



Underground Flow Equalization System Project

Virtual Community Meeting

December 21, 2020



Introductions



Azalea Mitch
Deputy Public Works Director



Deryk Daquigan
Engineering Manager



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Senior Engineer



Bethany Lopez
Senior Engineer



Ron Esmilla
Senior Construction Manager



Kellie Benz
Communications & Public Relations



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.
- 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.

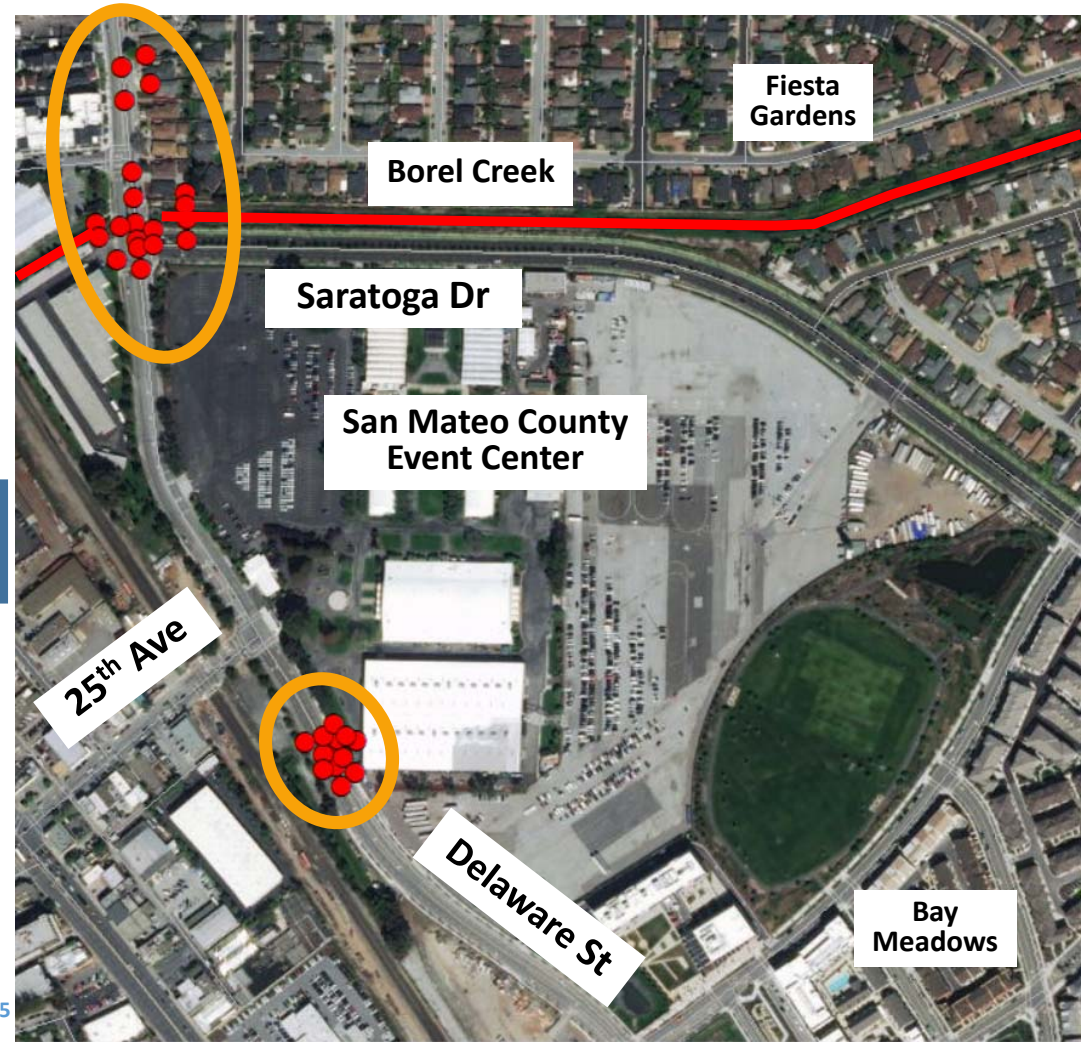
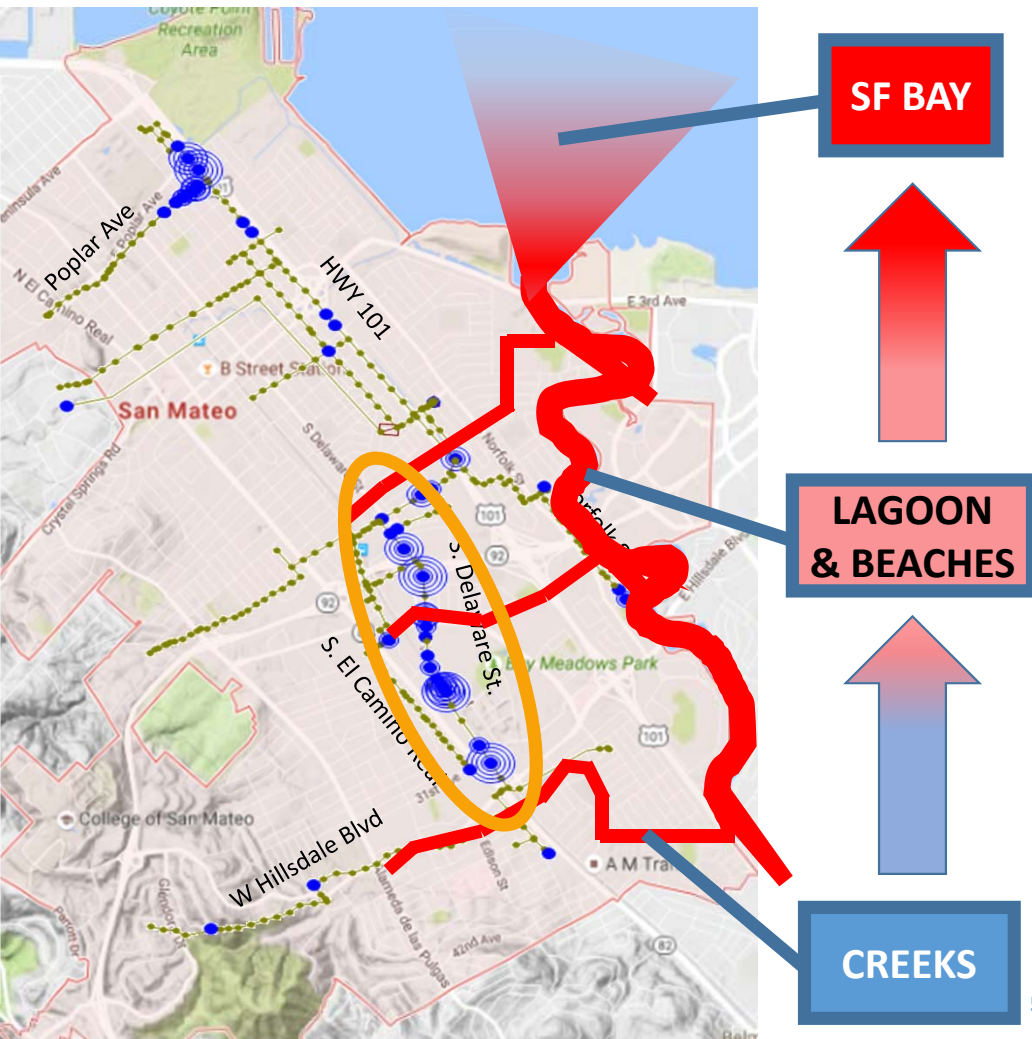


Agenda

- Project overview
- Construction activities
 - *Event Center site*
 - *Pipe construction on Saratoga and Delaware*
- Monitoring and managing
- Reporting, outreach, and engagement
- Q&A session



Sewer Overflow Impacts & Regulatory Violations





Why is the UFES Project Needed?



- Meet Cease & Desist Order requiring prevention of SSOs
- Provide system capacity and optimize collection system performance
- Improve safety and reliability of the system and reduce discharges of raw sewage in San Mateo and the Bay.

Project Location & Features

- Event Center, east corner
- Approximate 5.3 million gallon underground temporary holding structure
- New diversion system (diversion sewer, diversion structure, and force main)
- Above-ground electrical building
- Continuous odor control facilities



Project Location & Features

8



Construction Contractor Prequalification Process

- Prequalification criteria

- *Essential requirements (license and insurance)*
- *History & performance of business*
- *Health, safety & labor compliance*
- *References*
- *Experience (similar scope & size, shoring, micropiles, dewatering, open trench and trenchless methods, and projects with public sensitivities)*

- Awarded construction contract to



- *Leaders in the construction of water and wastewater infrastructure*
- *53 years of experience on similar projects*
- *Proactively identified risks and working collaboratively with the City*







What to Expect During Construction

- UFES activities on the Event Center site by phase:
 1. Site preparation (completed)
 2. Shoring (current phase)
 3. Excavation
 4. Foundation piles
 5. Structure
 6. Site finishing
- Pipeline construction
- Approximate duration of each phase
- Monitoring and management of noise, dust, vibration, groundwater, and traffic



Construction Traffic Routes To and From Event Center site

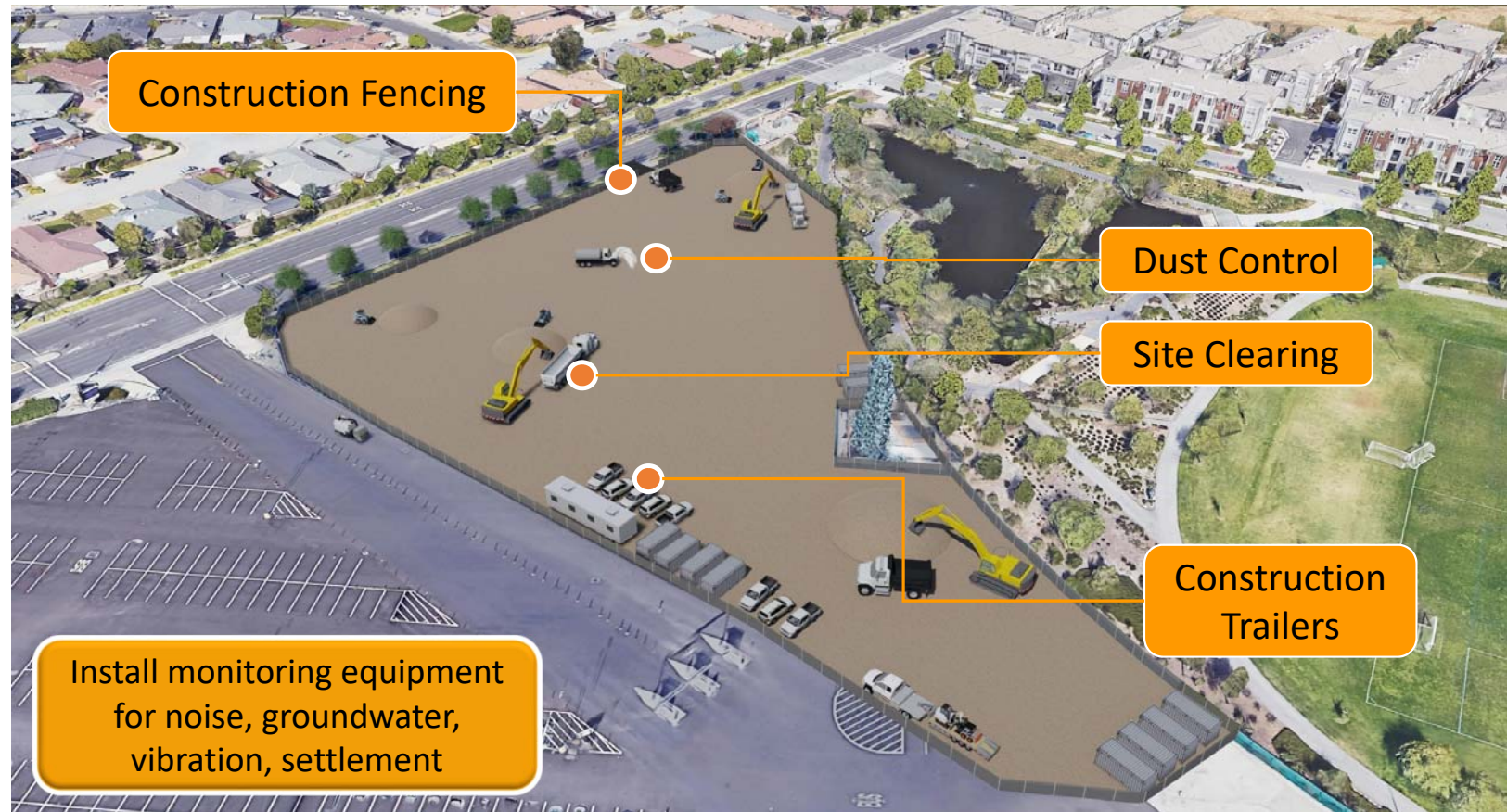
-  City designated truck/haul routes
-  Primary project haul route
(Easement Purchased from the County of SM)
-  Secondary project haul route
-  UFES underground structure site



Phase 1: Site Preparation

Duration: 3 months

COMPLETED



Phase 2: Shoring Installation

CURRENT PHASE
Duration: 3 months



What is “Shoring”?

- Engineered system to safely hold an excavation open for an extended duration
- *“A large wall that holds the hole open”*
- Water is removed from inside and around to maintain stability

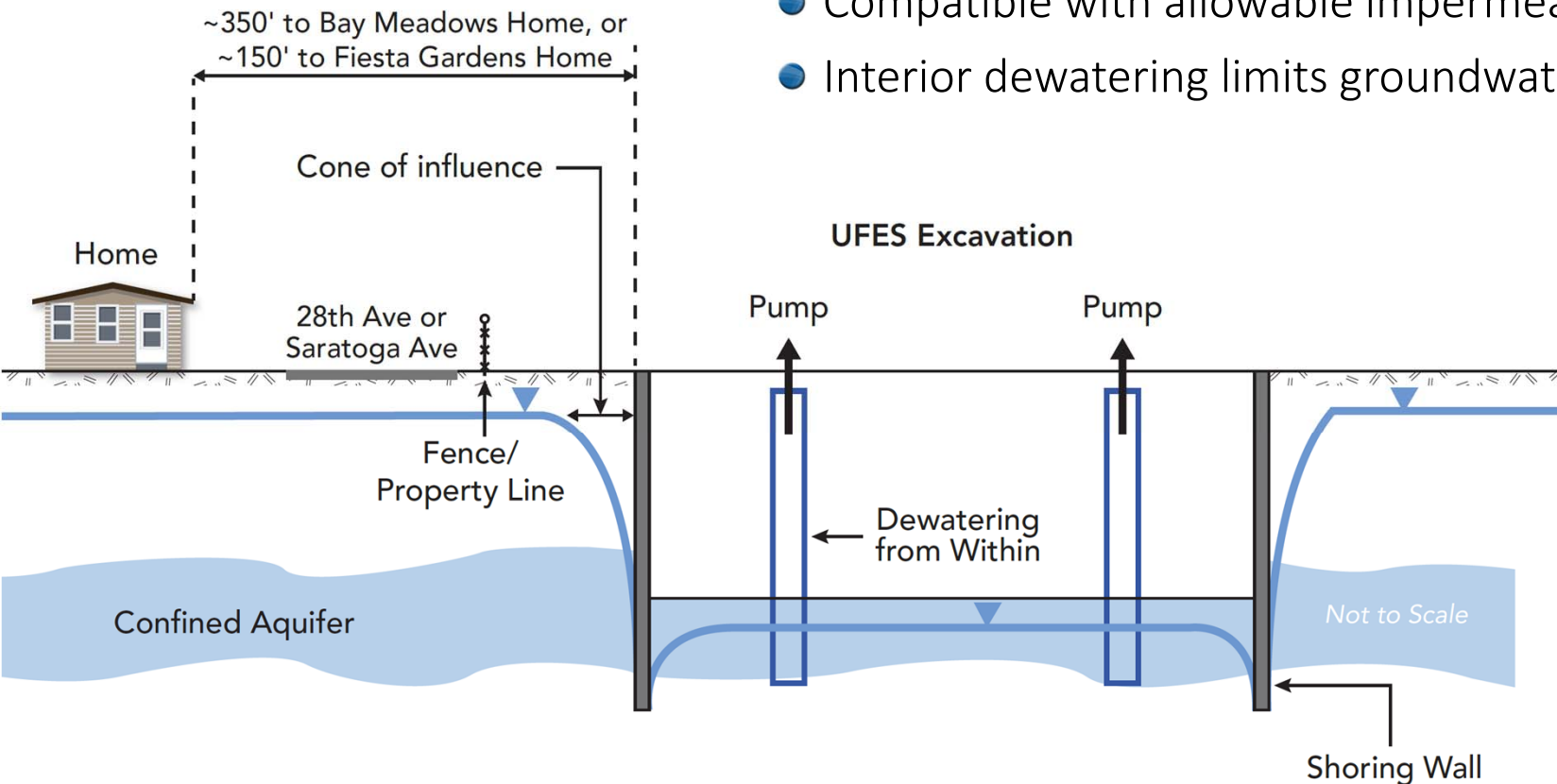


Cement Deep Soil Mixing Shoring Wall



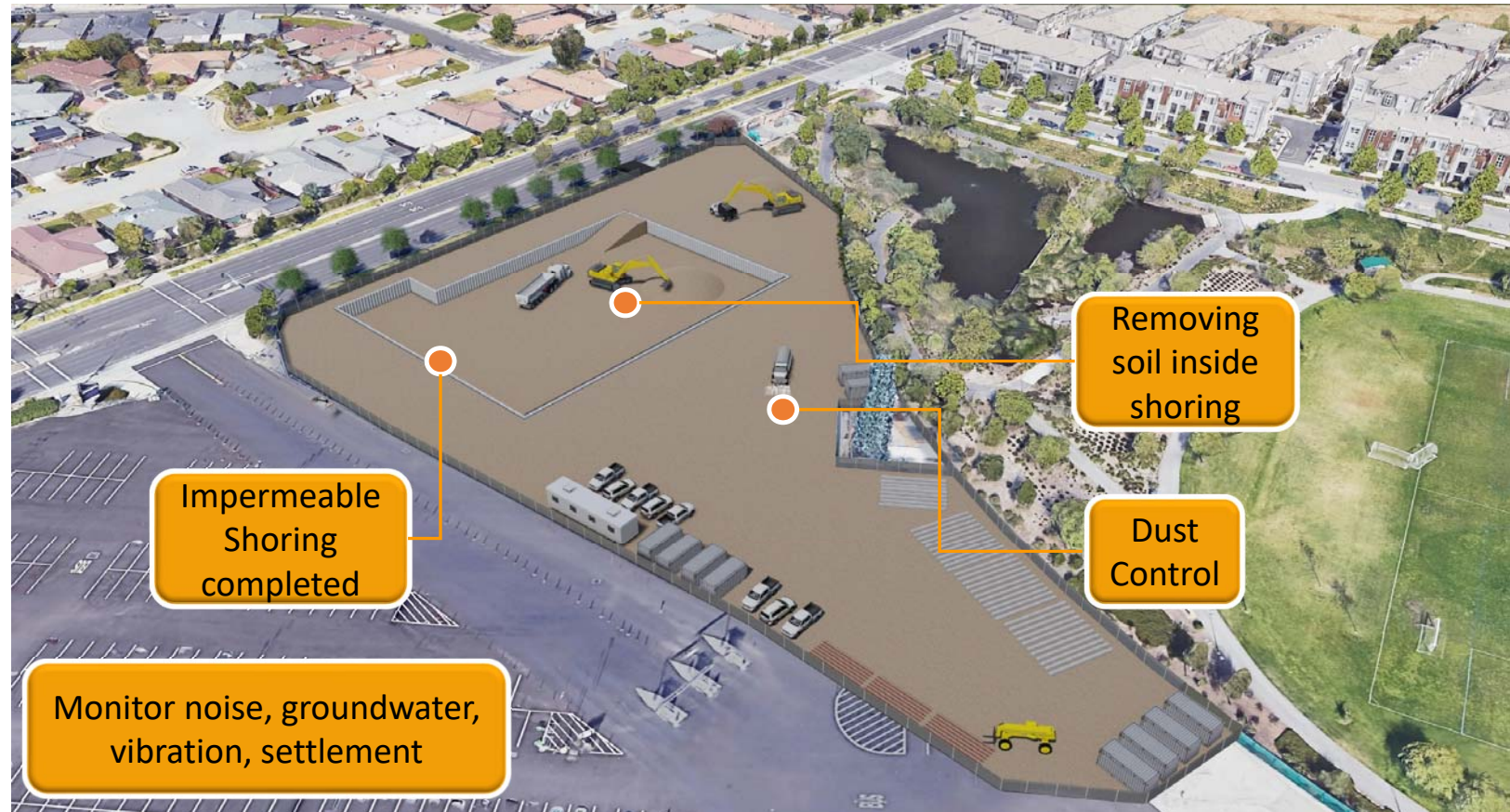
Dewatering from Within the Shoring

- Significantly reduces potential for settlement
- Compatible with allowable impermeable shoring systems
- Interior dewatering limits groundwater table drawdown



Phase 3: Excavation

Duration: 5 months



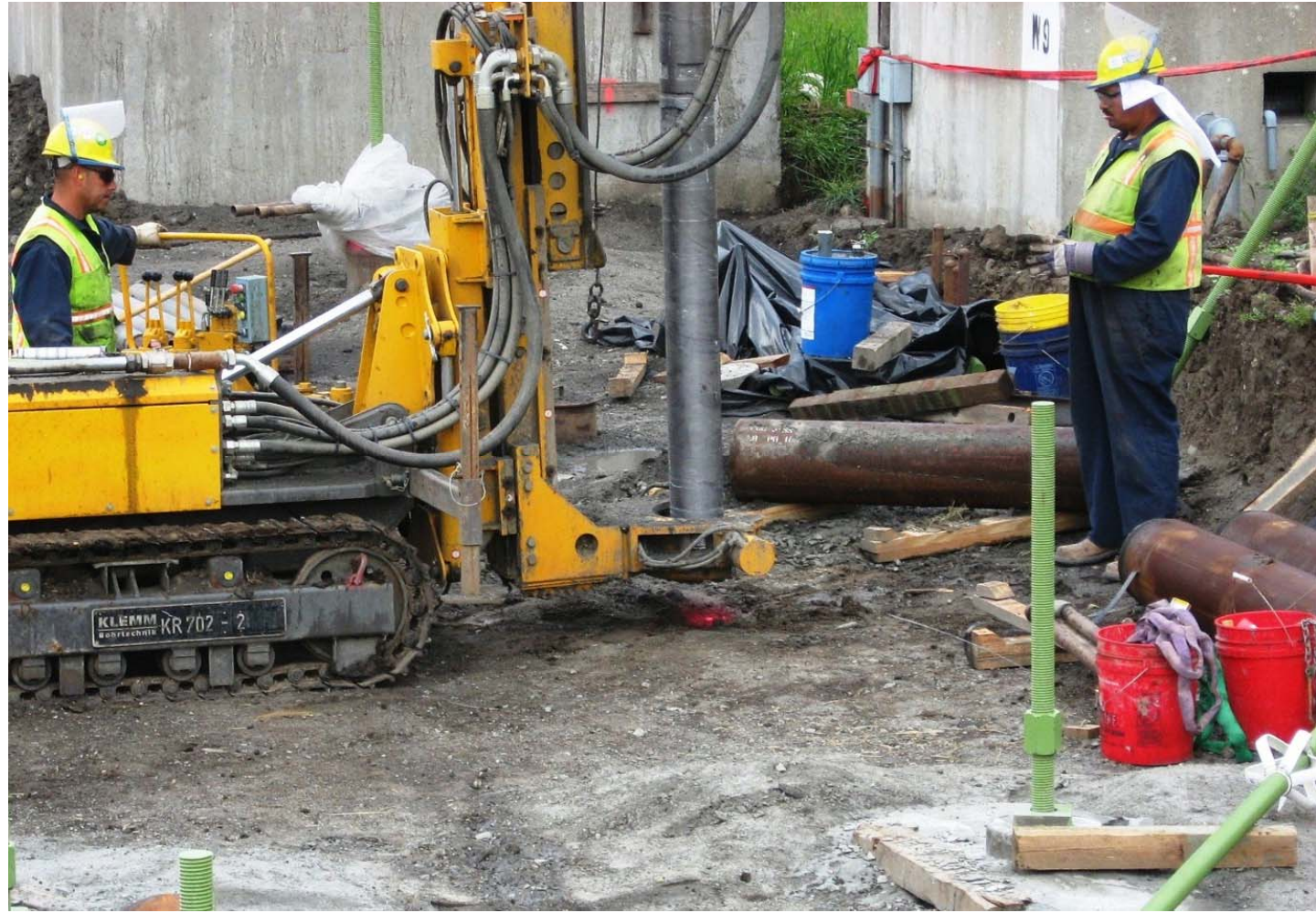
Phase 4: Micropile Installation

Duration: 2 months



Drilled Micropiles

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



Phase 5: Structure

(Concrete, Mechanical,
and Electrical)

Duration: 20 months





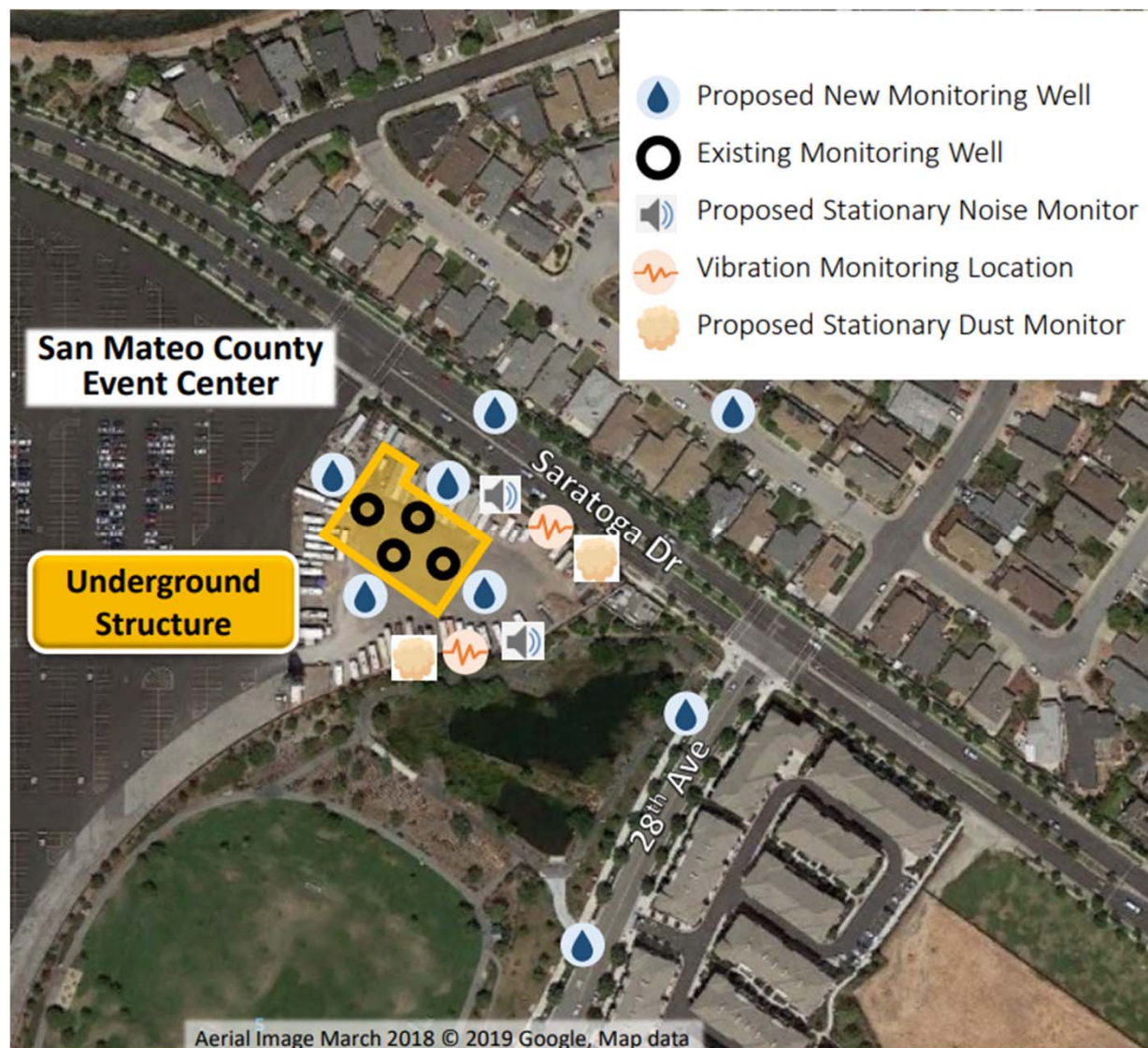
Phase 6: Site Finishing

Duration: 8 months



On-Going Monitoring and Management

- Noise, dust, vibration, and groundwater
- Live web camera
- Preconstruction surveys
- Coordinate construction traffic in Bay Meadows & Fiesta Gardens



Diversion System

(Diversion Sewer Pipe, Diversion Structure, and Force Main along Delaware St and Saratoga Dr)



Diversion System on Saratoga and Delaware

● Diversion Structure

—South of Saratoga and Delaware intersection

● Diversion Sewer

—New 36-inch diameter, 15 to 22 feet deep

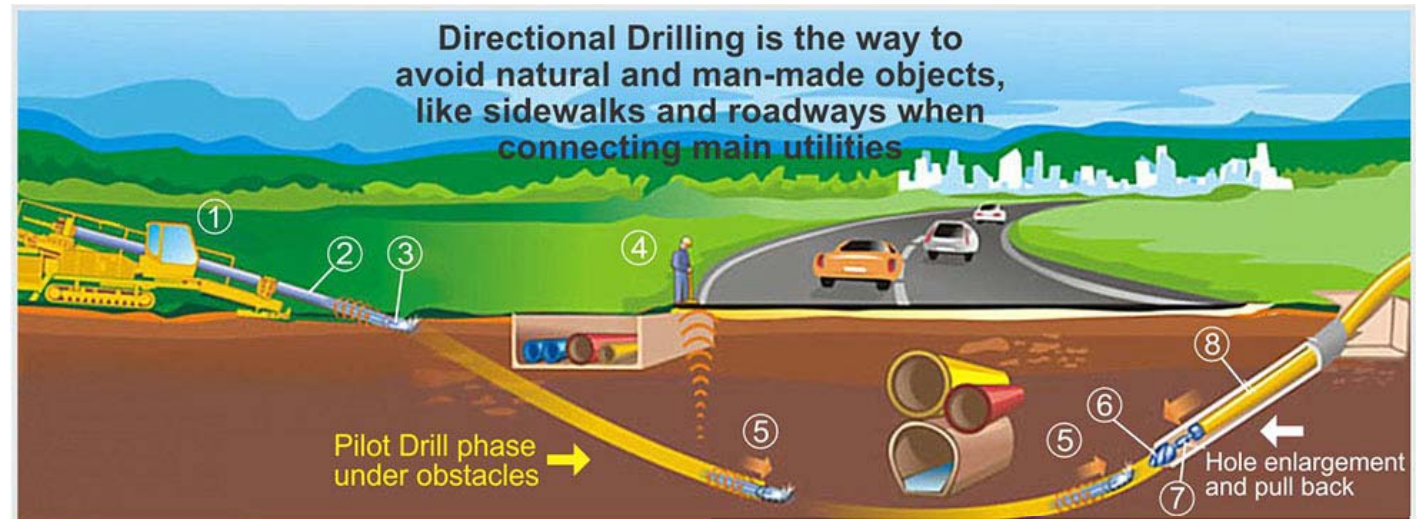
● Force Main

—18-inch sewer pipe

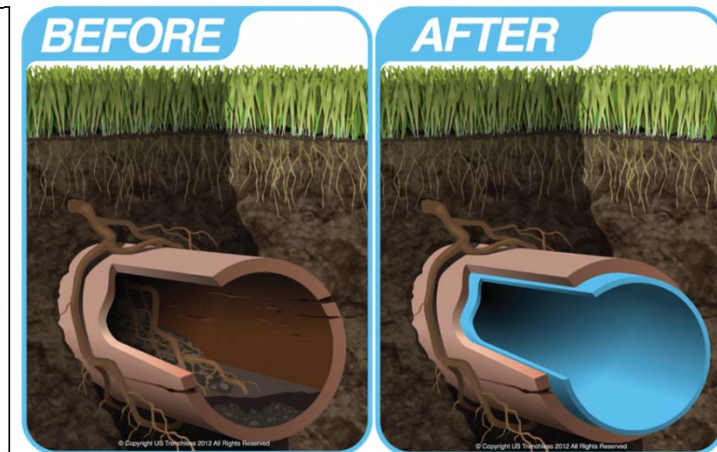
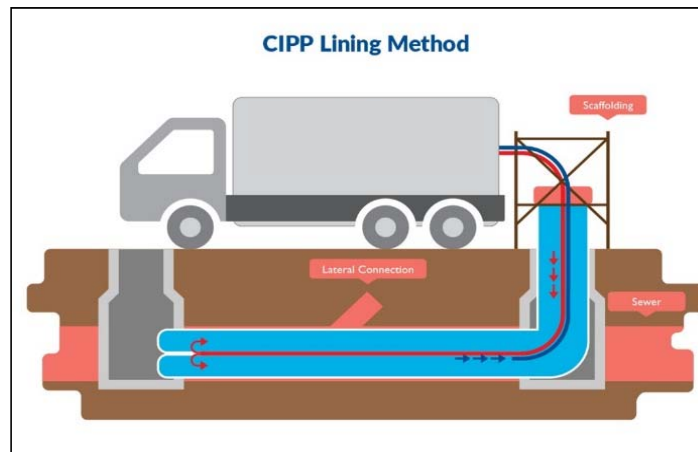


Force Main Construction

- Borel Creek Culvert Undercrossing at Delaware
Horizontal directional drilling of new 18" force main (Approx. 200 LF)

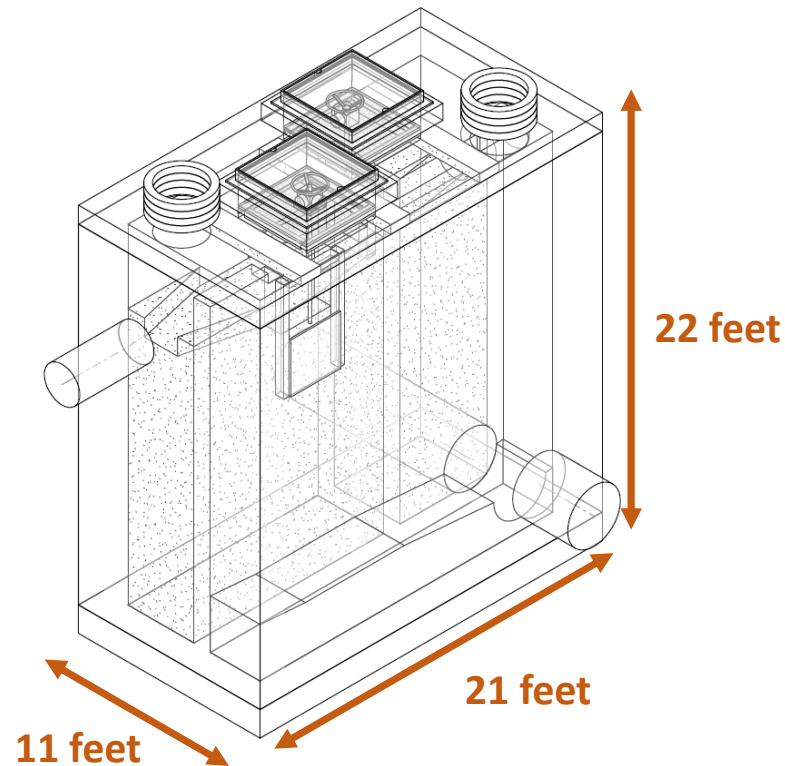


- Saratoga Force Main
Cured in place pipe lining of existing 18" pipe (Approx. 1,900 LF)



Diversion Structure Construction

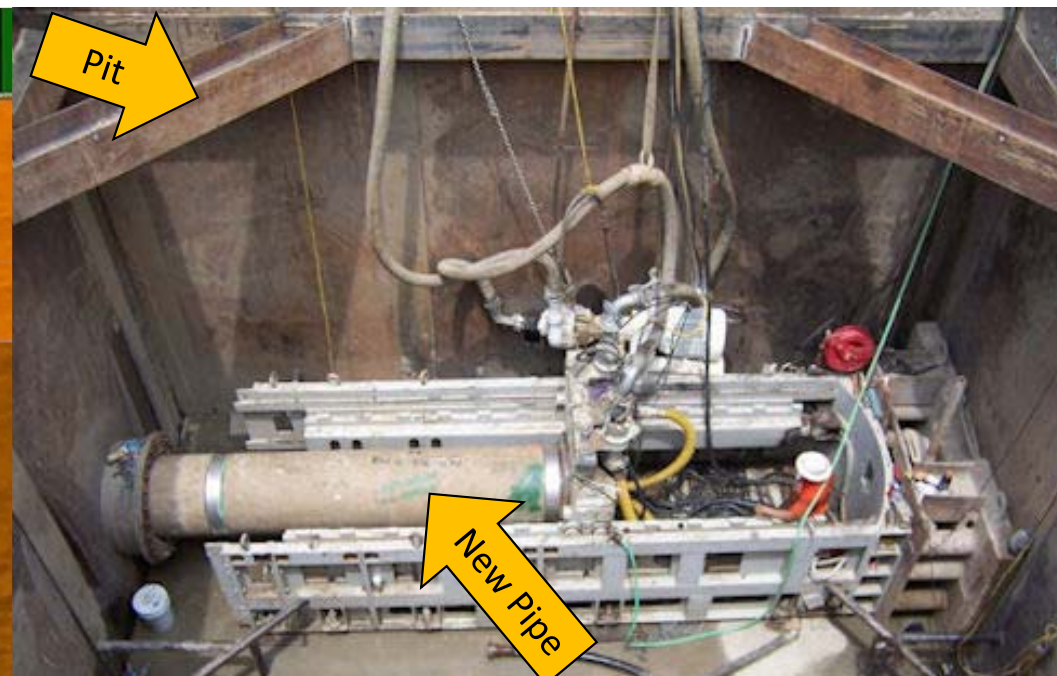
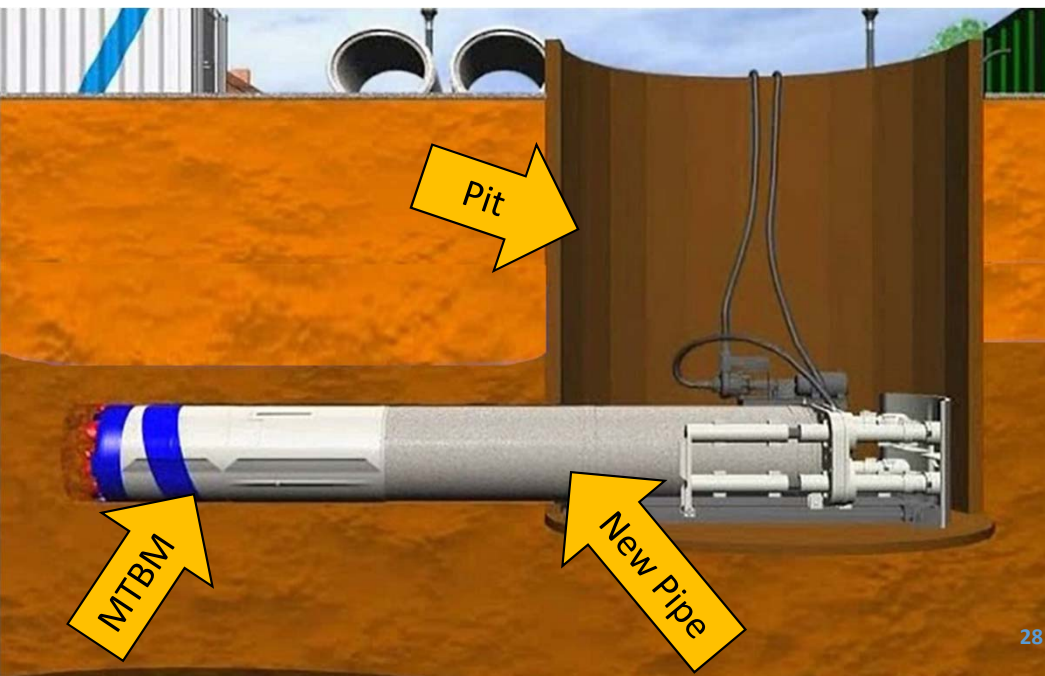
- Excavation in intersection of Delaware and Saratoga
- Temporary shoring
- Traffic control around excavation



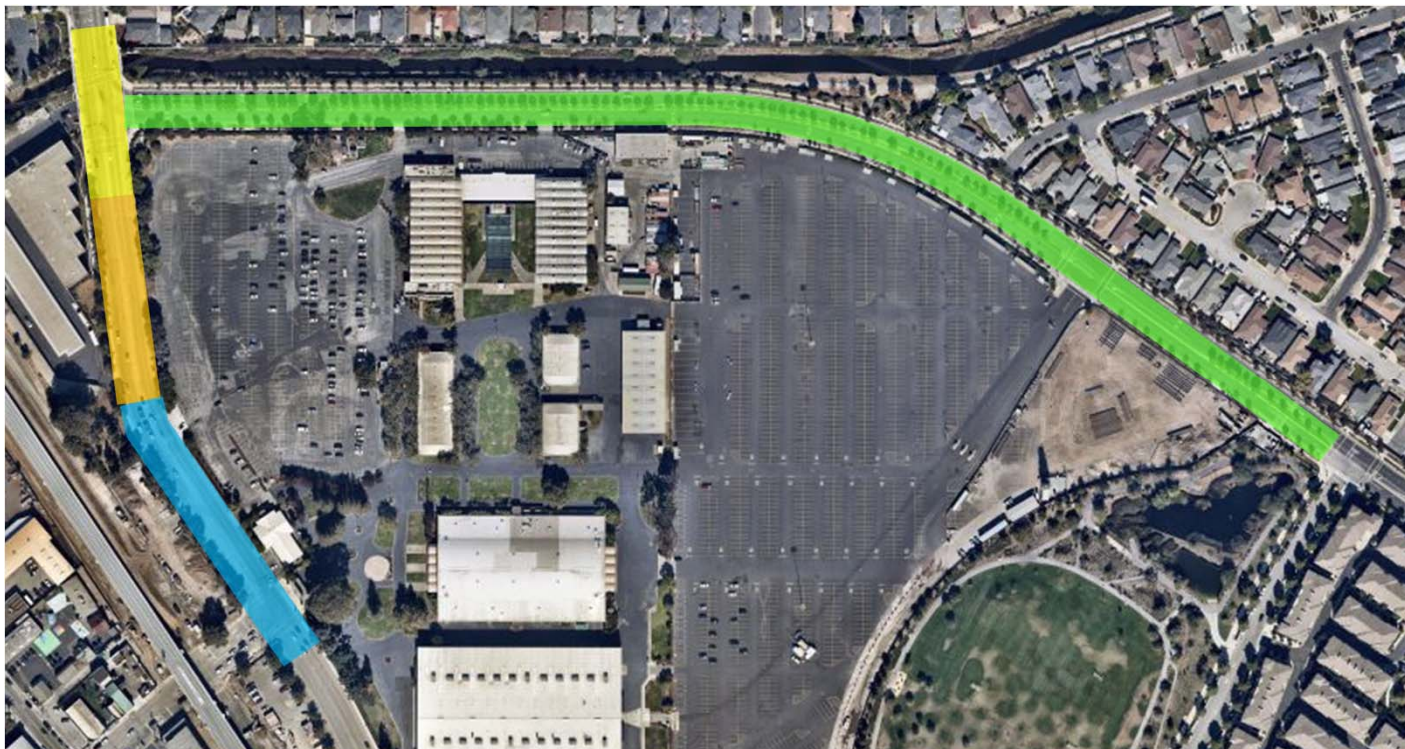
Microtunneling of New Diversion Sewer

Delaware and Saratoga Pipelines (≈3,100 linear feet)

- Excavation of pits (4 on Saratoga, 2 on Delaware, and 1 at intersection)
- Temporary shoring
- Microtunnel boring machine (MTBM)
- Traffic control around excavation



Overview of Delaware & Saratoga Traffic Control Plan during Diversion Sewer Construction



Highlighted areas show Saratoga and Delaware segments where traffic control will be placed



Traffic Control Plan Goals

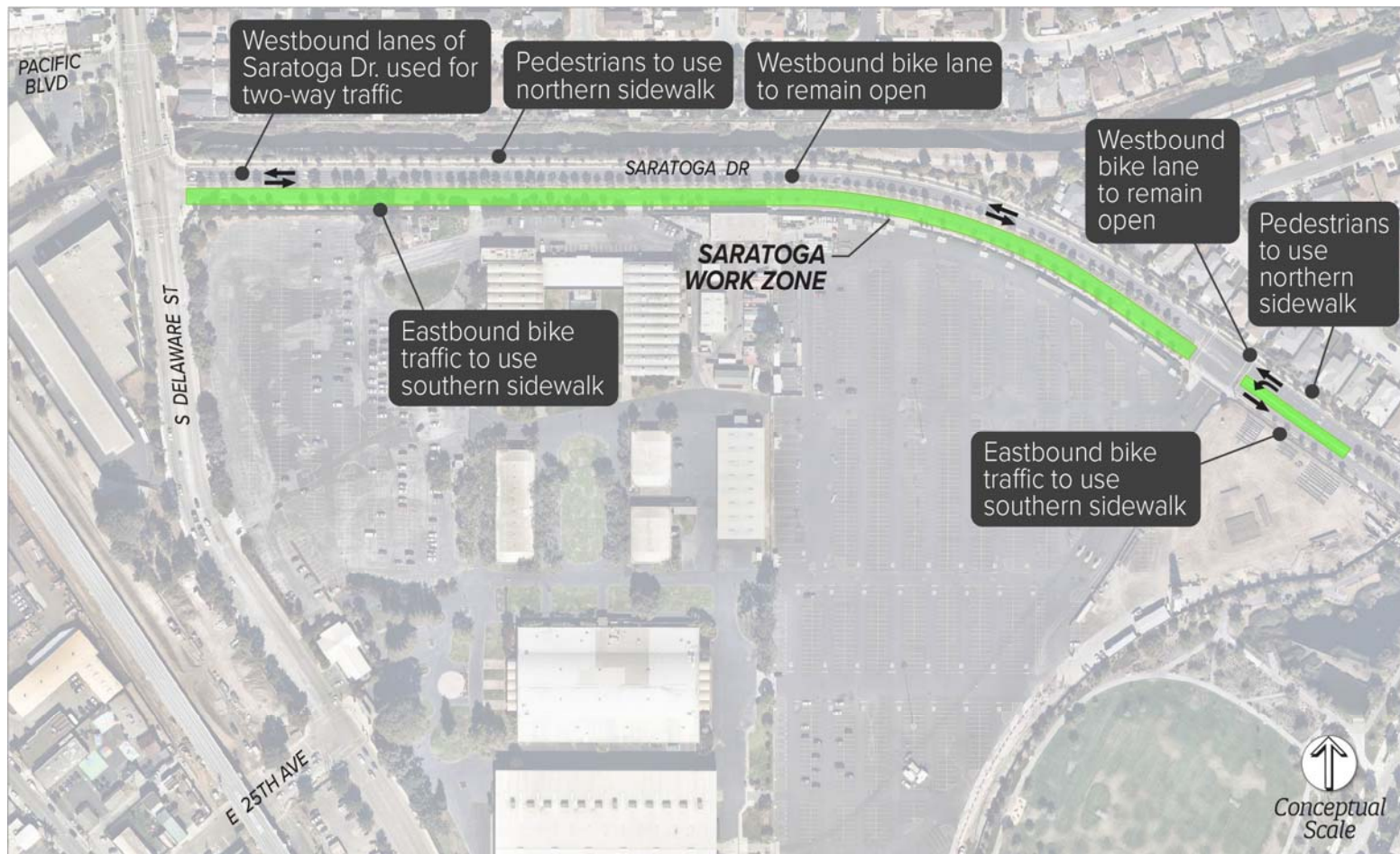
1. Provide safe and continuous travel for all modes of transportation (vehicles, pedestrians, and bicyclists)
2. Minimize impacts to all modes of transportation
3. Maintain access for the Event Center
4. Facilitate safe construction progress
5. Coordinate TCPs with all adjacent construction projects



Phase 1 Overview

Construction Activities

- Excavate 4 pits on Saratoga
- Pipe installation via microtunneling

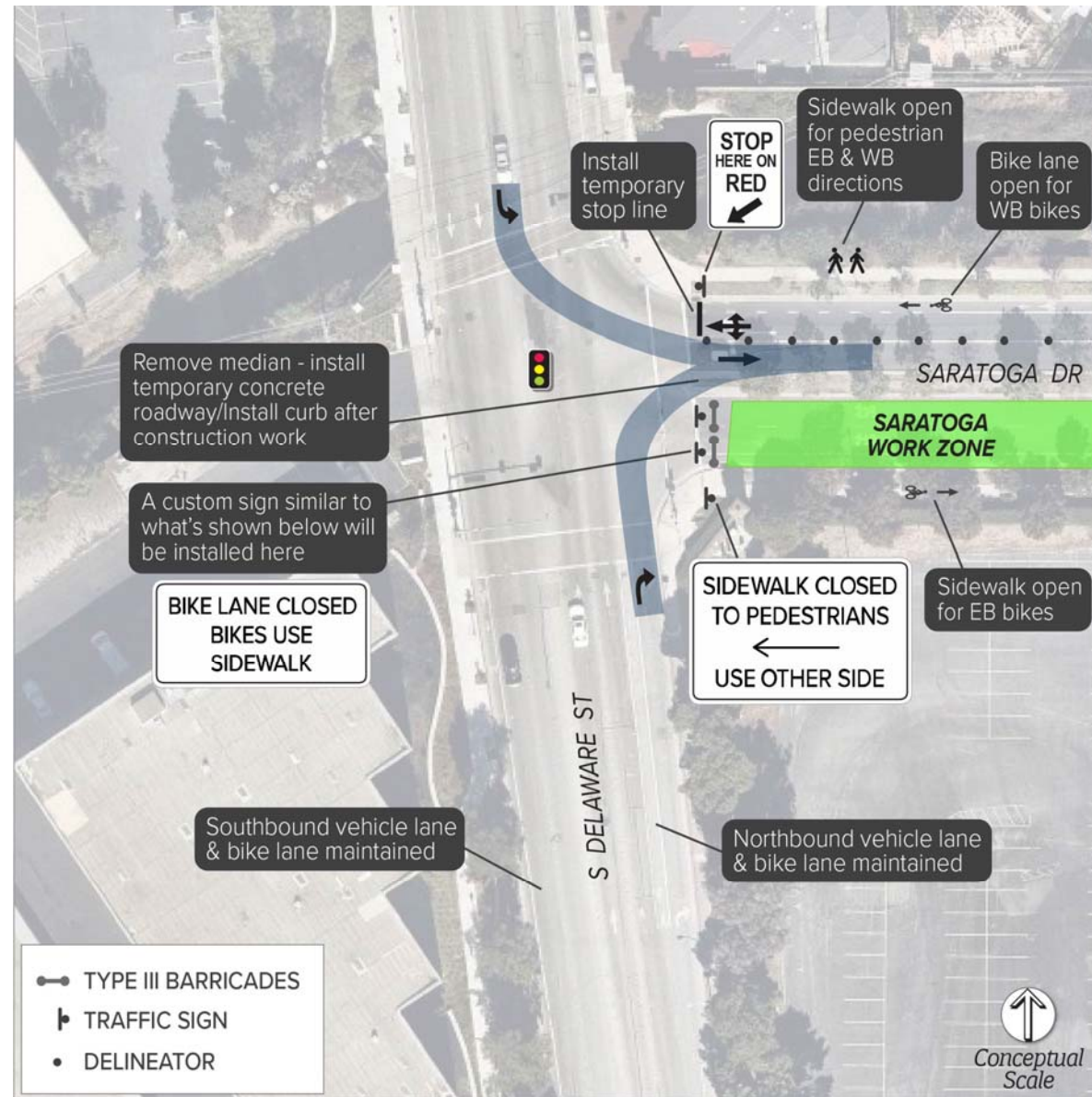


Phase 1
6 months

Saratoga Westbound Lane Adjustments & Eastbound Lane Closures (9.5 months)



Intersection: Saratoga & Delaware - Phase 1

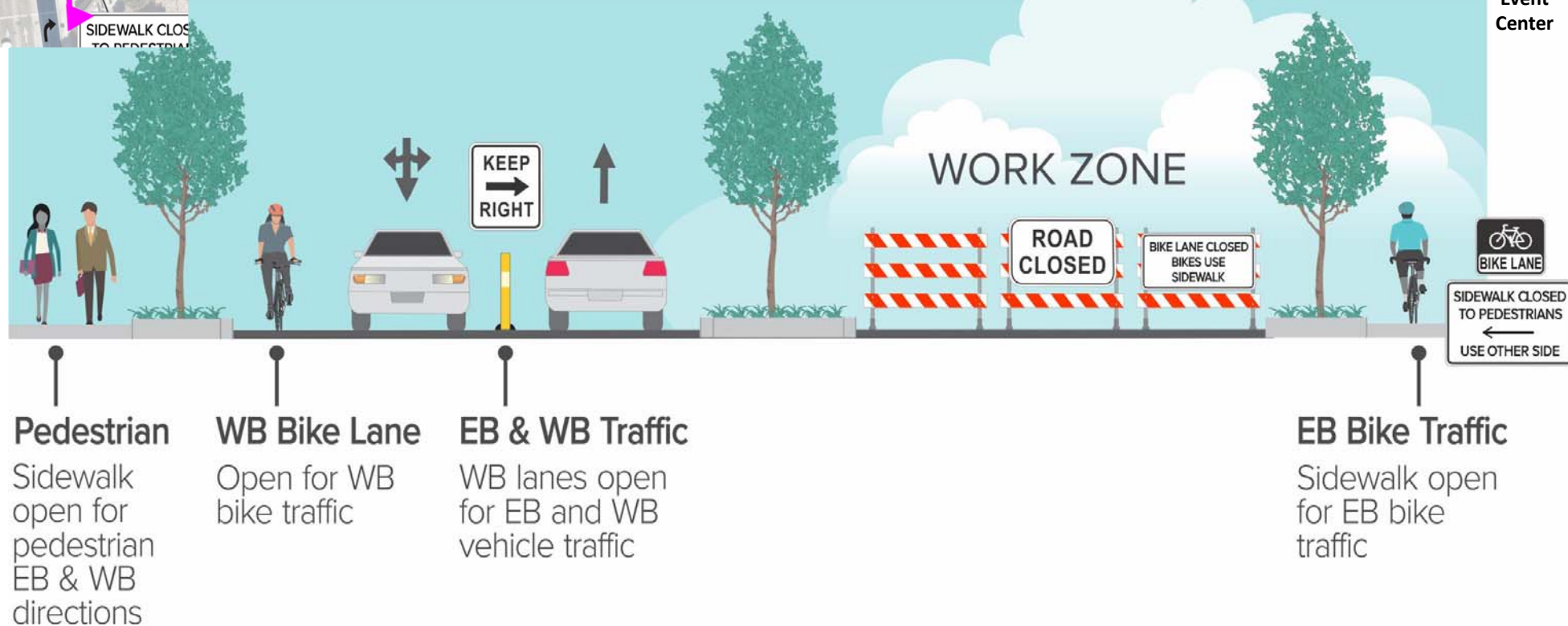




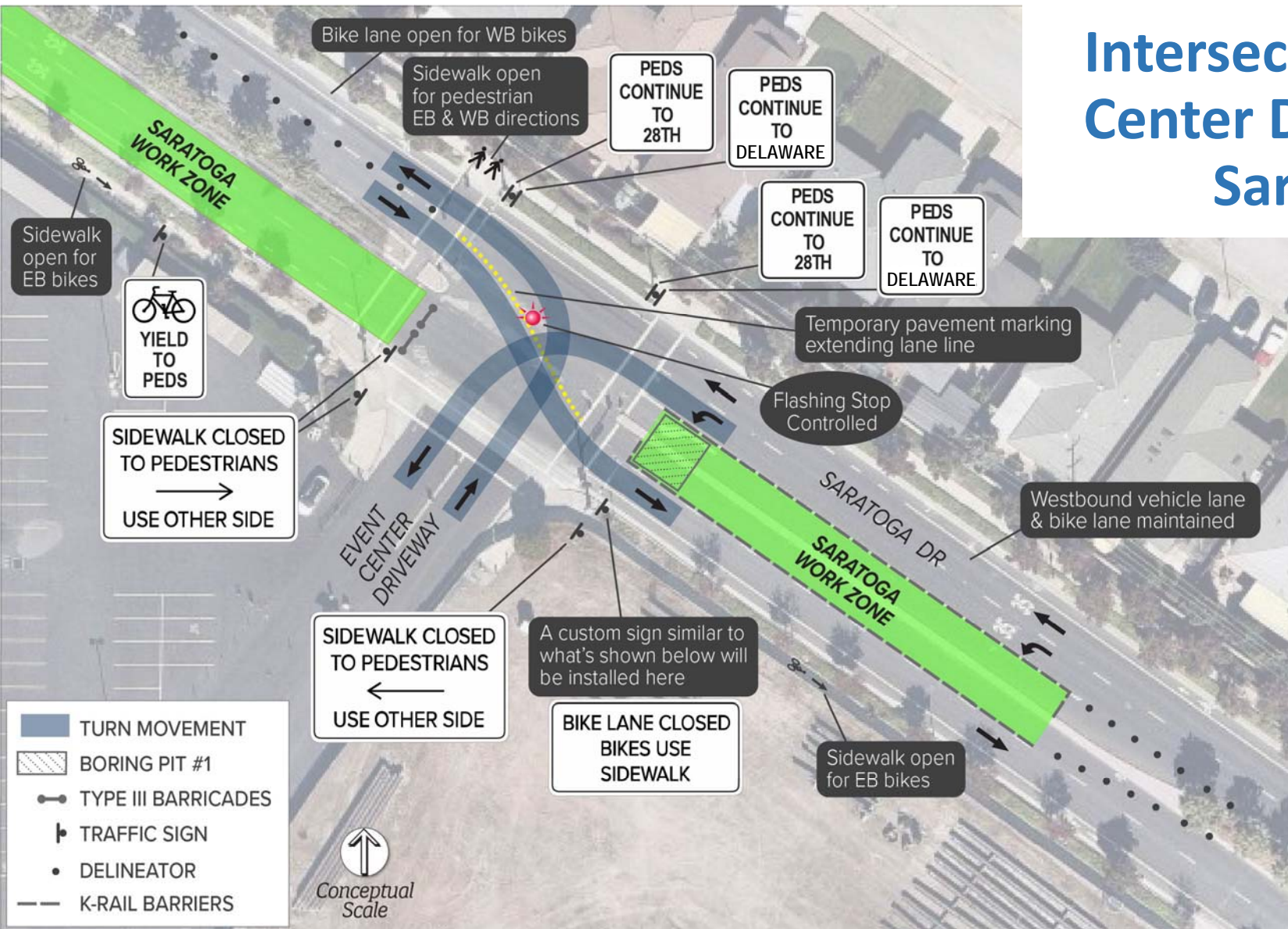
Saratoga Drive @ S. Delaware Street

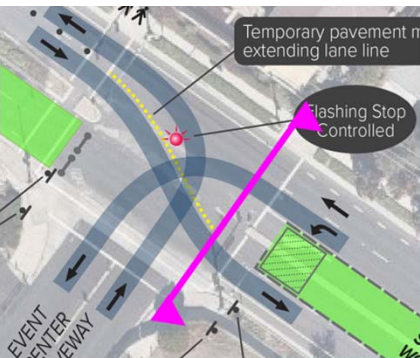
(Looking East)

Event Center

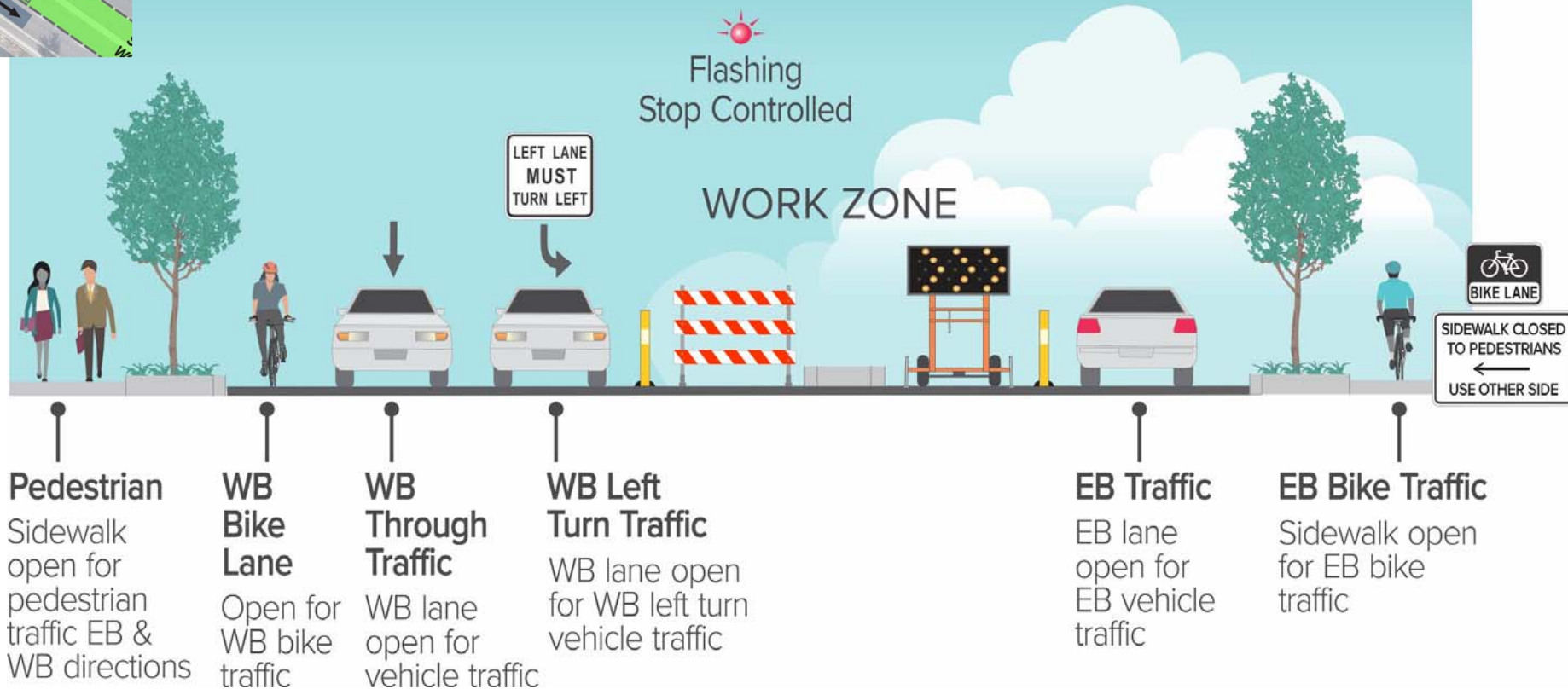


Intersection: Event Center Driveway & Saratoga





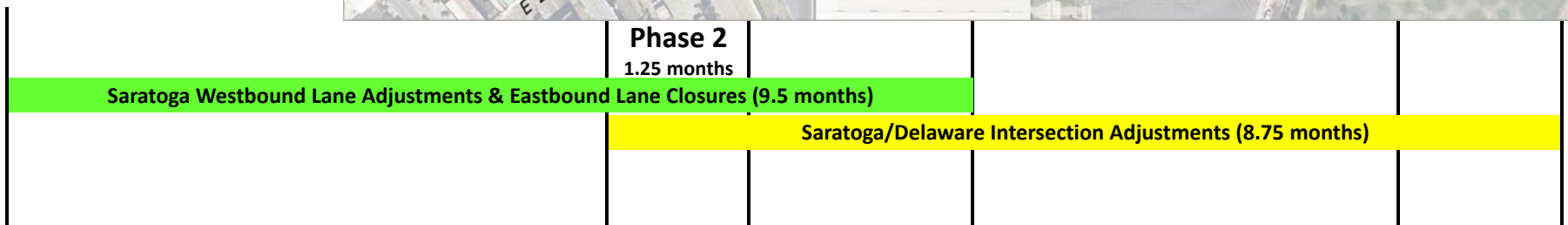
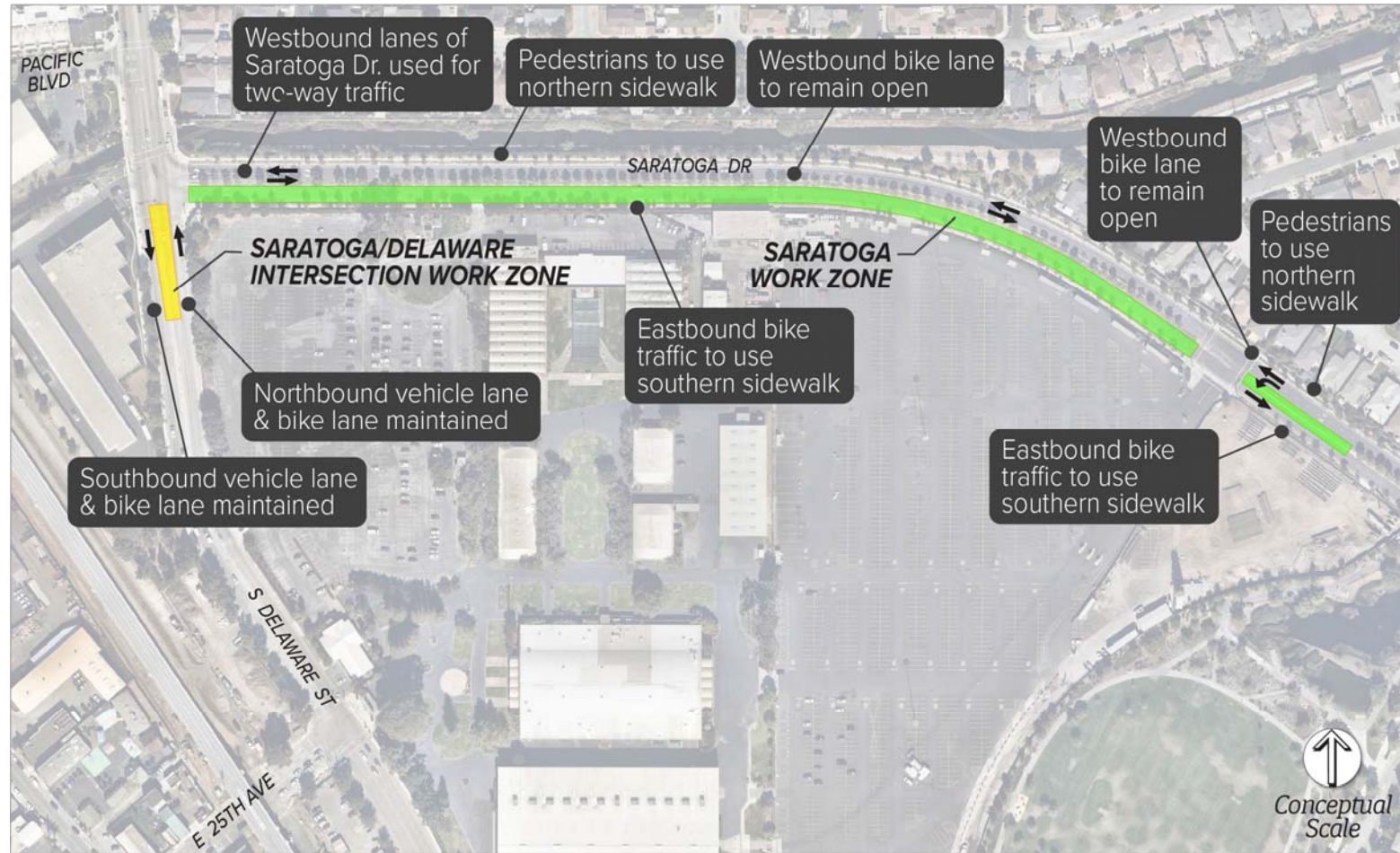
Saratoga Drive @ Event Center Driveway (Looking East)



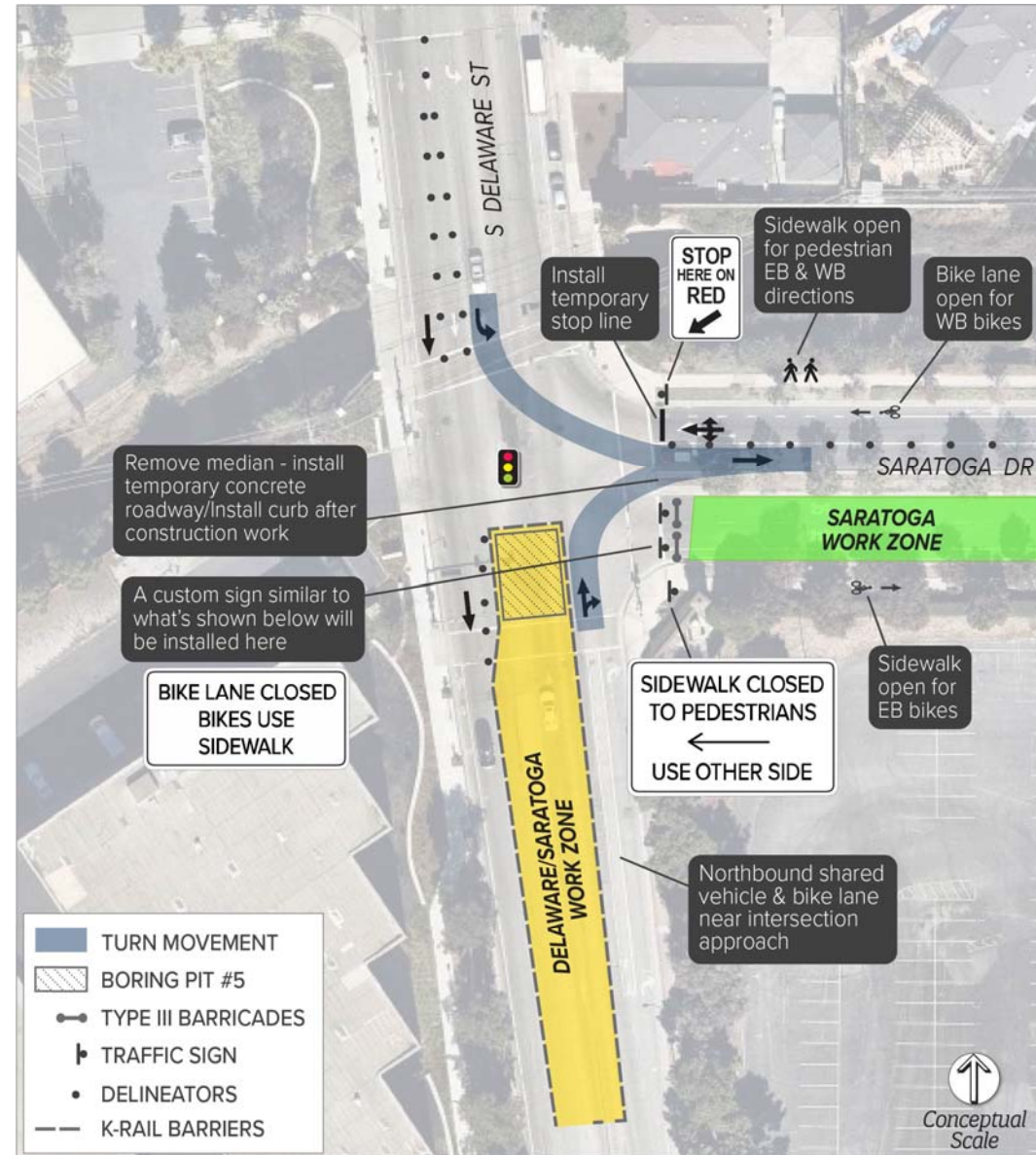
Phase 2 Overview

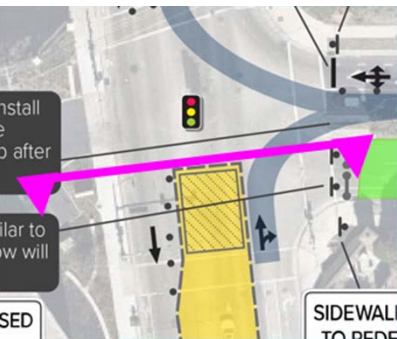
Construction Activities

- Excavate pit adjacent to Saratoga/Delaware intersection
- Pipe installation via microtunneling



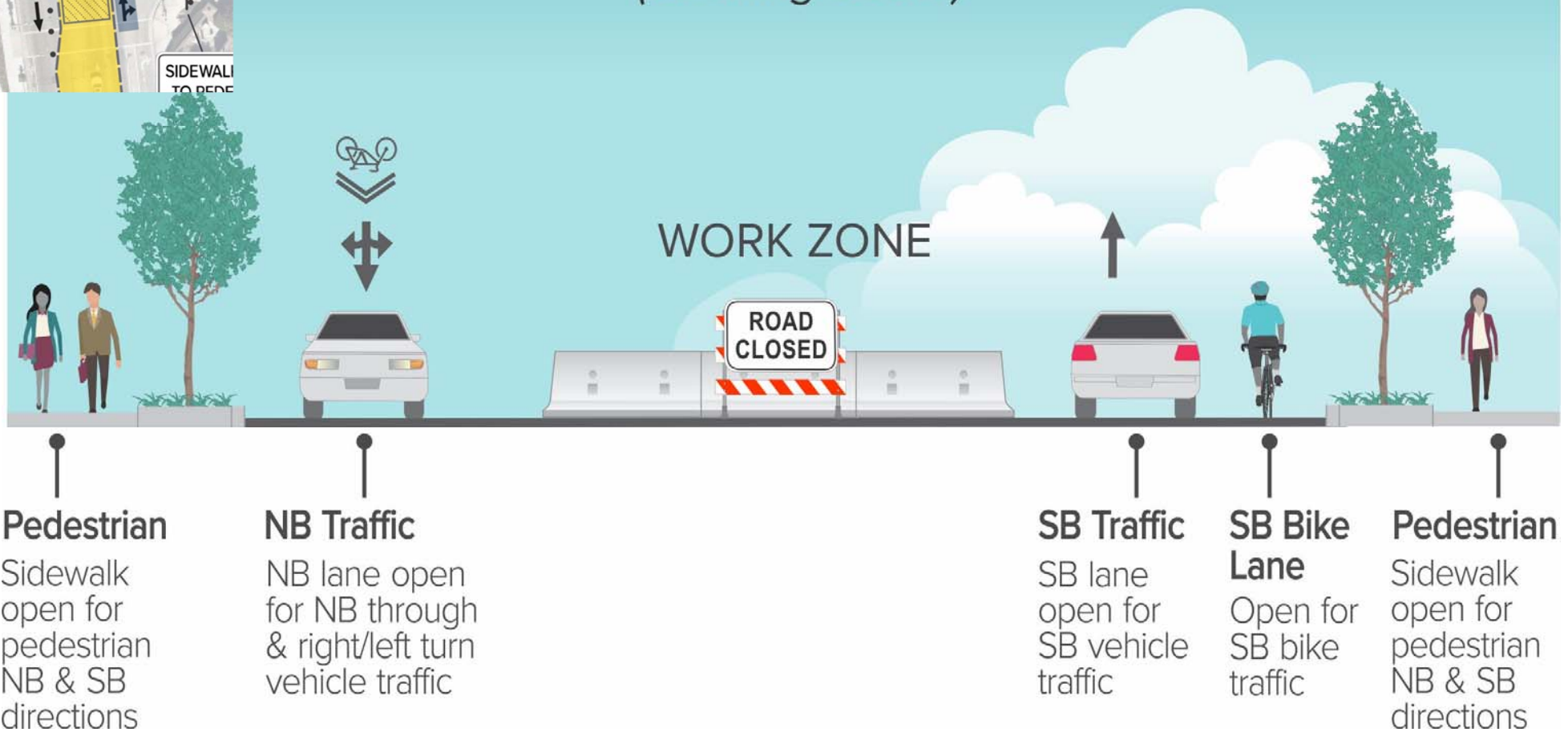
Intersection: Saratoga & Delaware - Phase 2





Delaware Street @ Saratoga Drive

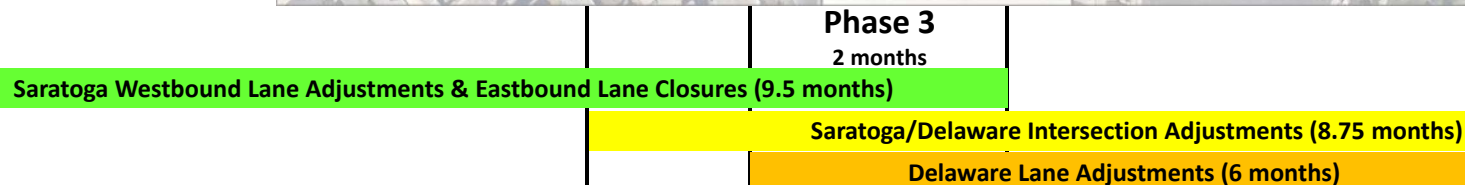
(Looking South)



Phase 3 Overview

Construction Activities

- Excavate pit on Delaware
- Pipe installation via microtunneling
- Manhole installation
- Backfill Saratoga pits



Phase 4 Overview

Construction Activities

- Excavate pit at Delaware/25th intersection
- Pipe installation via microtunneling
- Manhole installation
- Backfill Delaware pits
- Construct diversion structure at Delaware/Saratoga intersection



Saratoga Westbound Lane Adjustments & Eastbound Lane Closures (9.5 months)

Phase 4
4 months

Saratoga/Delaware Intersection Adjustments (8.75 months)

Delaware Lane Adjustments (6 months)

Delaware/25th Intersection (4 months)

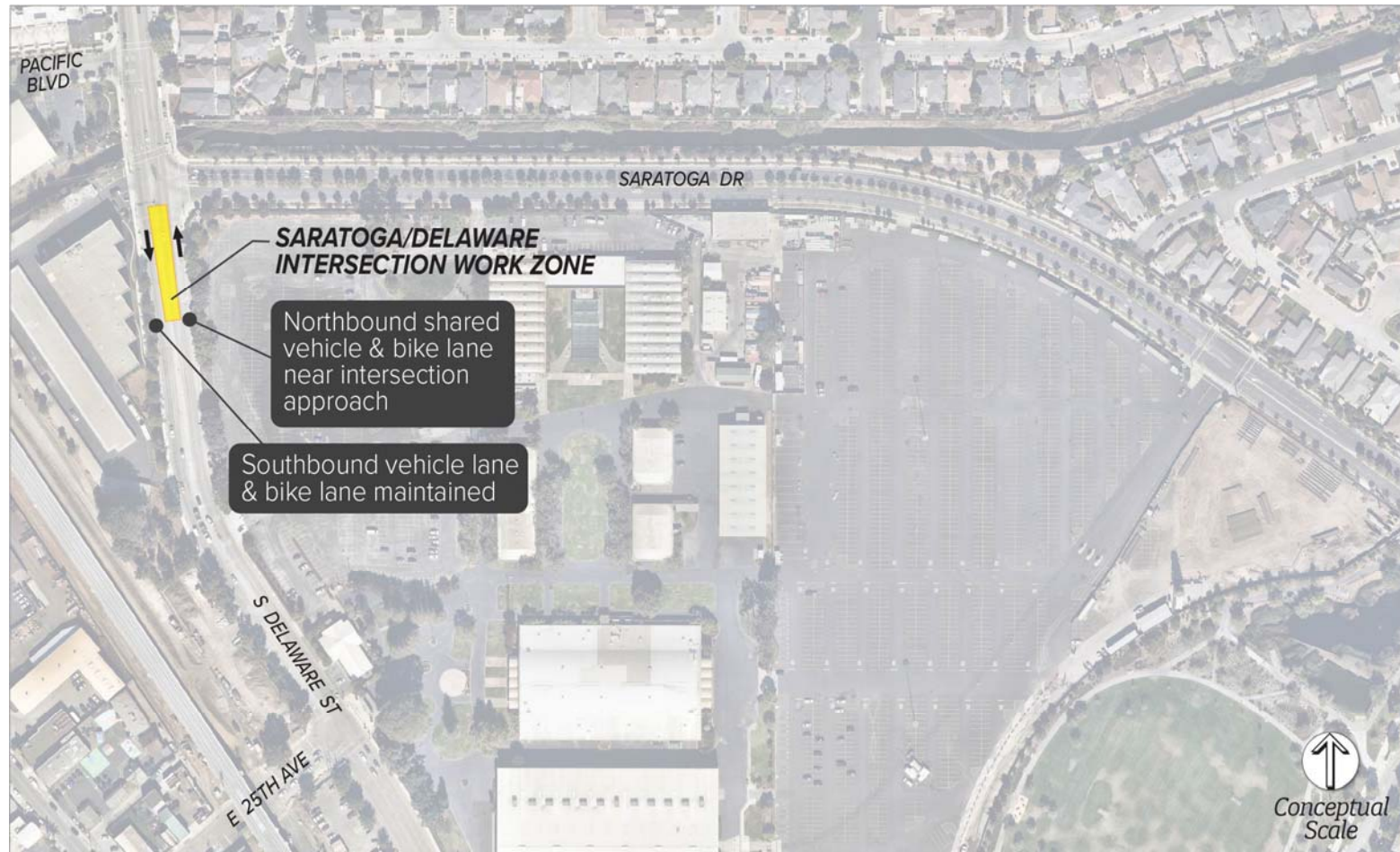
Intersection: Delaware & 25th Ave



Phase 5 Overview

Construction Activities

- Construct diversion structure at Delaware/Saratoga intersection
- Sewer tie-ins
- Backfill pit



Saratoga Westbound Lane Adjustments & Eastbound Lane Closures (9.5 months)

Saratoga/Delaware Intersection Adjustments (8.75 months)

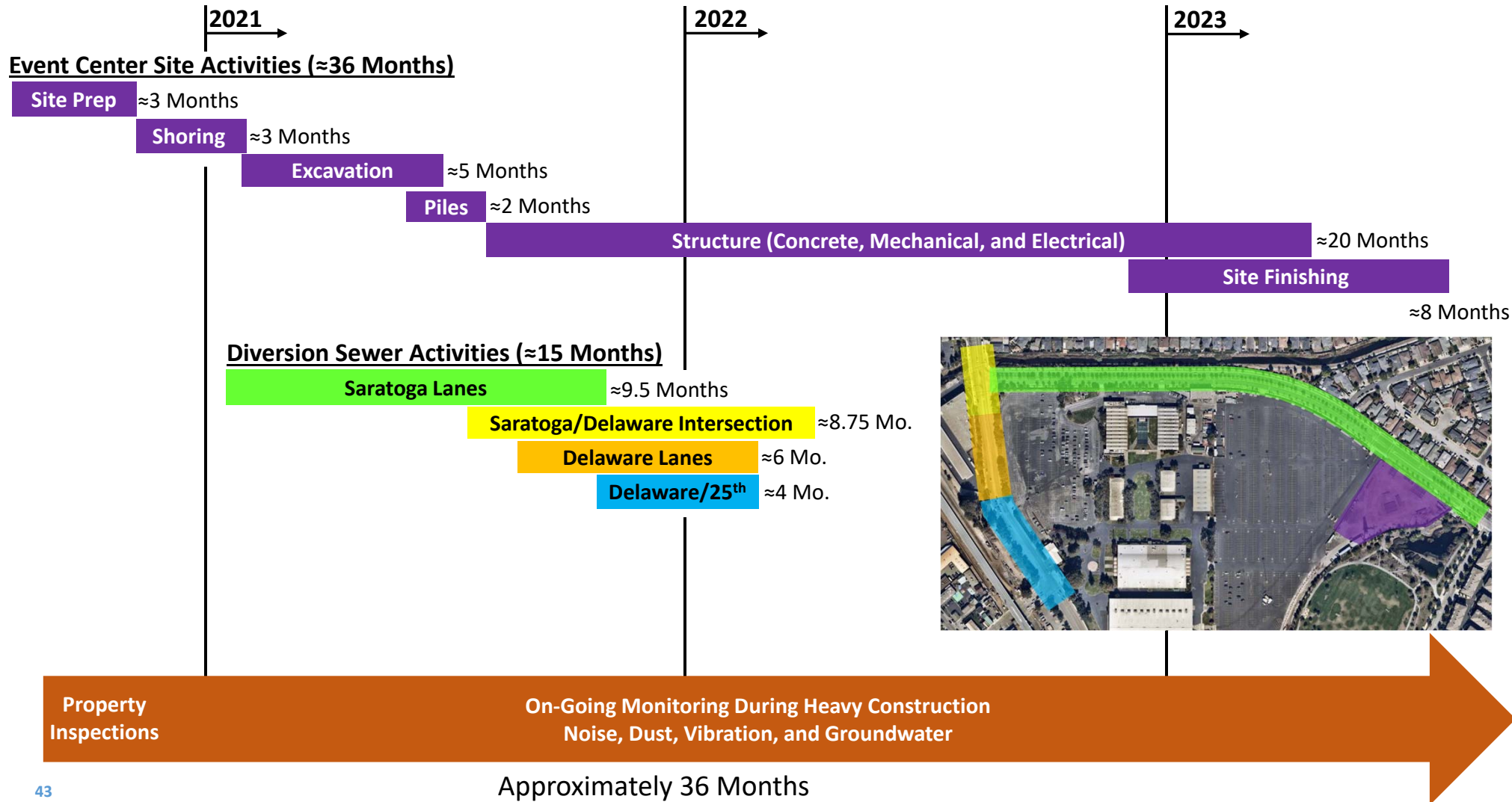
Delaware Lane Adjustments (6 months)

Delaware/25th Intersection (4 months)

Phase 5
1.5 months



Anticipated Construction Schedule



Construction Hours

- Work hours for UFES Site: Monday to Friday, 7 am – 7 pm
 - *Typical construction day is expected to be 8-10 hours*
 - *No truck haul or delivery between 4:00pm and 5:30 pm*
- Work hours in streets:
 - *Saratoga Dr.: 8:00am to 4:00pm*
 - *Delaware St.: 8:00am to 5:00pm*
- Construction work is not planned for weekends or outside of approved hours.
 - *Exceptions may be needed, but only with City approval (e.g. concrete pour)*



New UFES Webpage Content: Monitoring Event Center Site

www.CleanWaterProgramSanMateo.org/UFES

CONSTRUCTION CAMERA



Pan, Zoom, and Live Viewing Capabilities



45

Construction Monitoring



NOISE

Project not to exceed 90 dBA at the property line at Saratoga Ave and Bay Meadows Park

Week: November 30-December 6, 2020
There were no observed exceedances this week.



VIBRATION

Project not to exceed vibrations of 1.0 inches per second for more than 30 seconds

Week: November 30-December 6, 2020
There were no observed exceedances this week.



DUST

Project not to exceed dust particulate levels of 82 pounds per day

Week: November 30-December 6, 2020
There were construction-related exceedances this week, resulting from equipment startup and loading of cement trucks near the monitor. Corrective actions taken include wetting the site with a water truck, after which particulate concentrations decreased.



GROUNDWATER

Click link below for additional information

[November 9-December 9, 2020](#)

UFES Outreach & Engagement Channels

- Project newsletter
- SMS text notices for traffic adjustments and time-sensitive activities (e.g. concrete pours)
- Project webpage with status updates and monitoring information
- UFES specific hotline (Tom, Ron, and Deryk)

Q & A



Azalea Mitch
Deputy Public
Works Director



Deryk Daquigan
Engineering Manager



Tom Williams
Senior Engineer



Bethany Lopez
Senior Engineer



Ron Esmilla
Senior Construction
Manager



Kellie Benz
Communications &
Public Relations

Stay Engaged!

Sign Up for Email Updates

info@CleanWaterProgramSanMateo.org

Receive Construction Updates via SMS Text

Text "UFES" to 1-833-321-0231

Message & data rates may apply

Call the UFES Hotline

650-522-7250

Follow the City's Social Media



Visit the UFES Project Website

www.CleanWaterProgramSanMateo.org/UFES

