers
- P003 Motor Control Center
- P006 Disinfection Improvements
- P007 Submersible Lift Station
- P008 Mechanical Step Screen
- P009 Grit Removal System
- P010 O&M Manual
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- P014 Convert Thickener to Digester
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- P016 Non-potable Water System

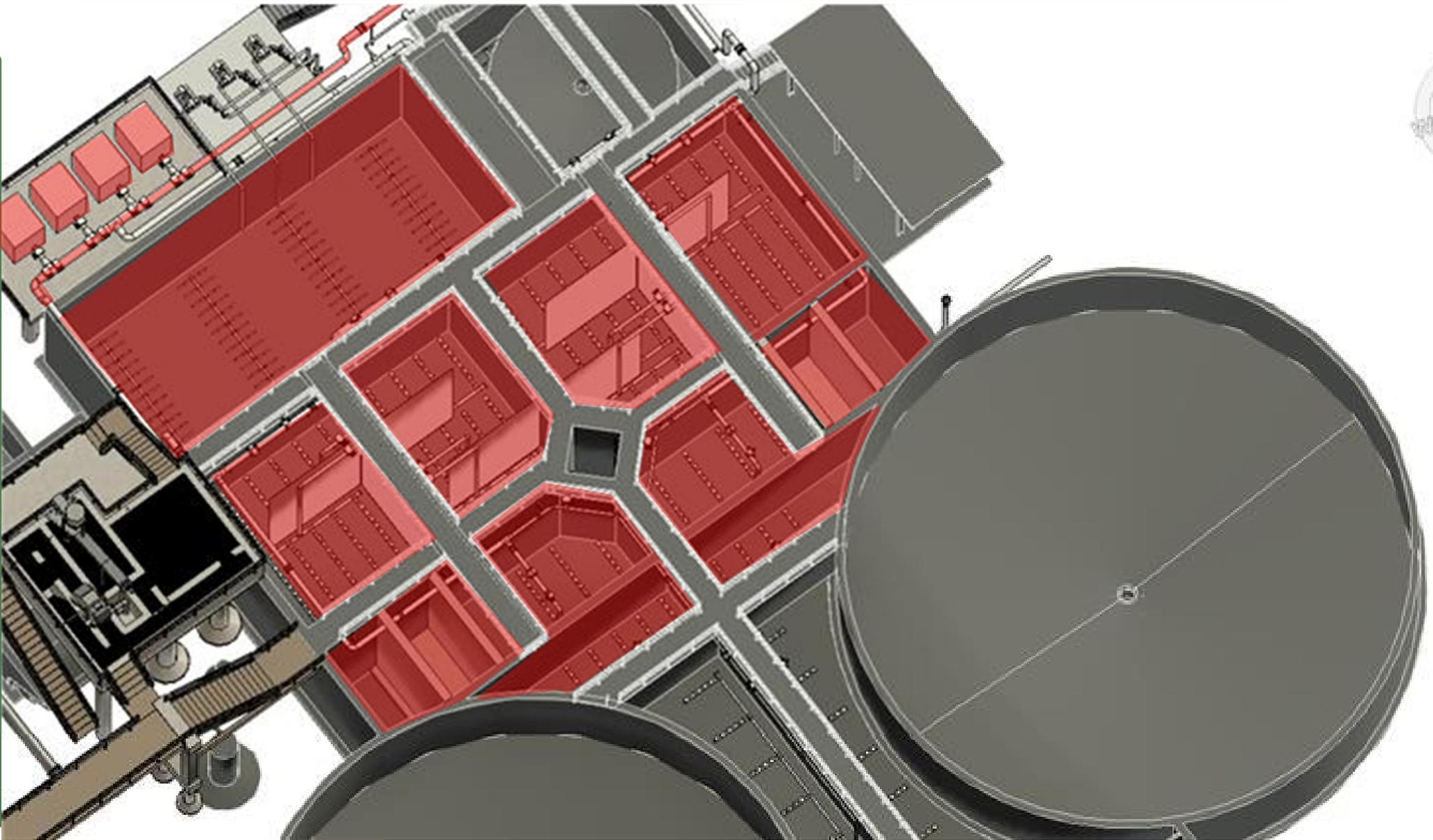


4. What upgrades are designed? ¹⁶

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4. What upgrades are designed?¹⁷



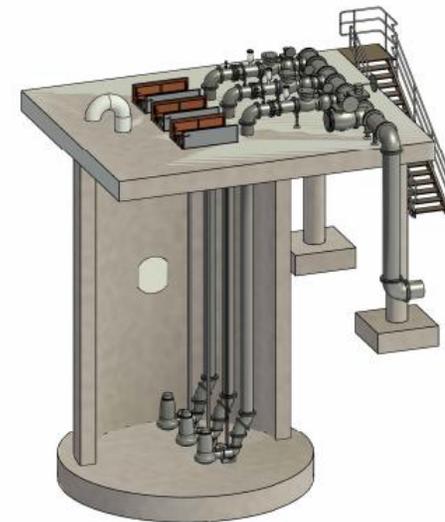
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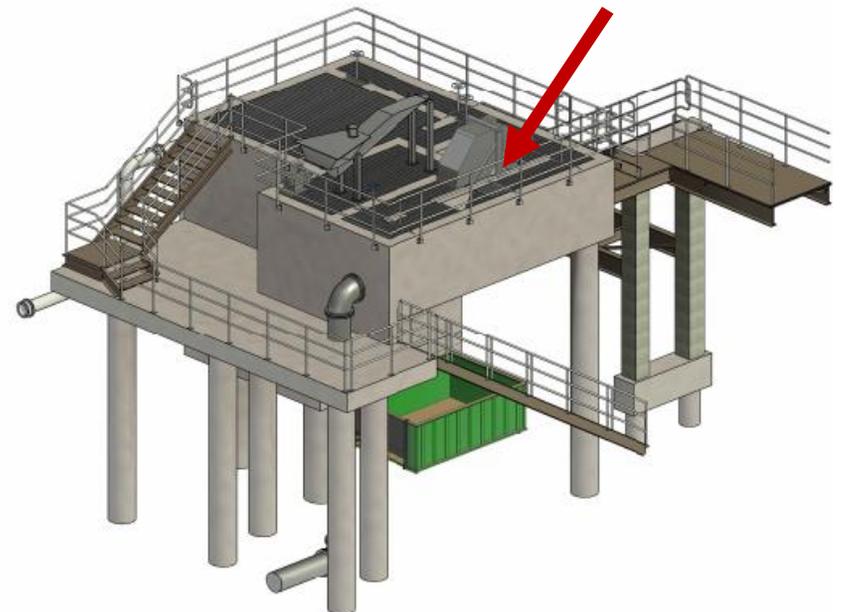
4. What upgrades are designed?²⁰

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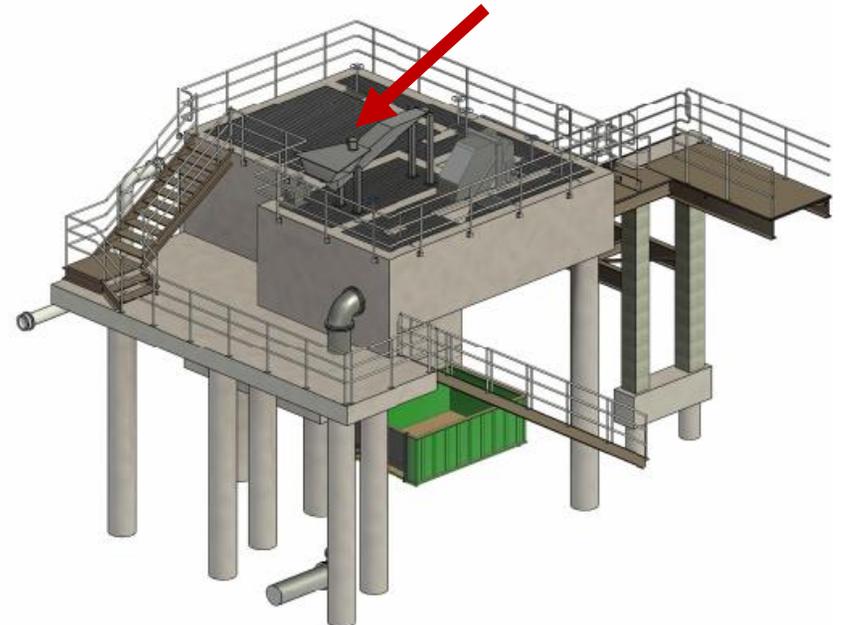
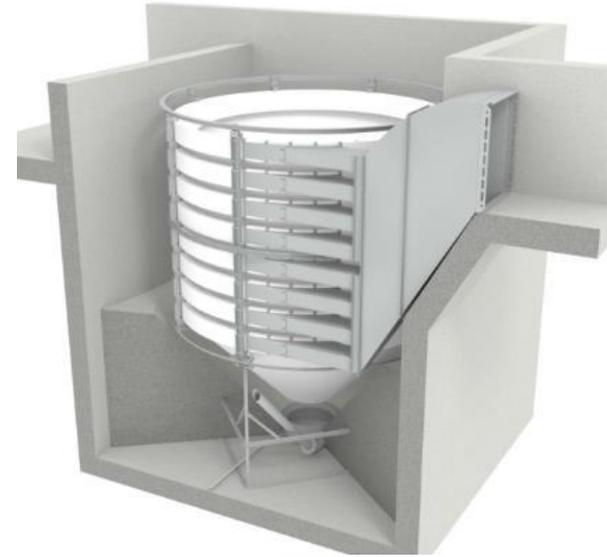
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4. What upgrades are designed?²²

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4. What upgrades are designed?²³

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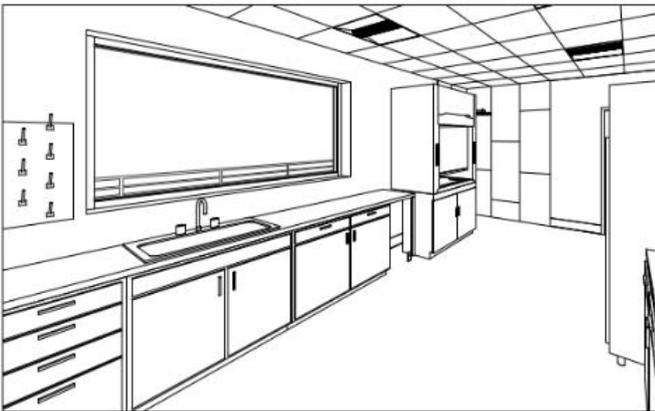
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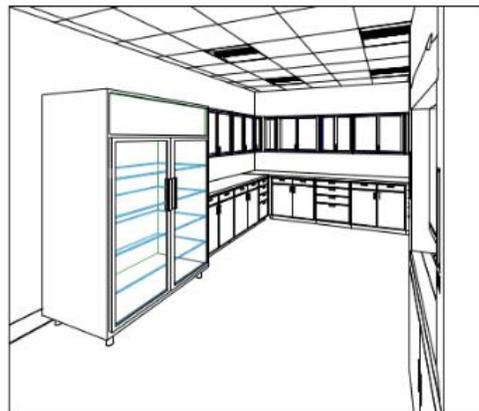


4. What upgrades are designed? ²⁵

- Control Building Interior



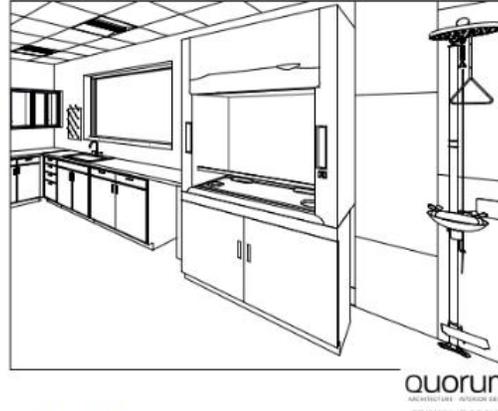
4 LAB VIEW 4



3 LAB VIEW 3

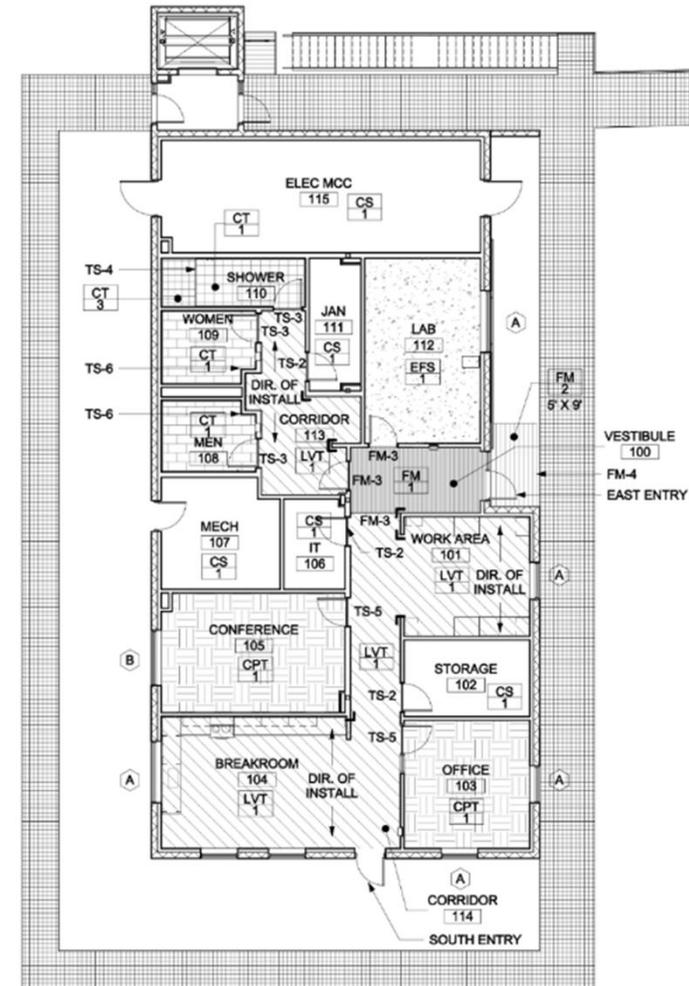


2 LAB VIEW 2



1 LAB VIEW 1

quorum
MANUFACTURE - INTERIOR DESIGN
825 W. Victory Drive, Suite 100
Fort Worth, TX 76104
(817) 708-8555

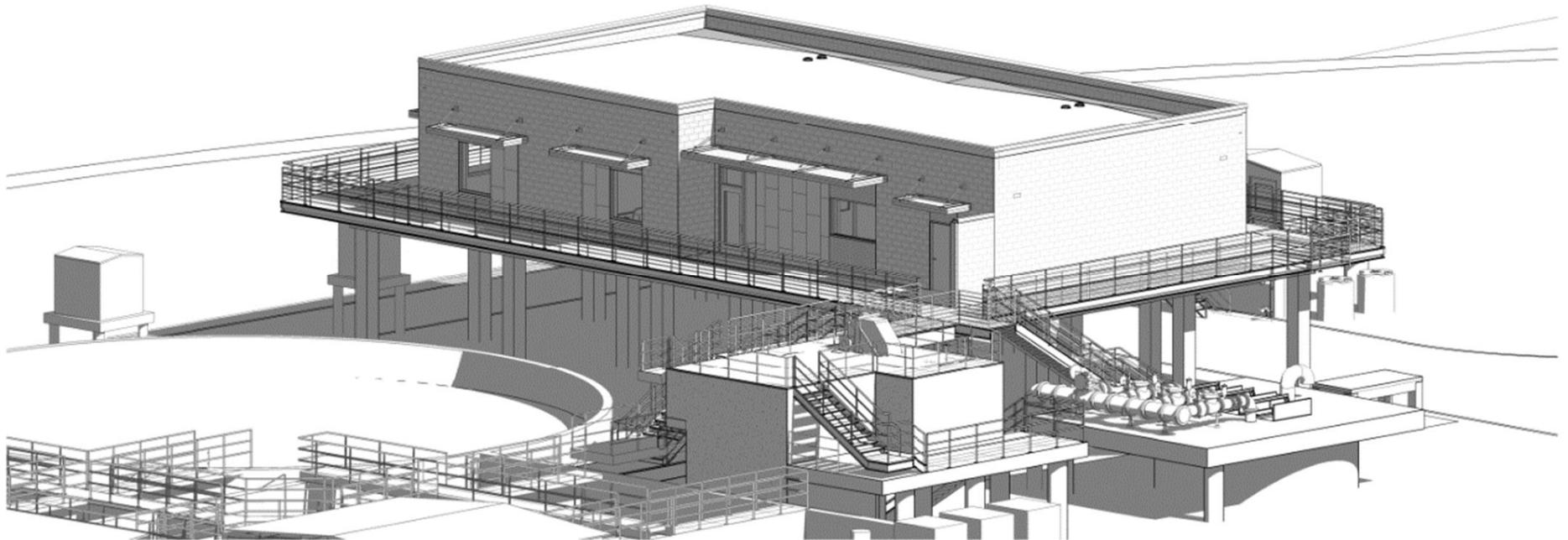




West University Waste Water
Treatment Control Building

4. What upgrades are designed?²⁷

- Control Building Exterior Finish Selection
 - Smooth Face CMU
 - Accent Tile
 - Color Selection



4. What upgrades are designed?²⁹

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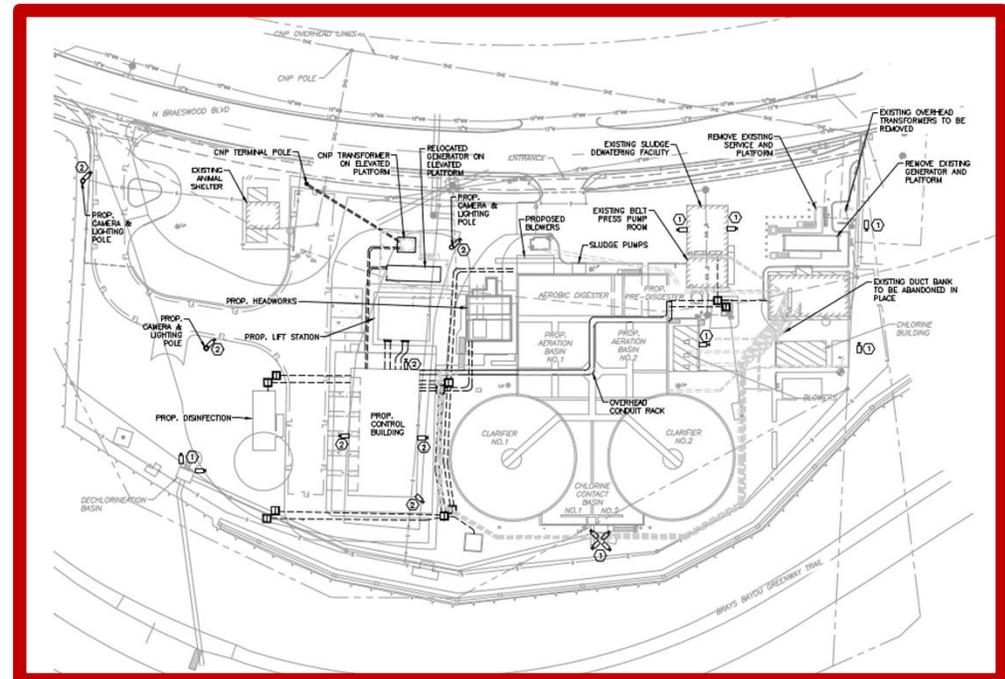
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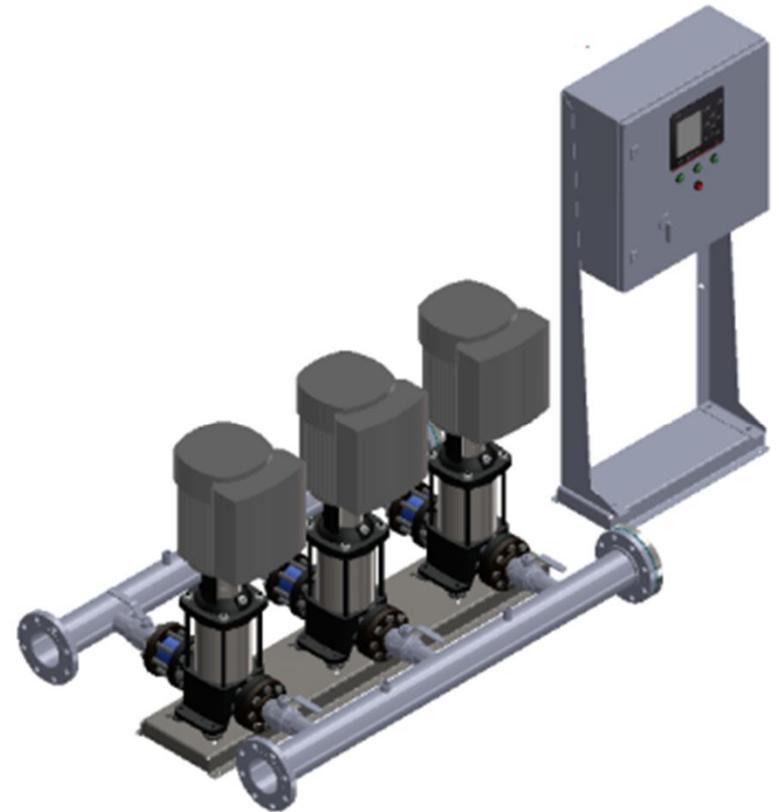
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4. What upgrades are designed?³²

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1. 60% WWTP Improvements
2. WWTP Location
3. Why upgrade the WWTP?
4. What upgrades are designed?
5. **Schedule**
6. Next steps

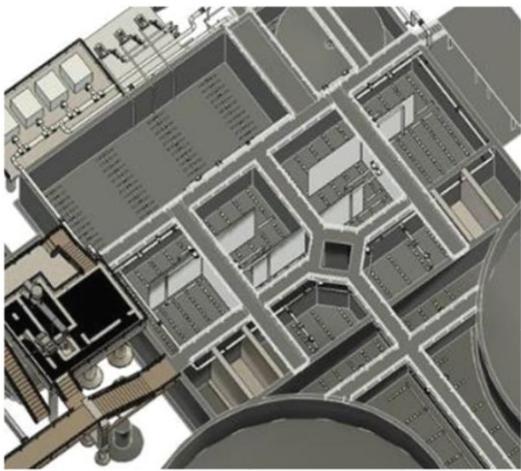
5. Schedule

Item	Duration
Permitting	
TCEQ	NAPD closed 10/21 November
City of Houston	Capacity Letter approved 10/3 FMO and Civil Submitted 10/7
90% Design	Due December
Bid Phase	3 Months
Construction	15 Months

1. 60% WWTP Improvements
2. WWTP Location
3. Why upgrade the WWTP?
4. What upgrades are designed?
5. Schedule
6. **Next steps**

6. Next Steps

1. Selection of Exterior Tile Color
2. Council Briefings at 90% design
3. Permit Coordination
4. Negotiate Construction Contract



October 24, 2021
City Council
Meeting



WASTEWATER TREATMENT PLANT 60% PLANS UPDATE

Prepared by
Kimley»Horn

For



Public Works Director Closure

- Today: Receive any additional comments or feedback from City Council
- Move forward to 90% design

