



**Wastewater Treatment Plant
Upgrade and Expansion Project**
Virtual Community Meeting
June 11, 2020



Purpose

- To share information on the construction activities for the second phase of the Wastewater Treatment Plant Upgrade and Expansion project and to describe what the community should expect.
- To answer any questions and stay connected.



Introductions



Azalea Mitch, P.E.
Deputy Public Works Director



Kellie Benz
Communications & Public Relations



Deryk Daquigan, P.E.
Engineering Manager



Doug Lenz, P.E.
Senior Project Manager



Chris Bessa, CCM
Construction Manager Lead



Zoom Webinar Information

Questions will be answered live after the presentation

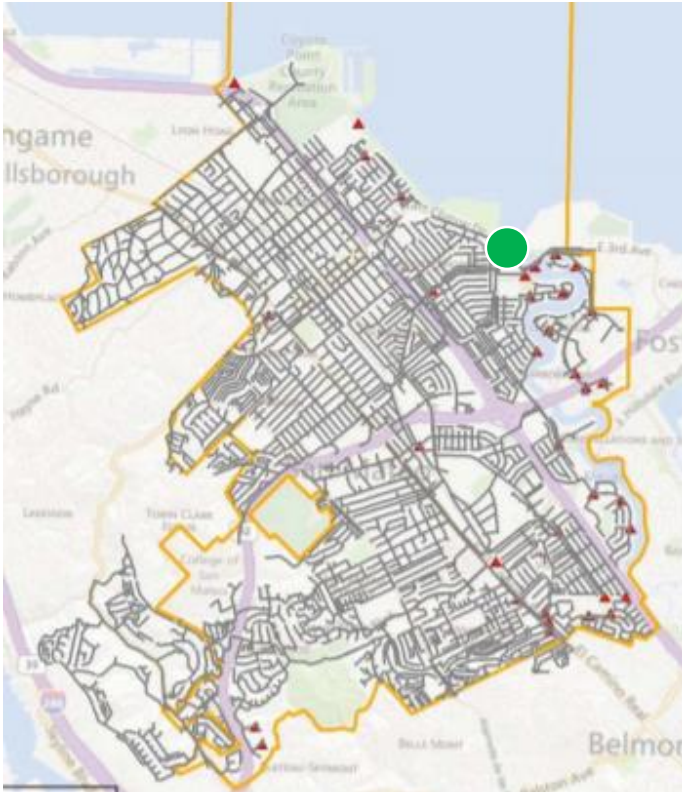
- How to ask a question:
 - Attendees with questions, please click 'raise your hand.'
 - For Phone-in participation, press #9 to raise your hand.
 - Or email info@cleanwaterprogramsanmateo.org
- Question order and length:
 - Questions will be asked one at a time and in order.
 - Please limit your question to 3 minutes maximum.
 - Questioner will be muted while speaker responds.
 - If you have a follow-up question, please click 'raise your hand' again.
- Recording: This meeting is being recorded. By joining this meeting through Zoom you agree to be recorded.

Agenda

- Clean Water Program Overview
- Wastewater Treatment Plant Upgrade & Expansion Update
 - *Ongoing Construction*
 - Phase 1: Site Preparation
 - *Upcoming Construction*
 - Phase 2: Foundation Piles
- Question & Answer Session

Clean Water Program Overview

Existing Wastewater System

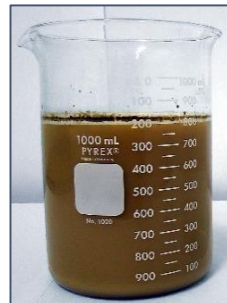


Existing Collection System



Existing Wastewater Treatment Plant (WWTP)

Collect Wastewater

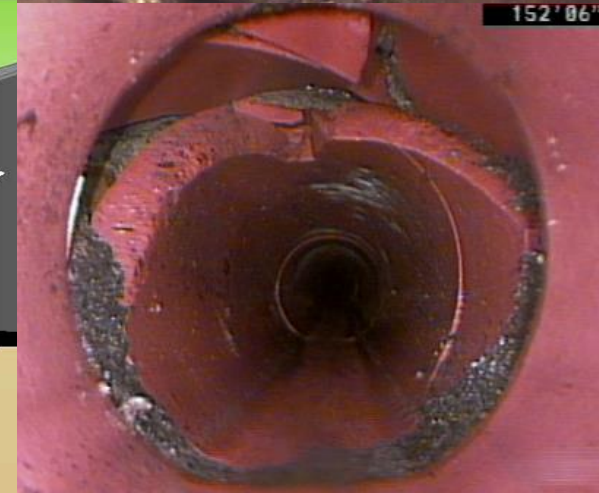
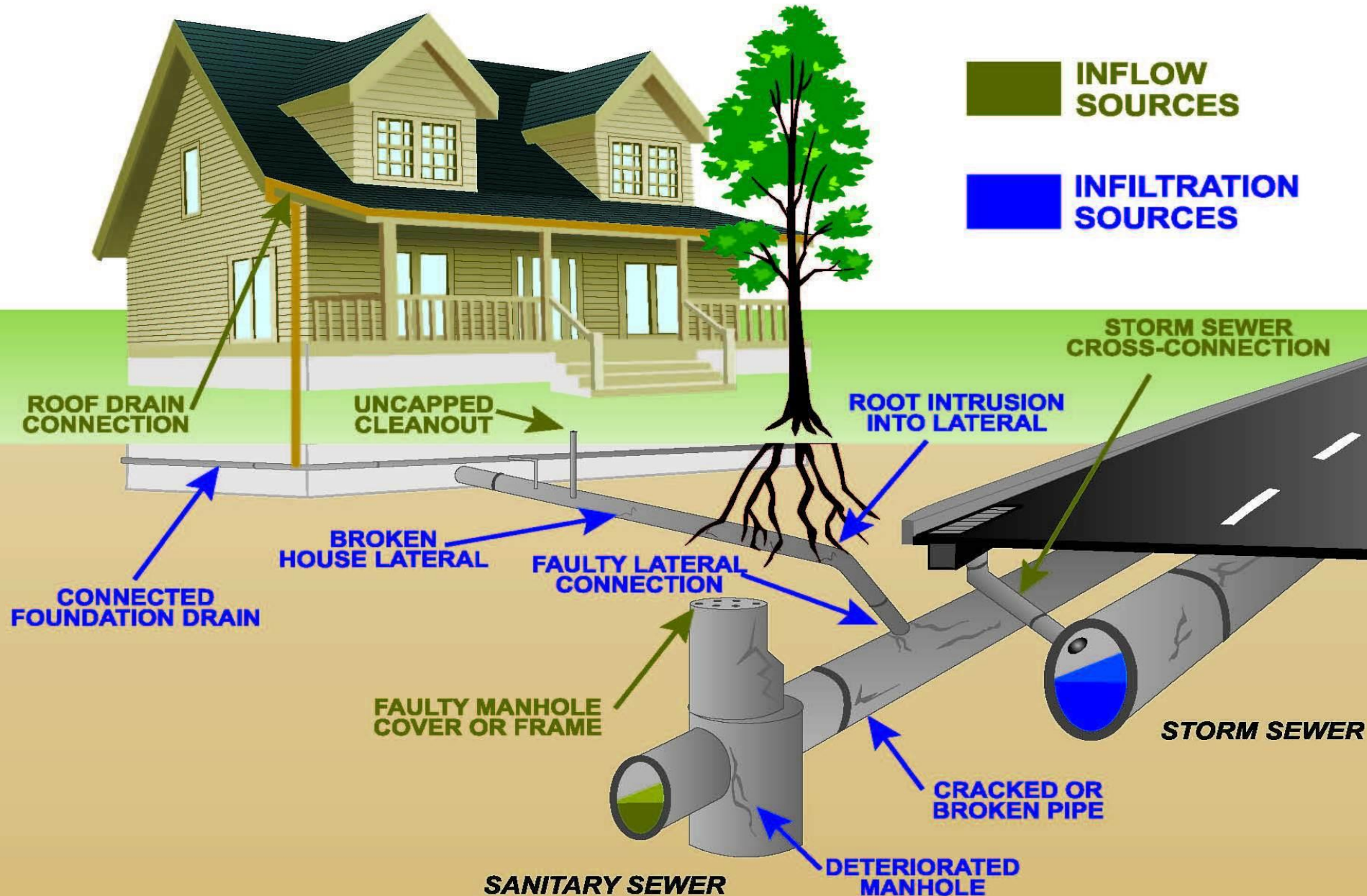


Treat Wastewater



Discharge Treated Water to Bay

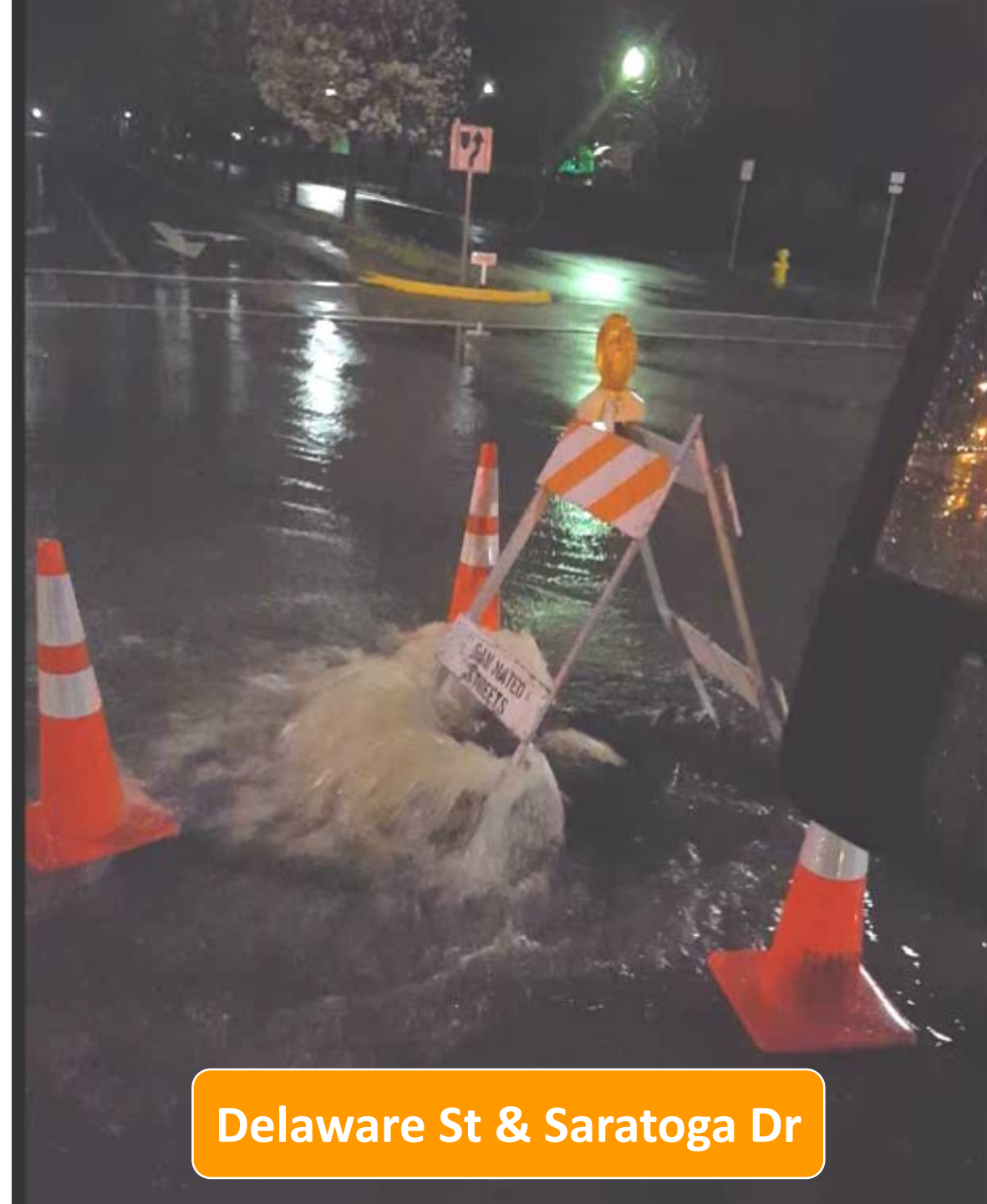
Sources of Infiltration and Inflow



Peak Wet Weather Conditions & Insufficient Capacity

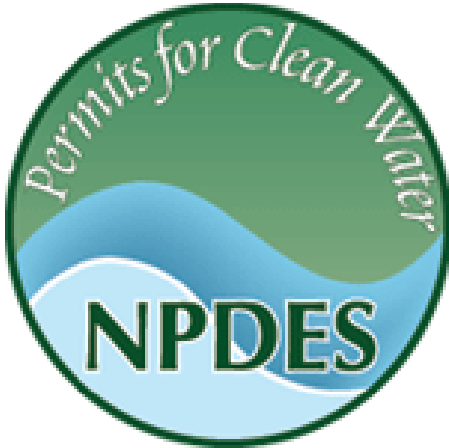
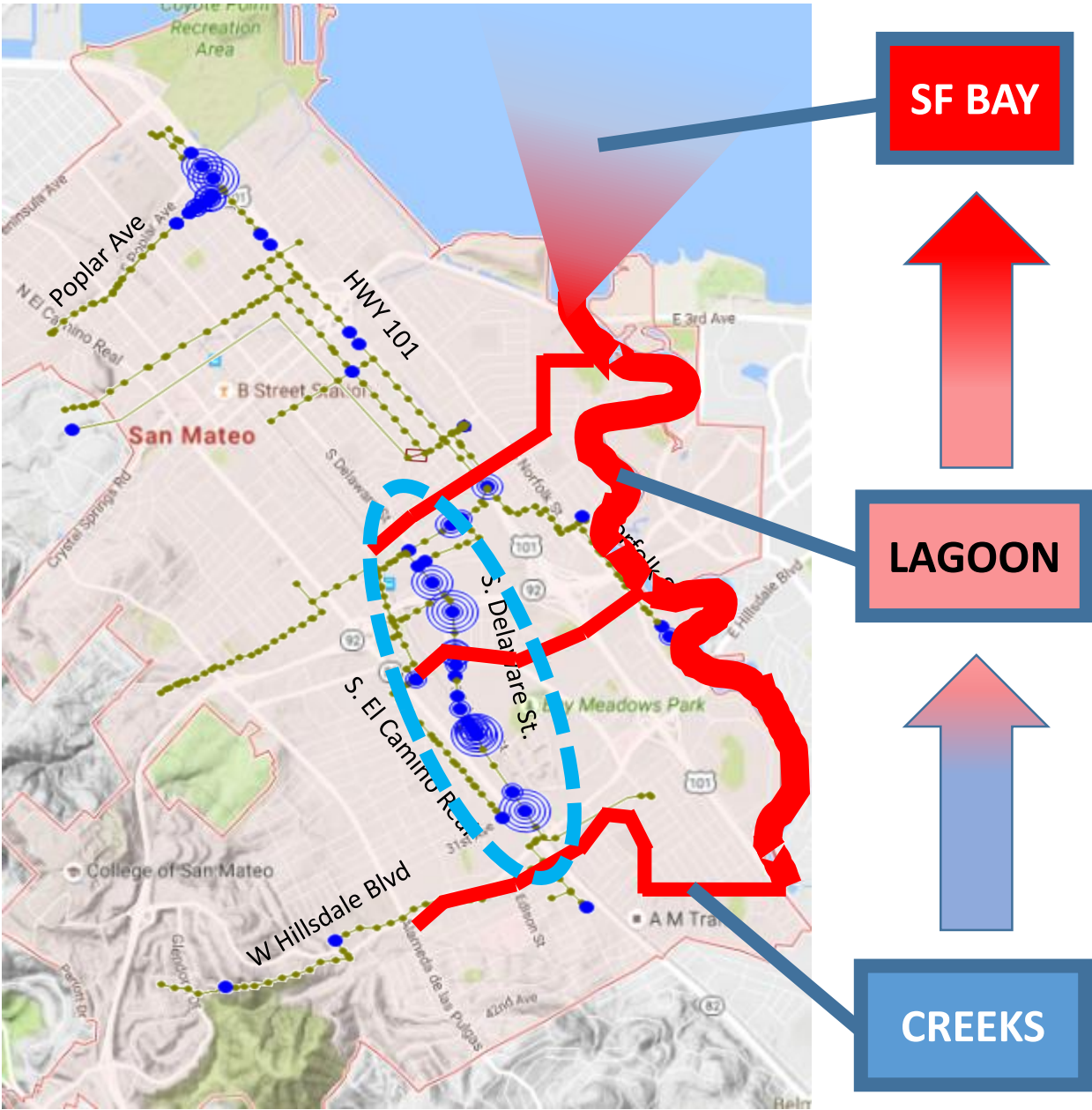
What Causes Sewer Overflows?

*Sewage PLUS
Infiltration/Inflow of Rain
Water Entering the System*



Delaware St & Saratoga Dr

Sewer Overflow Impacts & Regulatory Violations



Clean Water Program Goals



Replace aging infrastructure and facilities



Build wet weather sewer system capacity assurance to prevent overflows



Meet current and future regulatory requirements



Align with the City of San Mateo and Foster City's sustainability goals

Protecting the Bay and our Community for a Sustainable Future

WWTP Upgrade & Expansion Project Update

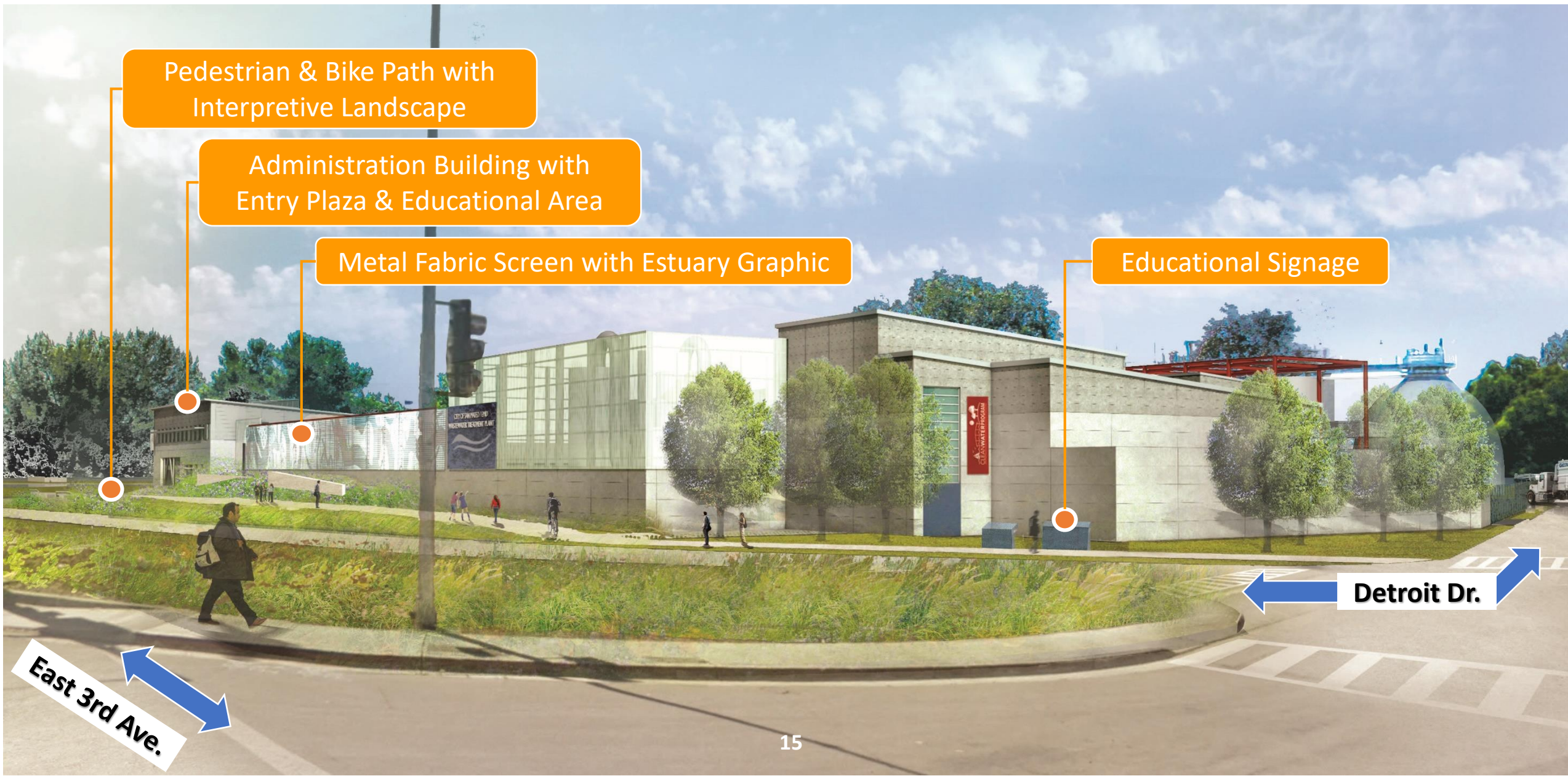
WWTP Site Location and Vicinity



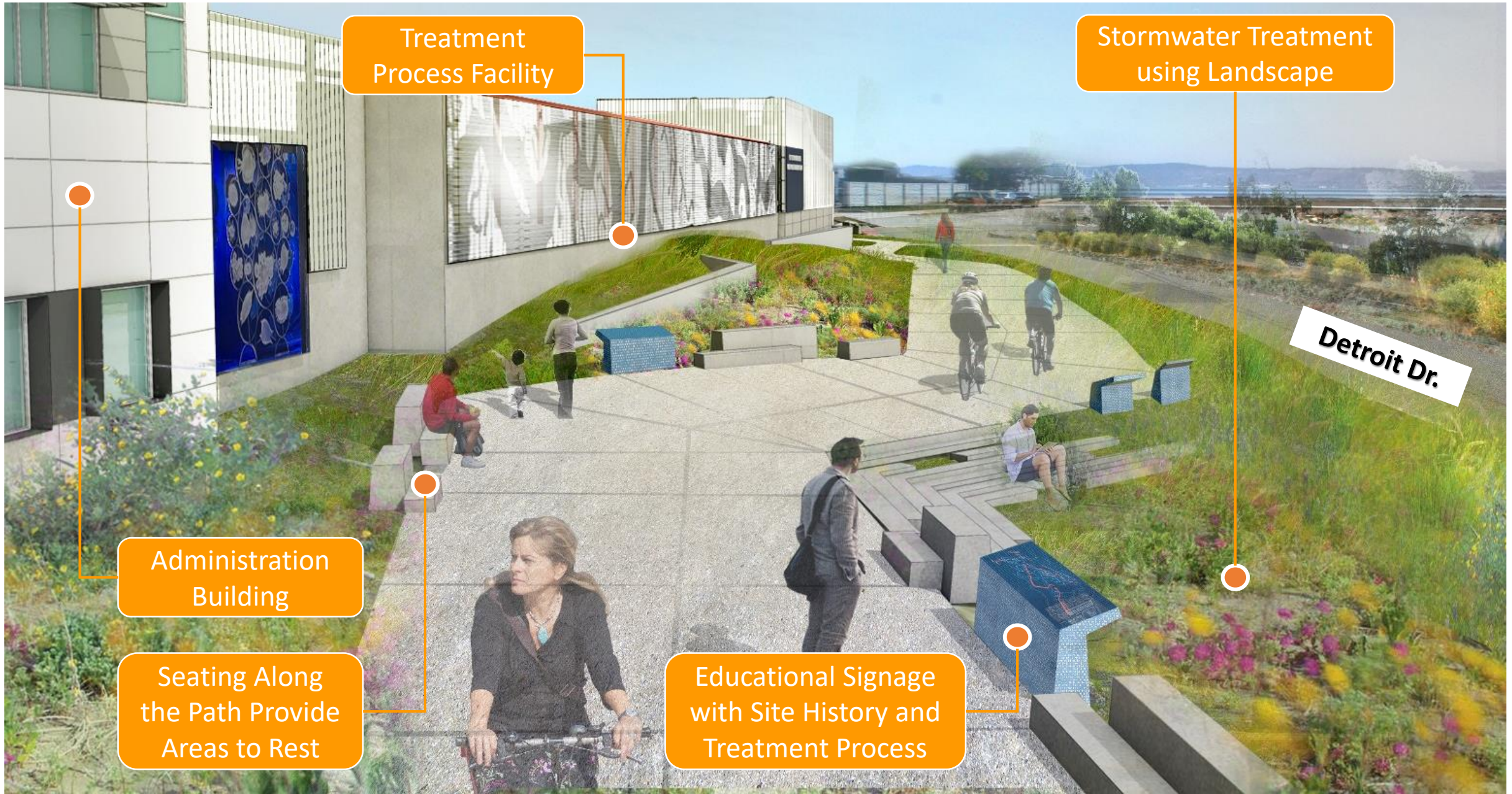
WWTP Conceptual Renderings



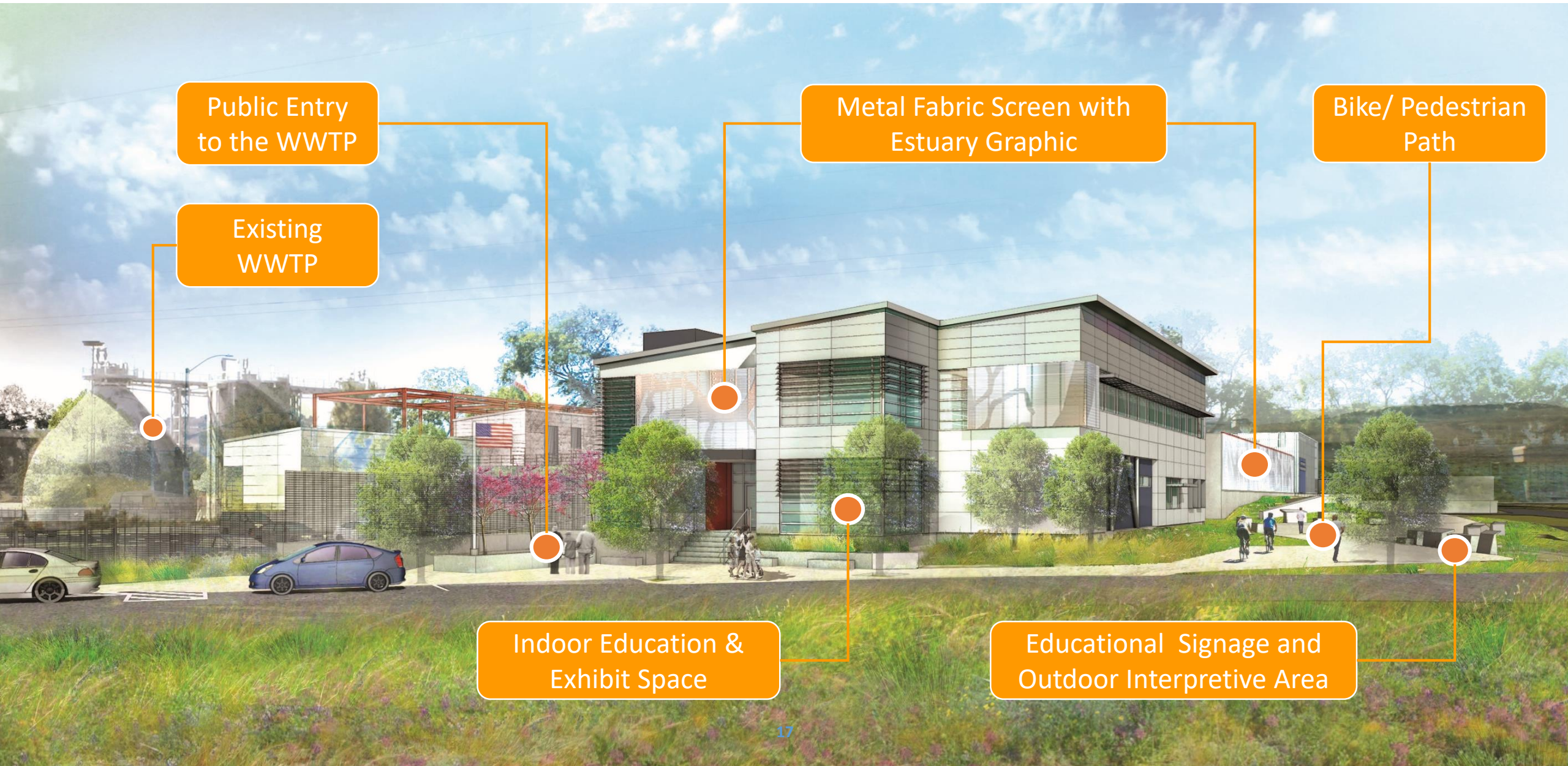
WWTP Entry View From East 3rd Avenue



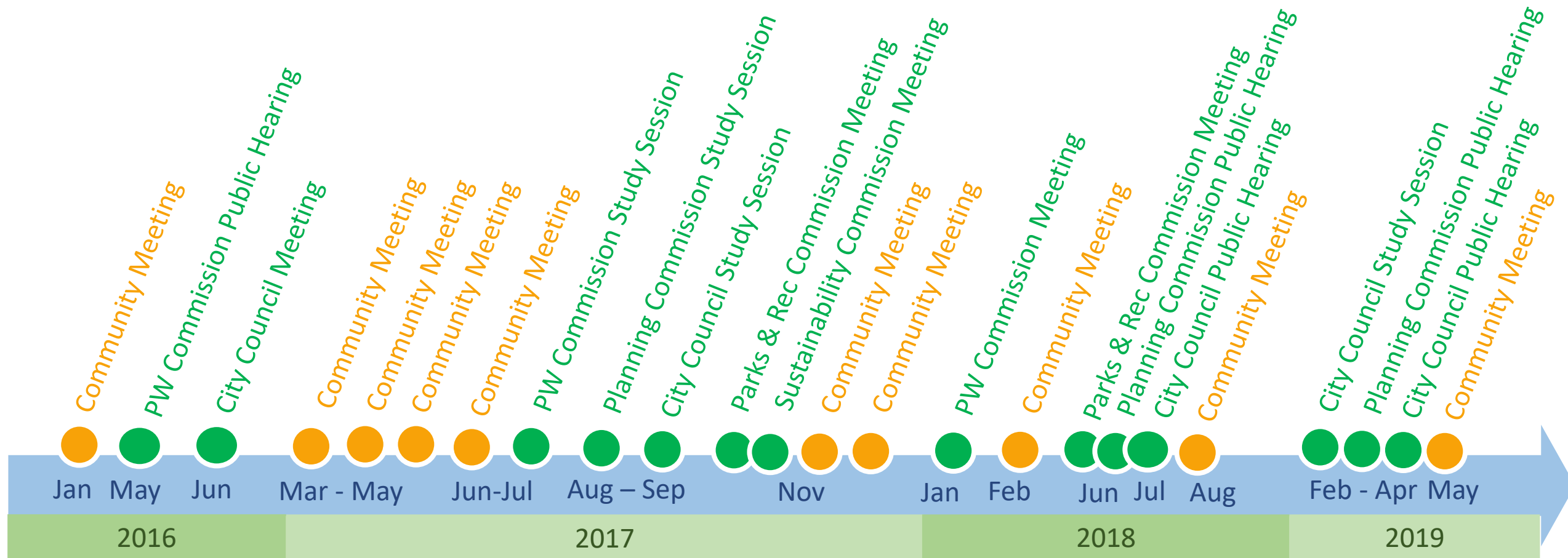
Pedestrian & Bike Path with Landscape Features



Public Interface at Administration Building



Continuous Outreach & Engagement



Construction Schedule Overlaps (Phases 1-3)

Phase 1 - Site Preparation

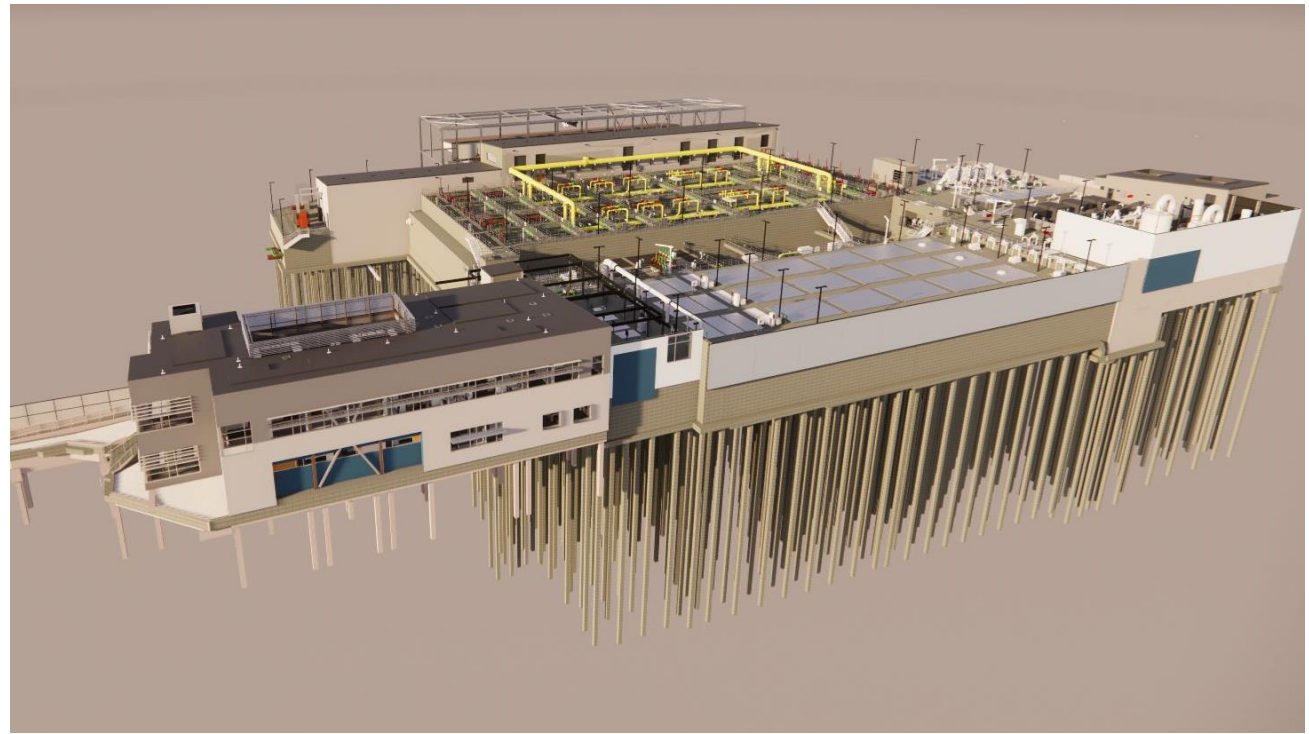
December 2020

July 2019



Construction duration for all three phases is approx. 5 years total

Construction Schedule Overlaps (Phases 1-3)



Construction duration for all three phases is approx. 5 years total

Construction Schedule Overlaps (Phases 1-3)



Phase 1 - Site Preparation

December 2020

WE ARE HERE



Phase 2 - Foundation

January 2022

Phase 3 - Facilities

July 2019

June 2020

September 2020

September 2024

Construction duration for all three phases is approx. 5 years total

Ongoing Construction

Phase 1 - Site Preparation

Aerial View of Project Site Prior to Construction



Phase 1 – Site Preparation (Construction Began Fall 2019)



Construction Site Live Video

www.CleanWaterProgramSanMateo.org/wwtp/

Wastewater Treatment Plant Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion Project

Quick Links

WWTP Presentations

WWTP FAQs

WWTP Environmental Documents



SOUTH CAMERA



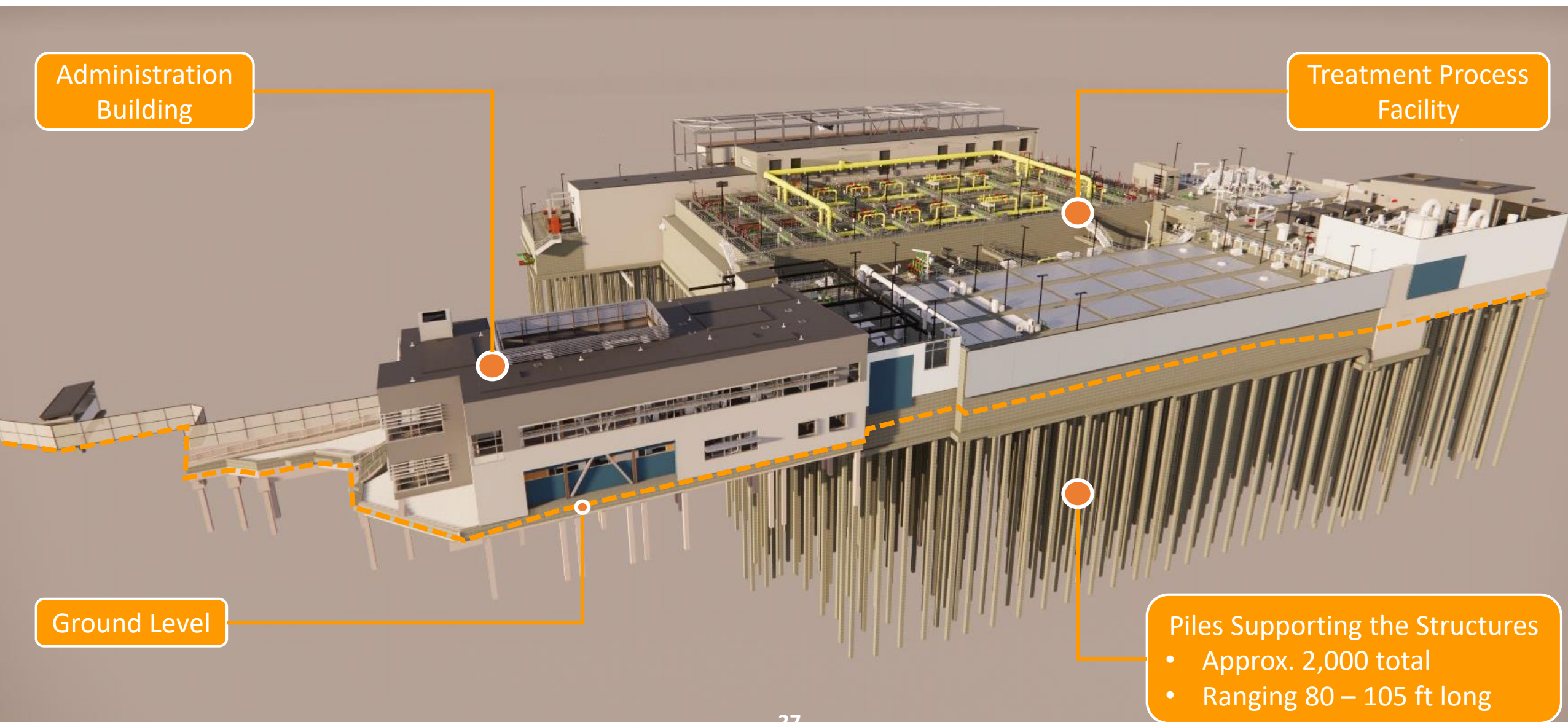
EAST CAMERA



Upcoming Construction

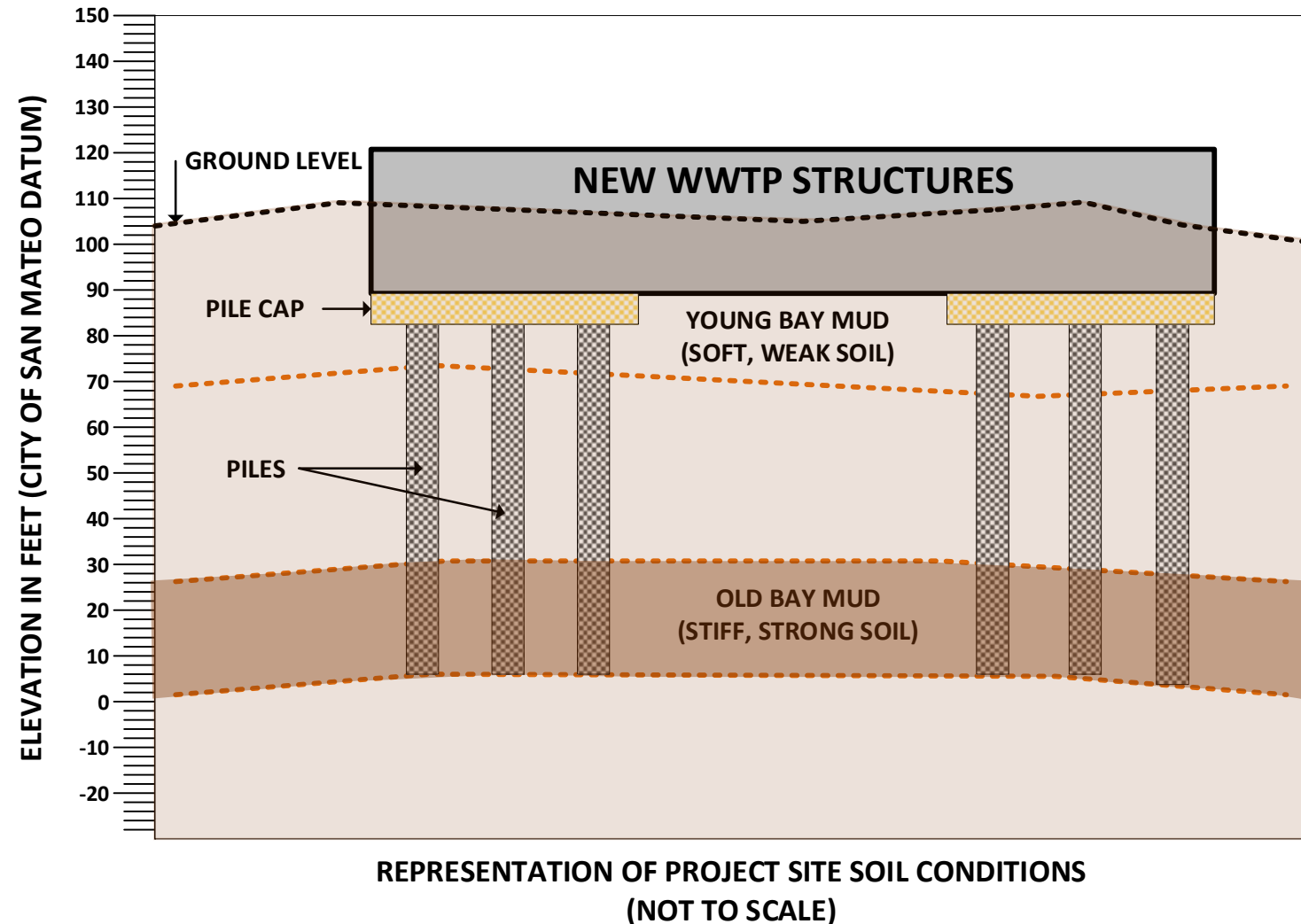
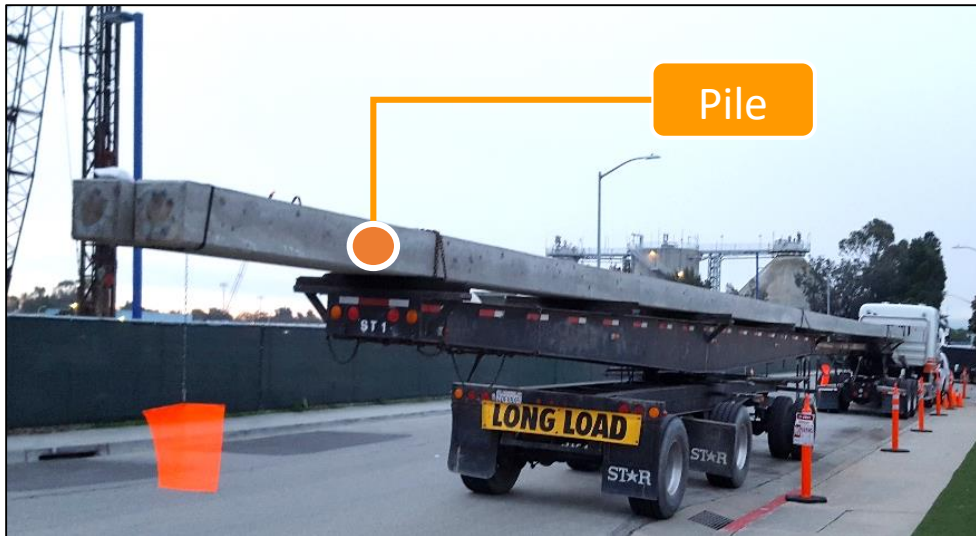
Phase 2 – Foundation (Piles)

3D Model View of the Piles Design



What is a Foundation Pile & Why are They Needed?

- Prevent the structures from uplift (floating) due to high groundwater
- Prevent settlement (sinking)
- Keep the structures in place during seismic events



Stage 1 Pile Driving

Duration: ~ 6 months
Late-June 2020 – December 2020

**Temporary Sound Wall
to Reduce Noise**

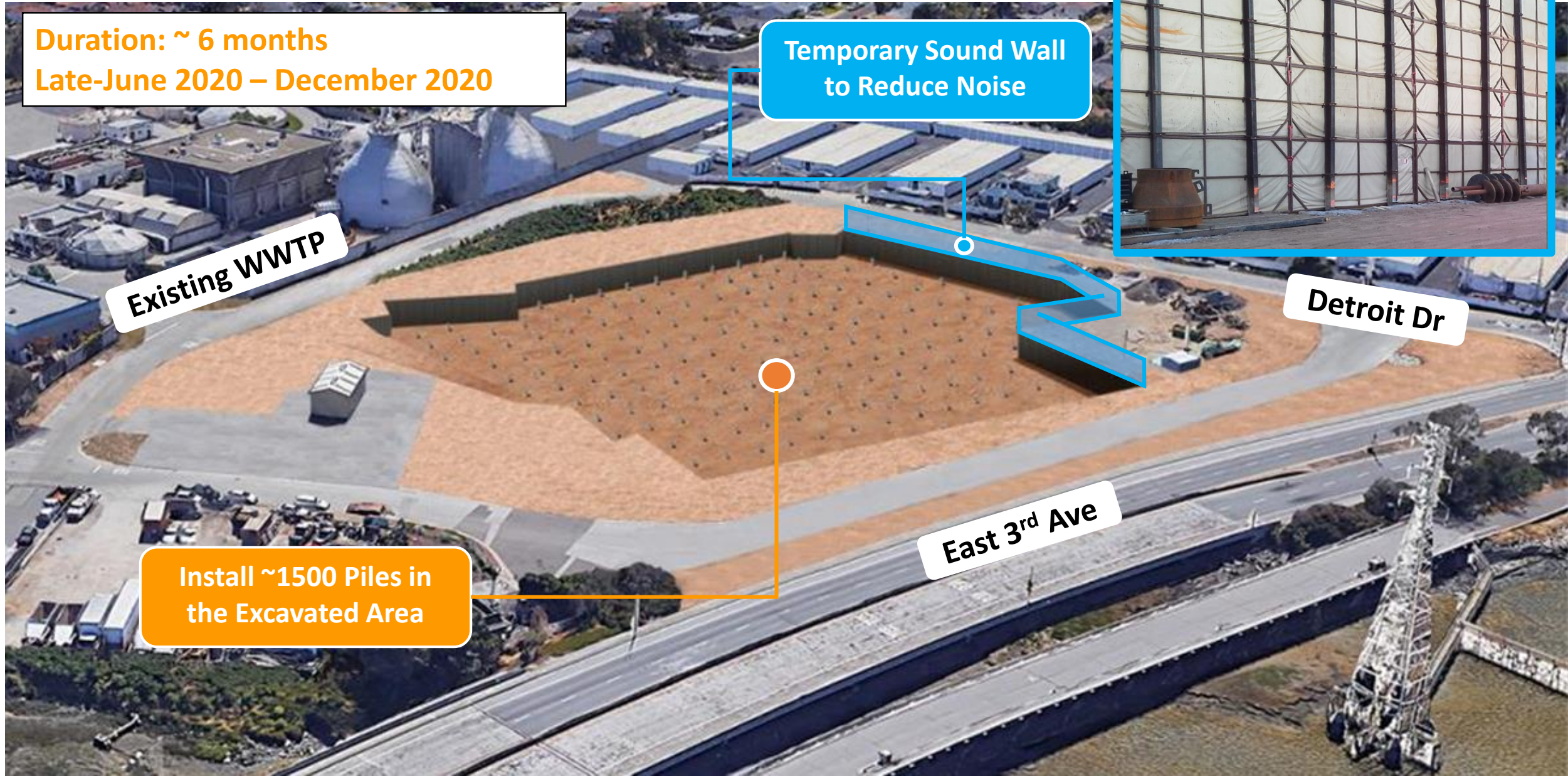


Existing WWTP

Detroit Dr

East 3rd Ave

**Install ~1500 Piles in
the Excavated Area**



Stage 2 Pile Driving

Duration: ~ 2.5 months
July 2021 – Mid-September 2021

Temporary Sound Wall to Reduce Noise



Existing WWTP

Detroit Dr

East 3rd Ave

Install ~500 Piles at Ground Level

Pile Type and Driving Method

- Conducted extensive data gathering and analysis to select the optimum pile system
- **Pre-cast Concrete Piles**
 - *Optimum for the site soil conditions and structural design*
 - *Pre-cast, i.e. manufactured off-site in a controlled environment*
 - *Cost effective*
- **Hydraulic Hammer**
 - *Lower noise levels*
 - *No smoke emissions*

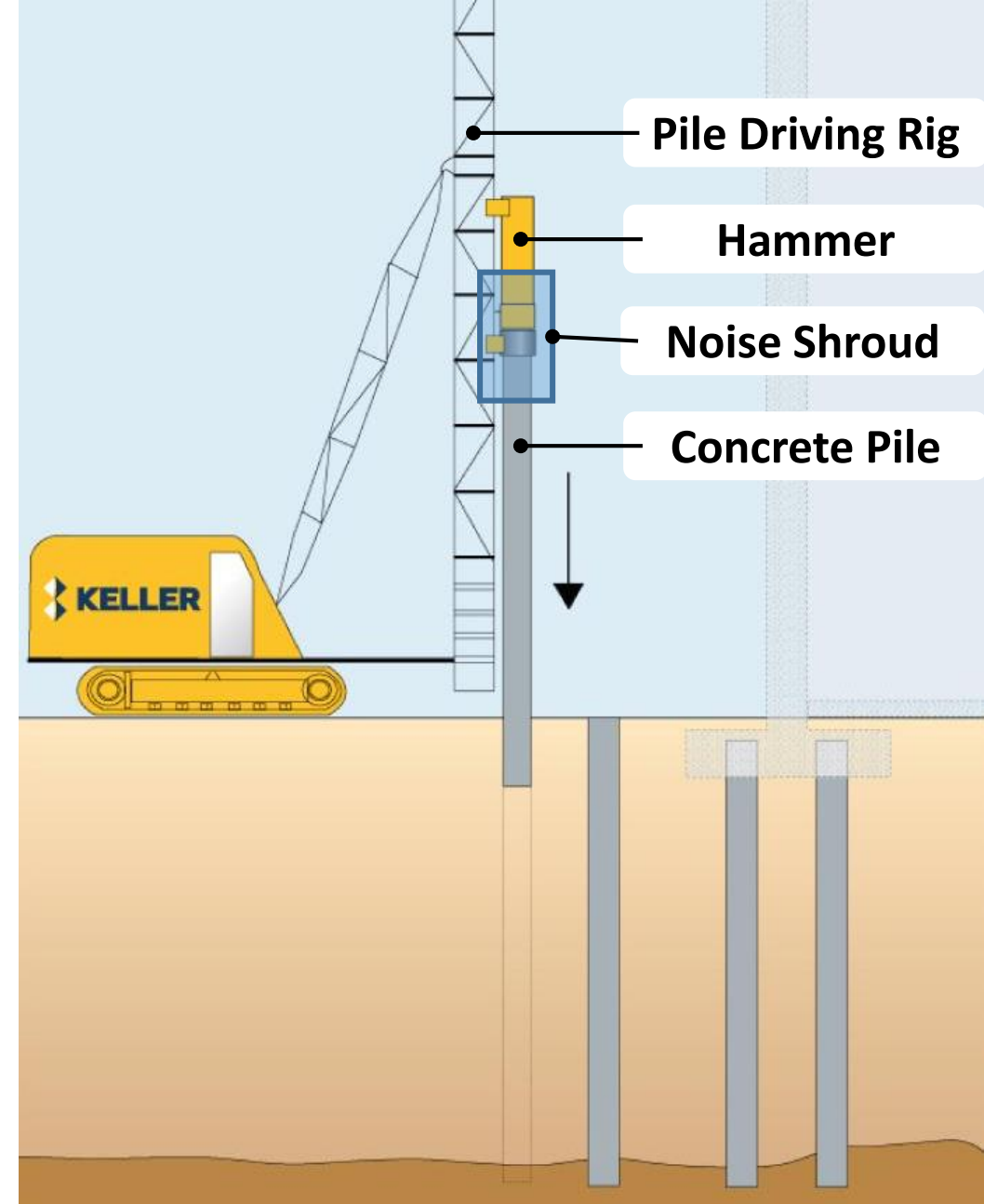
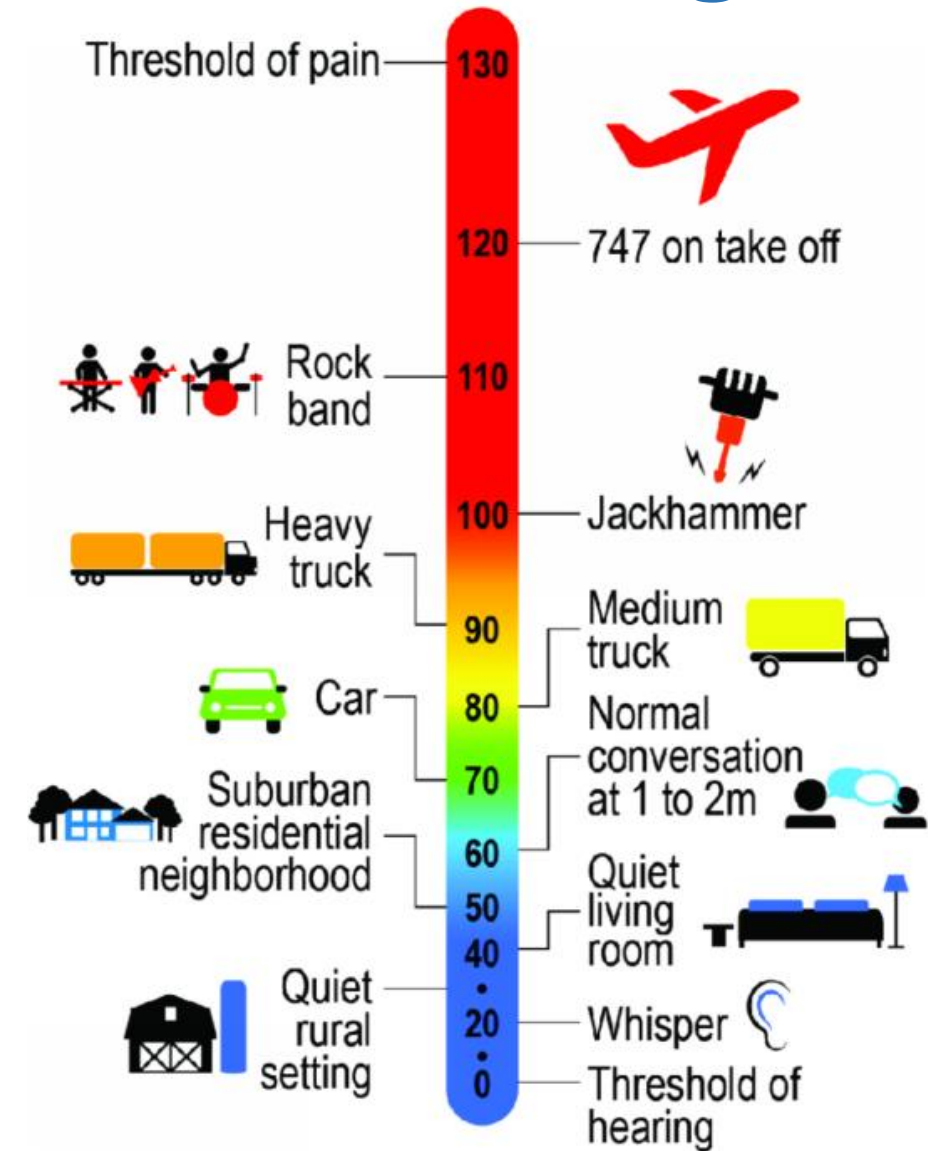


Image Source:

<https://www.keller.co.uk/expertise/techniques/driven-precast-piles>

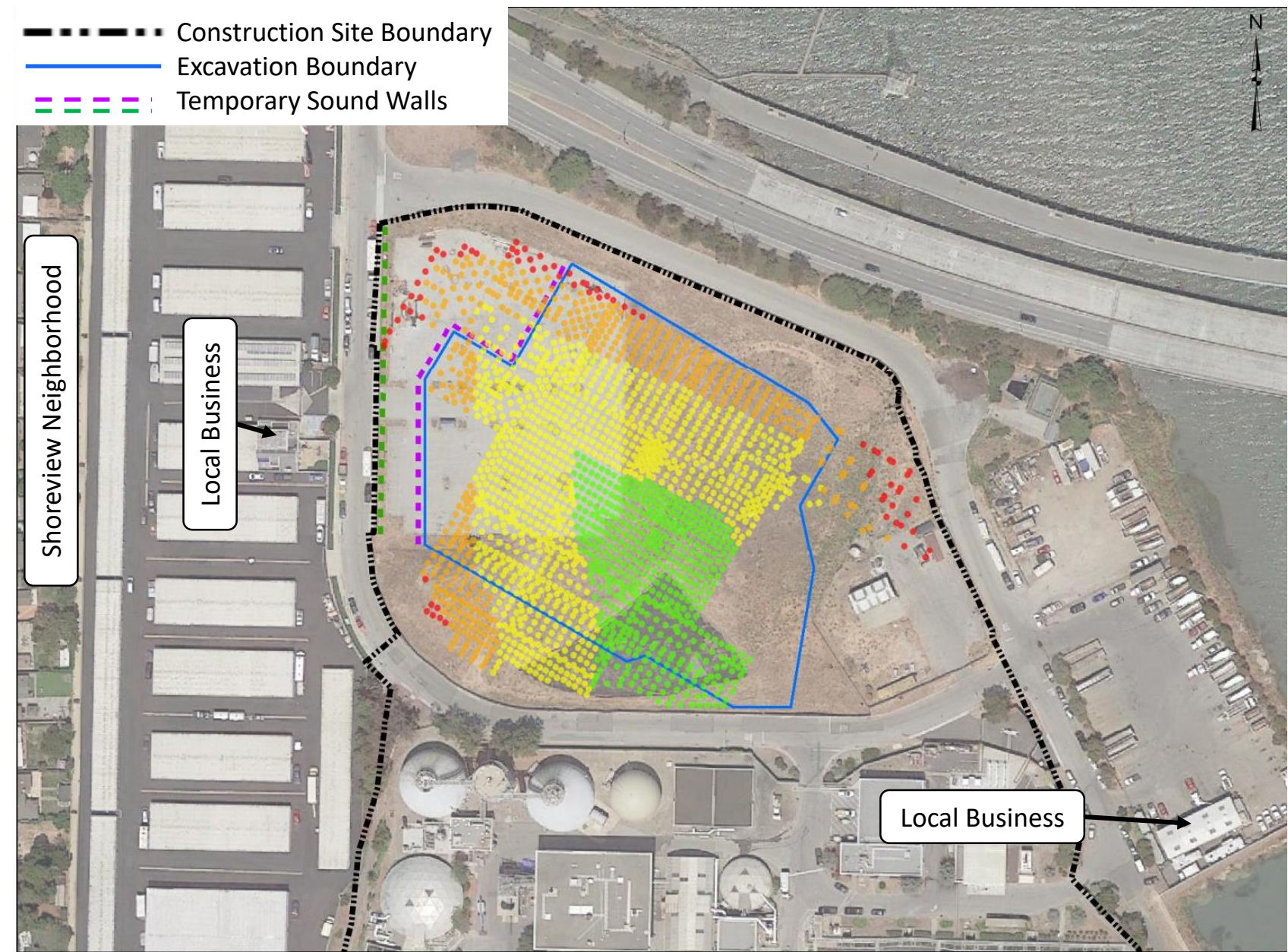
Expected Noise Levels from Pile Driving

- Pile driving noise is expected as follows:
 - Stage 1 starting late-June 2020 for approx. 6 months
 - Stage 2 starting July 2021 for approx. 2.5 months
- Noise levels will vary depending on pile location and distance from receptor
- Modeling indicates anticipated peak noise levels between 90 and 100 dBA at the property line for majority of the time
 - Stage 2: Some days are anticipated to exceed 110 dBA

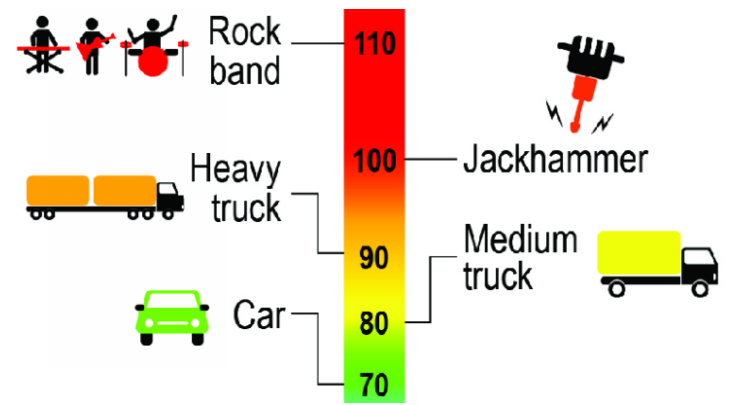


Typical Noise Levels Comparison

Expected Noise Levels During Pile Driving and Noise Control Measures



Distance of Receptor from Pile (ft)	Noise Level (dBA)
< 50	● 90 – 110
50 – 100	● 85 – 100
100 – 200	● 78 – 95
> 200	● < 90

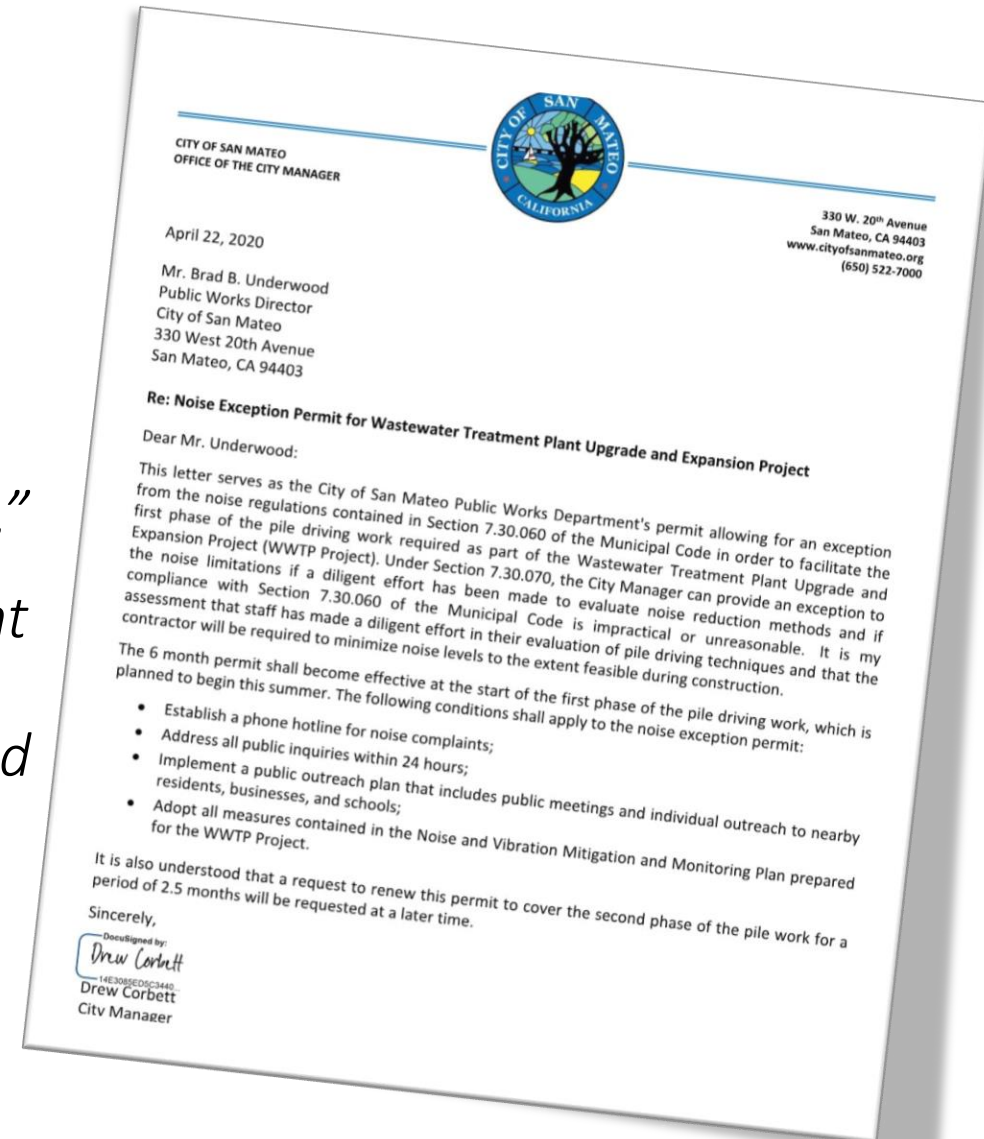


Construction Hours

- Construction site open from Monday to Friday, 7 am – 7 pm
- **Pile driving activities are restricted to weekdays only, 8 am – 5 pm**
- Typical construction day is expected to be 8-10 hours
- Construction work is not planned for weekends
 - *Exceptions may be needed, but only with City approval*
 - *Public notification would be provided*

Phase 2 – Noise Exception Permit

- Project team conducted a thorough evaluation of pile types, installation methods, noise abatement techniques, and construction scheduling.
 - *Concluded that the work will generate noise levels exceeding 90 dB outside the site*
- Municipal Code: *“the noise level at any point outside of the property plane of the project shall not exceed 90 dB.”*
- City Manager can issue an exception permit *“if a diligent investigation of available noise abatement techniques indicates that meeting the noise level requirement would be impractical.”*



Phase 2 Construction Monitoring

- **Vibration Monitors**
 - *Monitoring during on-site test pile driving indicated low risk*
 - *Continuous monitoring at four locations*
- **Groundwater Monitors**
 - *Continuous groundwater levels monitoring at four observation wells*
 - *Periodic surveying to monitor potential ground settlement*
- **Noise Monitors**
 - *Continuous noise monitoring at two locations*

Phase 2 – Construction Traffic Control (General)

- Use of City approved haul routes only
- Enforce Traffic Management Plan
 - No trucks waiting on J. Hart Clinton Dr./ East 3rd Ave
 - Right turn into site from J. Hart Clinton Dr.
 - Left turn from Detroit Dr.
 - Minimize construction traffic during commute hours



Phase 2 – Construction Traffic Control

- Anticipated Truck Traffic:
 - *Estimated 20 - 25 trucks per day*
 - *“Just-in-time” delivery*
 - *No truck parking on J. Hart Clinton Dr./ East 3rd Avenue*
- Delivery Time:
 - *Piles unloading only between 7 am and 7 pm on weekdays*
 - *No deliveries between 4 pm and 5:30 pm to minimize impact during peak commute hours*



**Truck Delivering Piles During On-Site
Test Pile Driving (2017)**

How to Reach Us & Stay Informed

Contact Us

 info@CleanWaterProgramSanMateo.org

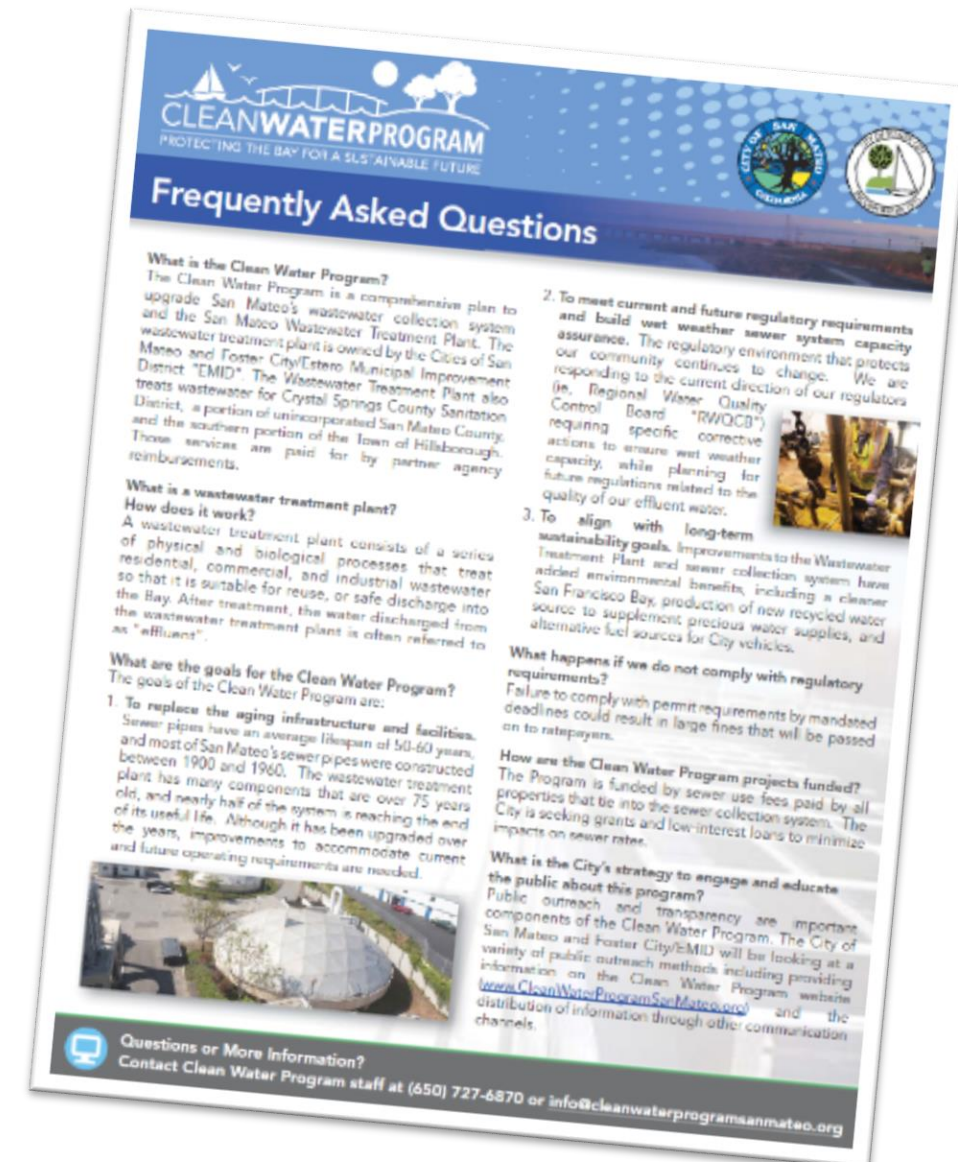
 Communication Hotline: **650-727-6870**

Sign Up for WWTP-Project-Specific Email Updates

www.CleanWaterProgramSanMateo.org

City Social Media:

Follow City of San Mateo on Facebook, Twitter, and NextDoor for public updates





Question & Answer Session

Zoom Webinar Q&A Info and Panelists

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