

# Bayshore Regional Sewerage Authority Power Resiliency Generation Project

Public Presentation

4/19/2021



# ORIENTATION



**BRSA**

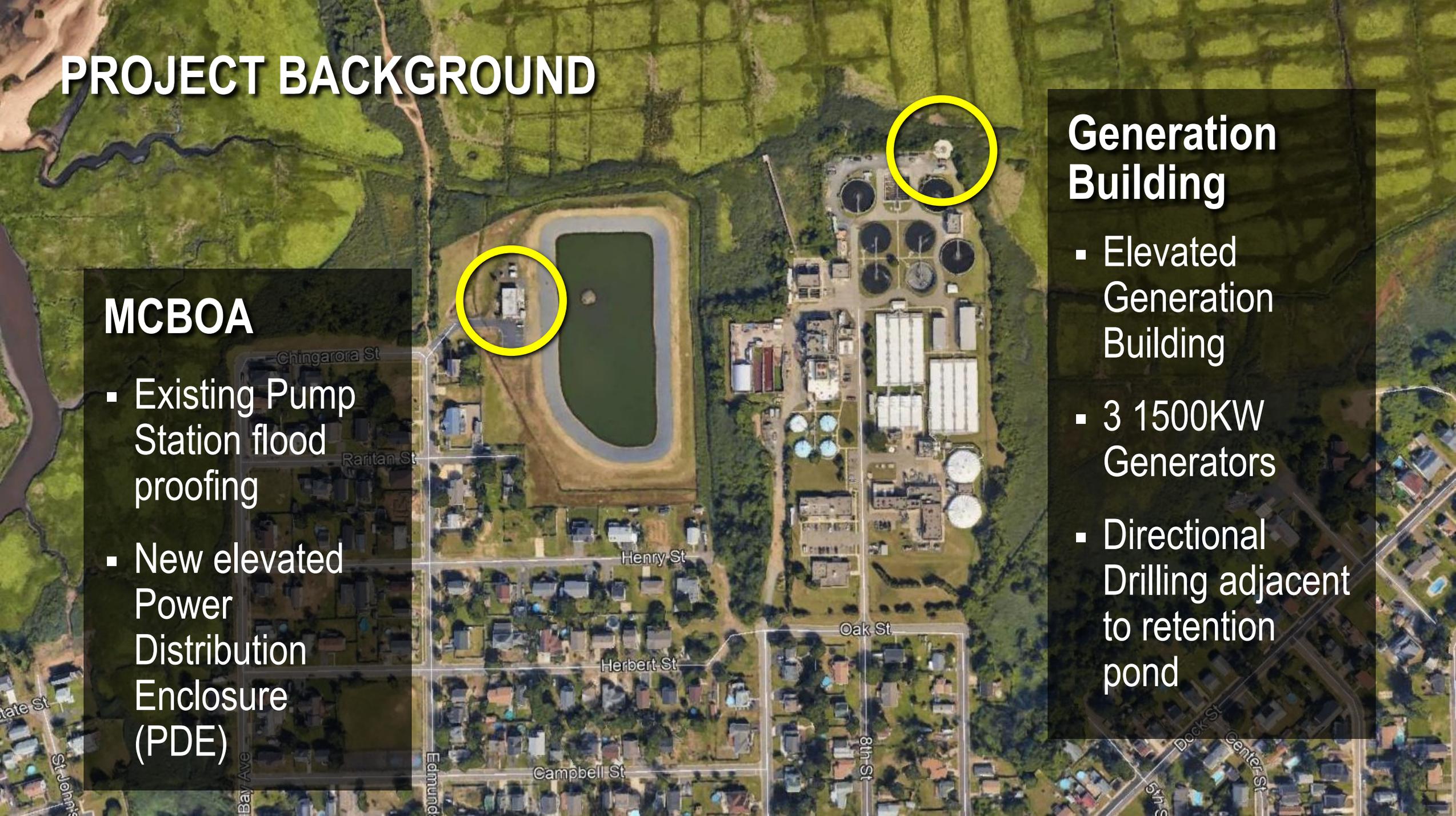
# PROJECT BACKGROUND

## MCBOA

- Existing Pump Station flood proofing
- New elevated Power Distribution Enclosure (PDE)

## Generation Building

- Elevated Generation Building
- 3 1500KW Generators
- Directional Drilling adjacent to retention pond



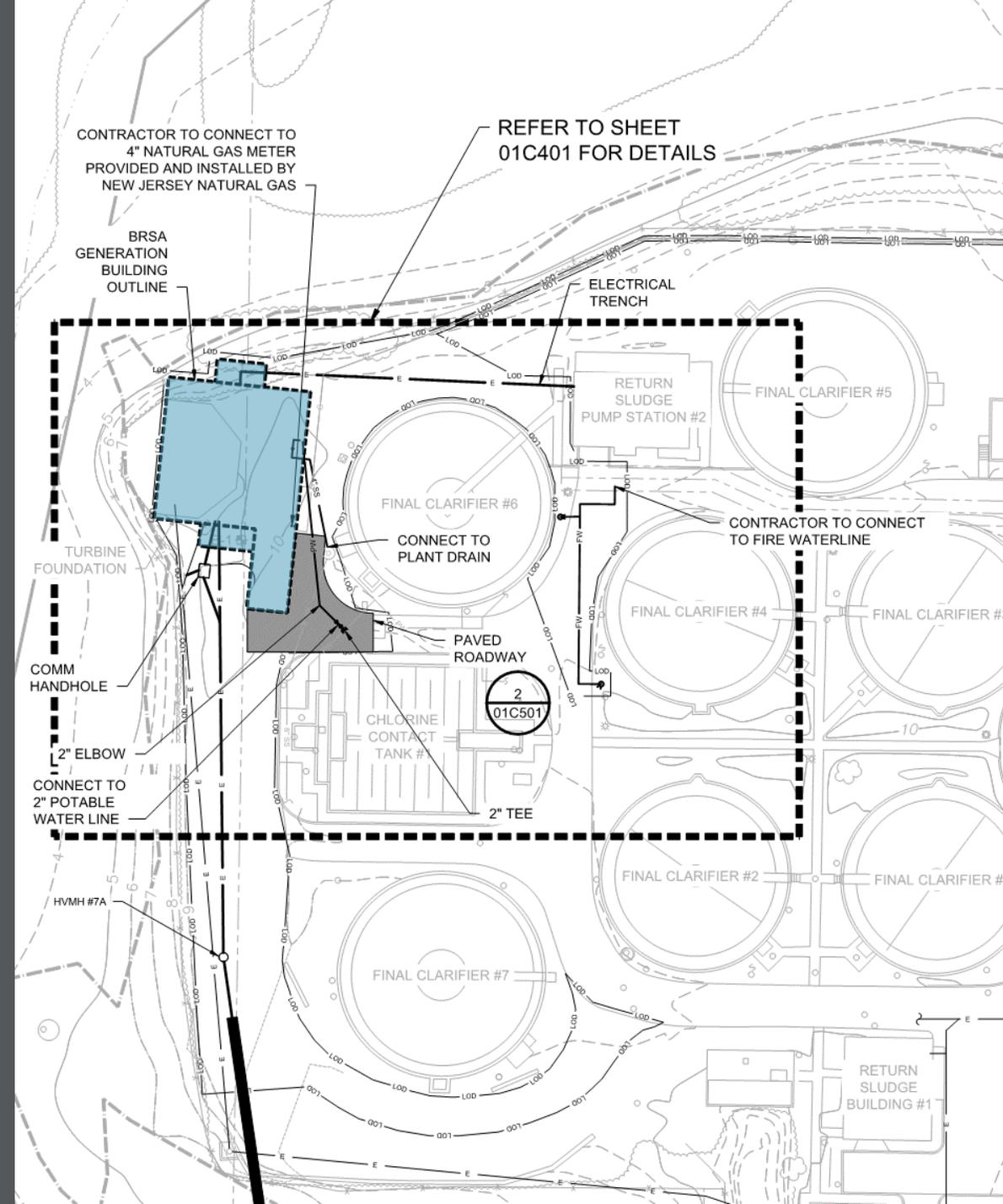


## PROJECT PURPOSE

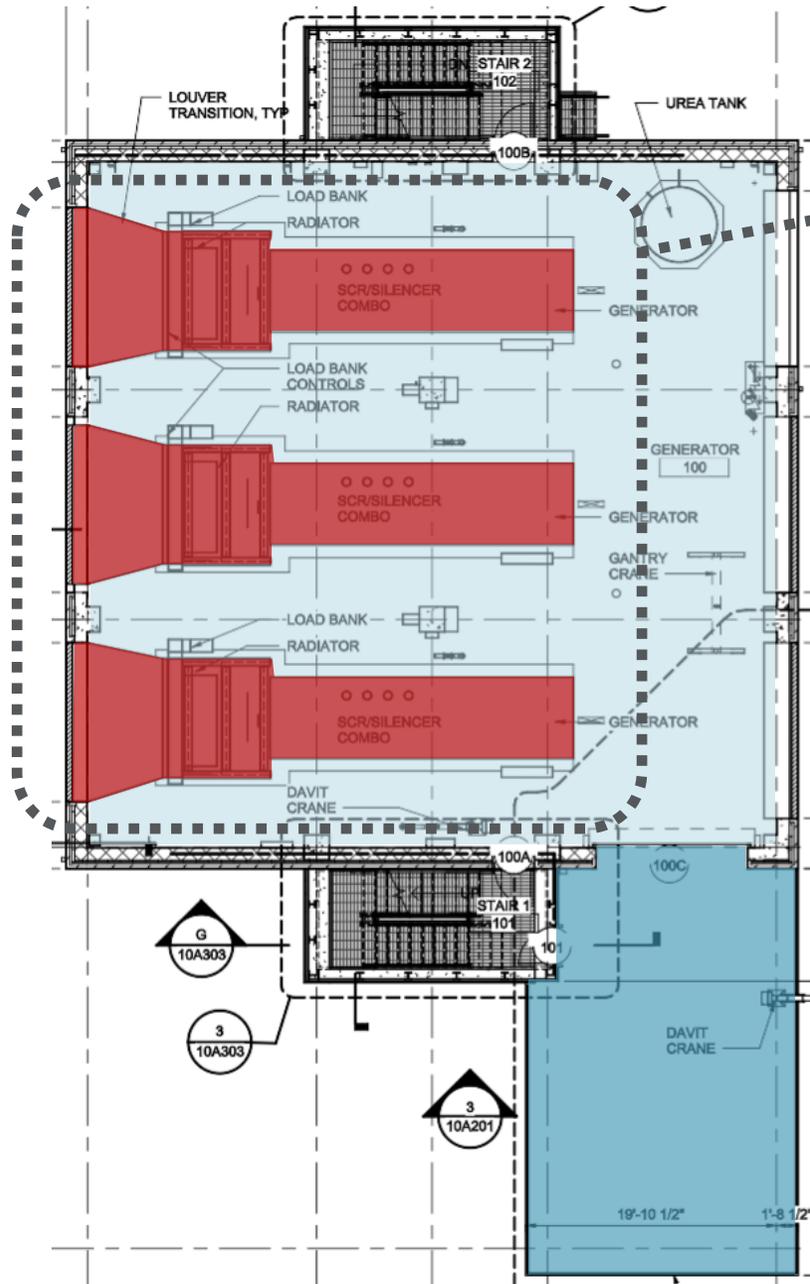
- The intent of the project is to provide the essential services of BRSA & MCBOA with reliable power in anticipation of, and during major storm events.
- BRSA & MCBOA services are a 24/7 operation that need to be maintained.

# GENERATION BUILDING

- Located atop the existing wind turbine pad
- Elevated above 500-year flood level
- Building Designated as “Special Industrial Occupancy”
- Emergency Generators running prior to major storm or during regular maintenance
- 2 hours/month maintenance
- Exhaust vents of Generation building are facing away from residents, directing noise towards the Bay.





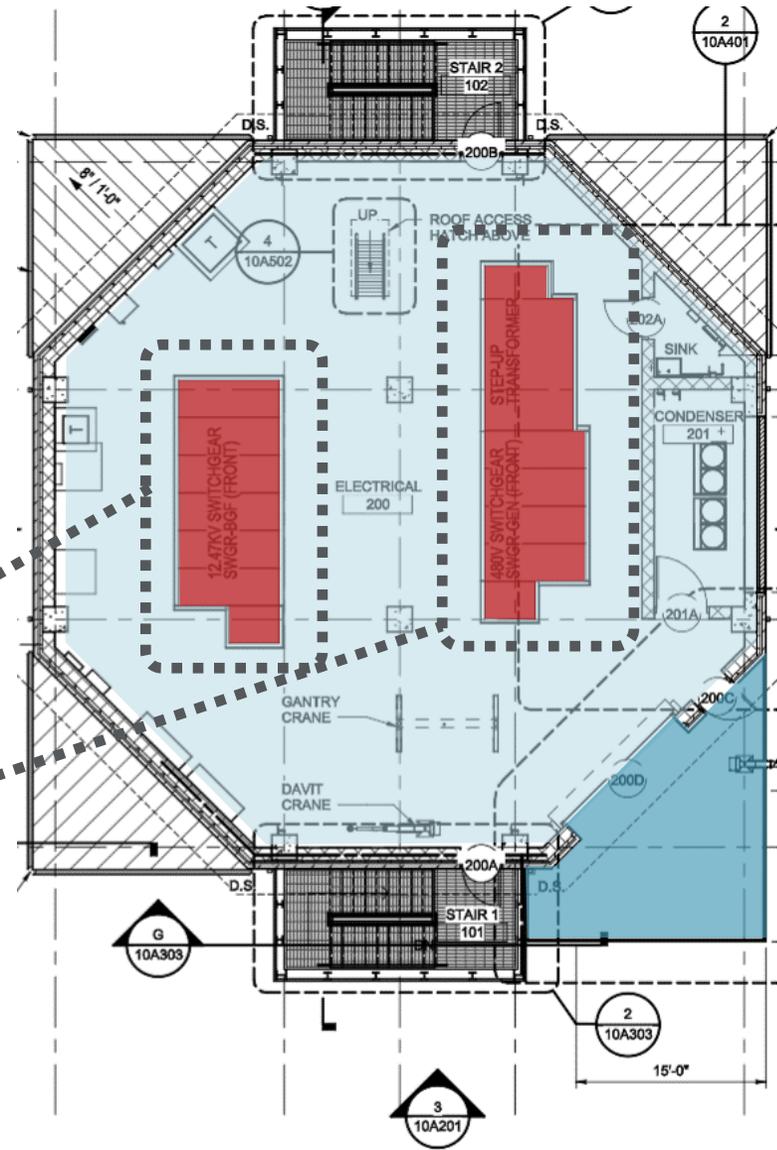


3  
Generators

480 v  
Switchgear

12.47kv  
Switchgear

**Generator Level**



**Electrical Level**

**87.5'** Top of Building  
95.5'

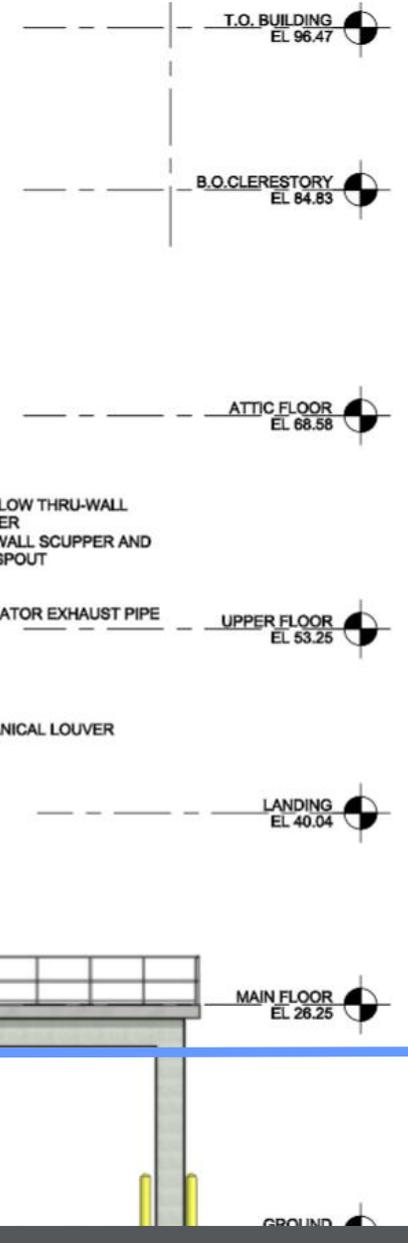
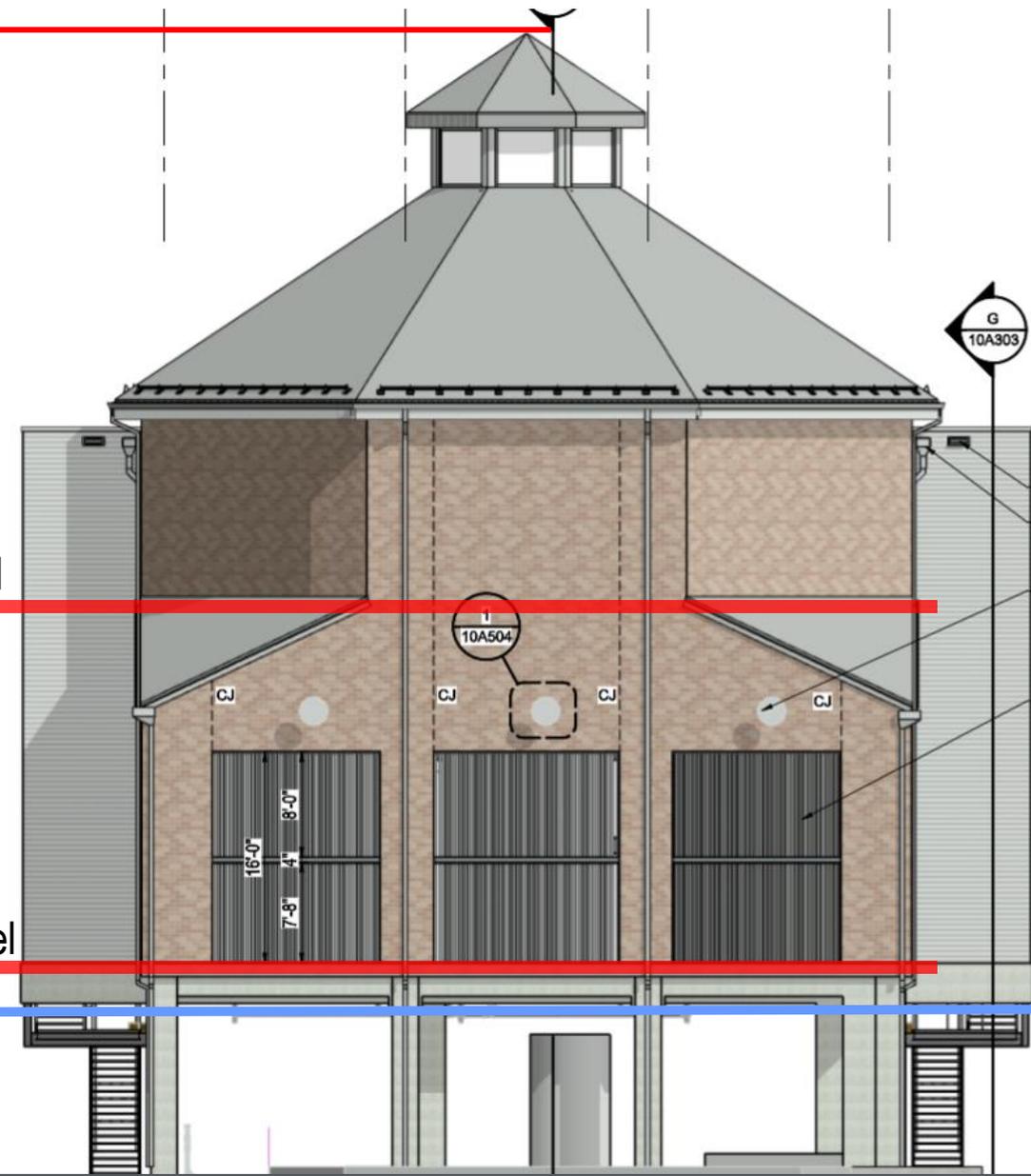
**43.5'** Electrical Level  
53.5'

**14'**  
24.0'

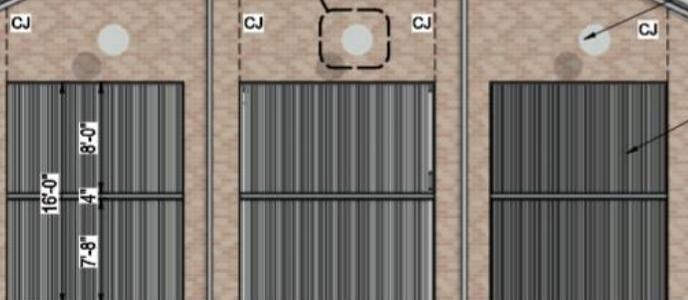
**16.5'** Generator Level  
26.5'

500 Year Flood Level

Ground Level



- OVERFLOW THRU-WALL SCUPPER
- THRU-WALL SCUPPER AND DOWNSPOUT
- GENERATOR EXHAUST PIPE
- MECHANICAL LOUVER



**87.5'** Top of Building  
95.5'

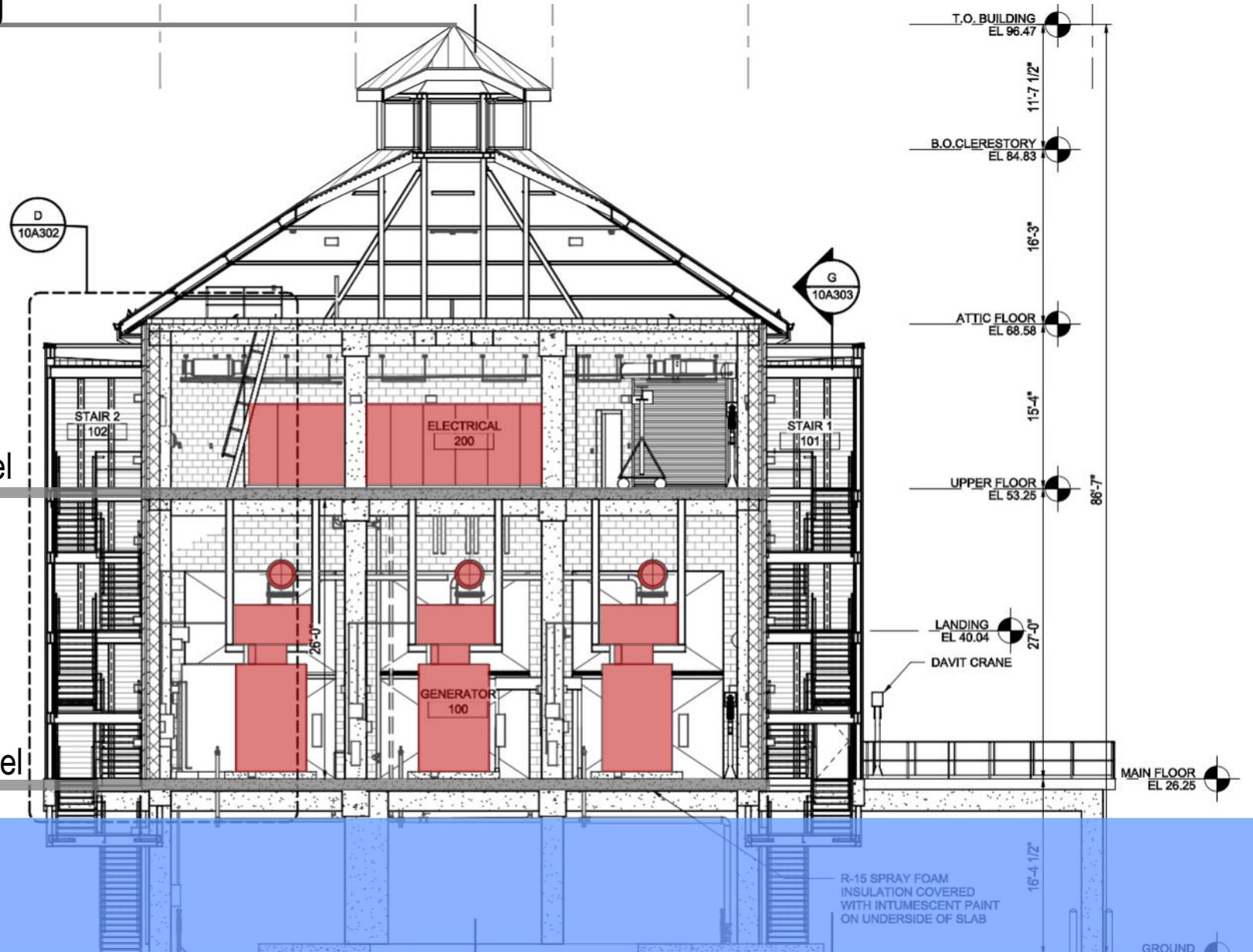
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26.5'

500 Year Flood Level

Ground Level



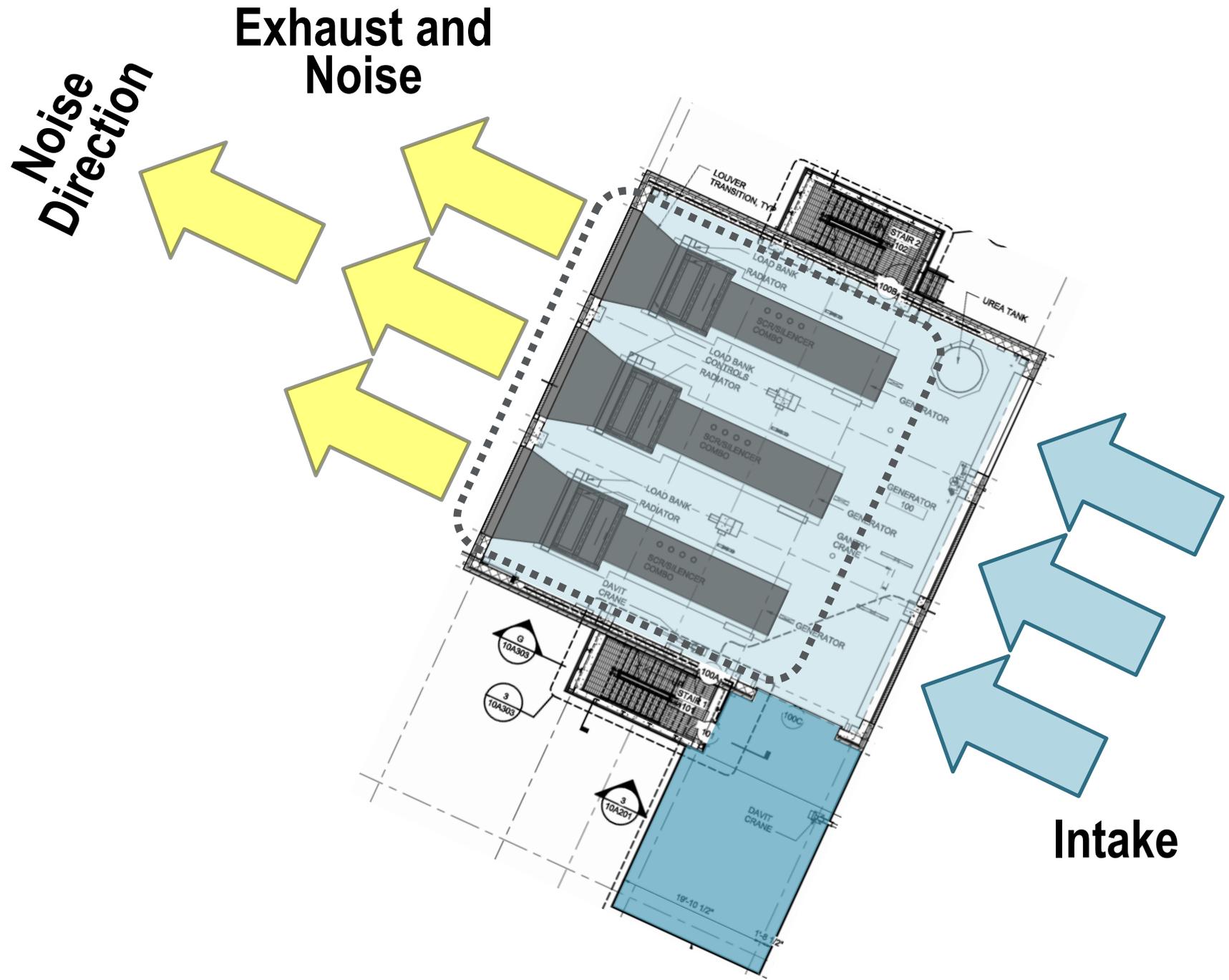


View from Raritan Bay



View from BRSA Facility

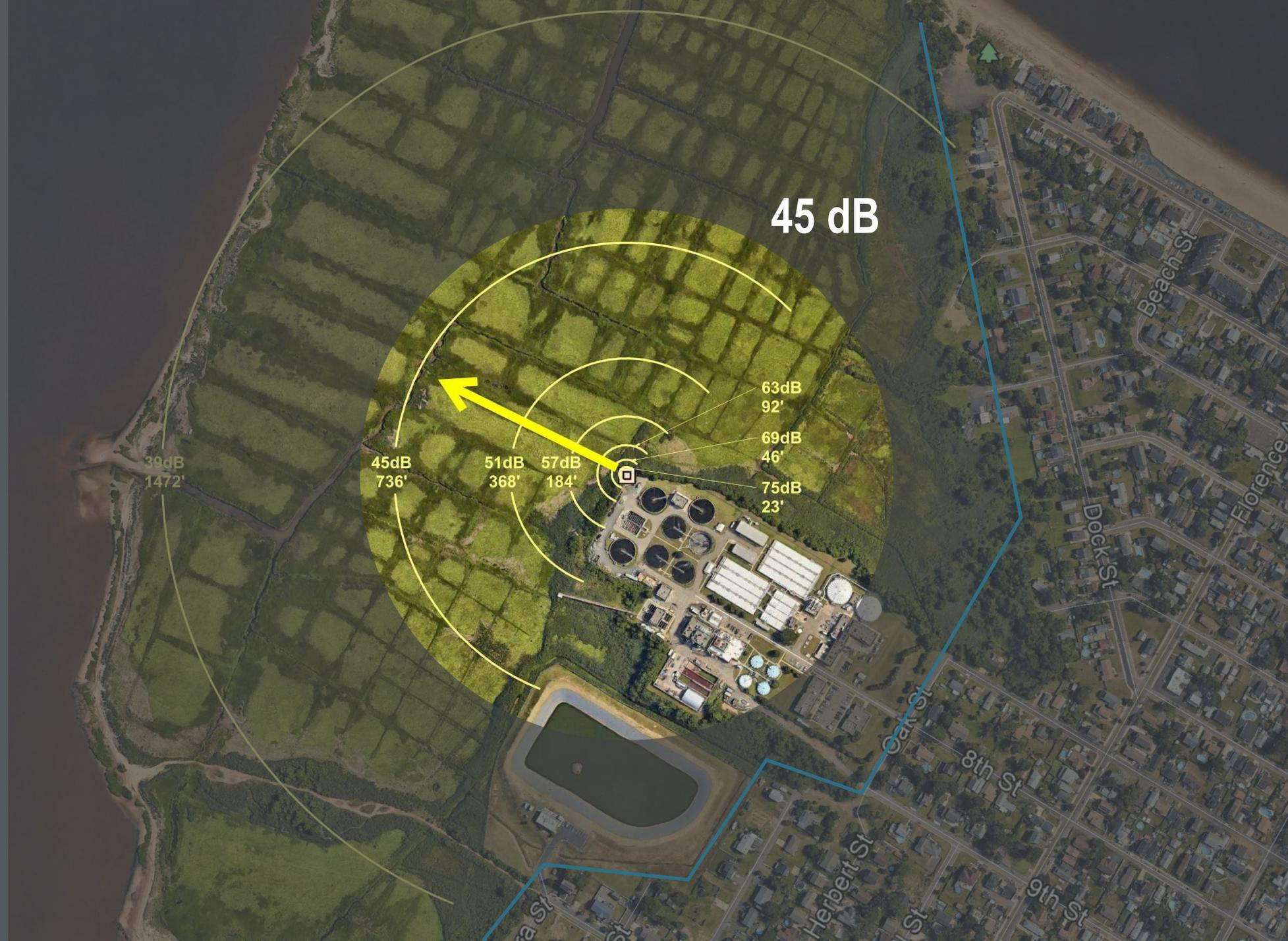
# AIR FLOW & NOISE





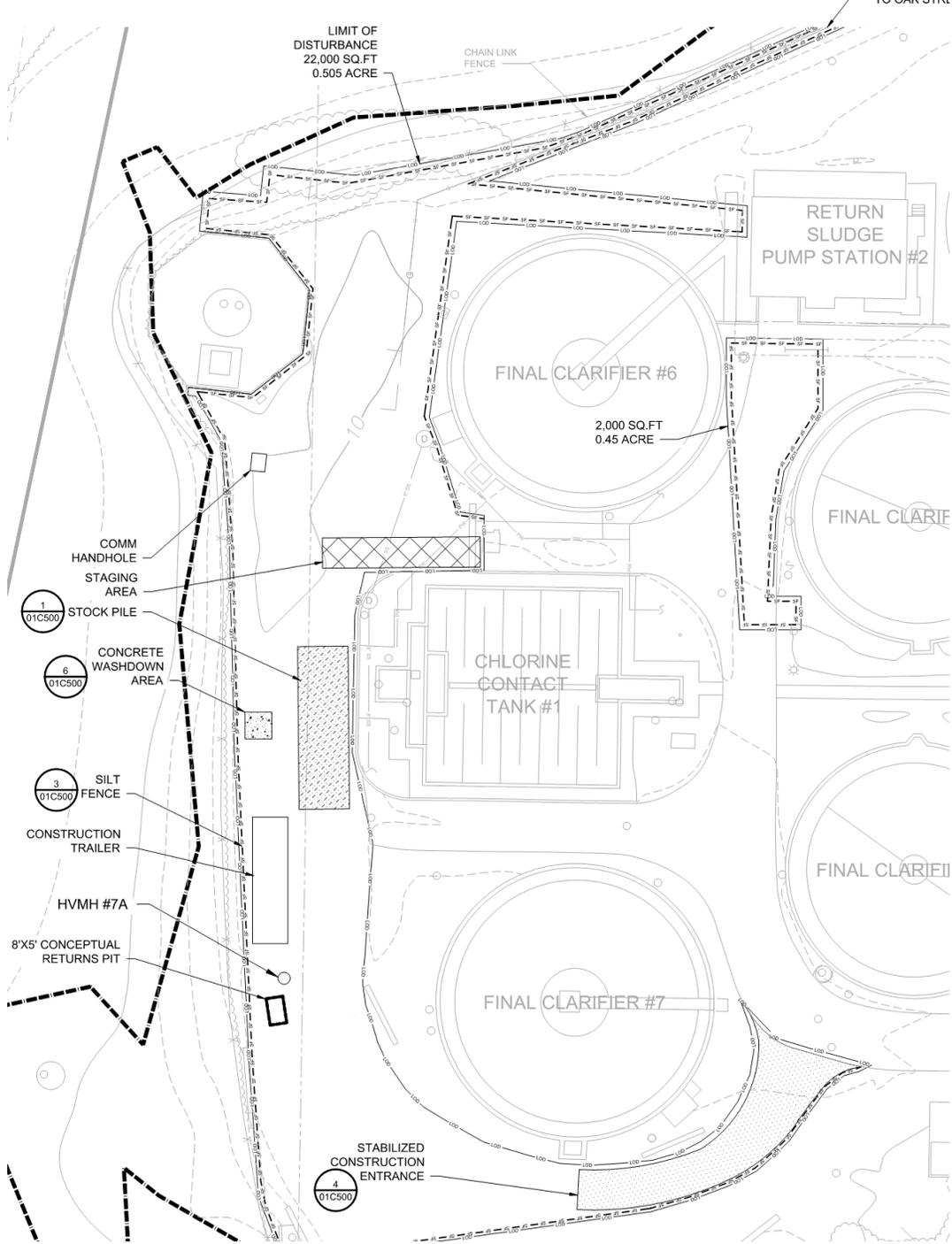
# NOISE

- **Noise ordinance at property line**
  - 65 decibels during **daytime**
  - 50 decibels during **night**
- Maintenance and testing completed **during the day**
- Exhaust points toward bay, **away from residents**



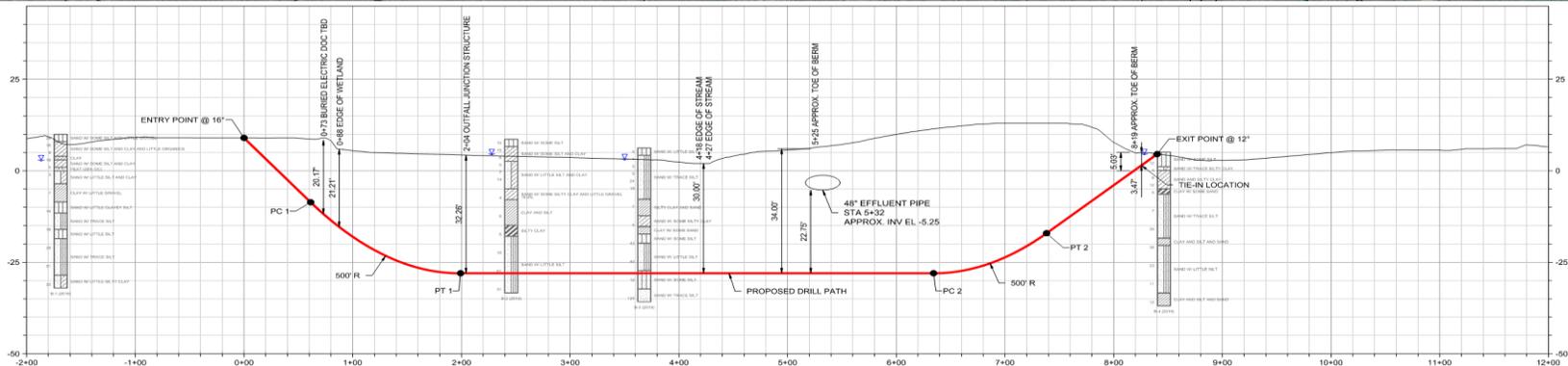
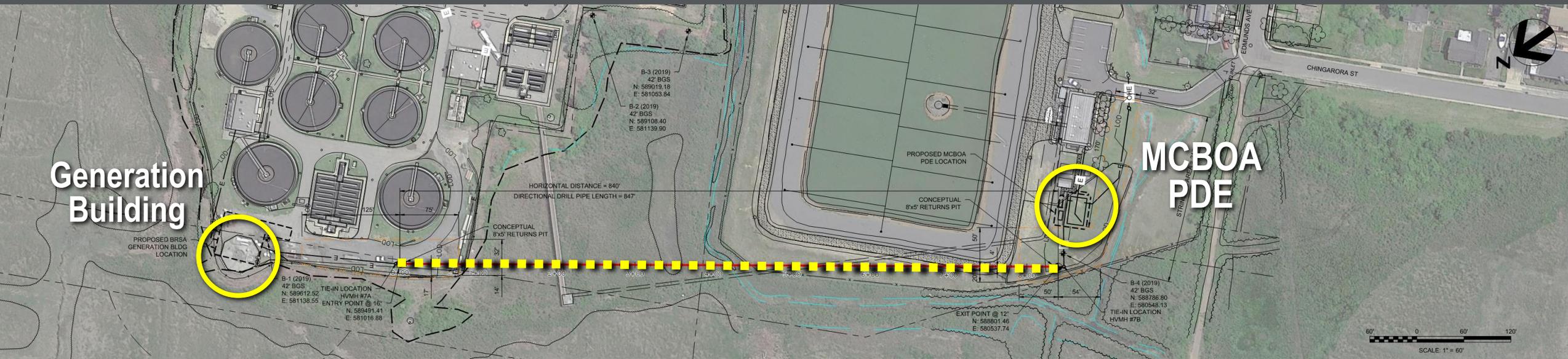
# GENERATION BUILDING EROSION CONTROL

- Construction Entrance
- Concrete Washdown
- Silt Fence
- Stockpile with silt fence



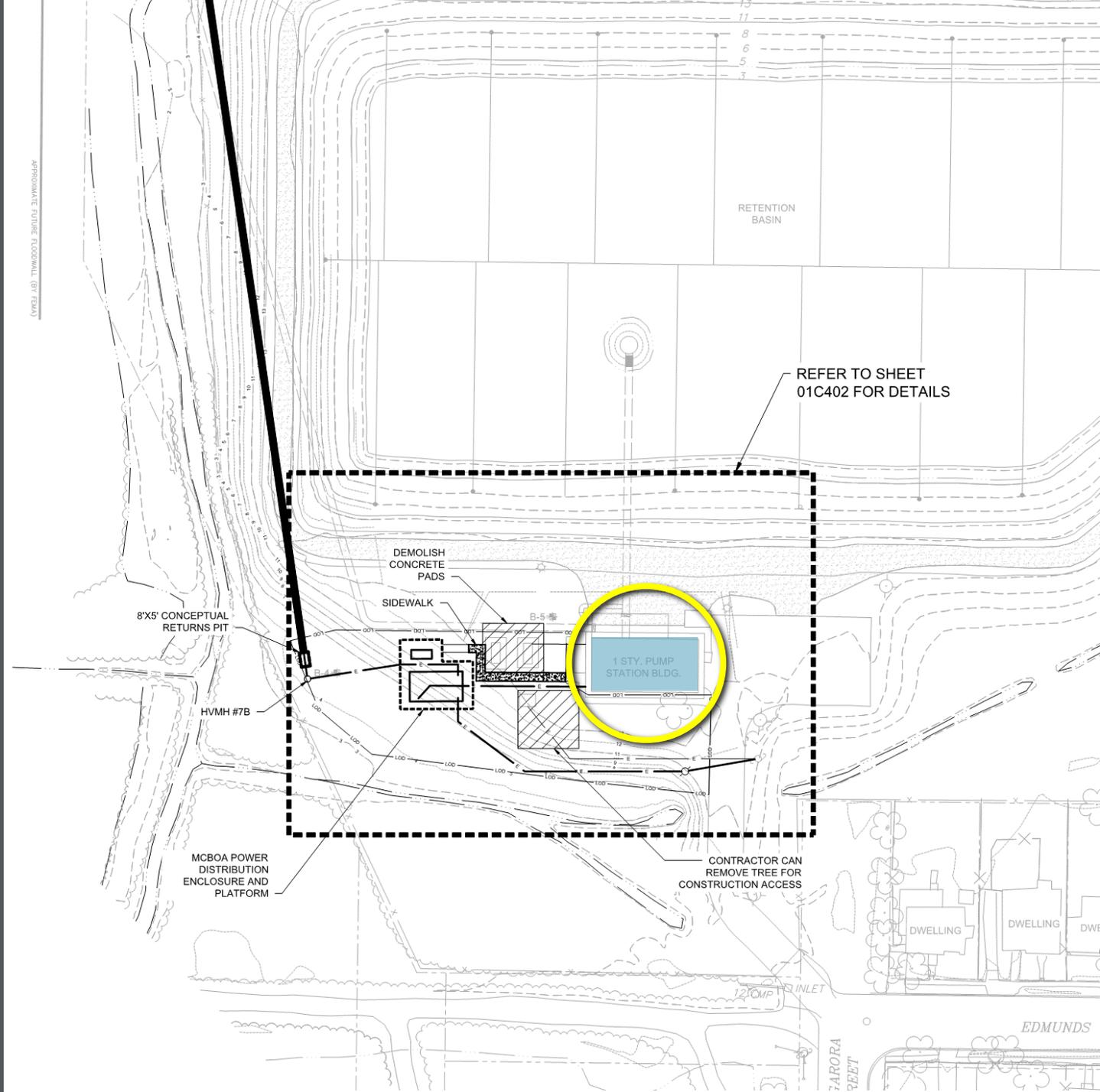
# HORIZONTAL DIRECTIONAL DRILL PLAN

- Providing conduit and power from Generation Building to MCBOA PDE, while not disturbing wetlands and retention pond



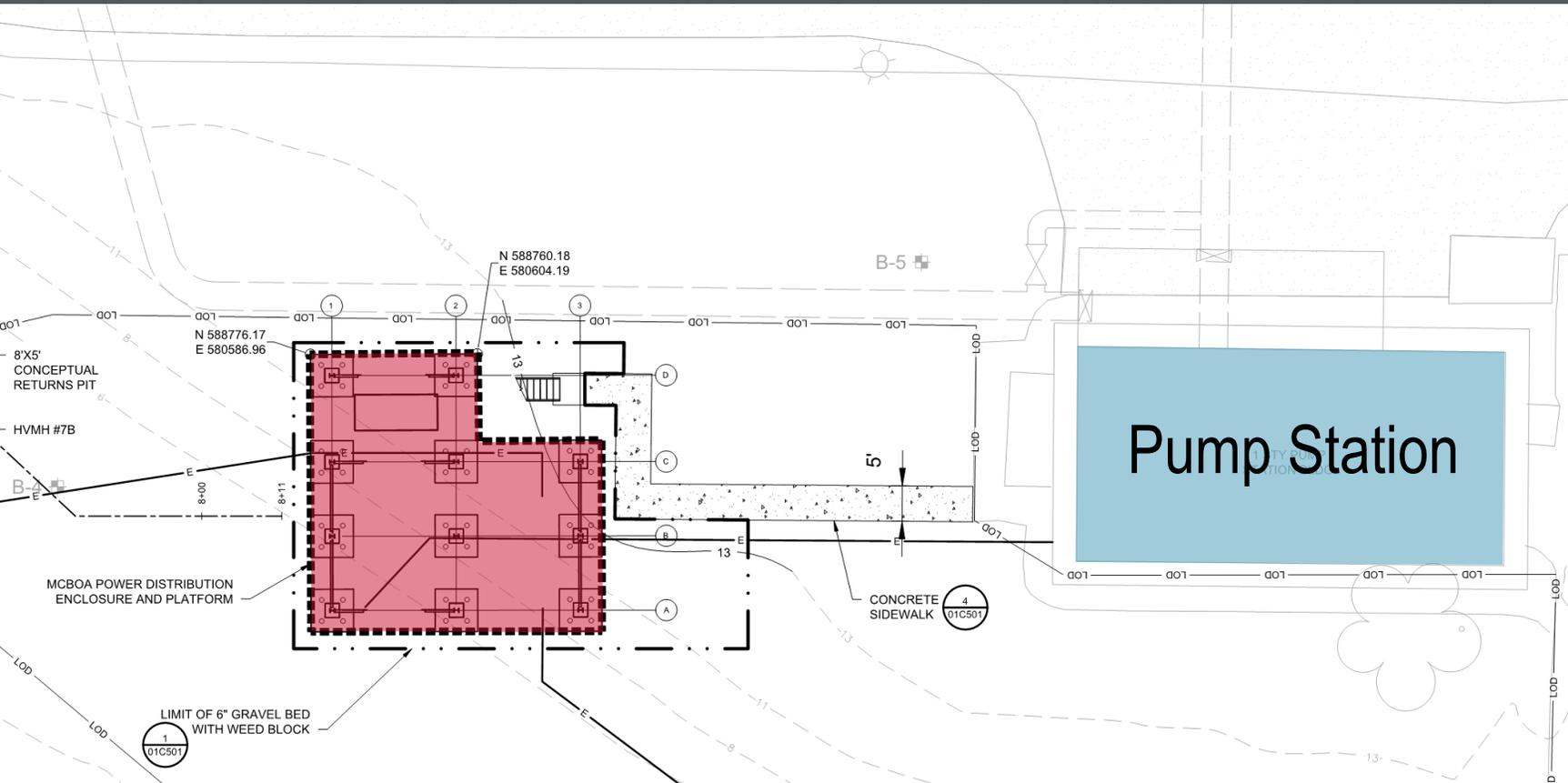
# MCBOA PUMP STATION

- Flood proofing existing pump station walls
- New PDE for electrical equipment
- Protected to 500-year flood level
- Noise level from PDE operation will comply with 50db at property line.



# MCBOA PDE

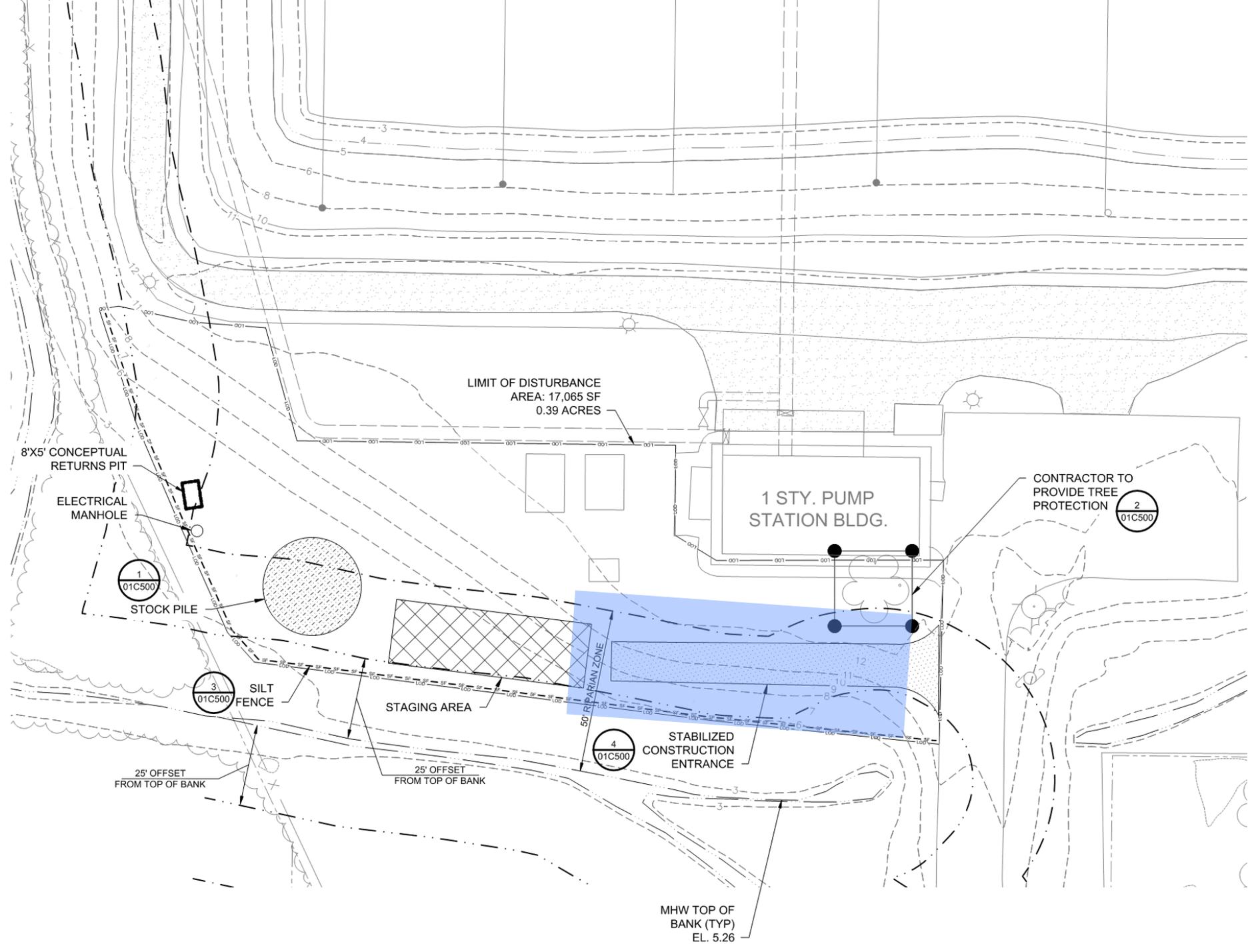
- PDE installed to the North West of the pump station
- Elevated platform supports existing diesel generator and transformer to operate MCBOA pump station.



Example from 2019 BRSA project

# MCBOA EROSION CONTROLS

- Construction Entrance
- Silt Fence
- Stockpile with silt fence





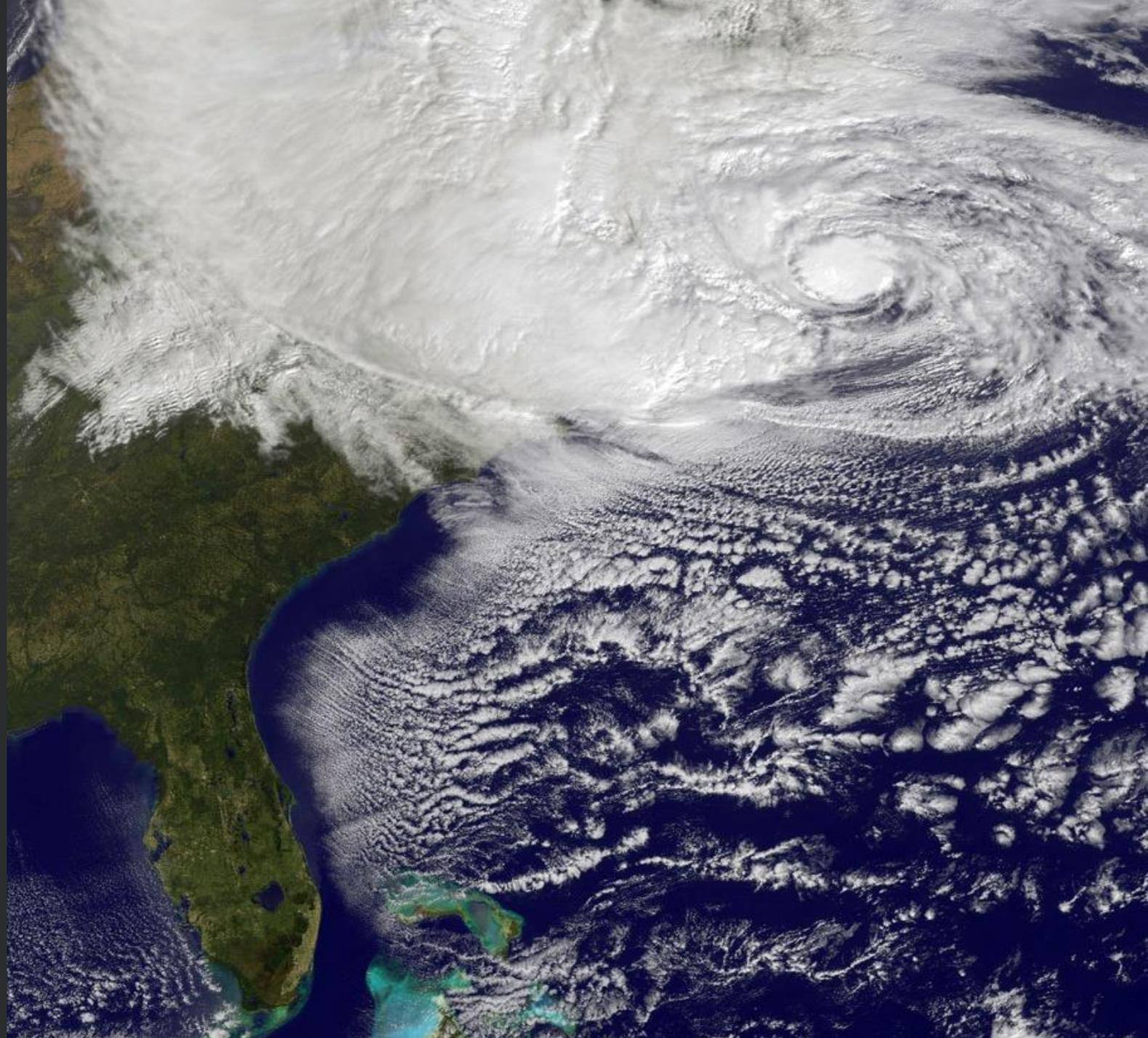
9<sup>th</sup> Avenue construction access

# CONSTRUCTION SEQUENCE

- Access through 9th Avenue to BRSA facility
- Access along Edmunds Avenue for MCBOA facility
- Large Delivery Items only during working hours:
  - Generators – mid 2022
  - Electrical Equipment – mid 2022
  - MCBOA PDE – early 2022
  - Concrete work – early - mid 2022
- Work Hours: 7:00 AM – 3:30 PM
- Construction Activities:
  - Pile work expected late 2021 – early 2022
- Construction Route:
  - Route 36 → Union Avenue → Front Street → Florence Avenue → 9th Street

# GENERATION OPERATIONS

- Generators are planned to operate in **Storm Anticipation Mode**
  - Powering the facility **6-hours prior to storm** and **continue operation during loss of power**
  - Monthly maintenance: 30 minutes per month per generator



# ANTICIPATED SCHEDULE

**Start  
Construction  
September  
2021**

**Construction  
Complete  
October  
2023**

**26 Months**



**2021**

**2022**

**2023**

**2024**

August 2021  
**Contract  
Awarded**

# Questions from Planning Board meeting on February 25, 2021

*Q: Are the upper portions of the structure susceptible to high winds. Was there any regulation requiring studies to be performed?*

- A: We are not aware of any regulation requiring a study. However, the building is designed to meet wind forces per code.

*Q: Will you notify the residents when there is testing or running of the generators.*

- A: This is something that can be considered. However, BRSA currently tests their diesel generators and receives no complaints.

*Q: Local fire truck ladder is a maximum of 75 feet. Is this a problem.*

- A: A ladder would be needed for rescue of personnel who should not be above the 2<sup>nd</sup> floor elevation, which is 44 feet above ground.

*Q: Will NJNG be bringing in a new line and need to upgrade their system. Will new gas line be from main road.*

- A: NJNG will be providing the new gas main. They need to replace the gas main on 7<sup>th</sup> avenue, and Poole Avenue. .

*Q: Are you willing to conduct a public meeting? Coordinate with Business Administrator and Engineer.*

- A: BRSA is willing to conduct a presentation for the public and make information available on the BRSA website.

*Q: Are you getting any Grant Funding?*

- A: Yes, FEMA is covering 90%.

*Closing Comment: This is a great project and will be a benefit for the residents of Union Beach.*

# Questions