



Central Waterfront Stakeholders Group

September 12, 2012

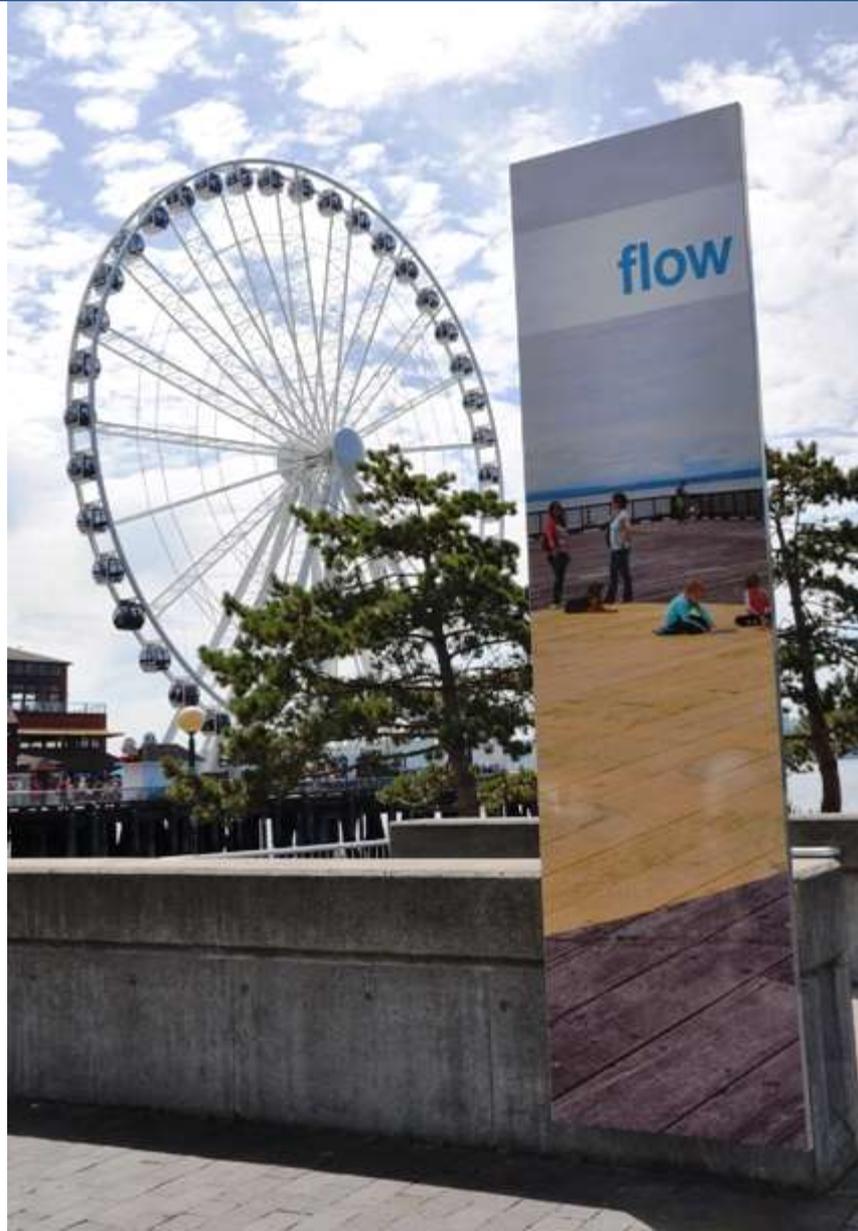
Waterfront
Seattle.org

and

Elliott Bay  Seawall
Project

Housekeeping

Waterfront kiosk, installed!



Waterfront Parking Update

AWV Parking Mitigation Goal/Objectives

Retain customers of the central waterfront and Pioneer Square business districts during SR 99 tunnel construction by making sure parking is:

- Available
- Proximate
- Safe
- Affordable



Mitigation Strategies

1. Parking garages / acquire new public spaces - \$15 M
2. Garage partnerships - \$2.87 M
3. Marketing program - \$4.0 M
4. Public right-of-way improvements (sidewalks, lighting, etc.) - \$350,000
5. Temporary on-street parking - \$750,000
7. Wayfinding improvements - \$370,000
8. e-Park operations - \$200,000
9. Parking mobile app - \$130,000
10. Changes to on-street parking restrictions - \$400,000
11. Special event programs - \$350,000

Total - \$24.42 M (remaining funds are contingency and administration)

Implementation Progress

- 78 new short-term parking spaces
- May 13: Free parking for Mother's Day promotion
- Summertime parking marketing
- RFI for parking garage
- Sunday (free) parking time limits

www.downtownseattleparking.com



Waterfront Seattle Update



CONCEPT DESIGN
STRATEGIC PLAN
OUTREACH +
PARTNERSHIPS

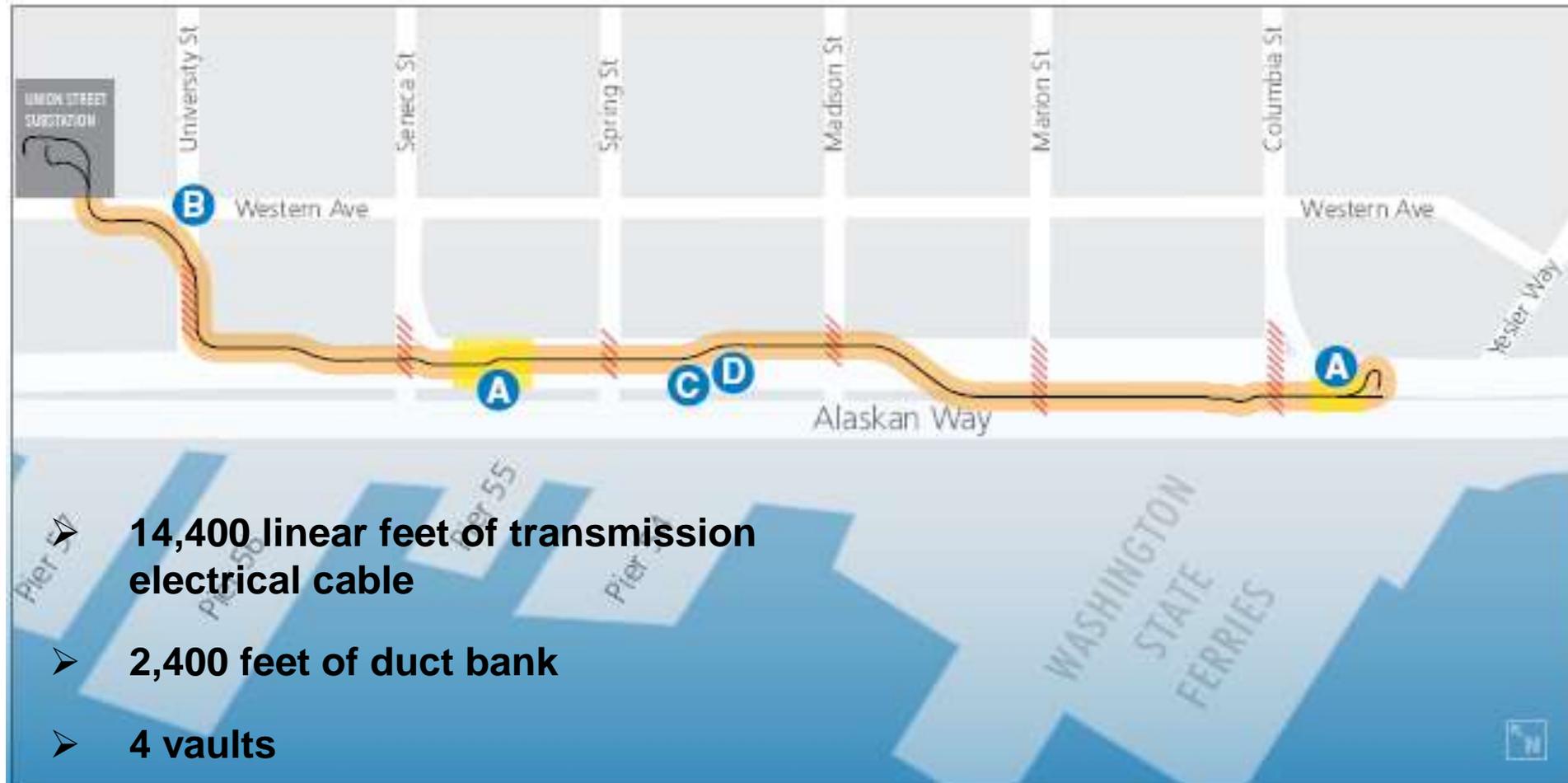
SCHEMATIC DESIGN PARTNERSHIP AGREEMENTS FUNDING



Central Waterfront Transmission Line Relocation Project

Key Take-Aways for Future Waterfront Projects

Seattle City Light Transmission Line Relocation Project



Work Underway: Solving Problems



Crews saw-cut the pavement before removing it to prepare to install a duct bank.



Crews use a drill rig to install a dewatering system.

Project Completed – June 2012

- 7 month duration
- Met tunnel contractor's schedule



Looking Ahead: Outreach Planning and Execution

Schedule planning

- **Events on the waterfront!**

Notification

- **Early notifications of major work elements**, with opportunity for feedback
- **Weekly email updates** effective
- Ongoing updates **as early in the week as possible** - especially for weekend work
- **Maps**/online maps helpful

Wayfinding

- **On-site traffic control** for pedestrians and vehicles
- **“Businesses are open” signage**

Technical and Construction Planning

- Expect **timber debris** and obstructions
- Factor in **tidal influence** during excavation
- Proactively consider smell of **hydrogen sulfide during excavation**
- Where possible, minimize on-street **parking** loss
- **Existing utilities** most effectively located through potholing (though loud)



- Ensure **cross-project coordination**, including multi-project traffic impacts

Next Steps

- Additional SCL work associated with AWW North/South Portals and additional relocation associated with viaduct demolition
- Continued coordination with SDOT on Elliott Bay Seawall Project
- Plan and design for temporary services during construction; likely to include coordination with stakeholders



*Do you have other lessons learned
from the CWF TLR project?*

Looking Ahead to Construction

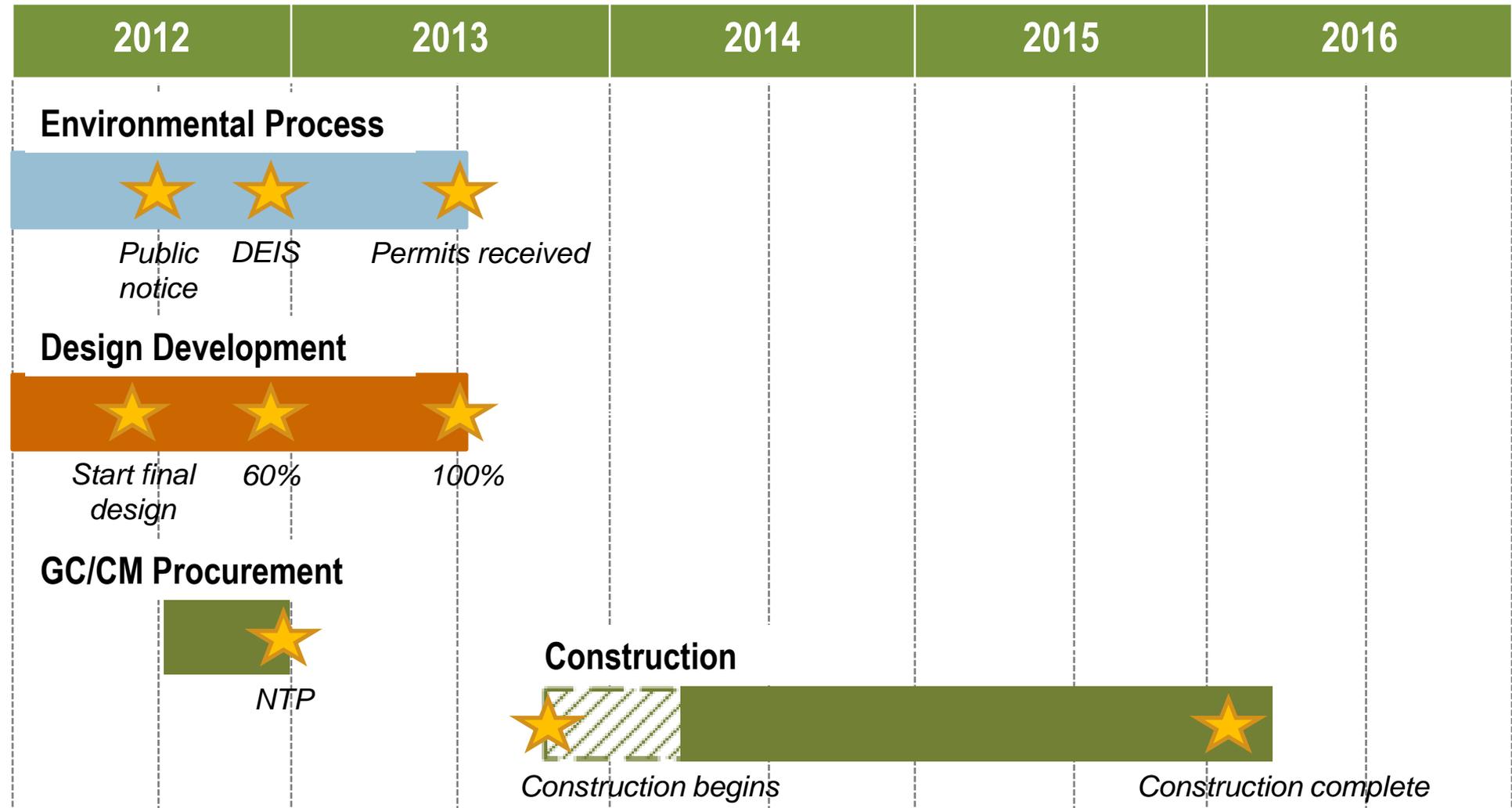
- September 2012** Project teams meet with stakeholders to gather detailed information
- October 2012** Teams continue to refine and project schedules
- November 2012** Selection of Seawall Project GC/CM and notice to proceed
- Early 2013**
 - Collaboration with GC/CM to further detail Seawall construction schedule
 - Seek stakeholder feedback on planning and construction schedules

Elliott Bay Seawall Project Update

Tonight's Topics

- Design approach
- Focus on new seawall
 - Soil as a structure
 - Jet grouting overview
 - Generalized construction techniques and steps
- 6-month look ahead
- Framing the SEPA DEIS and project permitting
- Stakeholder feedback

Project Schedule and Milestones

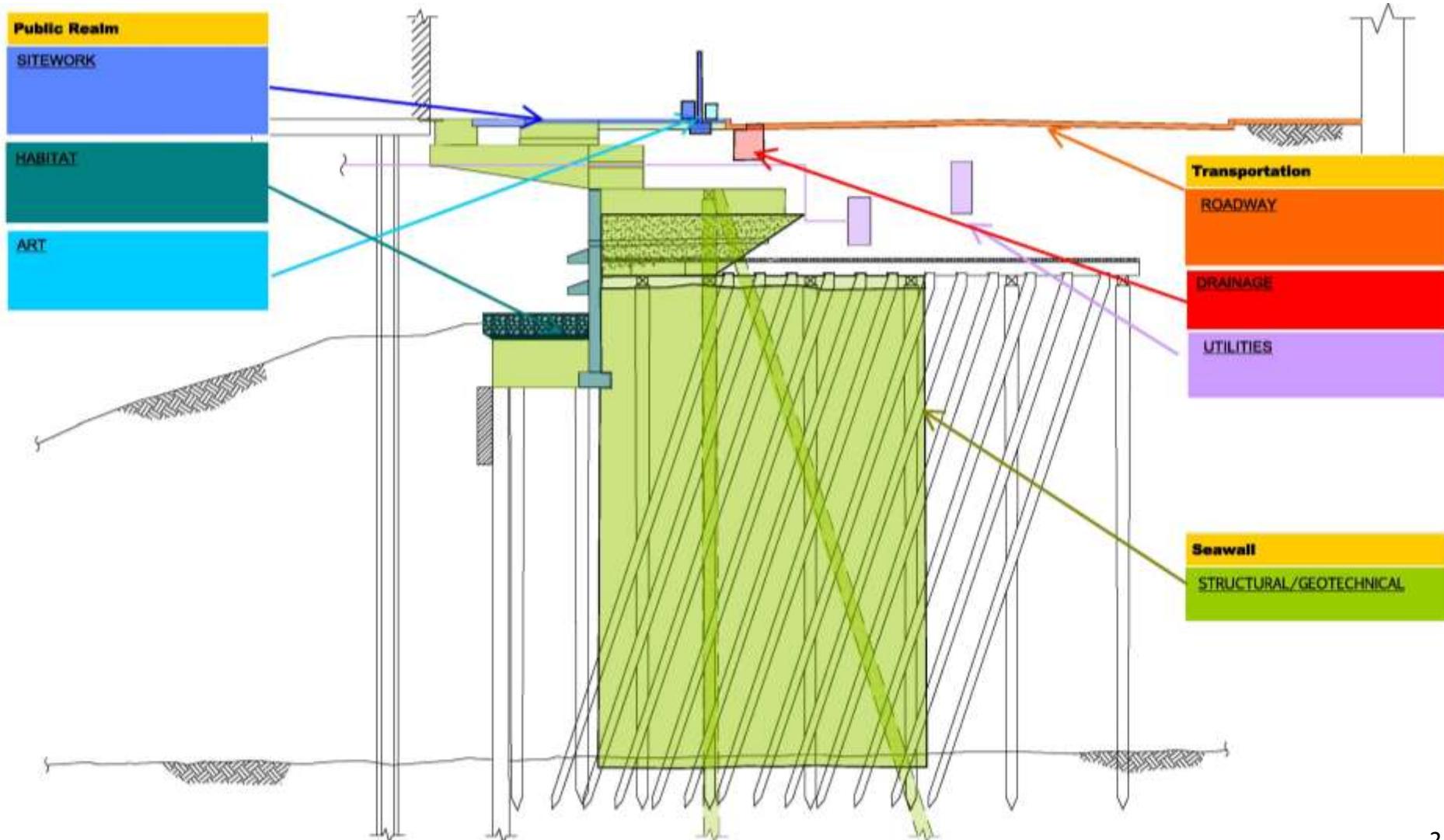


Design Approach

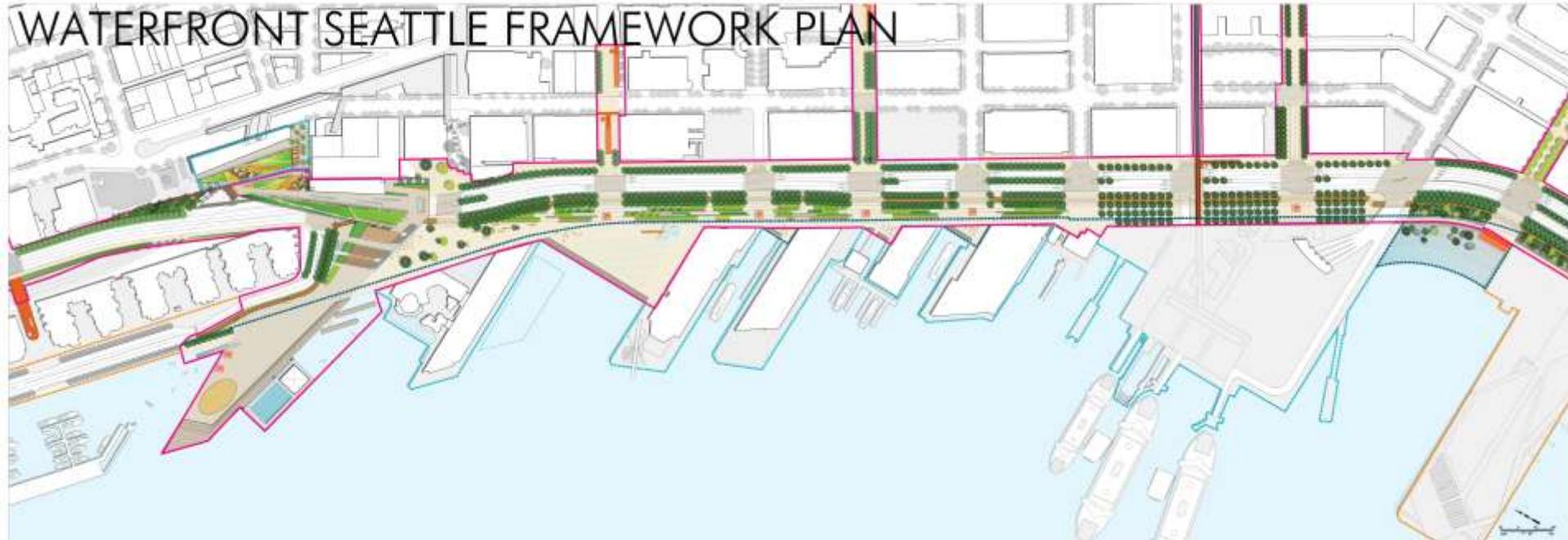
- Waterfront Seattle Framework Plan
- Public realm
- Transportation
- Habitat
- New seawall
- Utilities



Design Systems



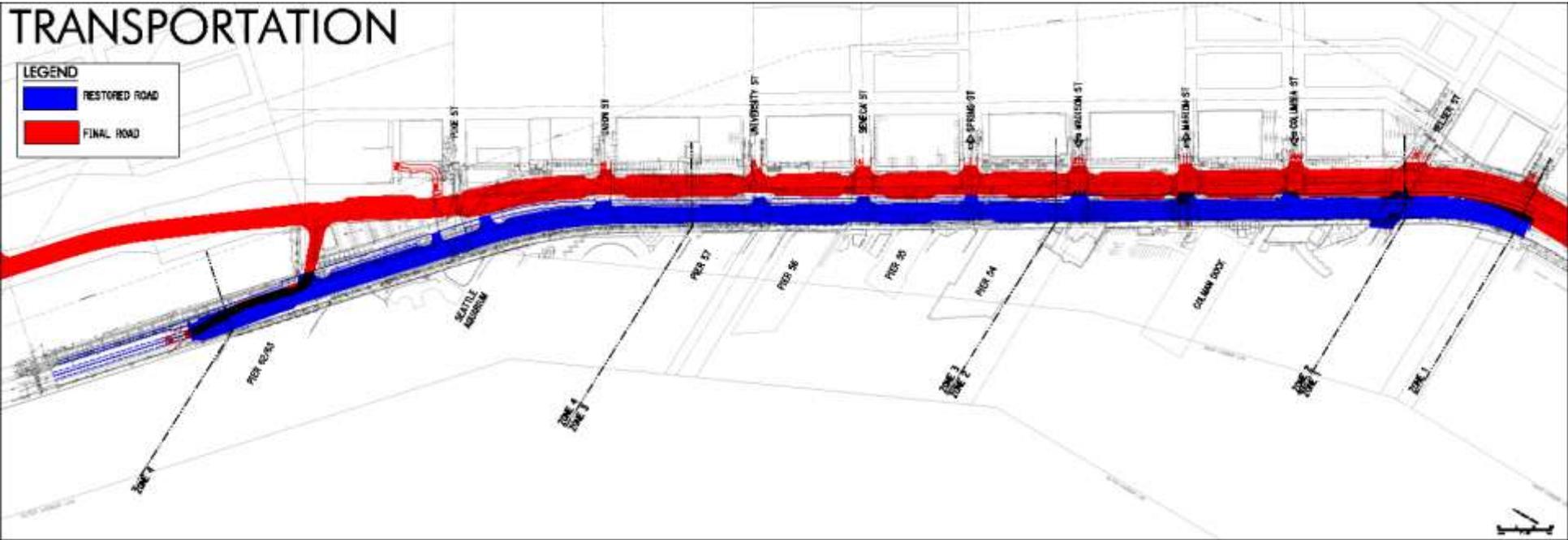
Waterfront Seattle Framework Plan



Public Realm



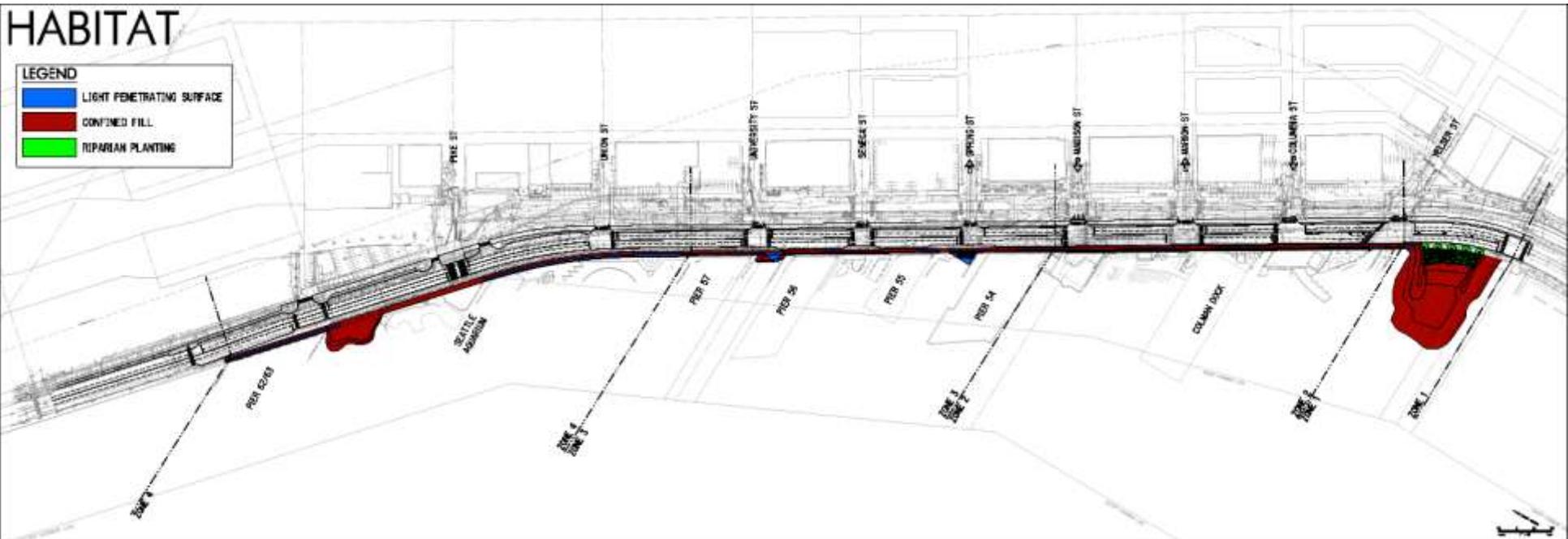
Transportation



Habitat

HABITAT

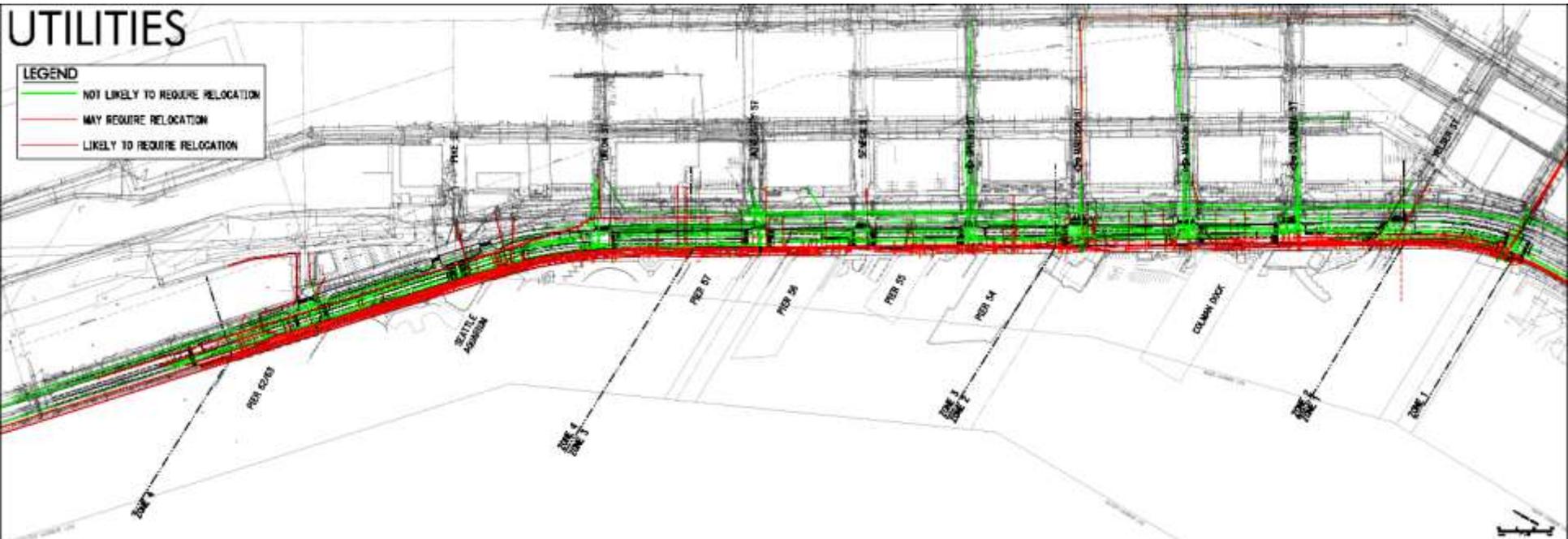
LEGEND	
	LIGHT PENETRATING SURFACE
	CONFINED FILL
	RIPARIAN PLANTING



New Seawall

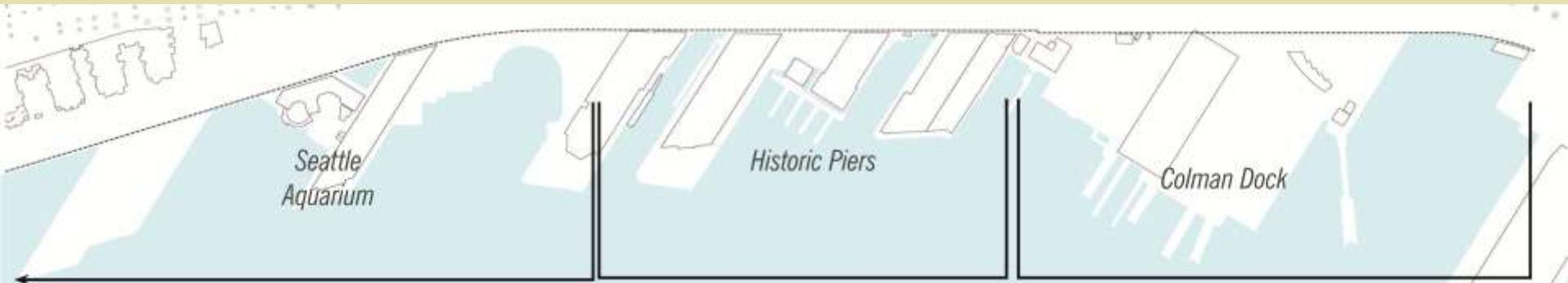


Utilities

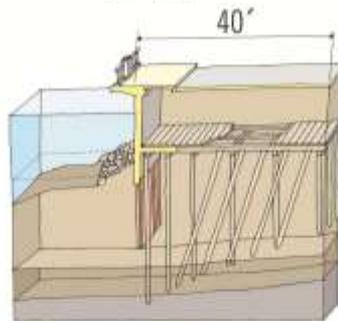


Focus on New Seawall

Existing Wall Types



Existing Type A Wall



Location: Aquarium and northward

- Built in 1934
- Timber structure with concrete face
- ~40 feet wide

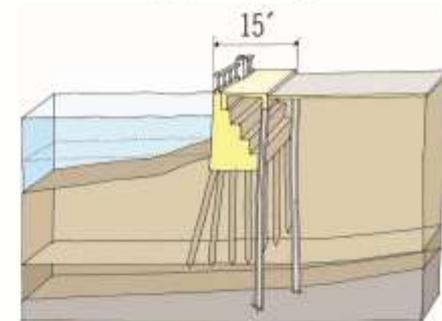
Existing Type B Wall



Location: Central Pier Zone,
Madison St to Union St

- Built in 1934
- Timber structure with steel master pile and concrete face
- ~60 feet wide

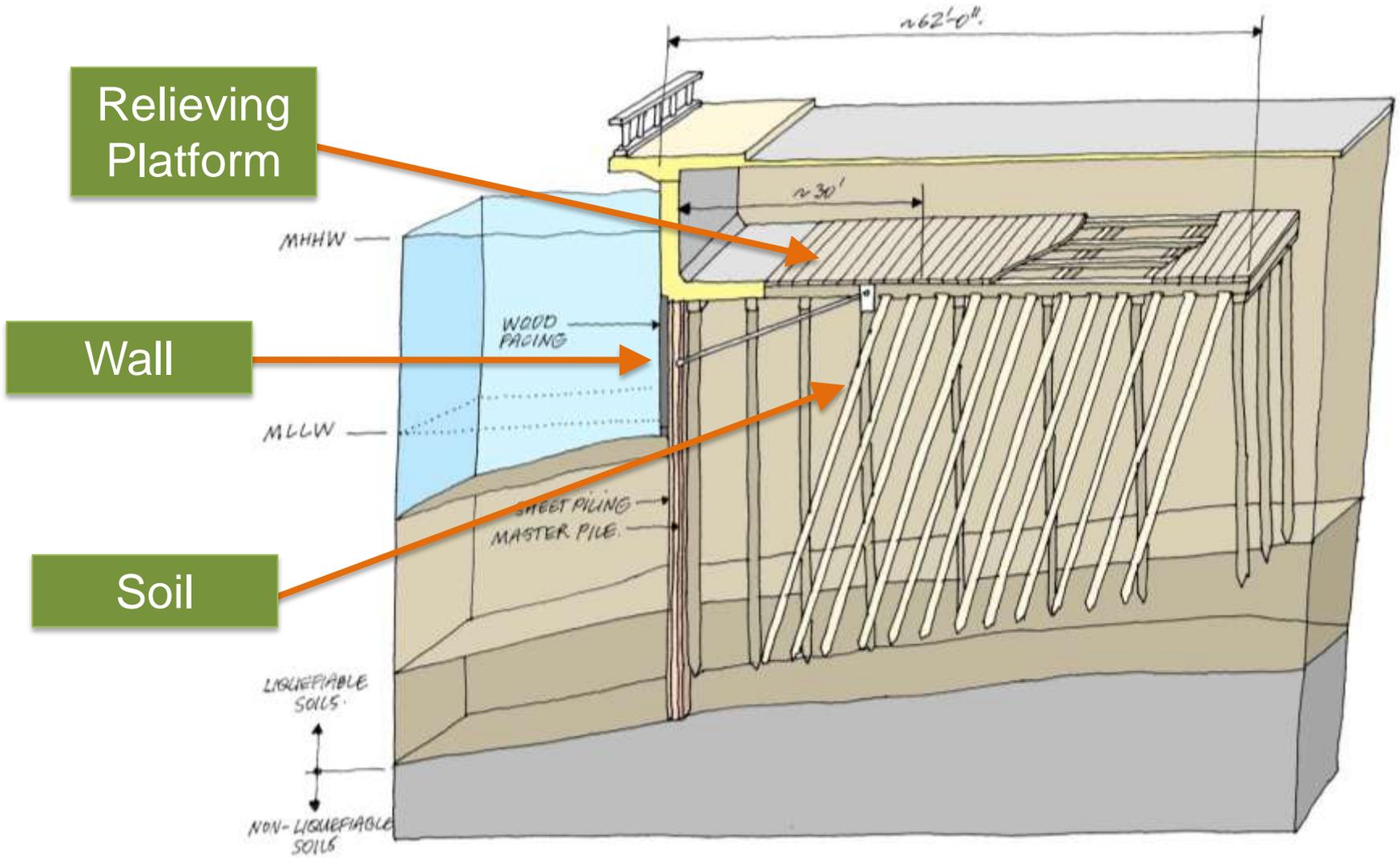
Existing Gravity Wall



Location: Pioneer Square/Ferry Terminal,
S. Washington St to Madison St

- Built in 1916
- Concrete structure supported by timber piles
- ~15 feet wide

Structural Elements of the Wall



Relieving Platform Condition



Relieving Platform Condition



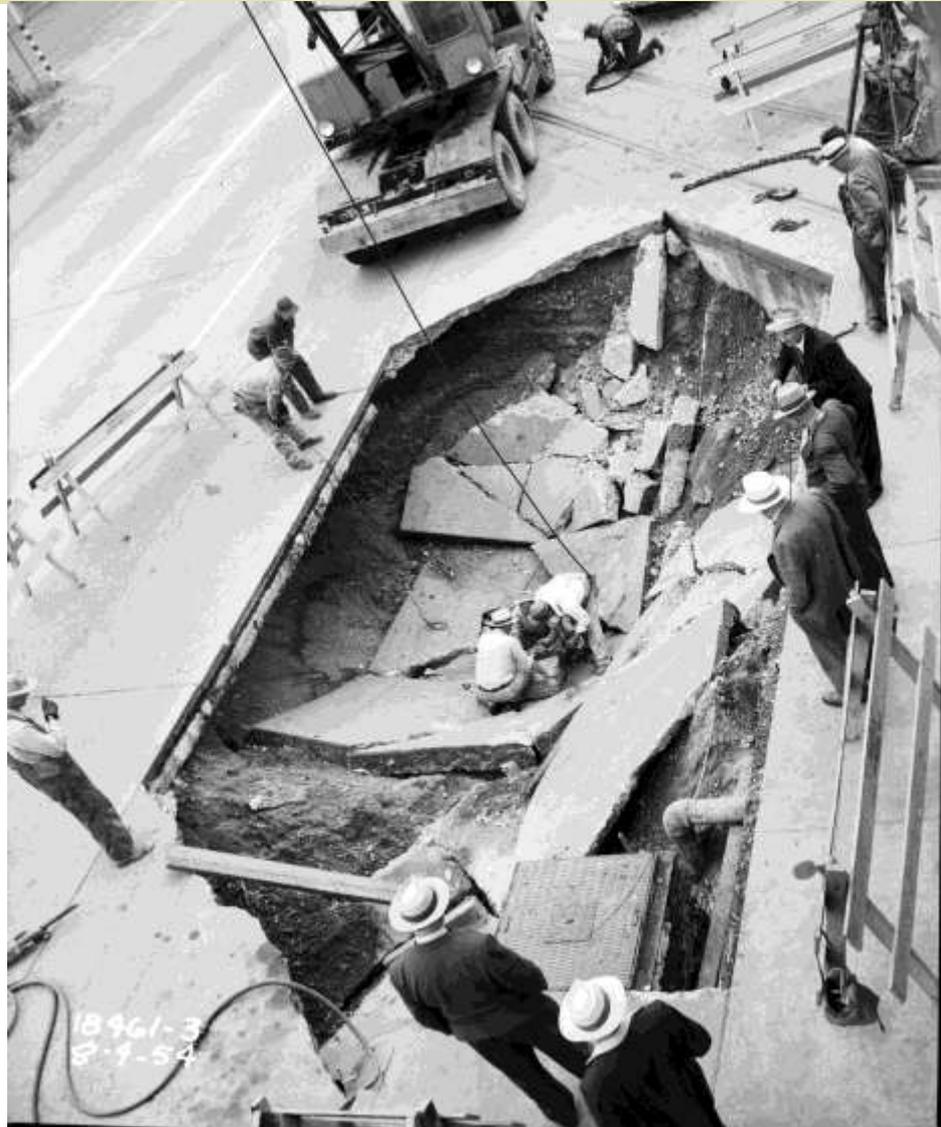
Wall Condition



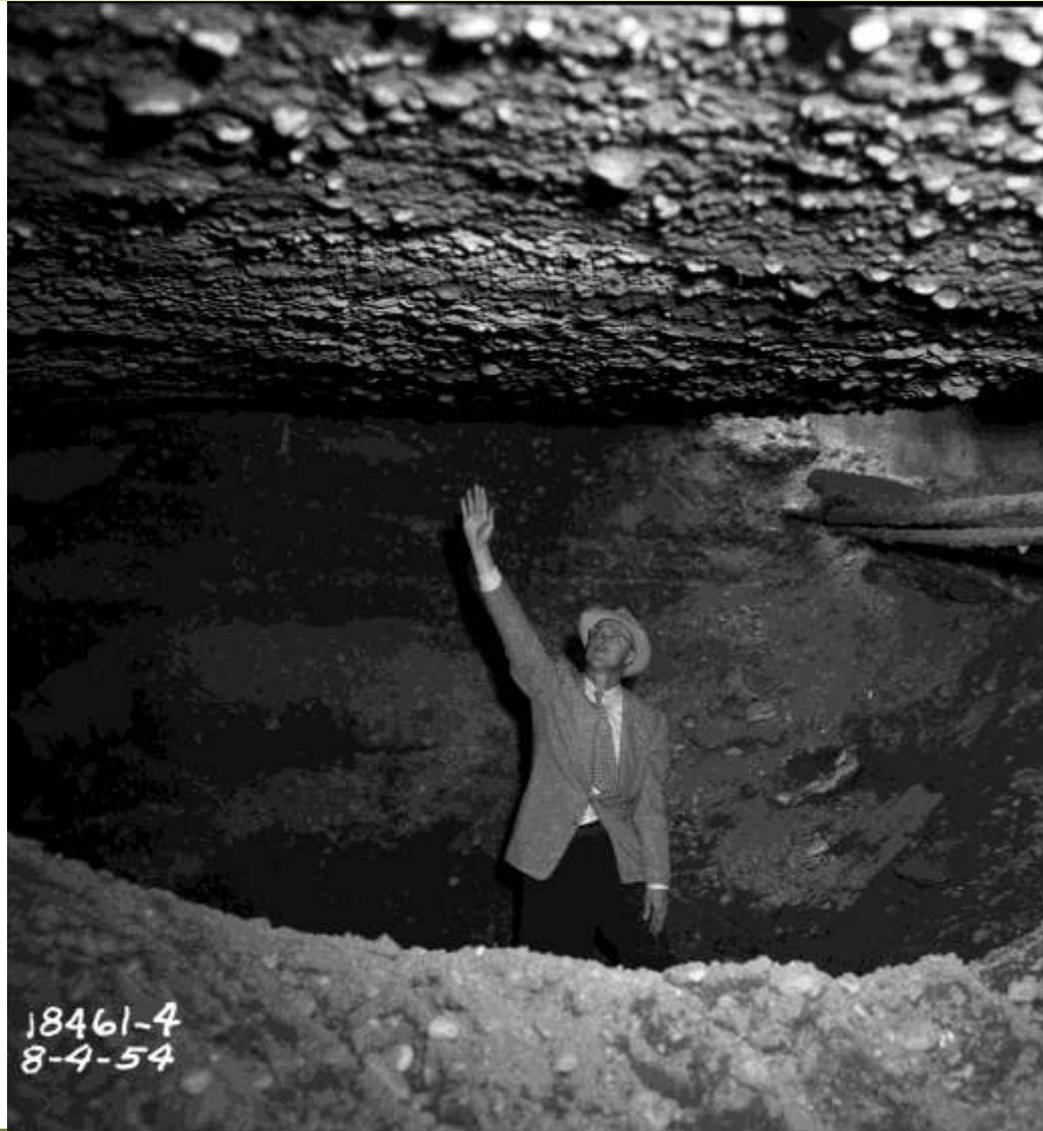
Wall Condition at Washington Street: 1986



Soil Condition at Clay Street: 1954

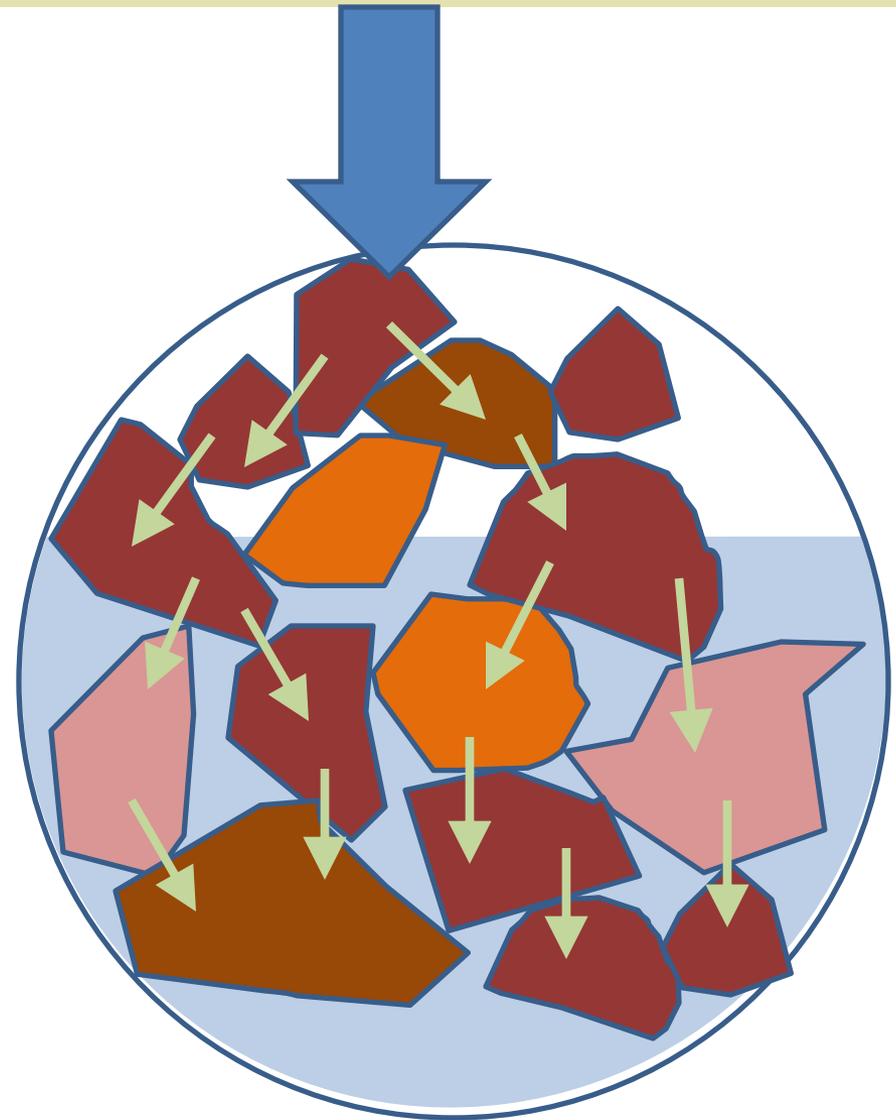


Soil Condition at Clay Street: 1954



Soil Structure

- Soil supports and distributes the load
- Direct contact and friction
- Water fills the space in between

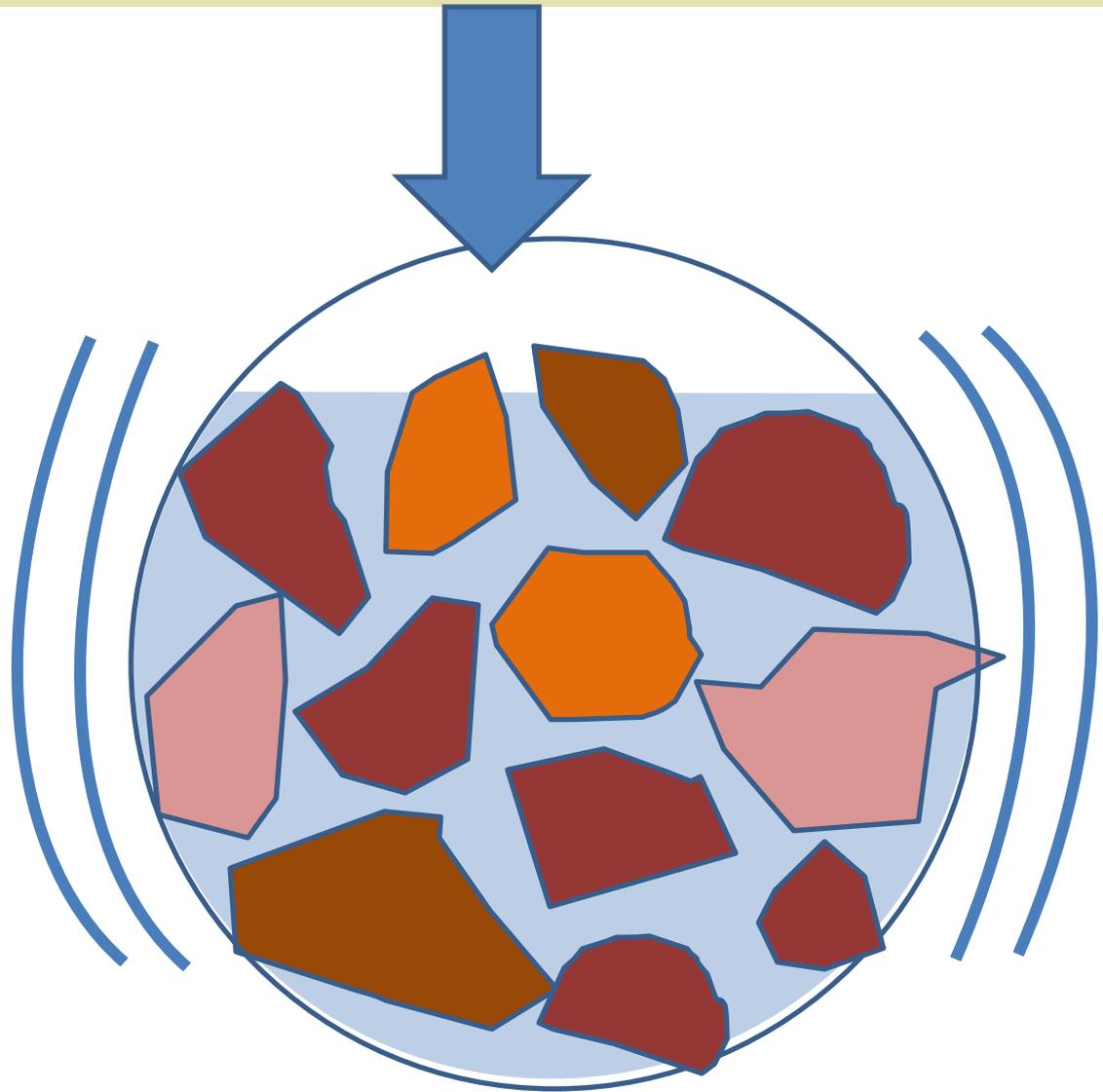


Soil Structure



Liquefied Soil

- Soils that lack cohesion separate in a seismic event
- Once separated the soil particles are unable to distribute the load



Liquefied Soil



End Result

Kobe, Japan (1995)



WSDOT Earthquake Simulation (2010)



Soil Stabilization: Jet Grouting



Jet Grouting: Applications



- Underpinning
- Soil improvement
- Barrier wall construction
- In-situ stabilization of contaminated soils



18

17

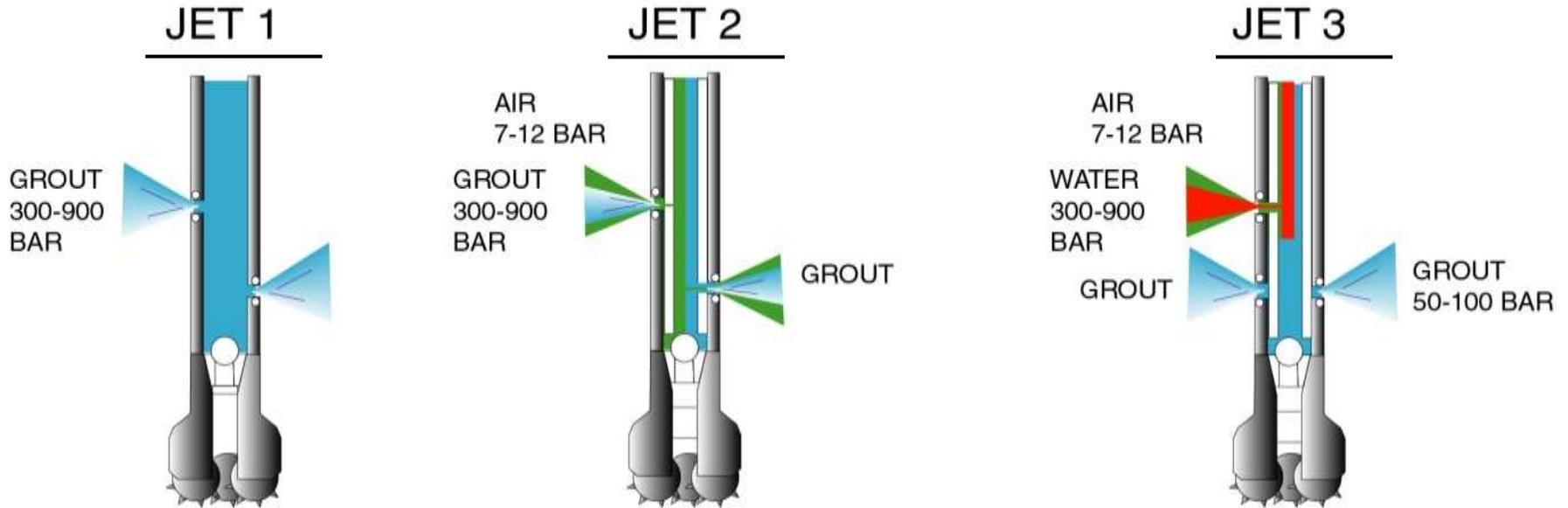
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14

16

13

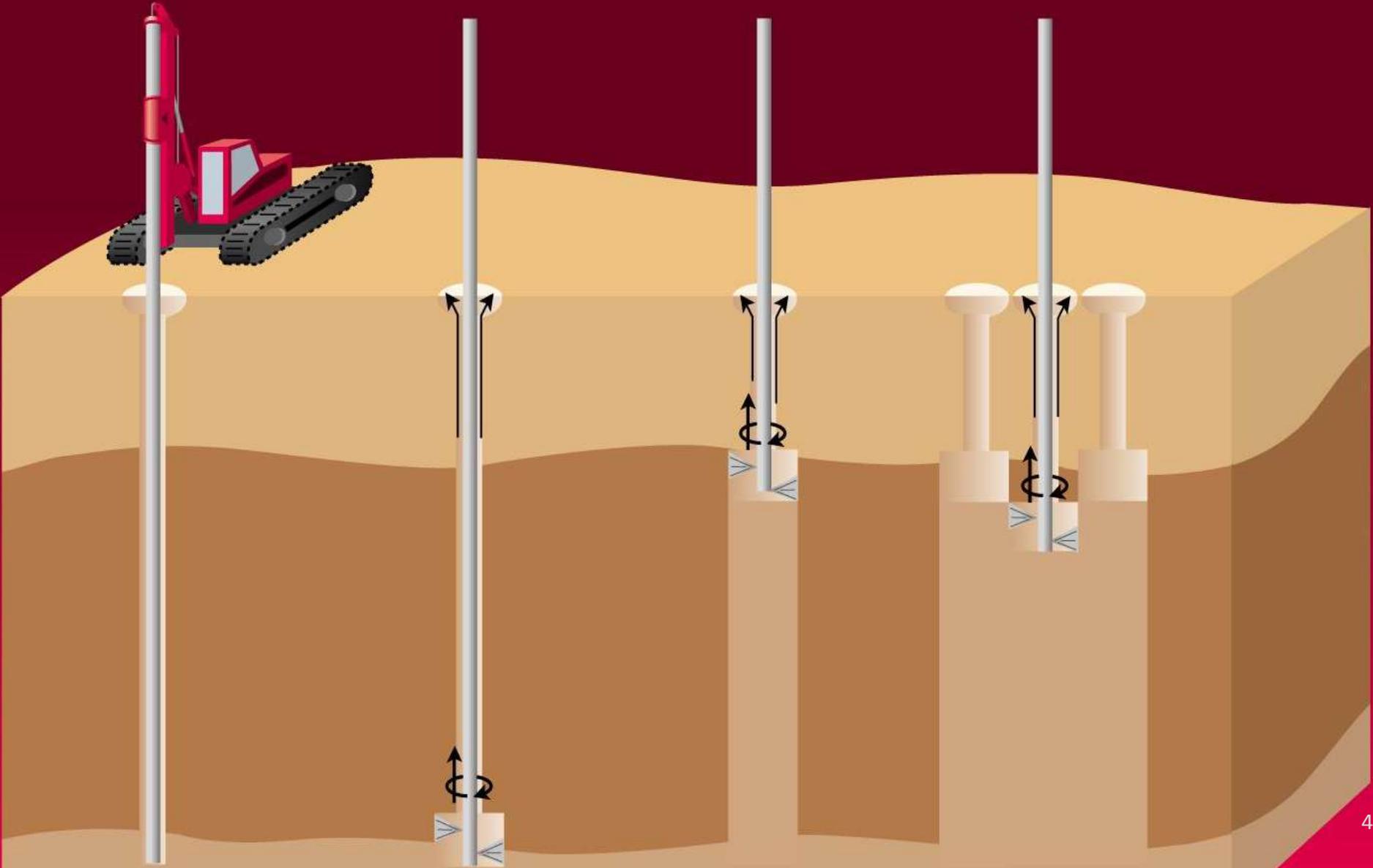
Grout Composition



LEGEND:

-  GROUT
-  AIR
-  WATER

JET GROUT BARRIER WALL TECHNIQUE



Continuous Row of Grouted Columns



Jet Grouting in Pittsburgh City Street



Jet Grout Batch Plant



Jet Grout Mix Plant



Jet Grout High Pressure Pump



Jet Grouting and Spoil Capture in Progress



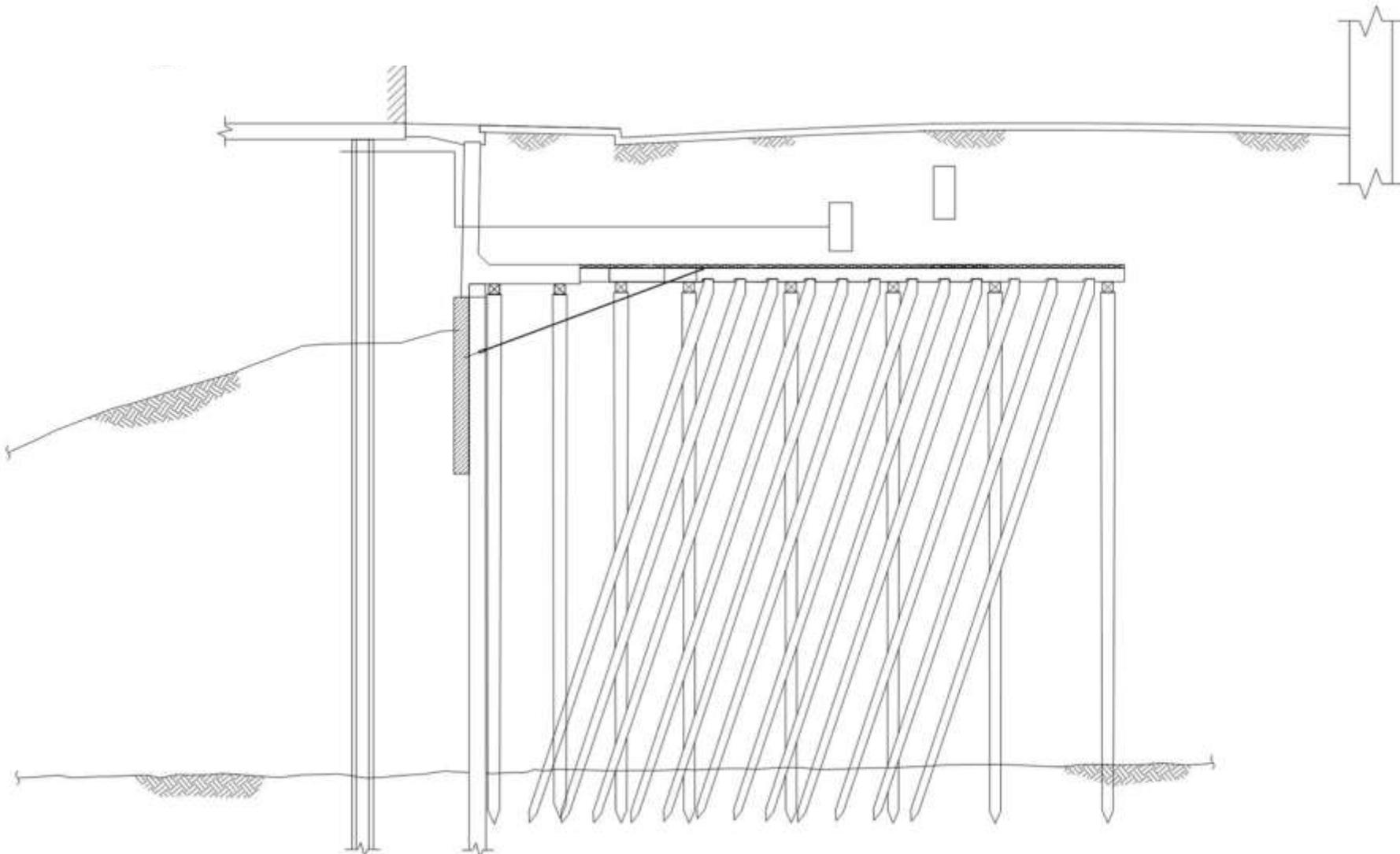
Spoils Capture Using Collection Trench



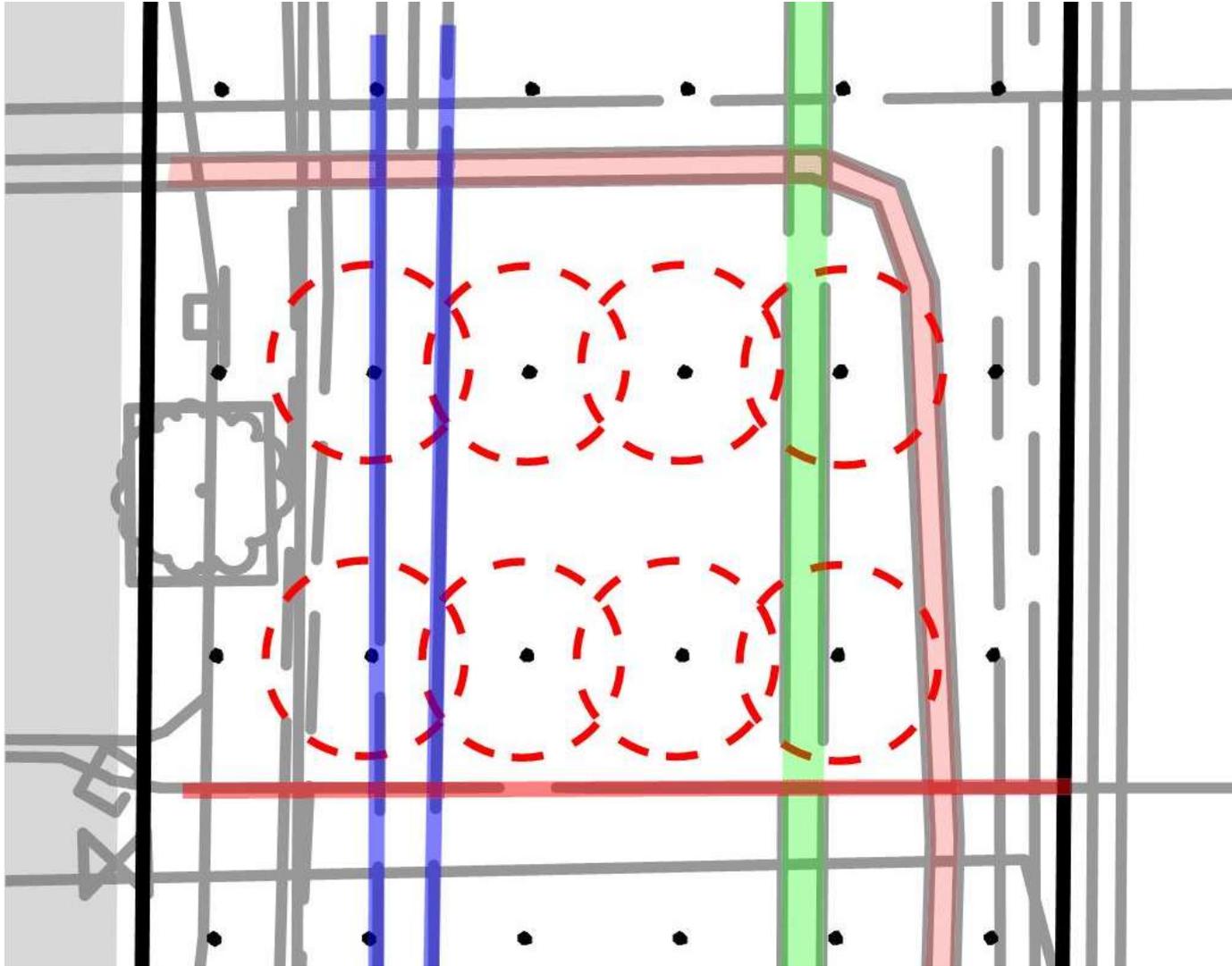
Cleaning the Spoils Collection Trench



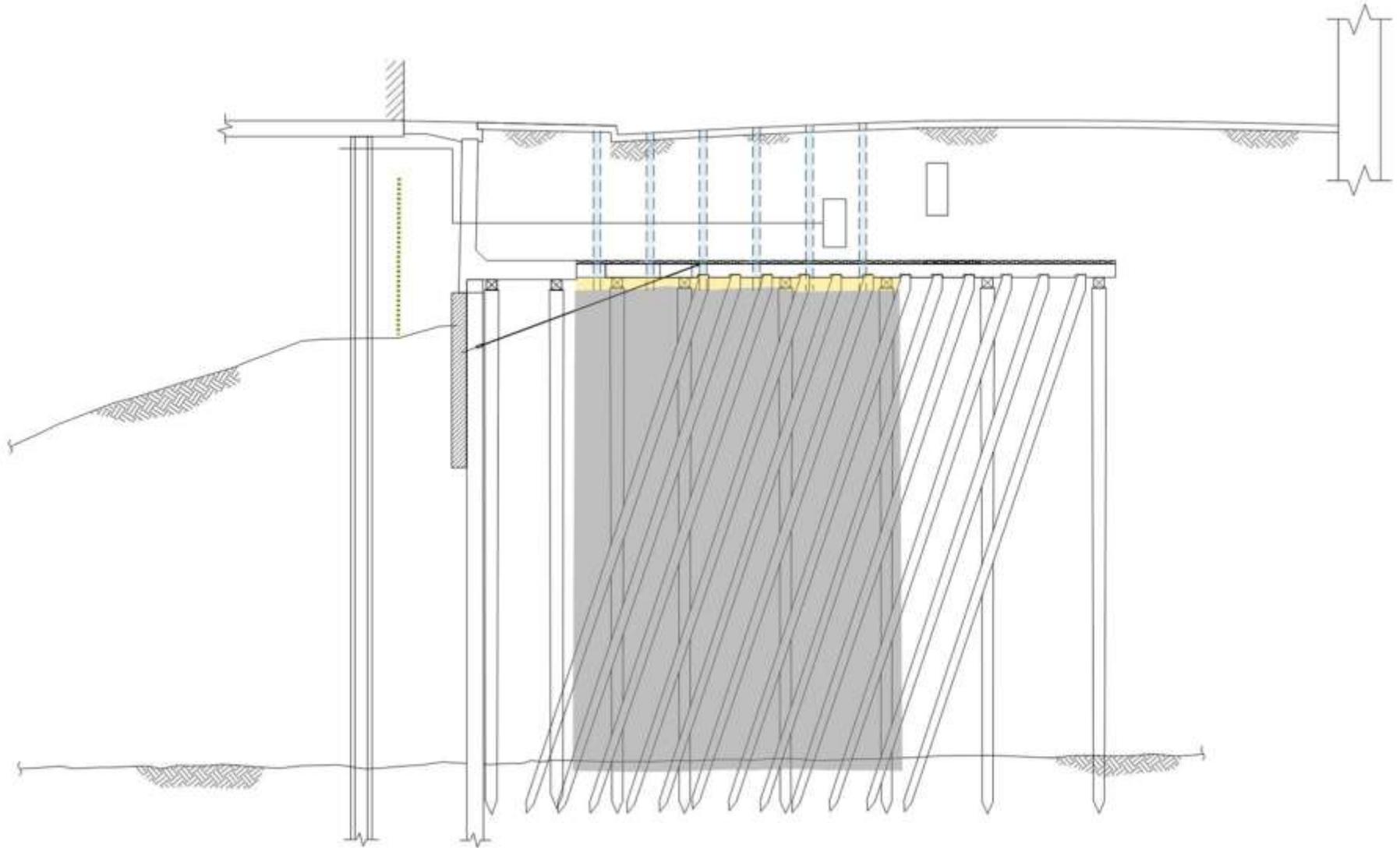
Existing Structure



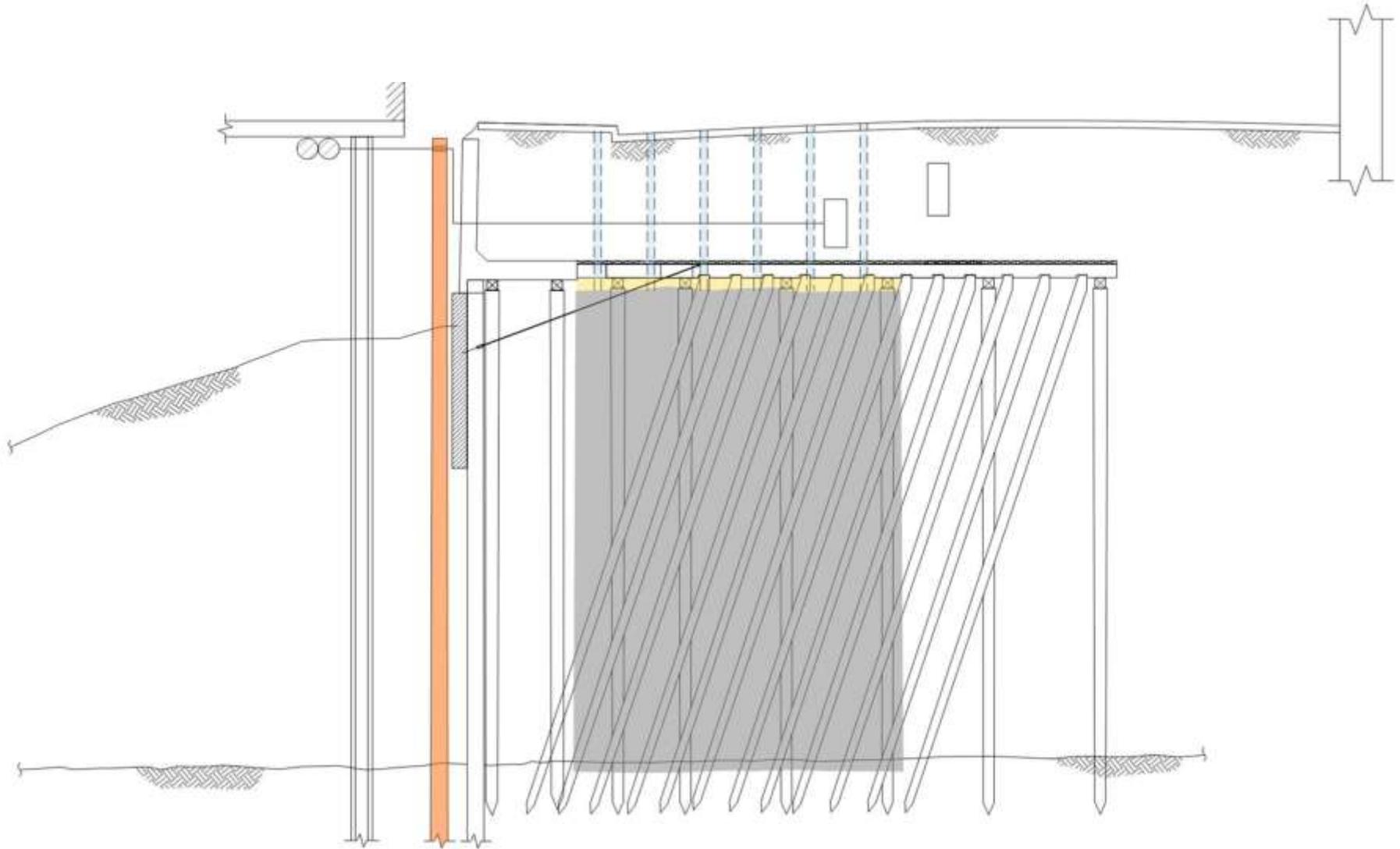
Pre-Drill Plan View



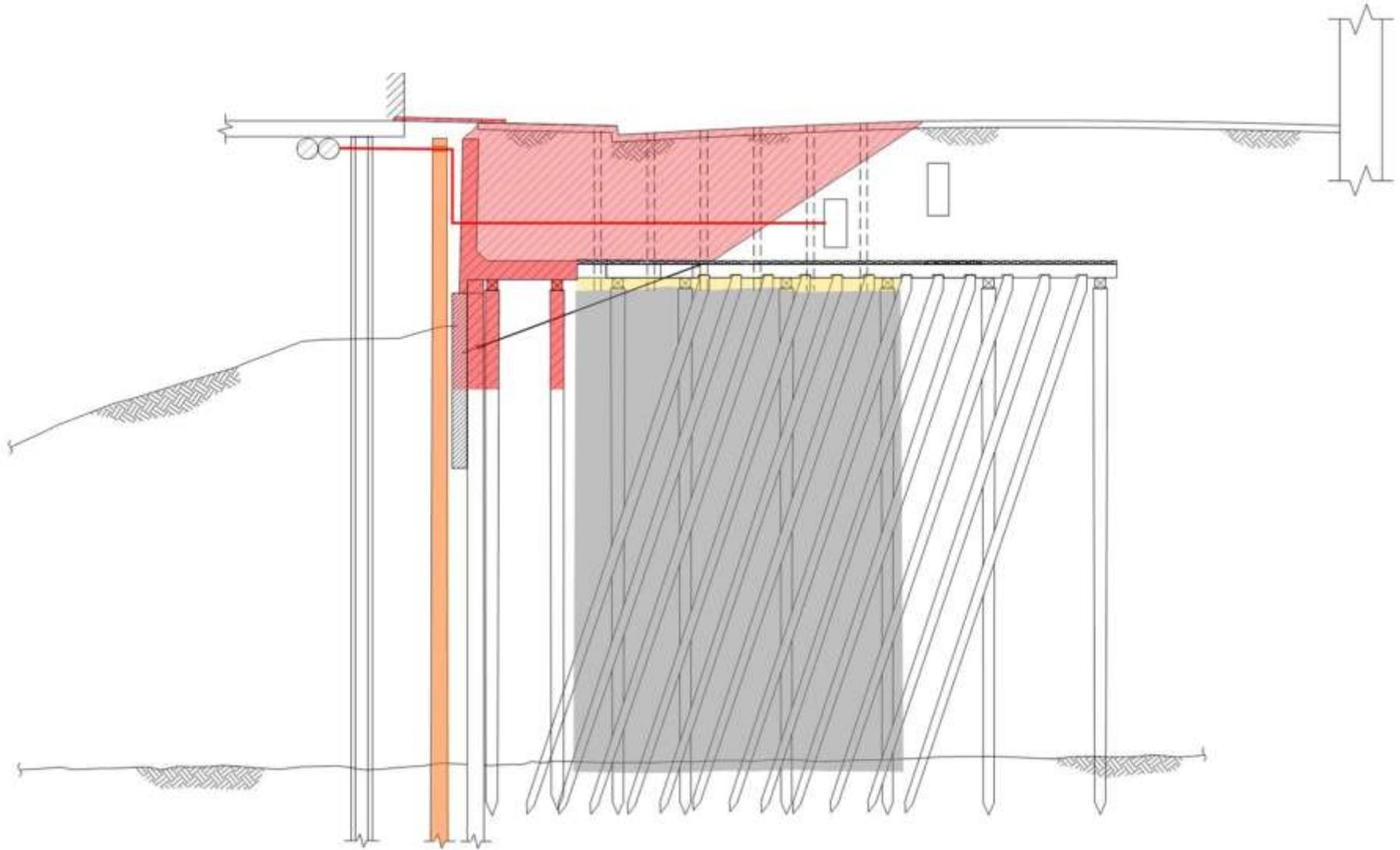
Jet Grout



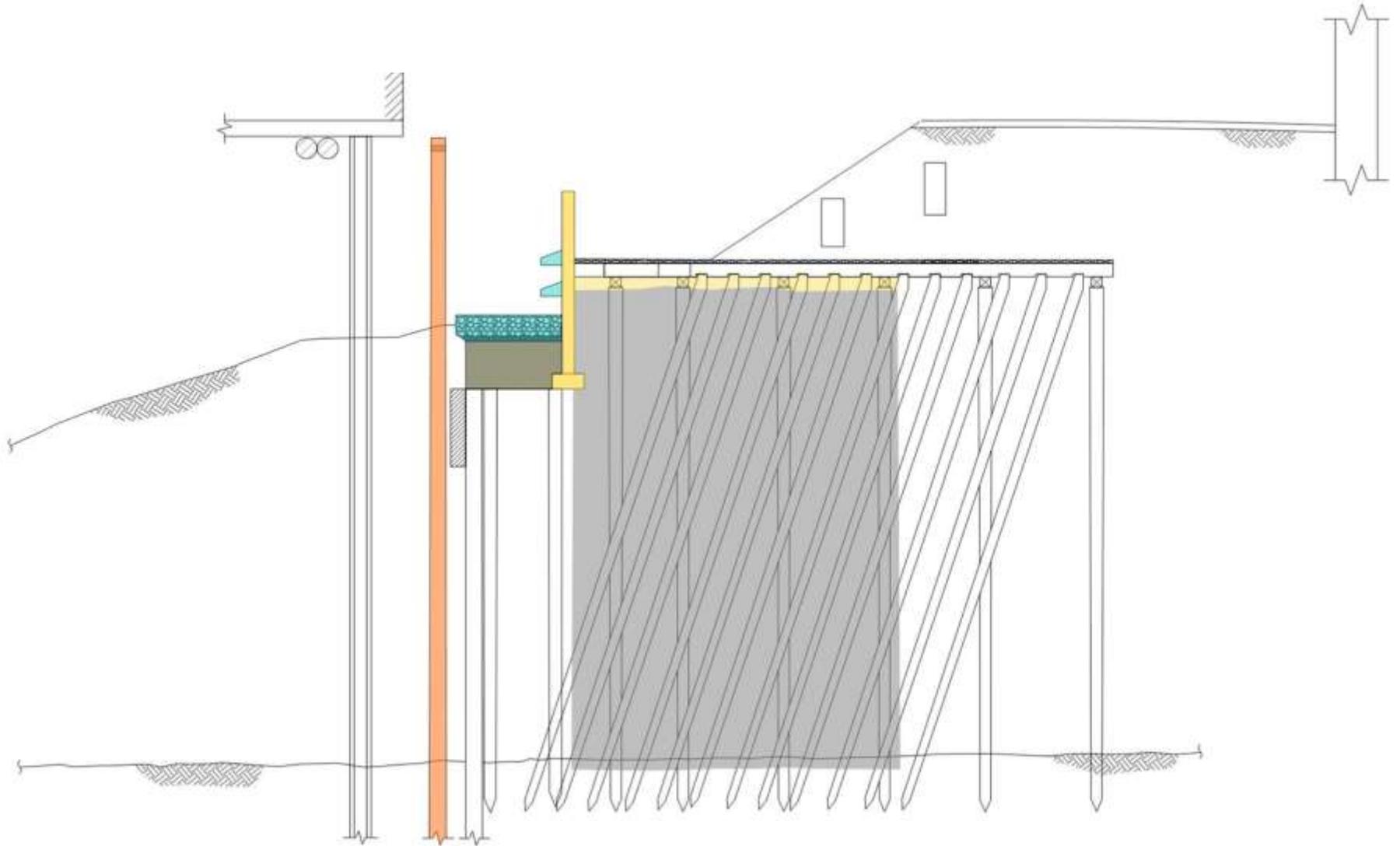
Place Containment Wall



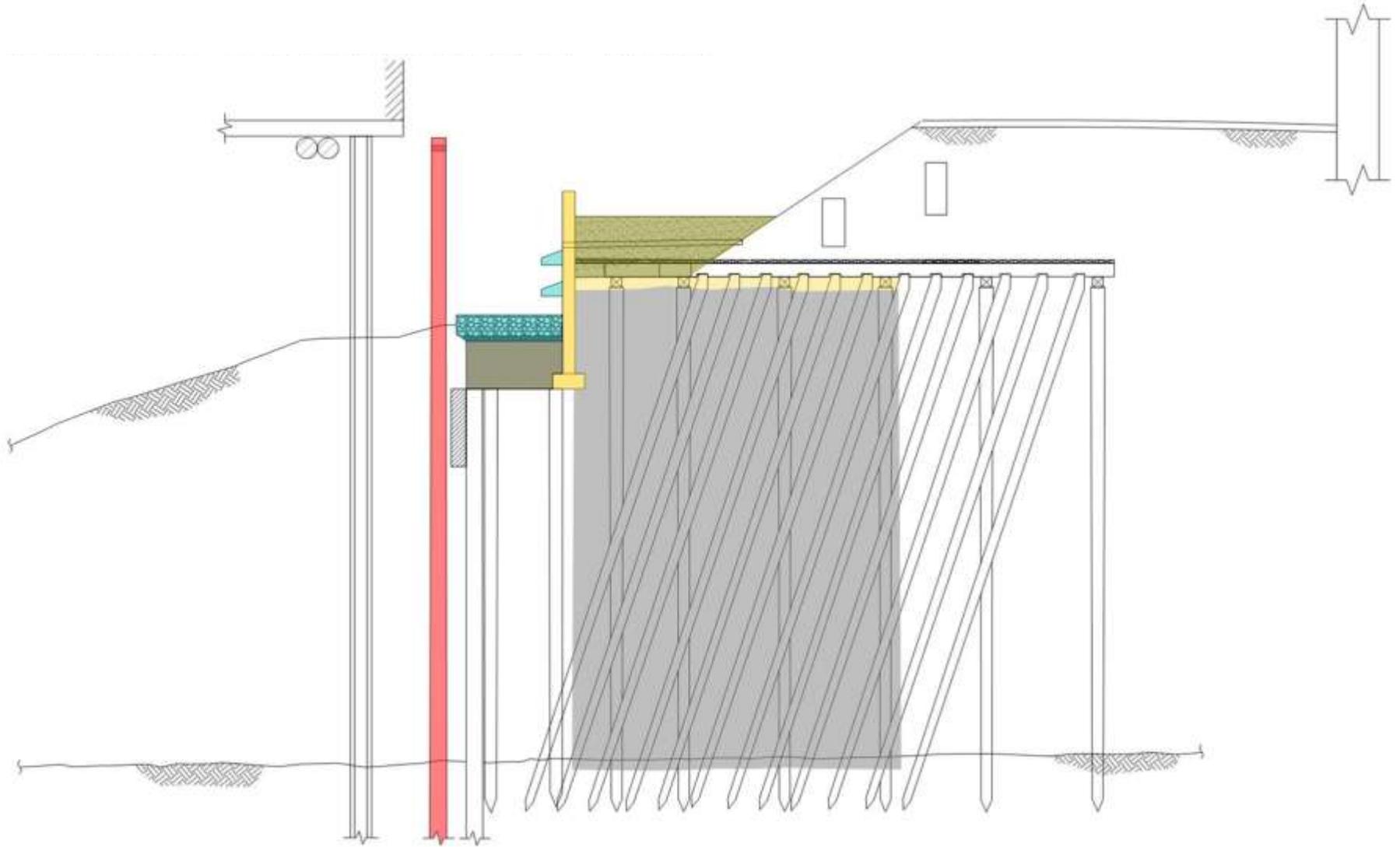
Excavate and Remove Existing Structure



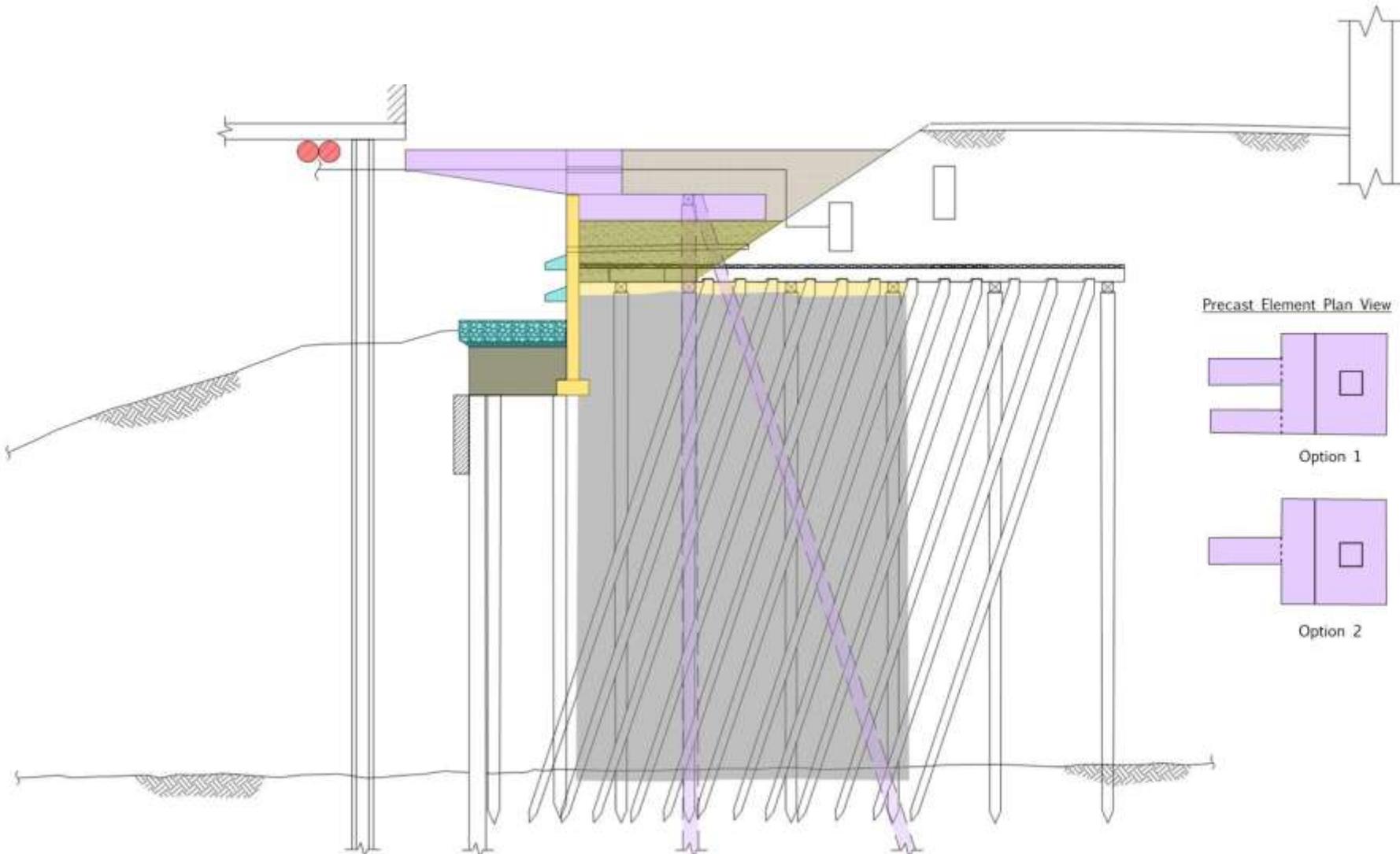
Place Habitat Bench and Shelves



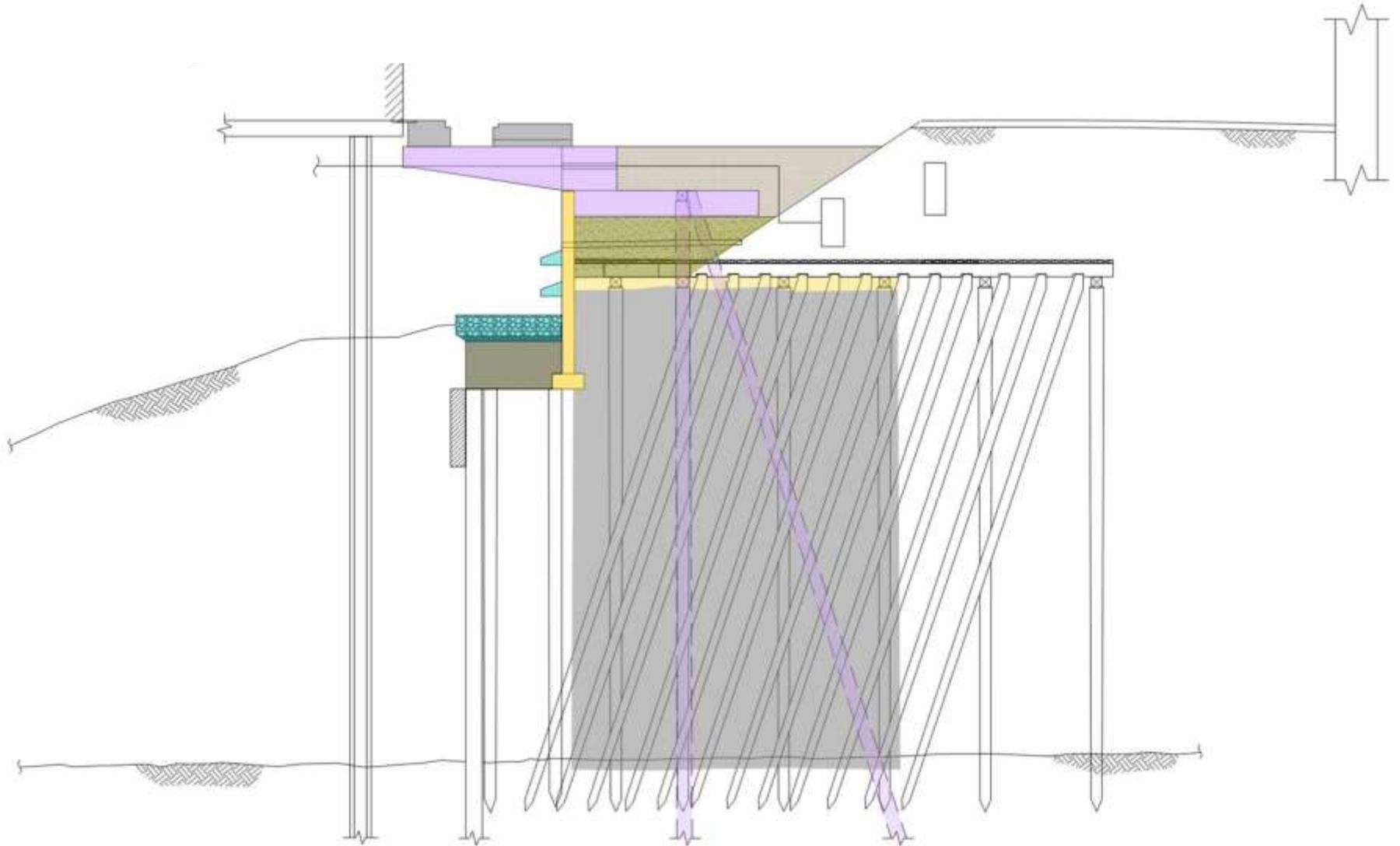
Remove Containment Wall



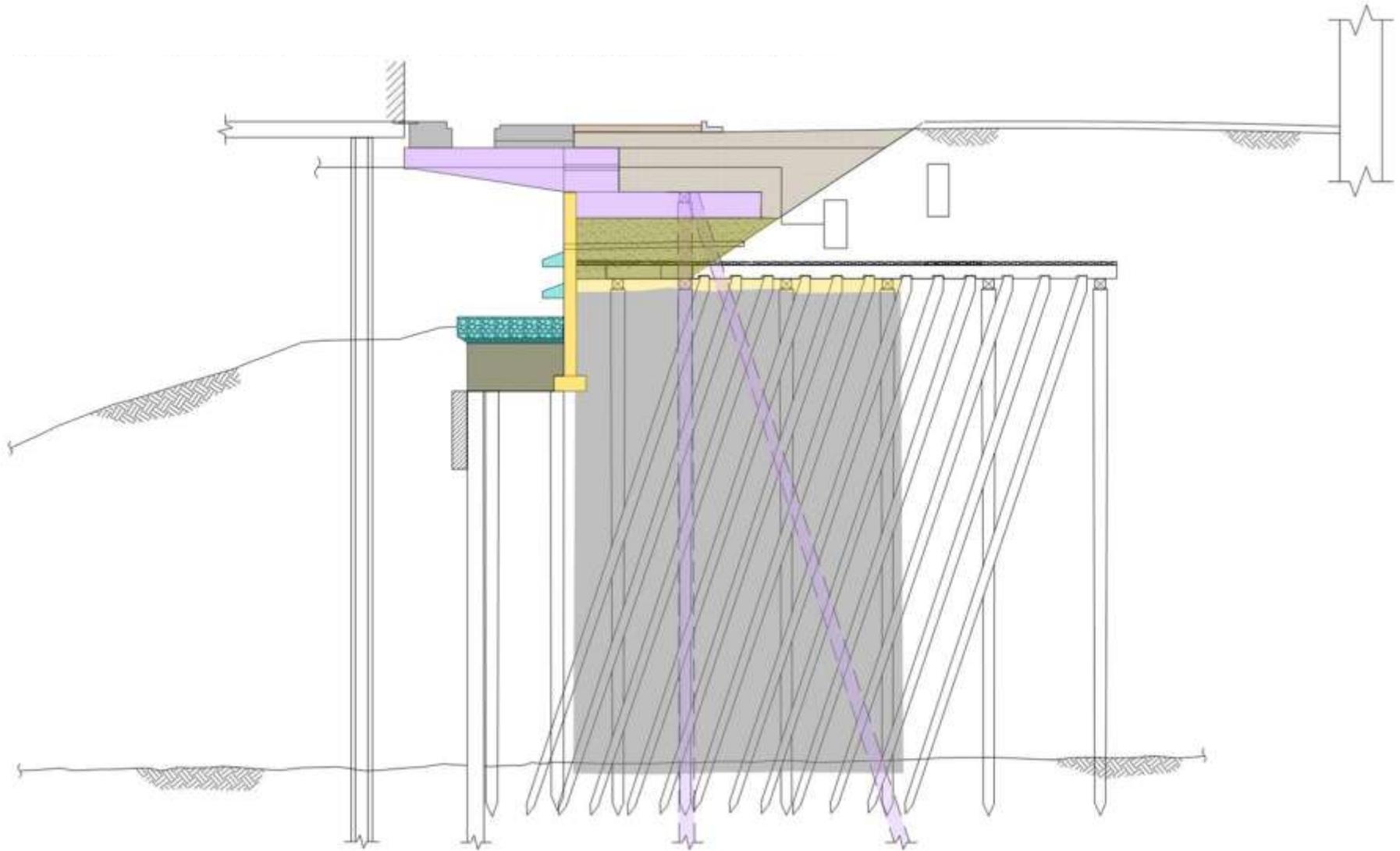
Place New Utility Laterals, Superstructure, and Backfill



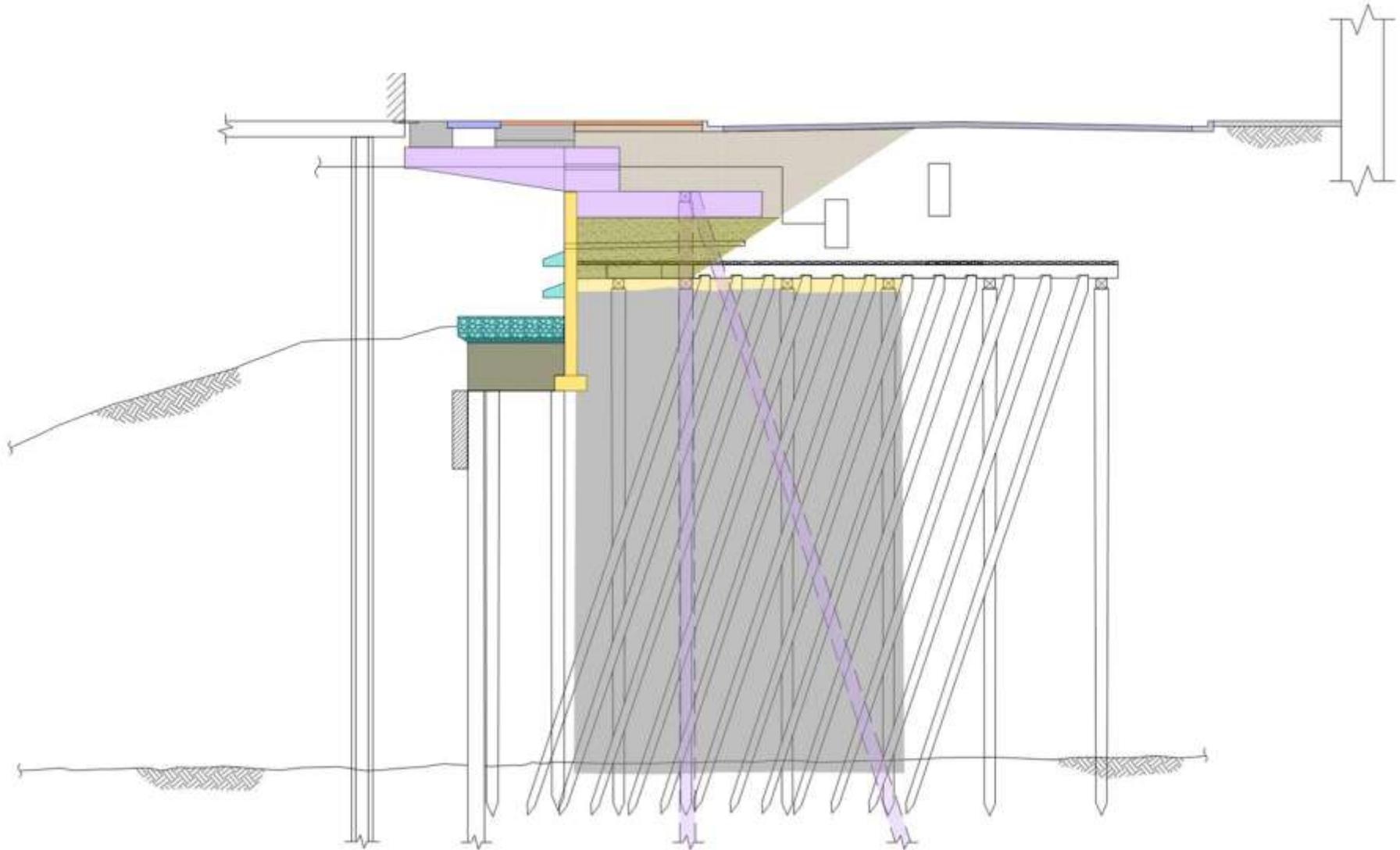
Place Precast Connection to Piers



Place Curb and Sidewalk Base

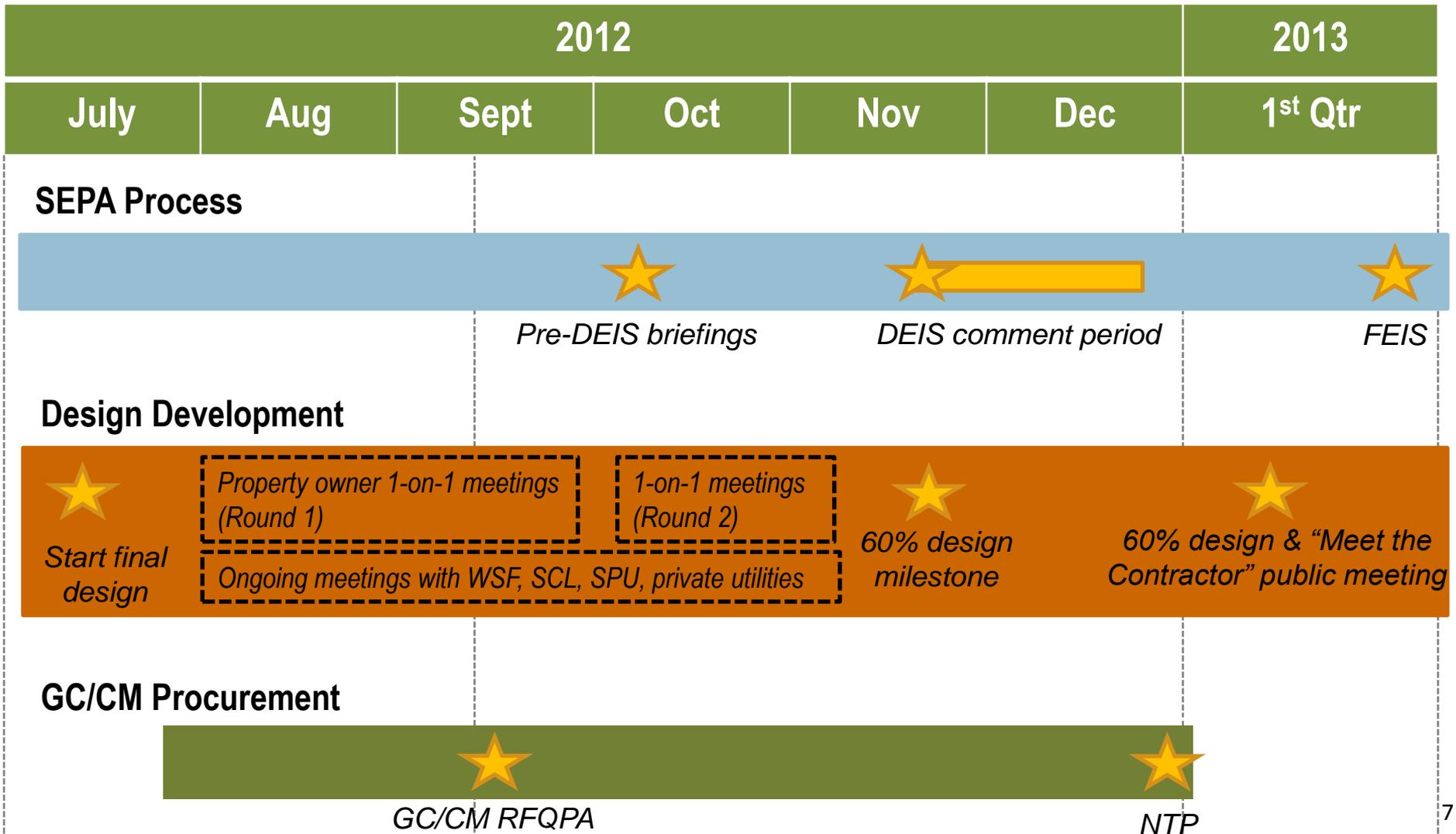


Place LPS, Sidewalk Topping, and Roadway Pavement



Procurement, Permitting, and Outreach

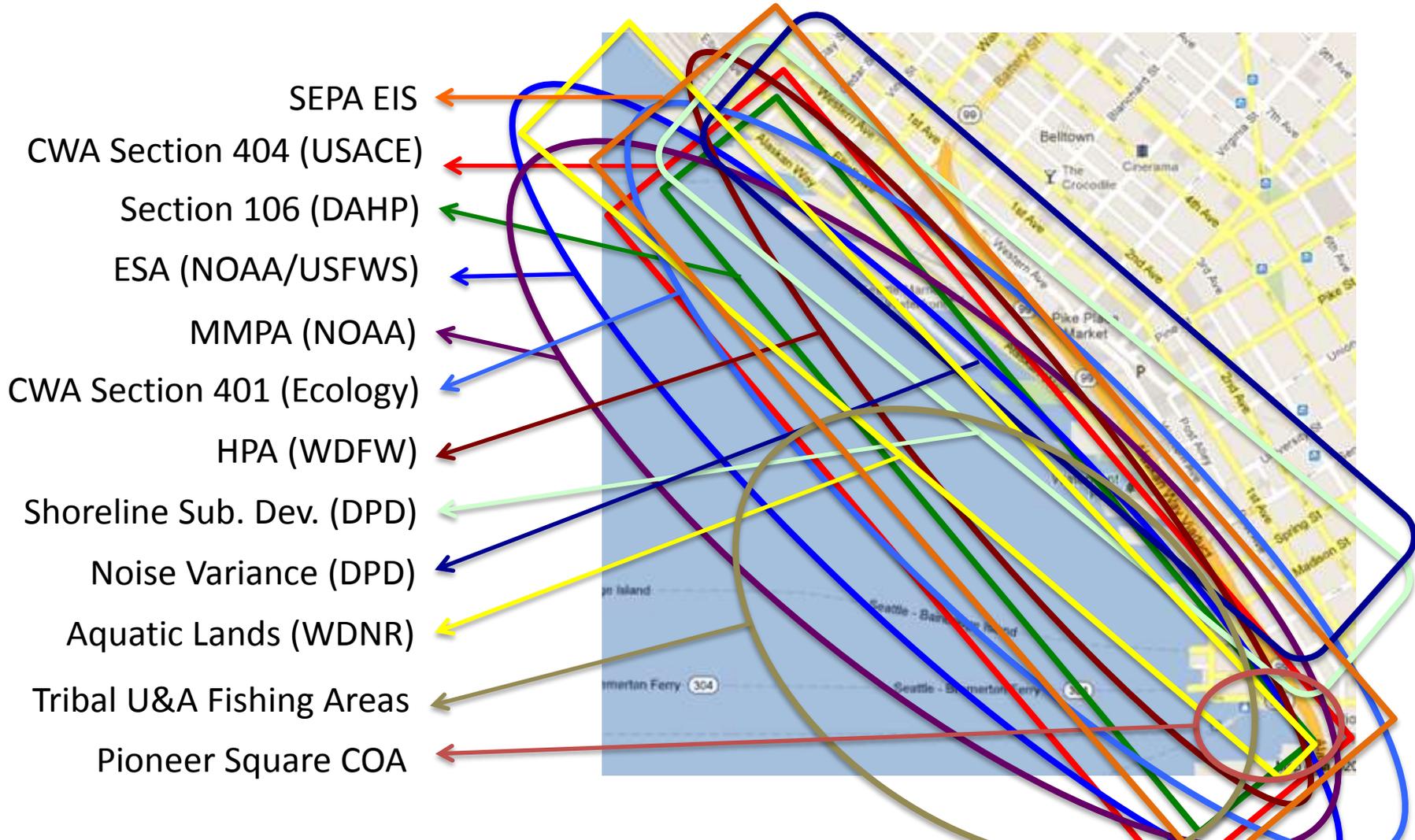
Project Schedule: 6 Month Look Ahead



Environmental Topics Addressed

- Air quality
- Construction
- Contaminated materials
- Cultural, historic, and archeological resources
- Cumulative impacts
- Energy/climate change
- Fish, vegetation, and wildlife, including endangered species
- Geology and soils
- Indirect impacts
- Land use, parks, and recreation
- Noise and vibration
- Project alternatives, including no action
- Project purpose and need
- Public safety
- Public services and utilities
- Socioeconomics
- Transportation
- Water quality

Seawall Environmental Clearances



Themes of Public and Agency Comments

From USACE Public Notice (June/July 2012)

- Traffic/transportation effects to businesses and residents
- Construction timing with other projects and events
- Habitat restoration measures
 - Cobble reefs and navigational considerations
 - Zone 1 beach and interaction with Colman Dock
 - Monitoring of restoration effectiveness, including long-term stability and maintenance needs
- Other construction effects, including noise, air quality, cultural resources, and fishing access

Upcoming Events and Outreach

- Light penetrating surfaces study on Pier 62/63
- Habitat/fish migration studies
- Habitat education
- Fairs, festivals, events
- Briefings
- Collaboration with Waterfront Seattle activities



- *What questions do you have about jet grouting?*
- *How can we best portray for you what will be happening on the waterfront?*
- *What are you interested in hearing about the DEIS at the October meeting?*

Stakeholder Once Around

*What additional feedback do
you have for the project
teams?*

Public Comment

Next Meeting:

October 16, 2012

City Hall, Bertha Knight Landes Room
5:15 – 7:15 p.m.

Topics:

- AWW Program Tolling
- Waterfront Schedule
- Preview of DEIS

Next Steps and Action Items

Actions and Contact Information



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