

SACRAMENTO DISTRICT AMERICAN RIVER COMMON FEATURES (ARCF) 2016 SACRAMENTO RIVER EAST LEVEE CONTRACT 4 & EROSION CONTRACT 2

PRE-CONSTRUCTION PUBLIC MEETING

March 21, 2023

Nikole May
Sr. Project Manager for Seepage, Stability and Overtopping

Hans Carota
Technical Lead for SREL C4

Brad Anderson
Environmental Manager for SREL C4

Gregory Treible
Sr. Project Manager for Erosion

James Wallace
Technical Lead for Erosion C2

Nicole Schleeter
Environmental Manager for Erosion C2



US Army Corps
of Engineers®



2021 CONTRACT 2 SB CUTOFF WALL



2022 EROSION / BANK STABILITY



2020 CONTRACT 1 DMM CUTOFF WALL



AGENDA



- System Overview
- ARCF 2016 Overview
 - Project Partners
 - Project Progress
- SREL Contract 4 Overview
- Erosion Contract 2 Overview
- Contact Information



- Technical Overview
- Haul Routes/Access Points
- Alternative Bike Routes
- Impacts
- Schedule



PROJECT PARTNERS

Federal Government



**US Army Corps
of Engineers®**

State Government



Central Valley
Flood Protection
Board



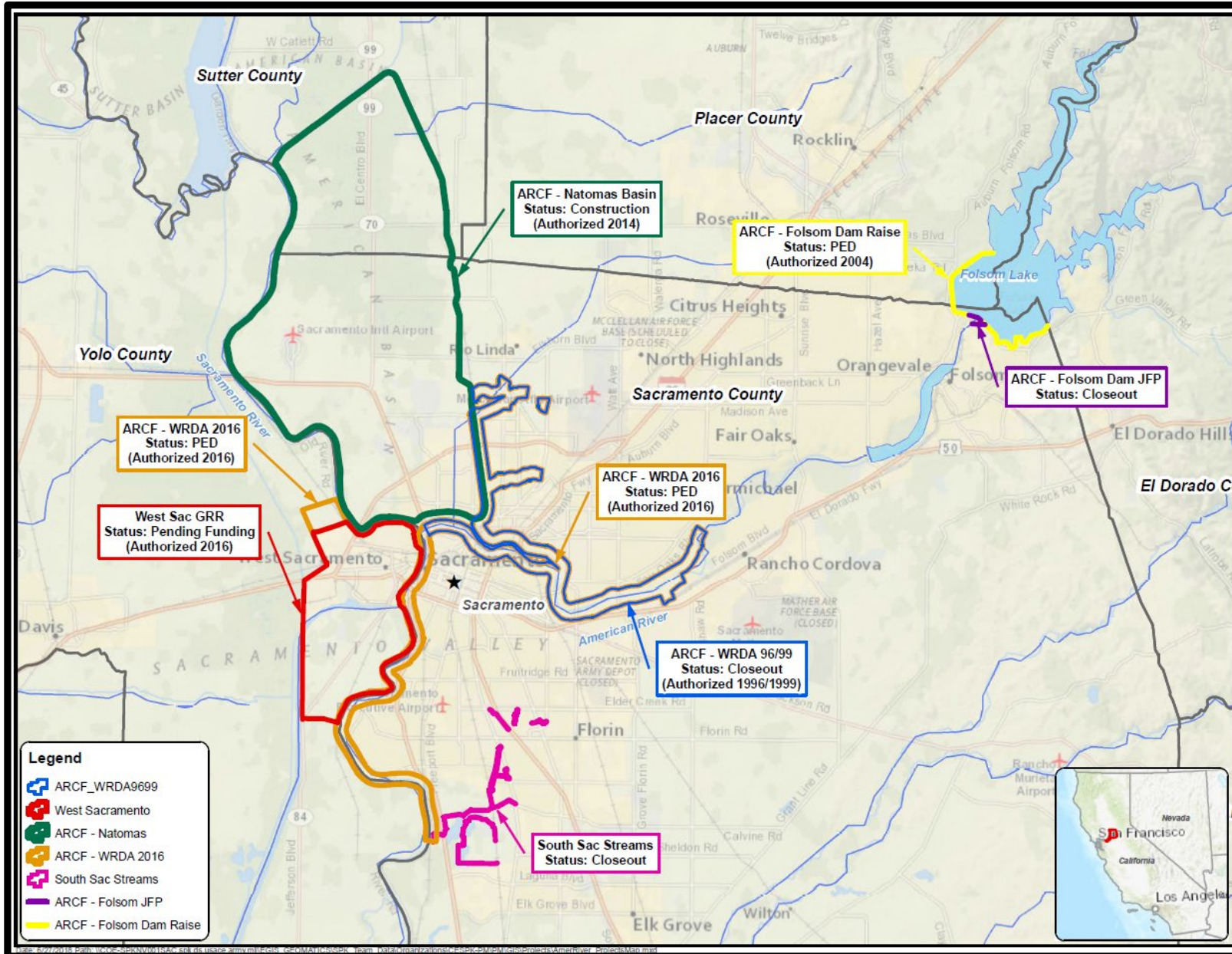
Department of
Water
Resources

Local Government



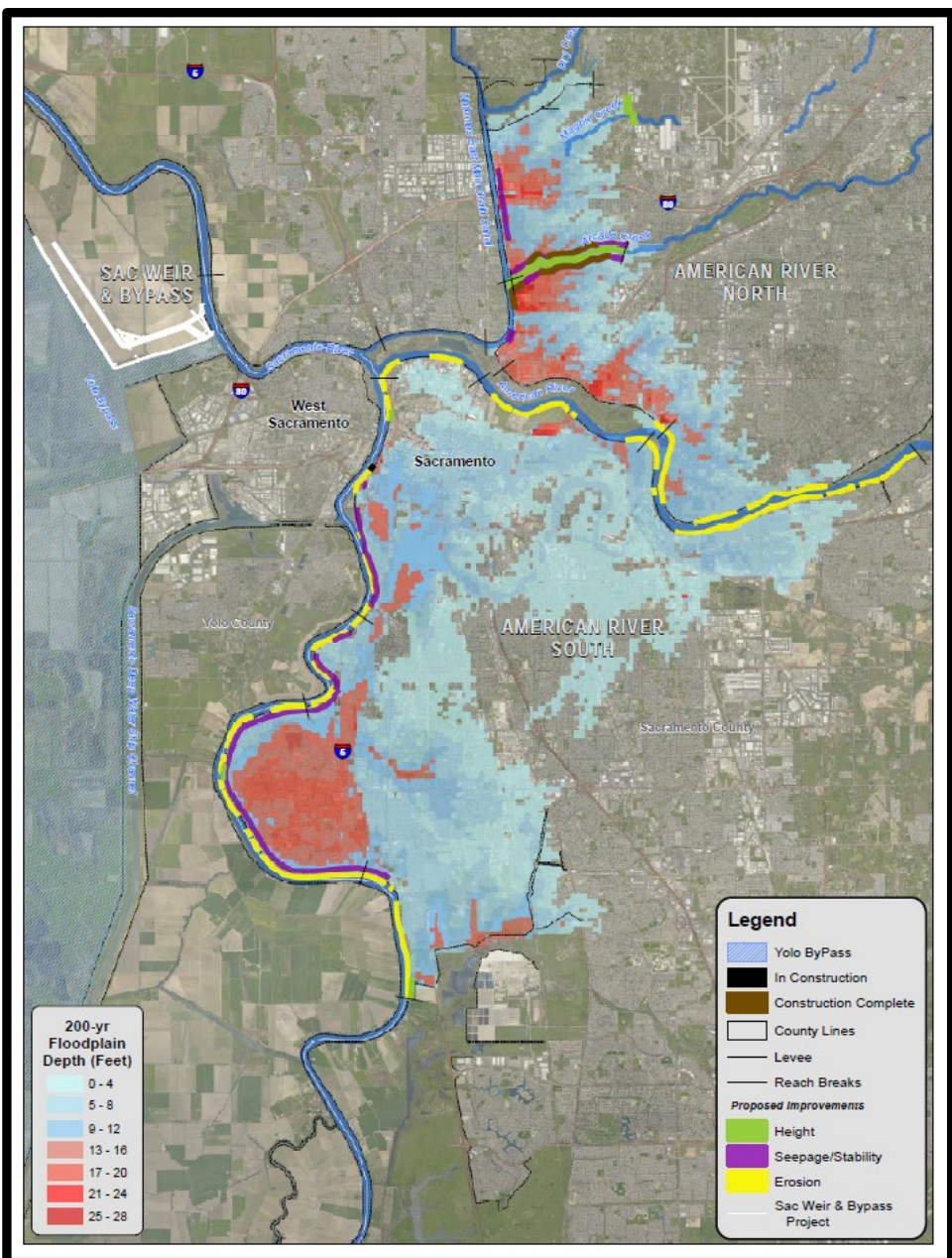


SYSTEM OVERVIEW





AMERICAN RIVER COMMON FEATURES (ARCF) 2016



SUPPLEMENTAL TARGET JAN 2024

Authorized Plan	
Features	
North Area Streams Seepage	4 miles
Sacramento River Seepage	9 miles
American River Erosion	11 miles
Sacramento River Erosion	10 miles
Levee Stabilization	5 miles
Levee raises	5 miles
Widen Sacramento Weir and Bypass	1500 feet
Reduces Risk	500,000 people
	125,000 structures
	\$62 billion protection



CAUSES OF LEVEE FAILURE

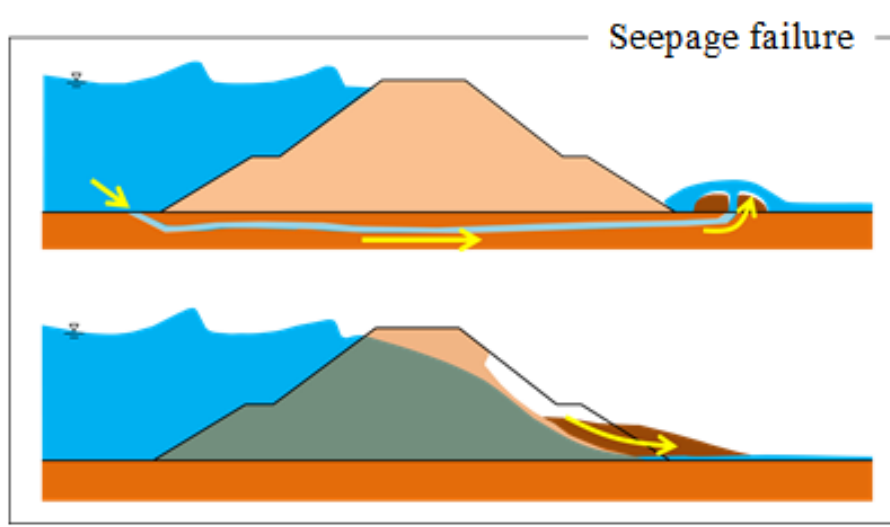
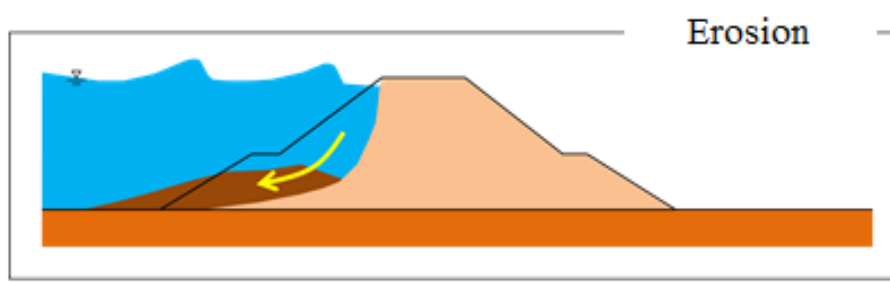
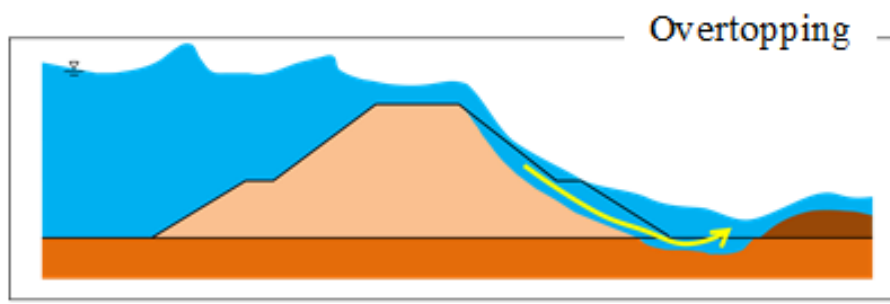


Image courtesy of PWRI Web Magazine



ISSUES ADDRESSED - SREL CONTRACT 4

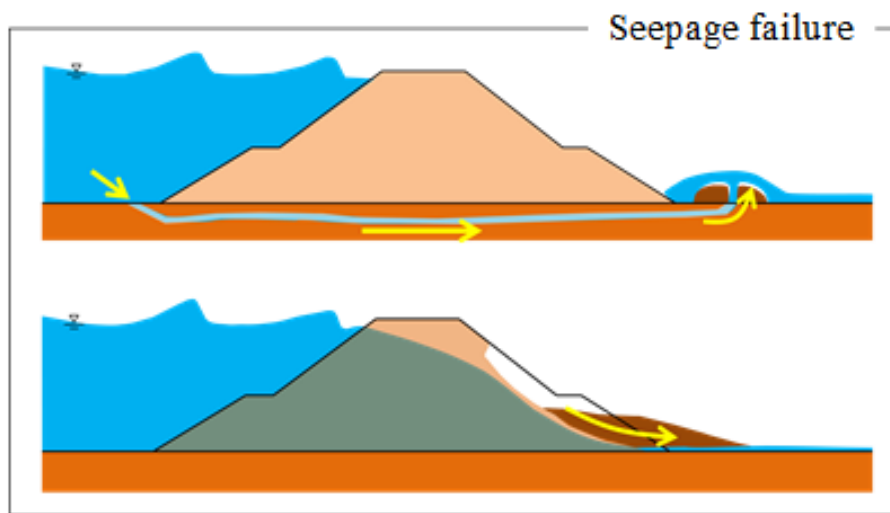
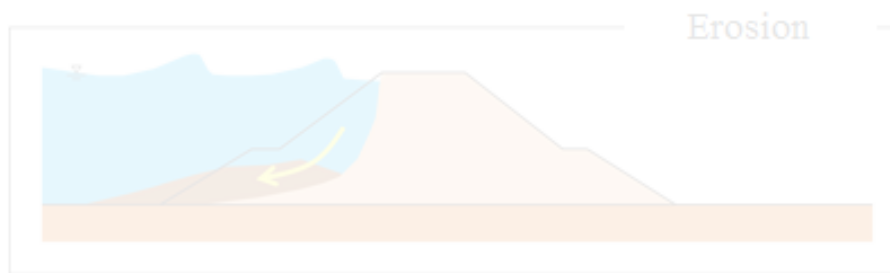
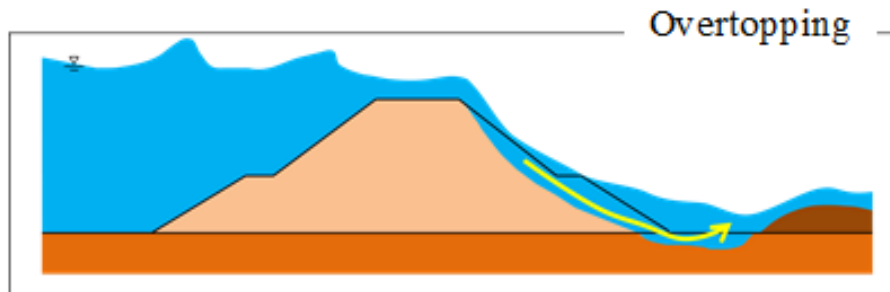


Image courtesy of PWRI Web Magazine



ISSUES ADDRESSED - SREL CONTRACT 4

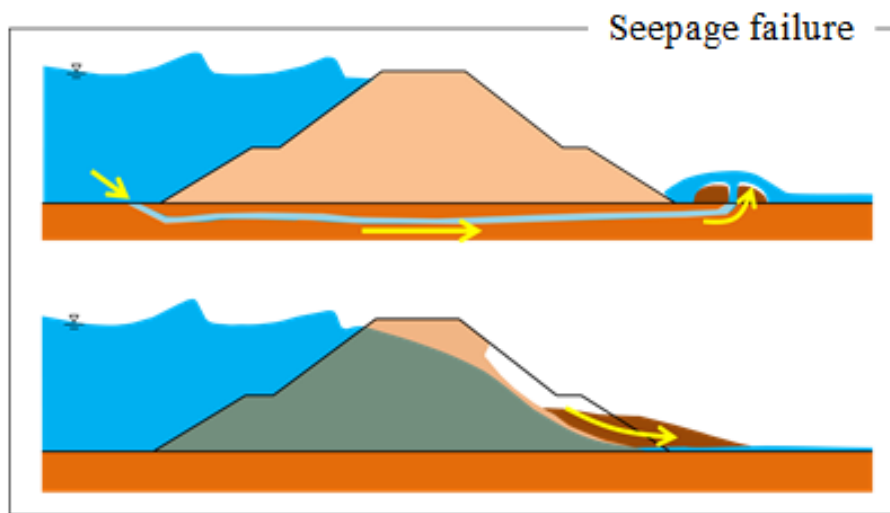
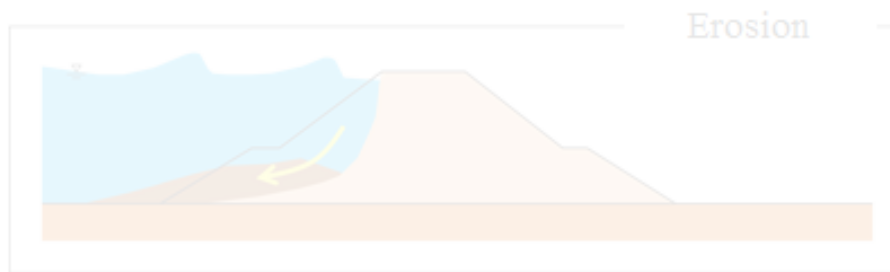
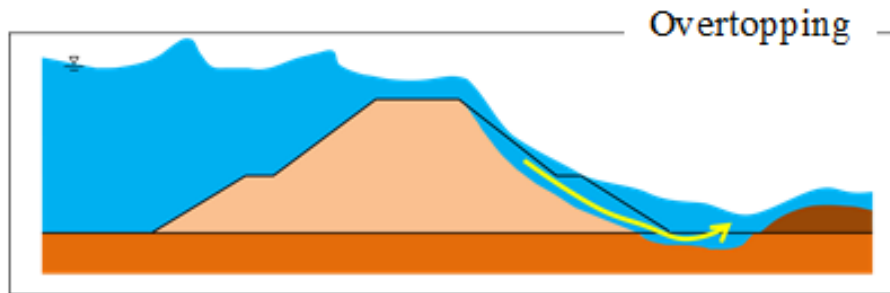


Image courtesy of PWRI Web Magazine



Atchison County, MO - 2011



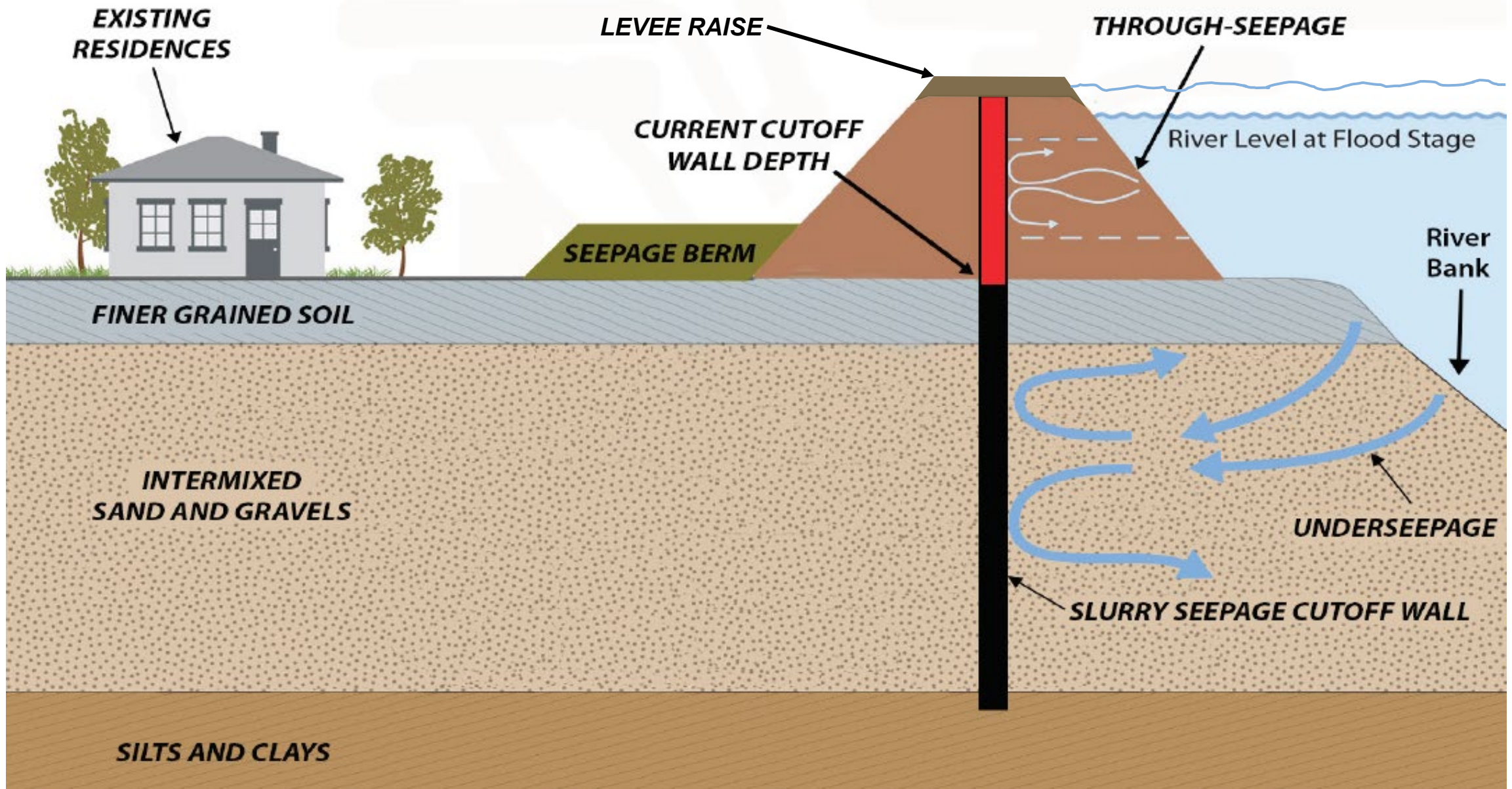
Natomas Garden Hwy - 1986



2017 Flood - Riverview Court, Little Pocket



SEEPAGE, STABILITY, & OVERTOPPING ISSUES ADDRESSED





ISSUES ADDRESSED – EROSION CONTRACT 2

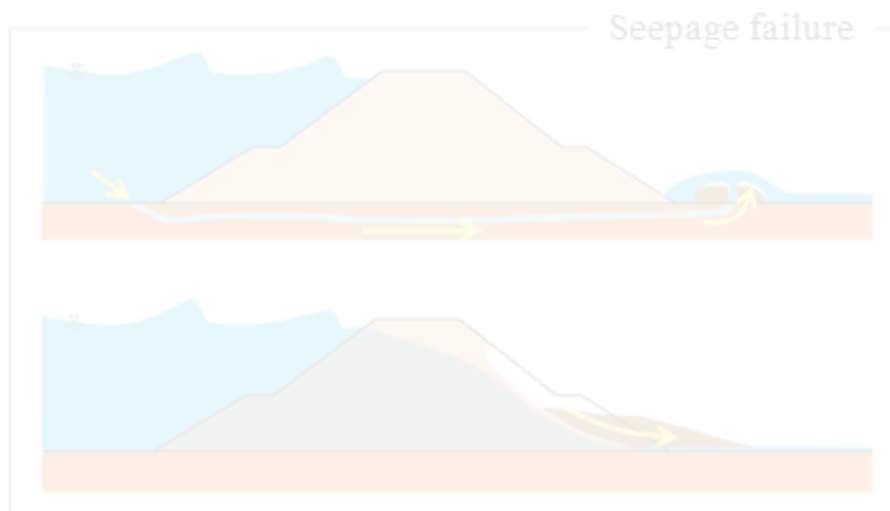
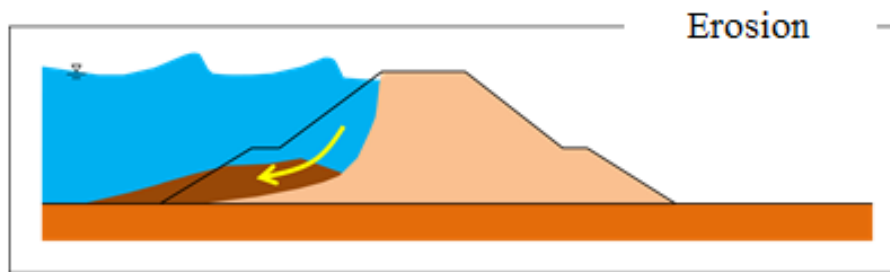
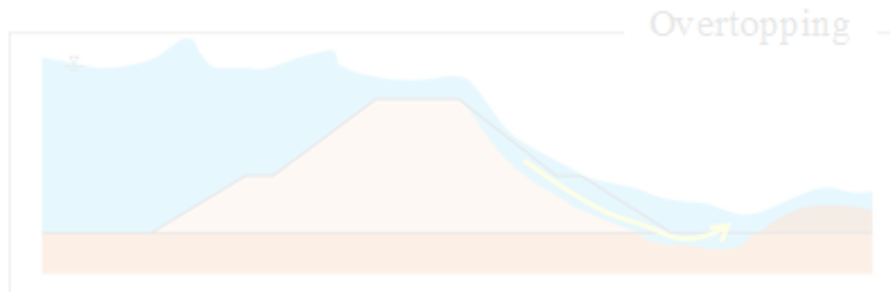


Image courtesy of PWRI Web Magazine



EROSION ISSUES ON THE SACRAMENTO RIVER



Contributors:

- Boat wake
- Steep slope
- Poor levee material
- Levees built very close to the riverbank



Wavewash



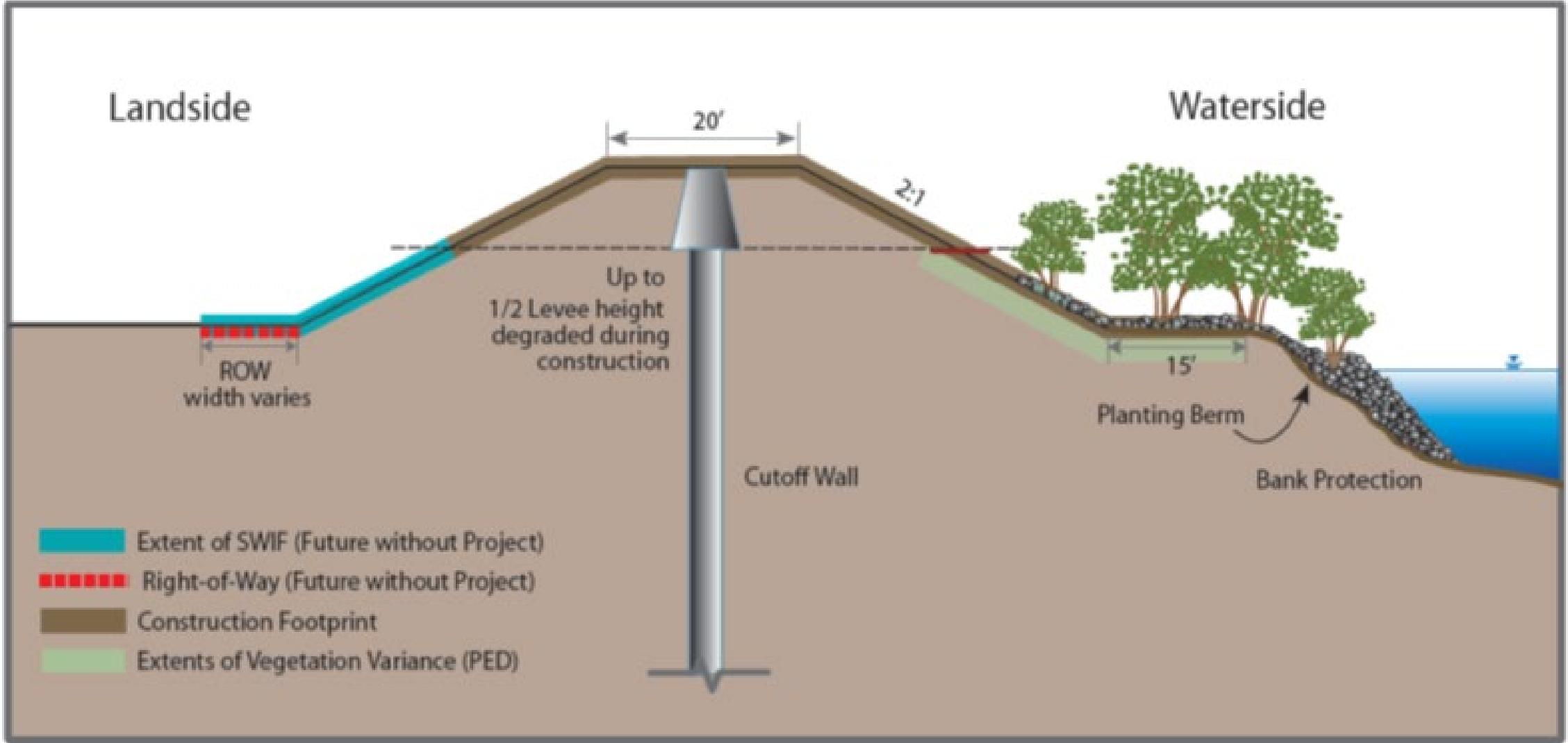
Steep Slopes



Aging slope protection

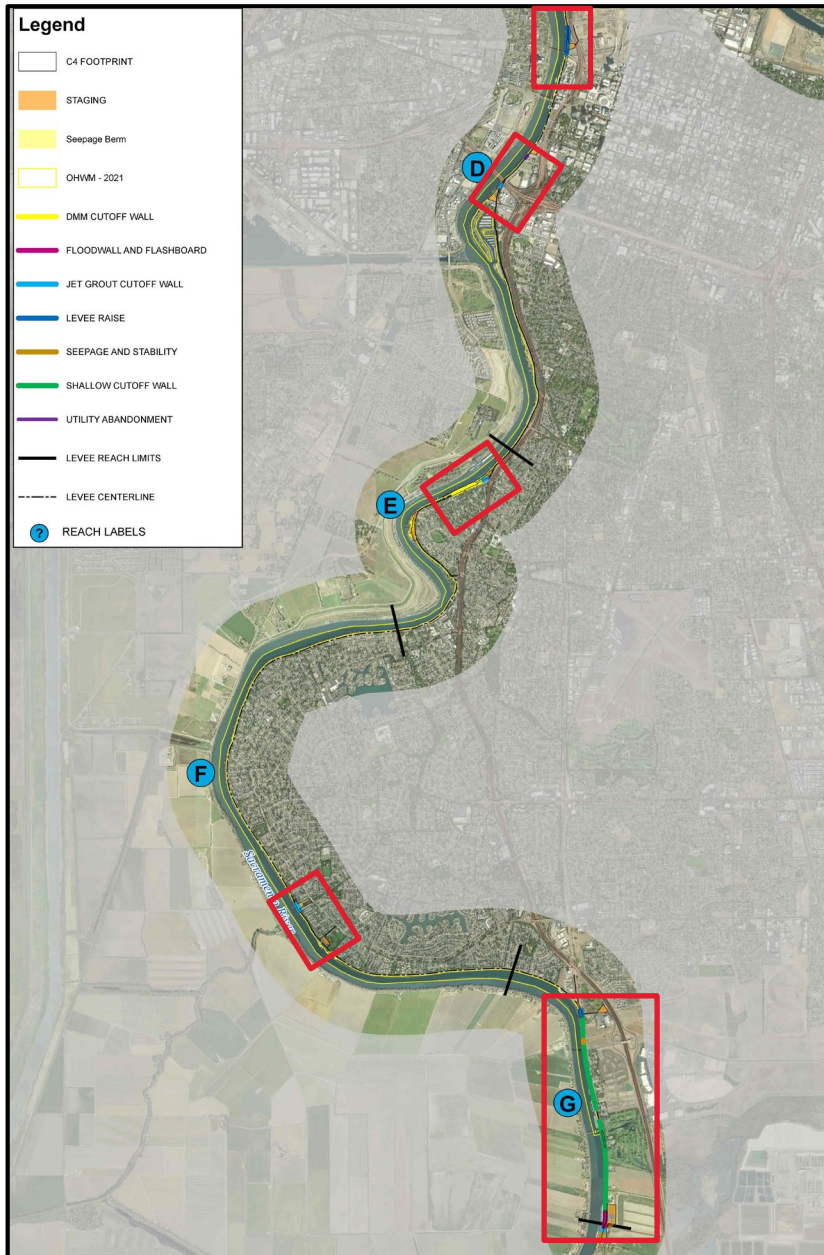


EROSION ISSUES ADDRESSED





SREL CONTRACT 4 OVERVIEW



- 2.3 Miles of Seepage Cutoff Wall
- 0.12 Miles of Berm
- 0.37 Miles of Levee Raise

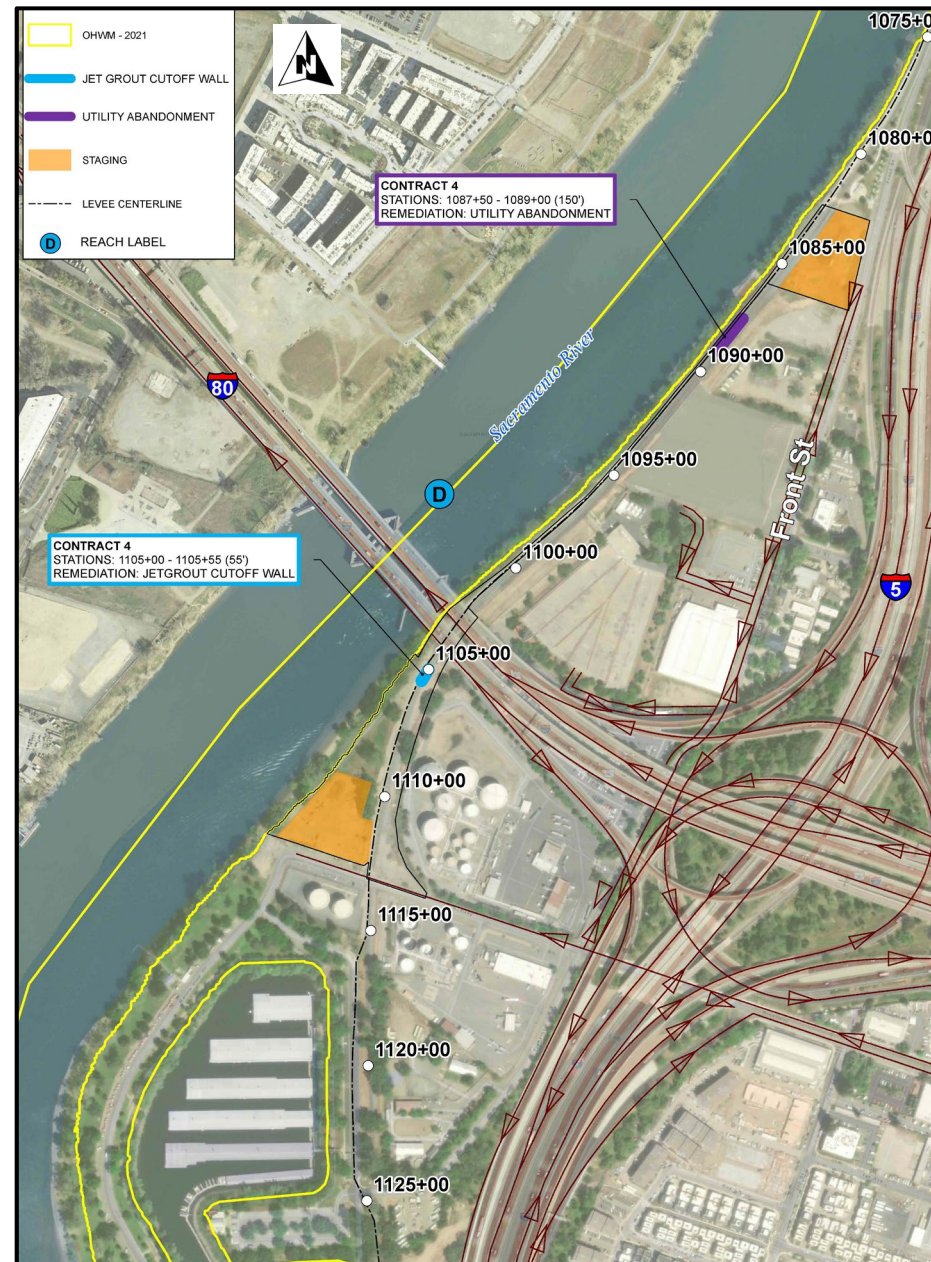
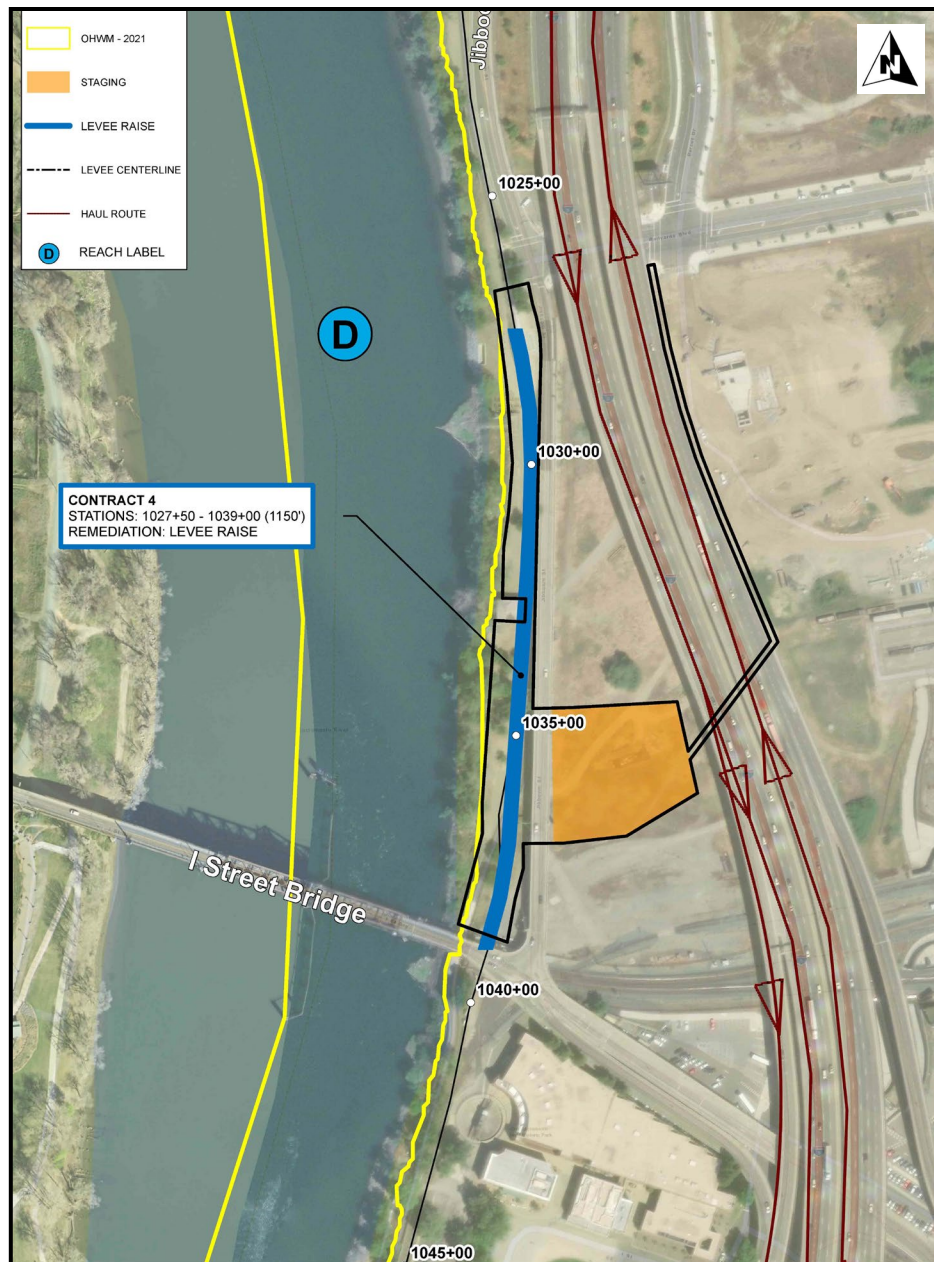
SREL Contract 4 Improvements Summary

GRR Reach ID	SREL Reach ID	Remediation Stationing		Remediation Length (ft)	Remediation Type
		Start	End		
D	A	1027+50	1039+00	1150	Levee Raise
	5	1105+00	1105+55	55	Jet Grout Cutoff Wall
E	10	1244+70	1248+00	330	Jet Grout Cutoff Wall
	11	1248+00	1261+75	1375	DMM Cutoff Wall
F	23	1530+30	1534+00	370	Jet Grout Cutoff Wall
G	N	1676+00	1678+00	200	Levee Raise
		1678+00	1710+29	3229	Shallow Cutoff Wall
		1689+00	1690+00	100	Seepage and Stability Berm
	O	1710+29	1719+60	931	Shallow Cutoff Wall
		1725+50	1728+75	325	
	P	1730+50	1766+00	3550	Floodwall and Flashboard Raise
1766+00		1772+00	600		
NBLL		1770+20	1774+00	380	Jet Grout Cutoff Wall
		1773+00	1778+20	520	Seepage and Stability Berm



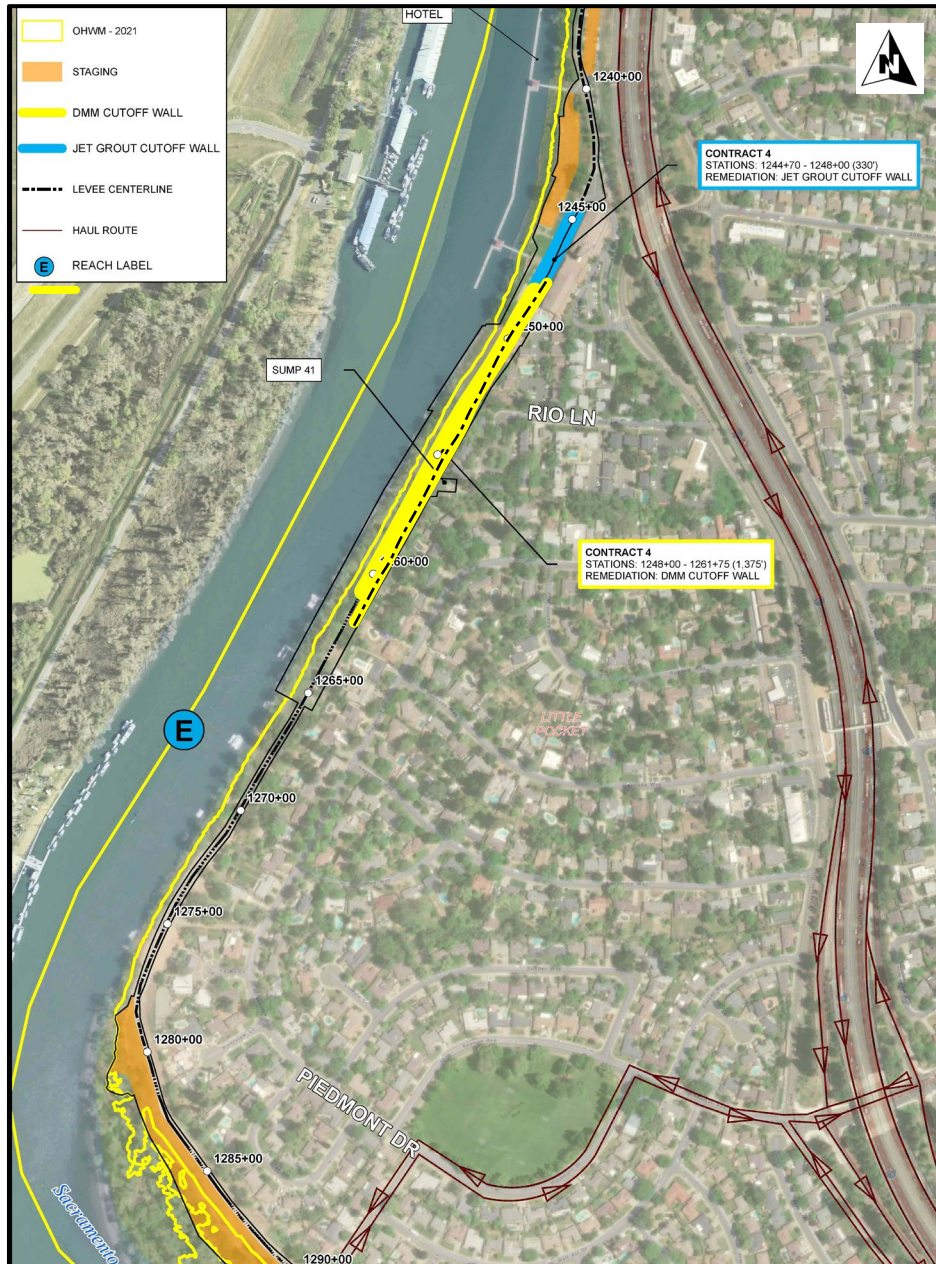
U.S. ARMY

SREL CONTRACT 4 OVERVIEW



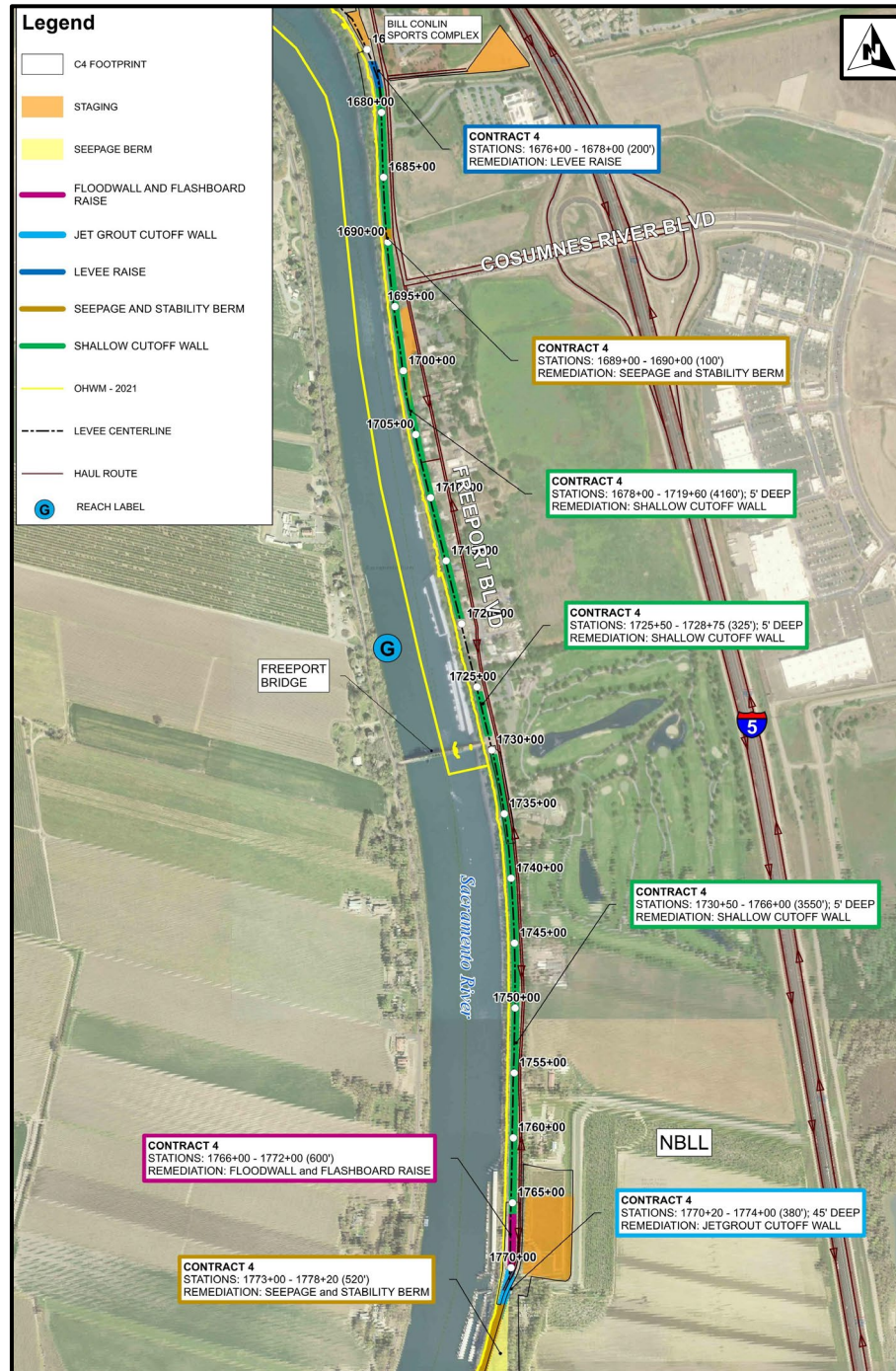


SREL CONTRACT 4 OVERVIEW



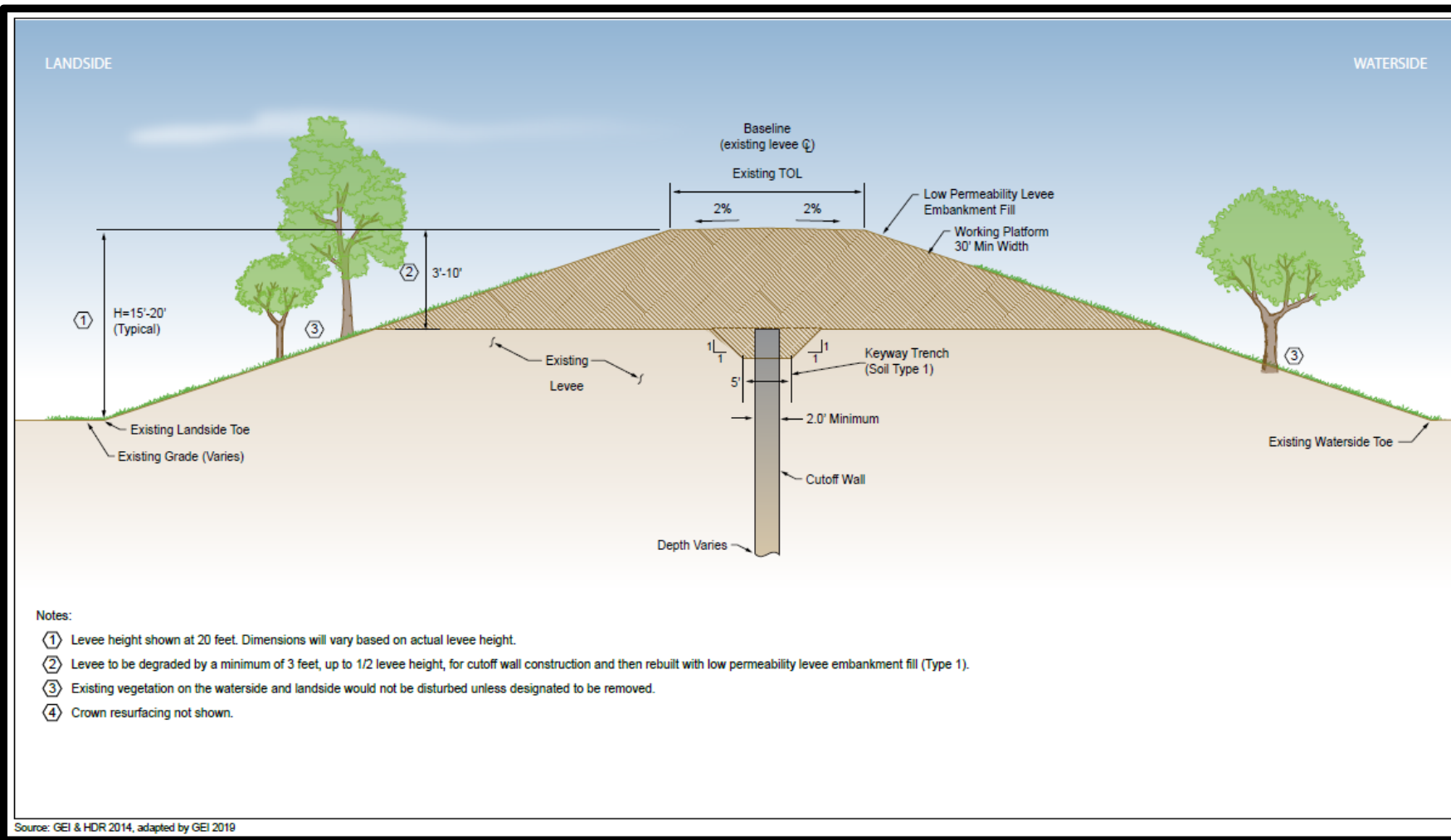


C4 OVERVIEW





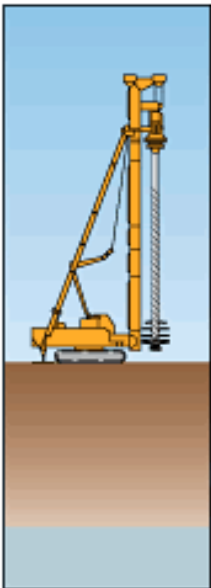
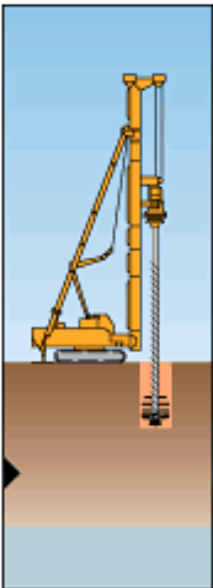
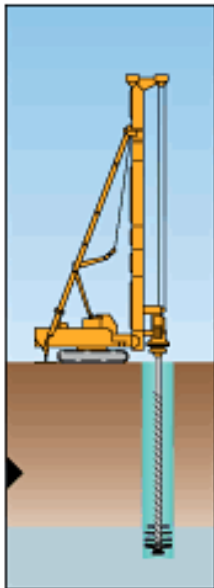
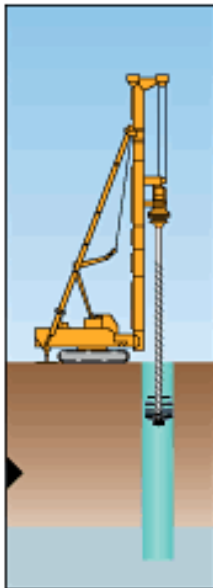
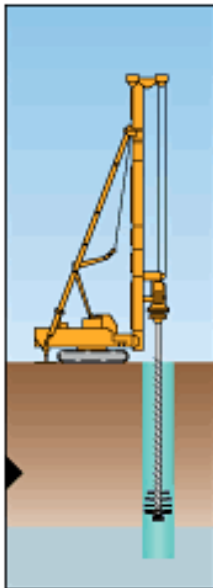
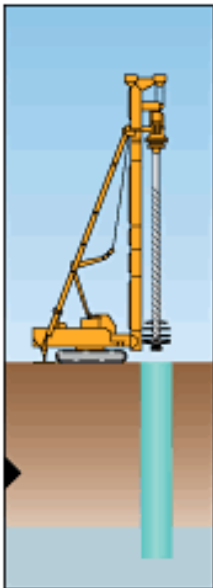
LEVEE DEGRADE TYPICAL CROSS SECTION





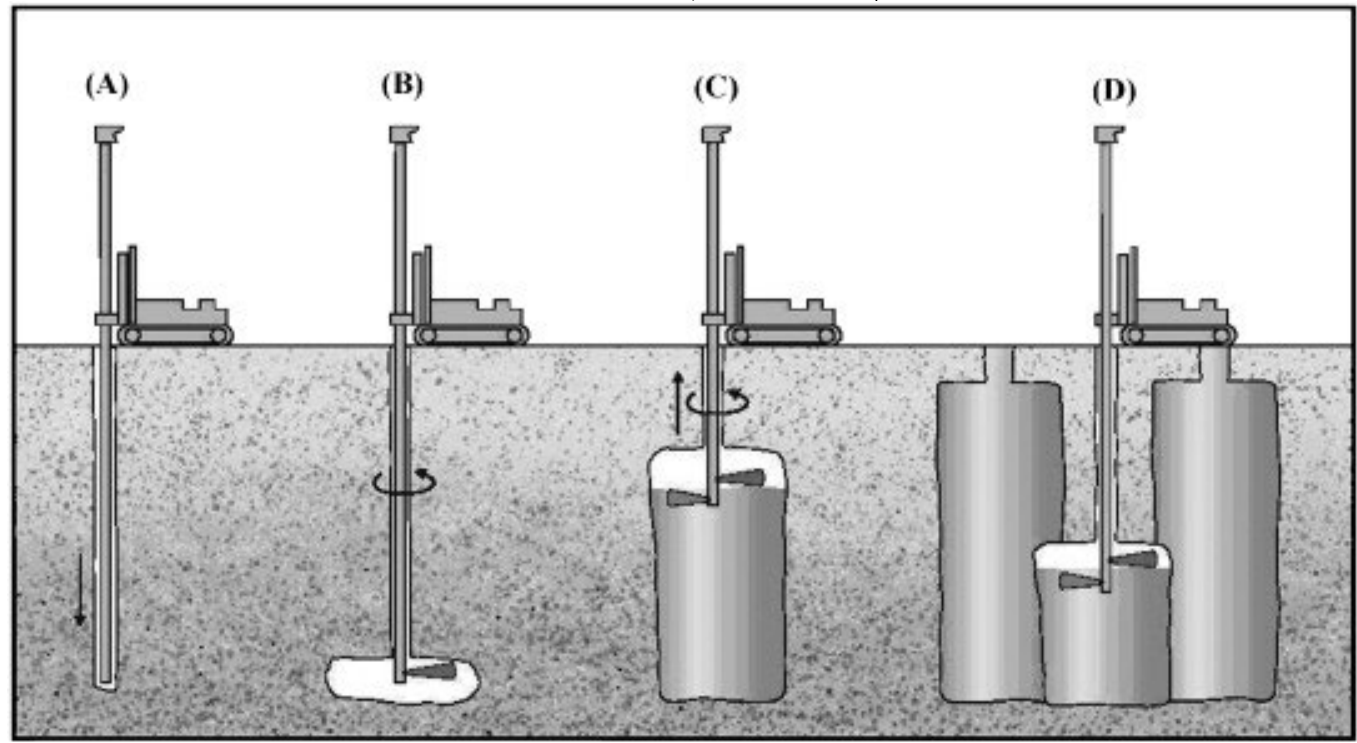
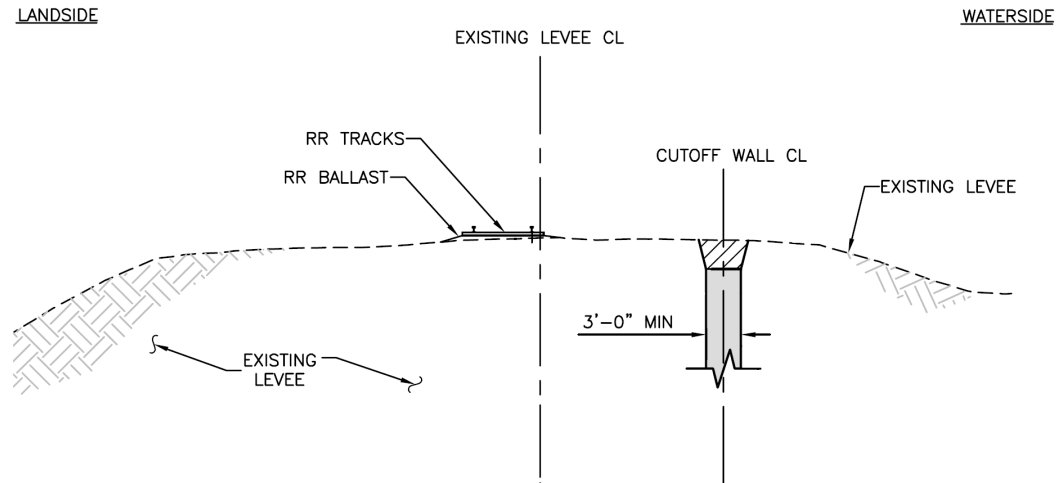
DMM WALL CONSTRUCTION PROCESS



Setup	Penetration		Churning		Completion
Position the rig at a pile position	After passing dry excavation zone, start injecting slurry. Drill down and mix with in-situ soil to a specified depth.		Move the head up and down to mix thoroughly so that each part of the soil receives the pre-defined number of cuts by mixing blades.		Withdraw and complete a soil cement column.
					



JET GROUT TYPICAL CROSS SECTION



American River Site L7



SREL C4 –ACCESS, STAGING, AND HAUL ROUTES



MARCH – DECEMBER 2023

Staging Areas	<ul style="list-style-type: none">• Railyards (empty field)• Front St• Broadway• Westin Hotel Valet Parking Lot• 1 Waterside Staging Areas (Little Pocket)• Interior Drainage Sump 132 (Pocket Canal)• Garcia Bend Park• Bill Conlin Sports Complex (Empty field)• Landside Near Cosumnes River Blvd• North Beach Lake Levee Empty Field
Access Points	<ul style="list-style-type: none">• Jibboom Street• Railyards Blvd• Front Street• Broadway• Sutterville Road• Riverside Blvd• Seamas Ave• Pocket Rd• Interior Drainage Sump 132• Garcia-Bend Park• Freeport Blvd

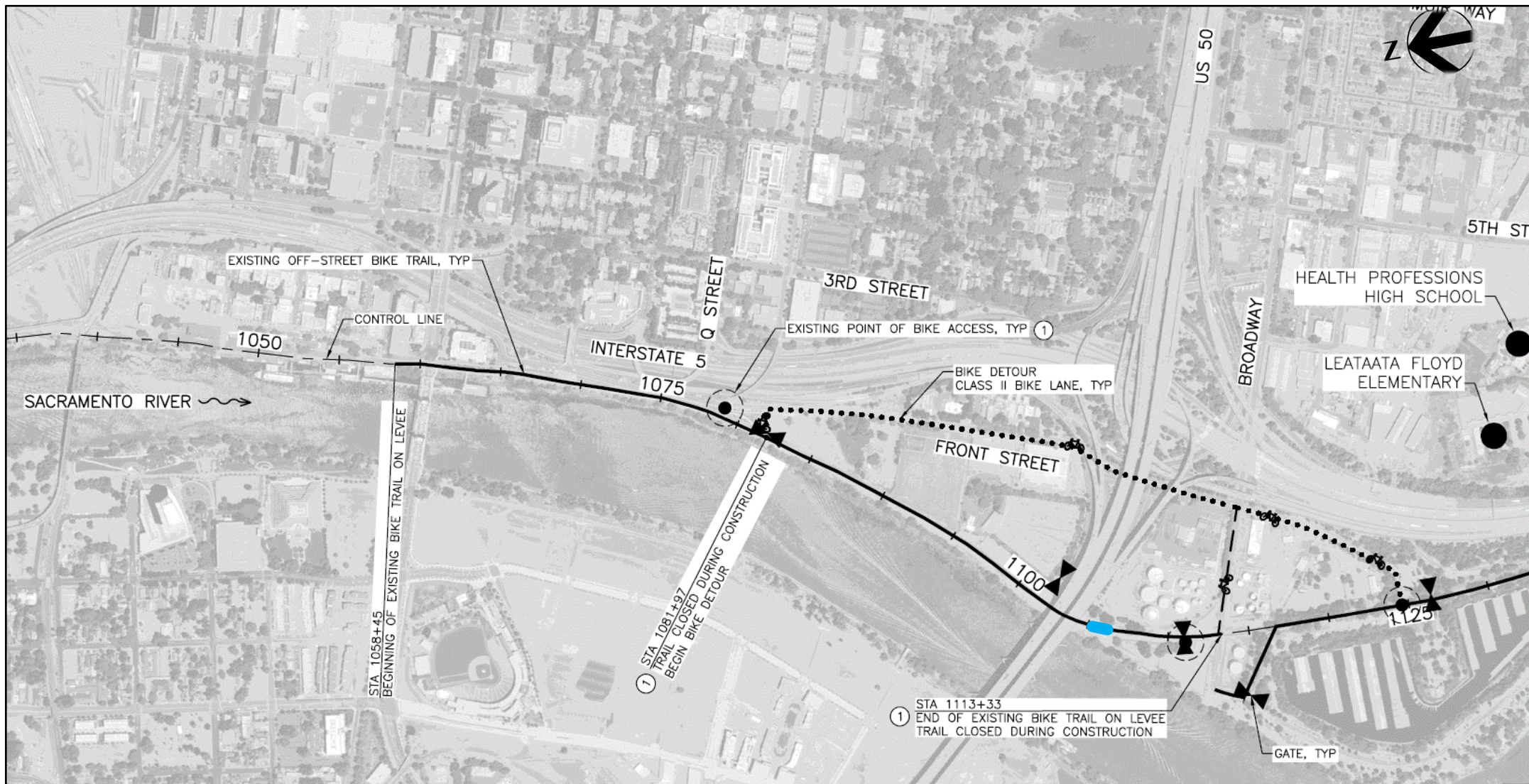


ALTERNATE BIKE ROUTE



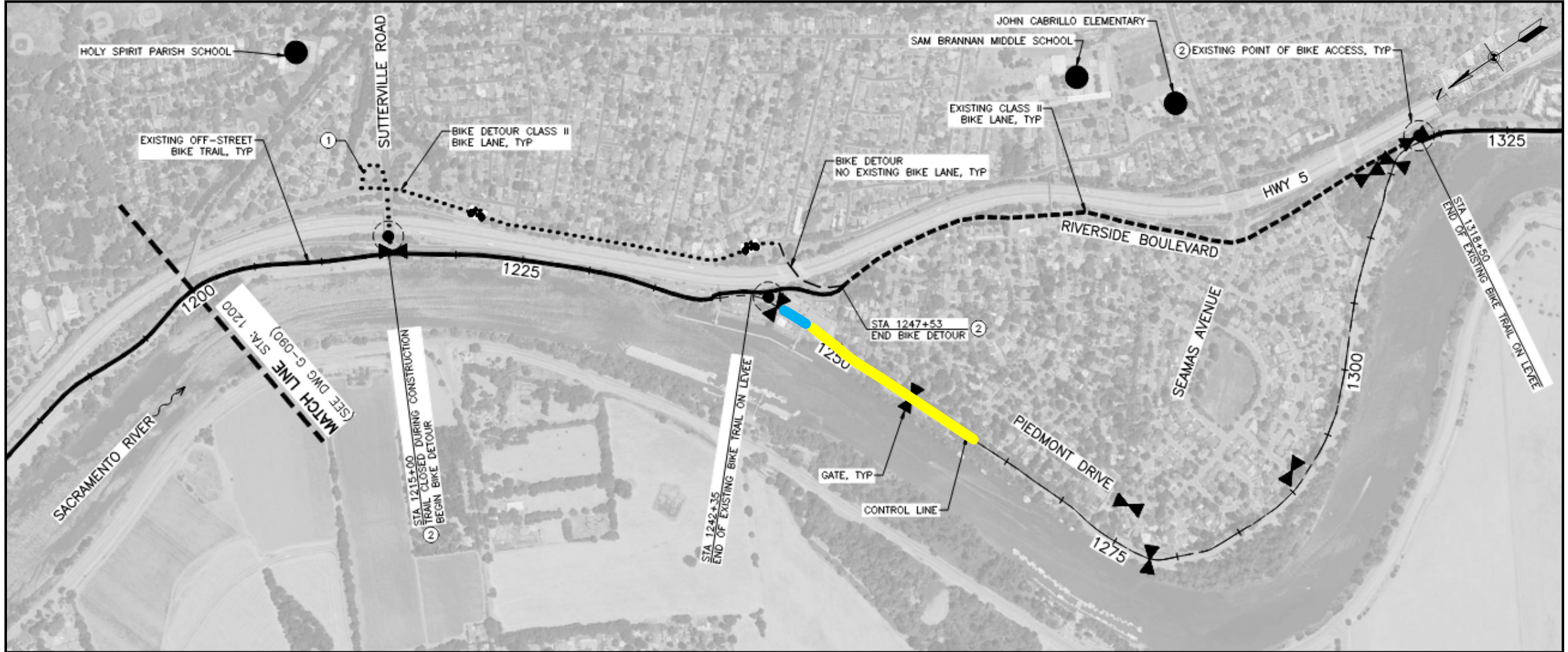


ALTERNATE BIKE ROUTE



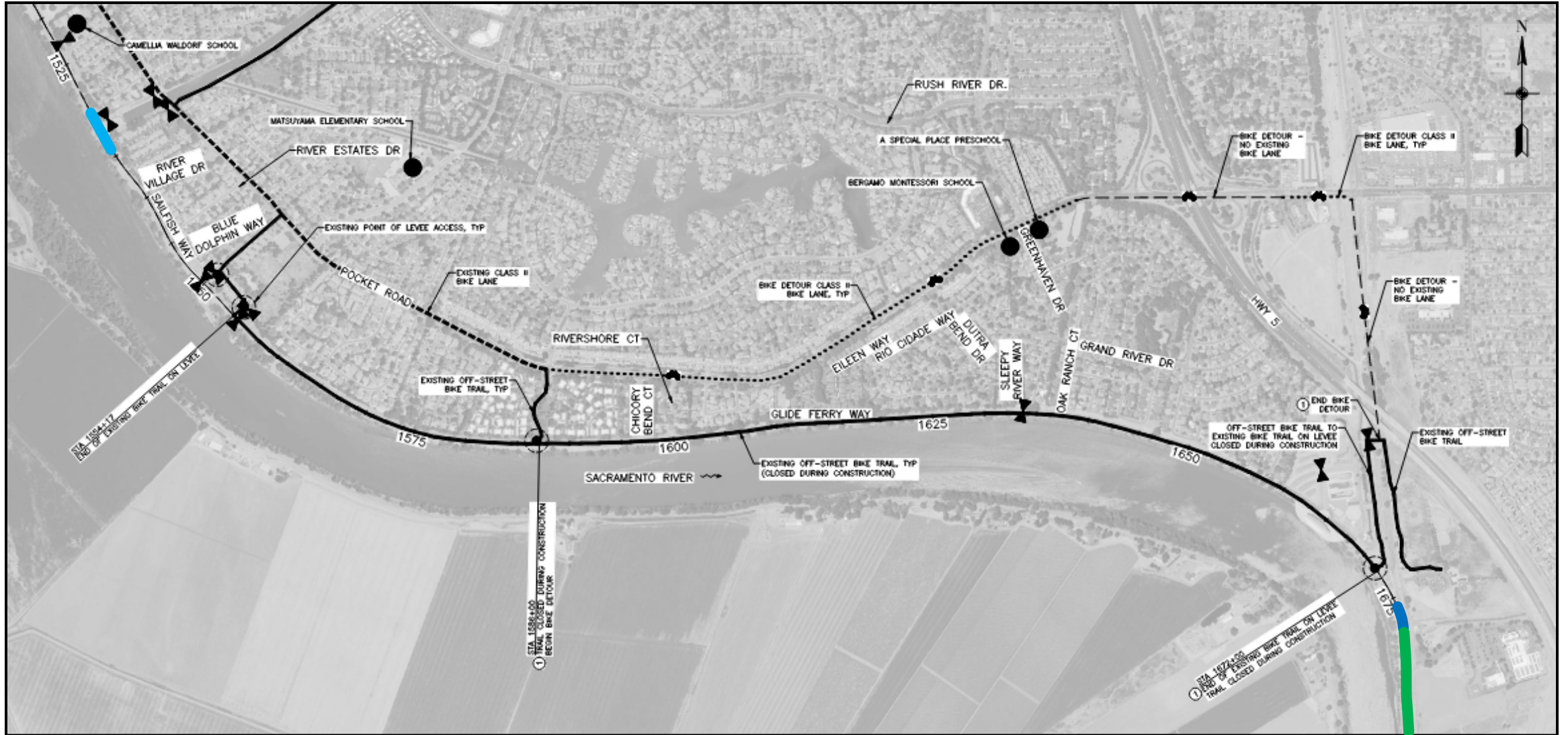


ALTERNATE BIKE ROUTE



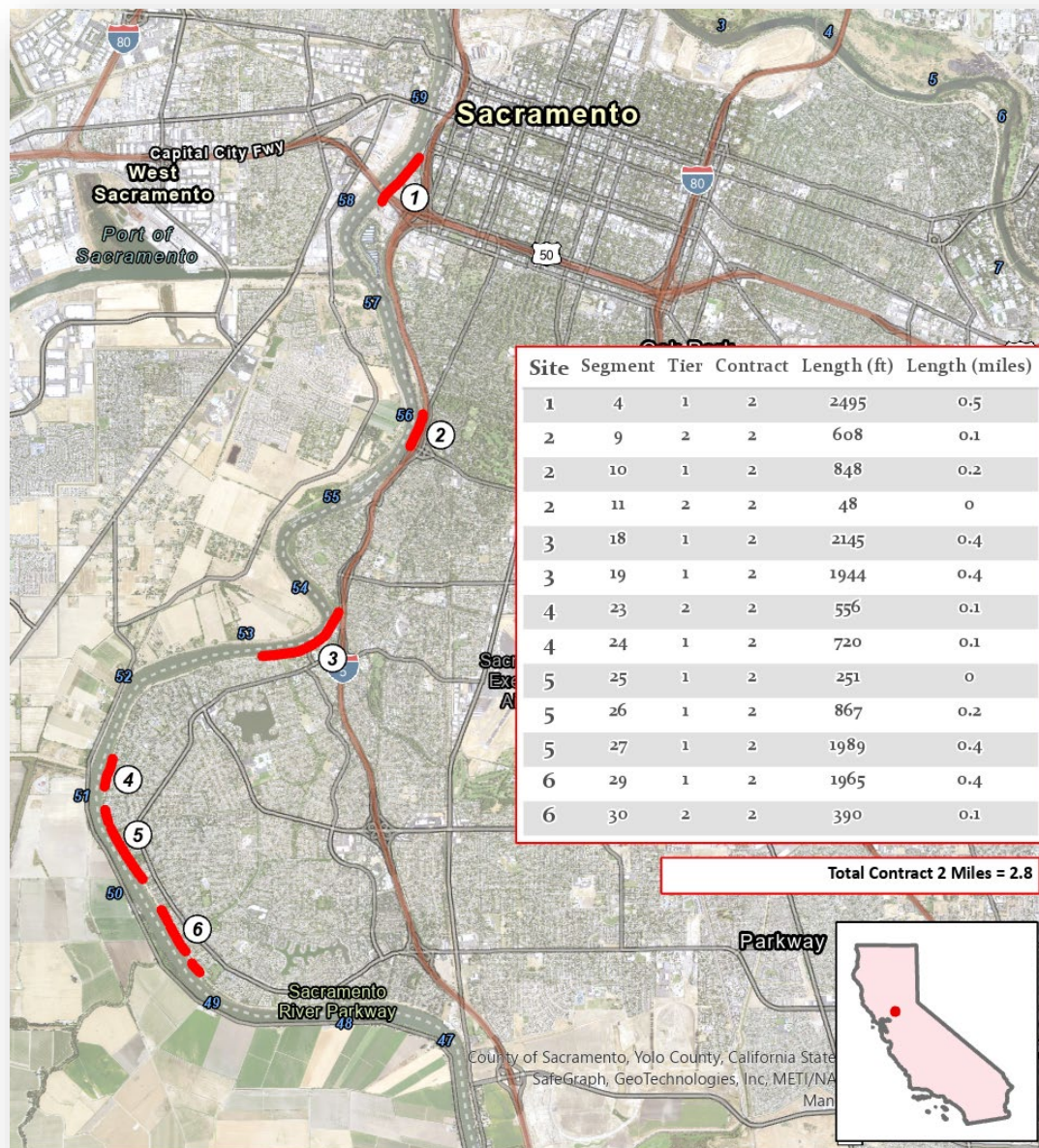


ALTERNATE BIKE ROUTE





SACRAMENTO RIVER EROSION CONTRACT 2



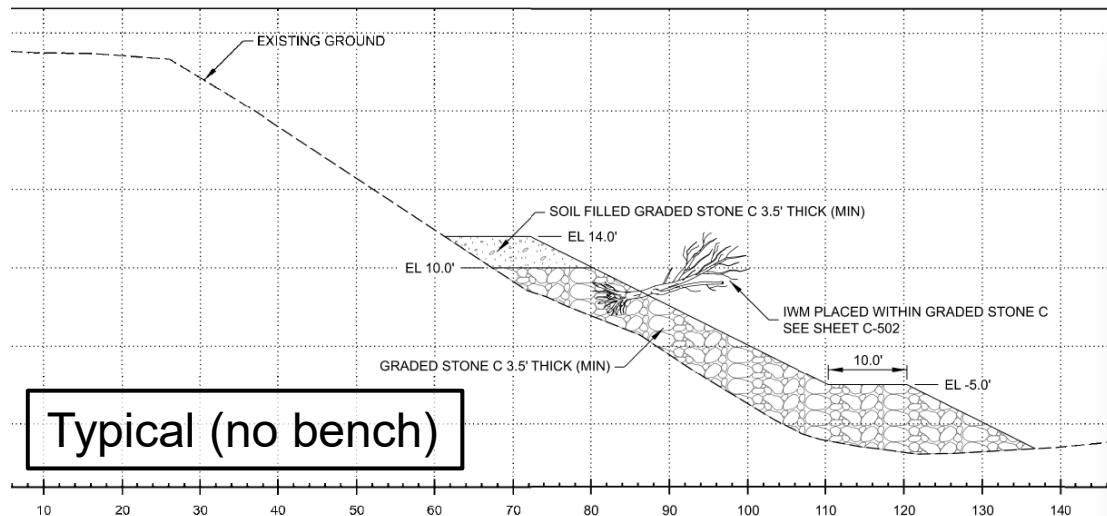
High velocities and waves from wind and boats lead to erosional processes that degrade the surface of the levee which can, in time increase the risk of levee failure.

The project design includes:

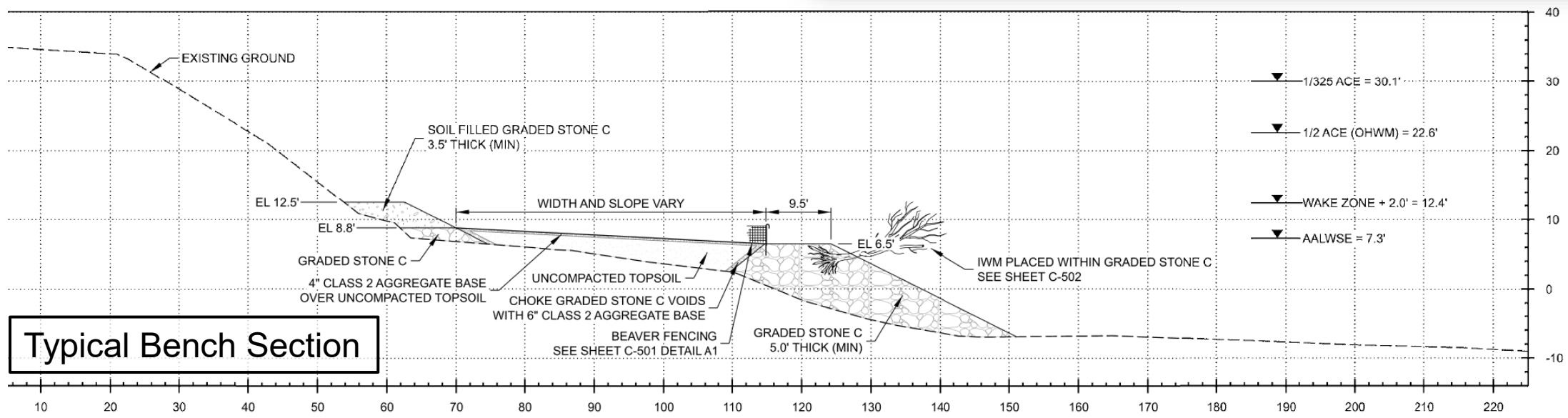
- Approximately 3 miles of water side erosion protection
- Barges to transport material
- Planting benches, IWM
- Replacement of water side pipes of SUMP 63



CROSS SECTION OF TYPICAL PLANTING BENCH

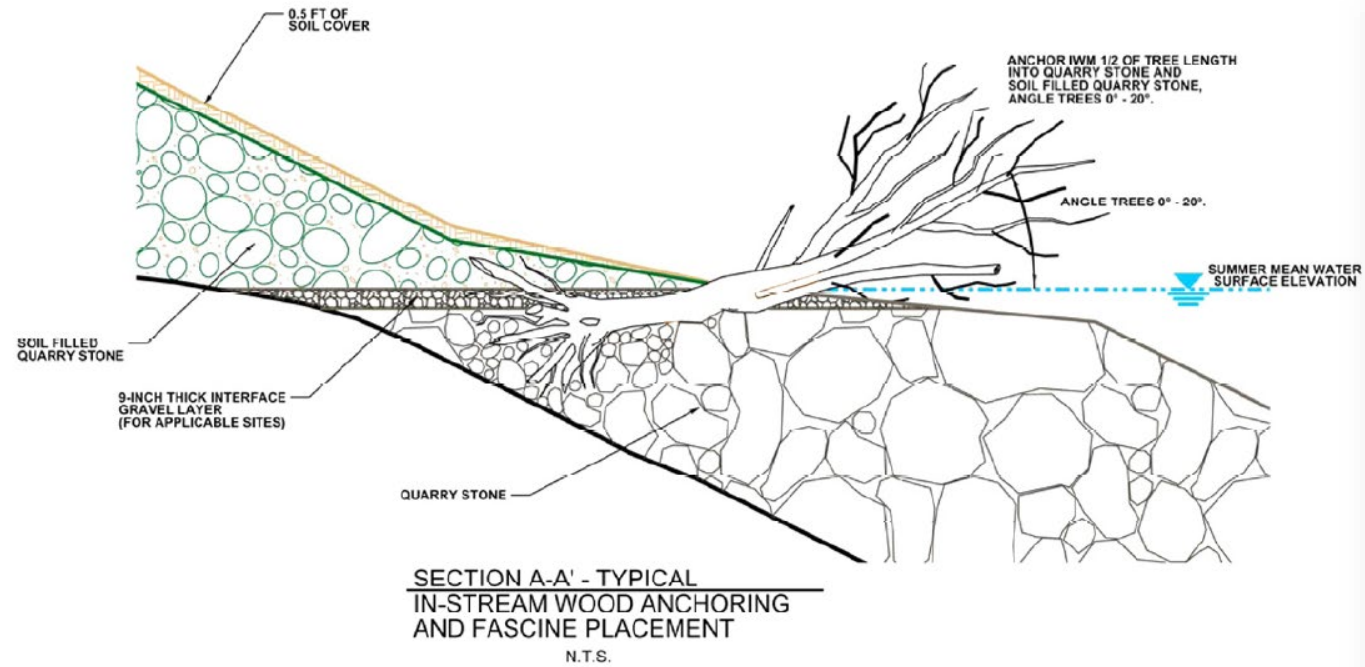


Typical (no bench)



Typical Bench Section

INSTREAM WOODY MATERIAL (IWM) DETAILS

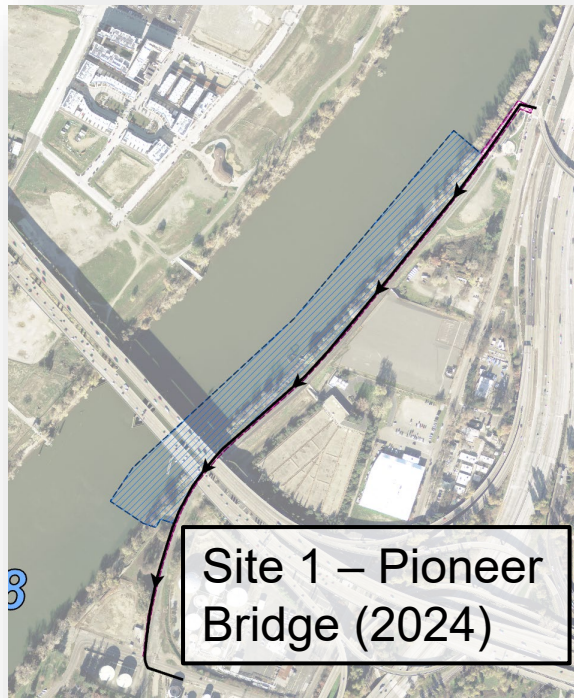
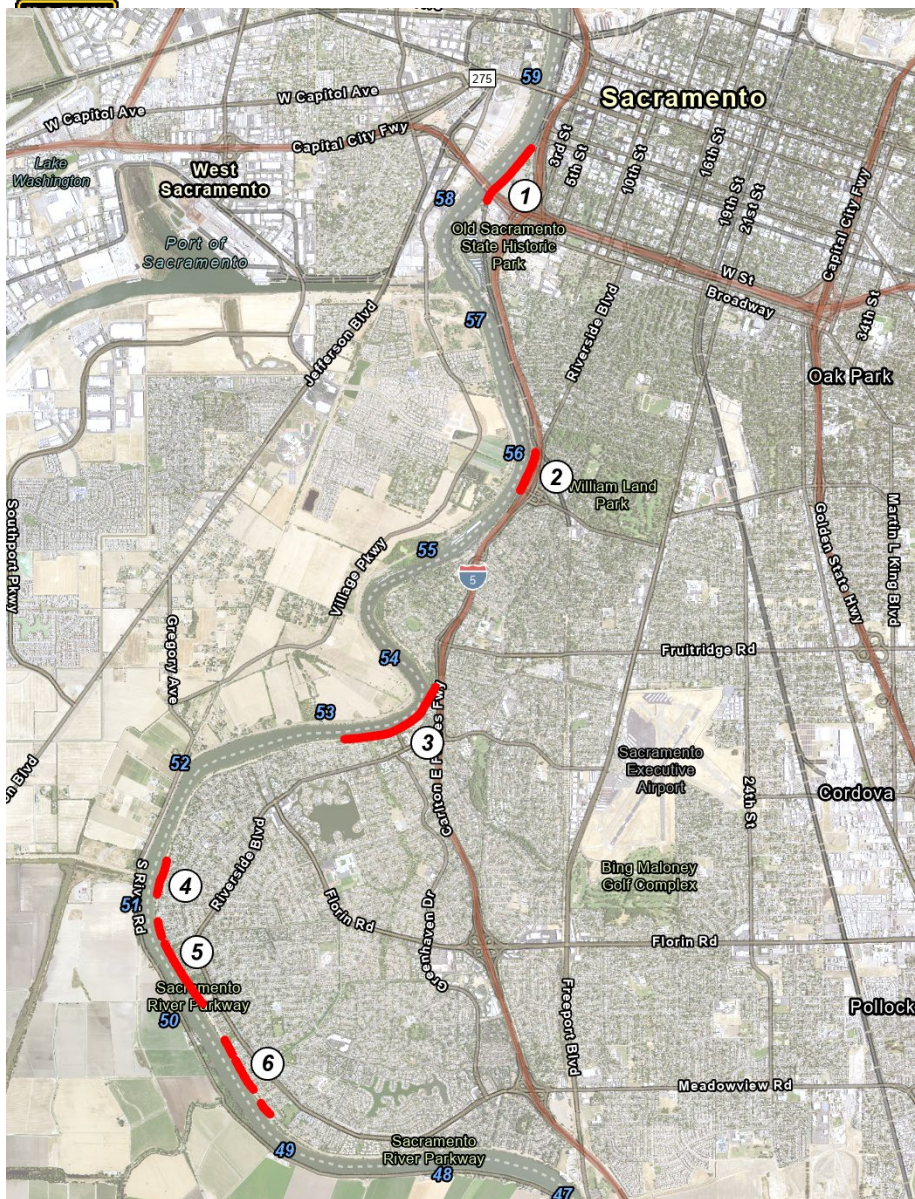


Source: Ayres Associates





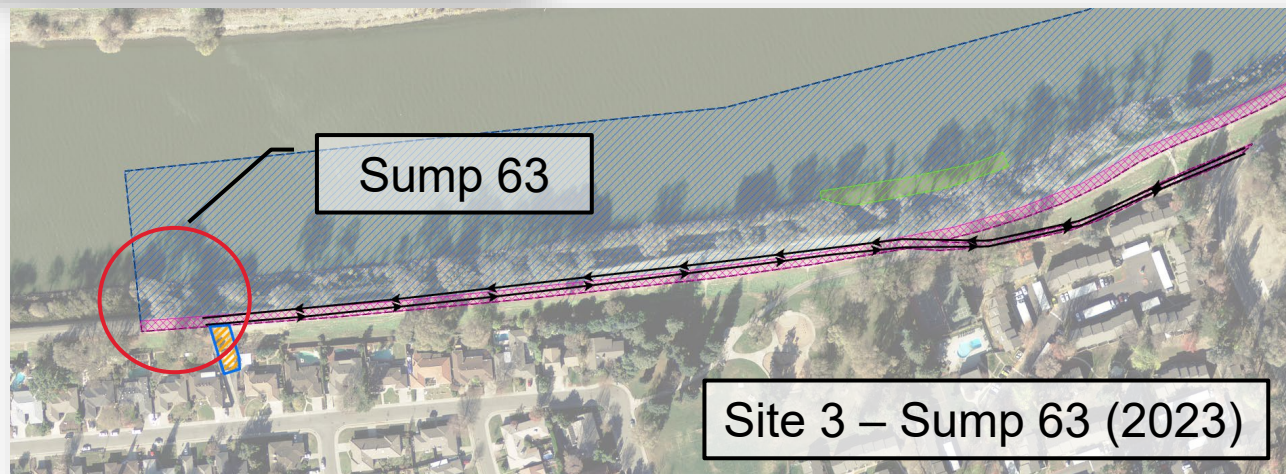
CONSTRUCTION ACCESS



Site 1 – Pioneer Bridge (2024)



Miller Park Marina Boat Ramp (2023 – 2024)



Sump 63

Site 3 – Sump 63 (2023)



SUPPLEMENTAL EIR/EA

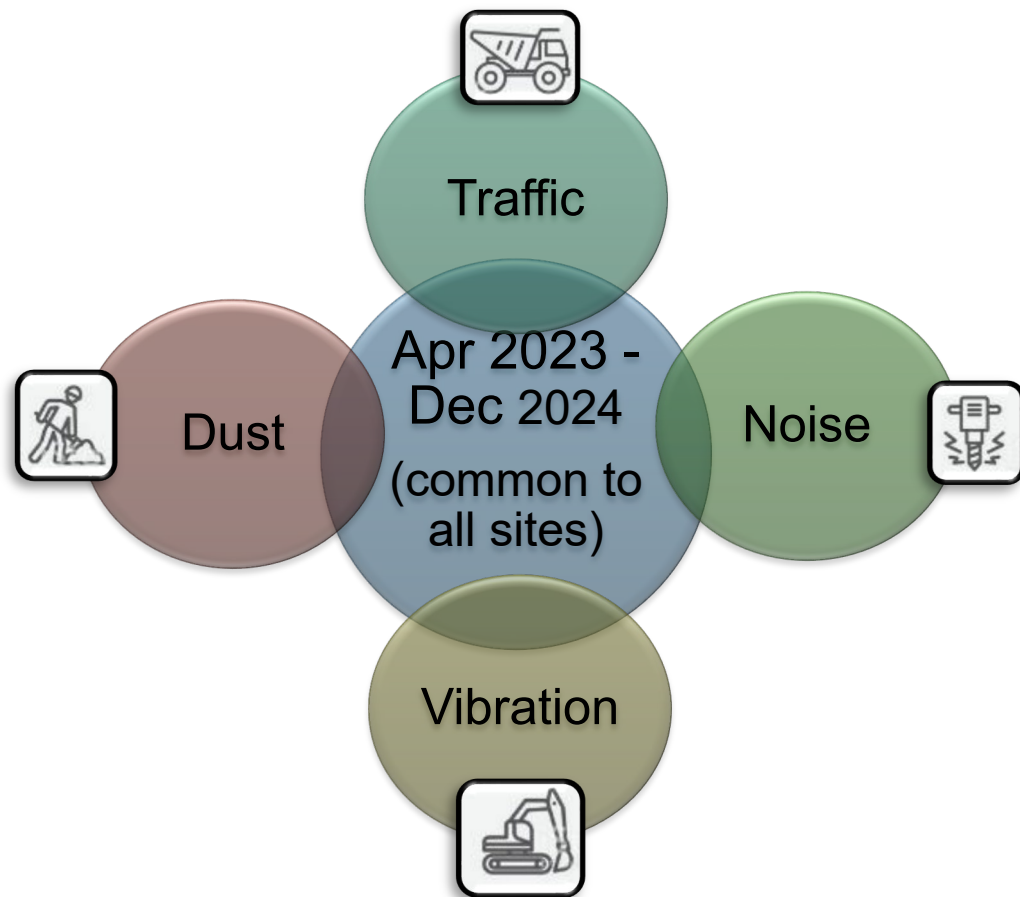
TOPIC AREAS ANALYZED



- Visual Resources
- Hydrology and Water Quality
- Vegetation and Wildlife
- Fisheries
- Special Status Species
- Cultural Resources
- Transportation and Circulation
- Geological Resources
- Air Quality
- Greenhouse Gas Emissions and Energy Consumption
- Noise
- Recreation
- Public Utilities and Service Systems
- Hazards and Hazardous Materials

Available at www.SacLeveeUpgrades.com

IMPACTS



Levee Access - Levee path closed to the public in work areas & parking closed near Westin Hotel

Park - Garcia Bend boat lot and ramp closed April - Dec 2023 & Miller lot April 2023 Dec 2024

Habitat/Shade/Aesthetic - In-water rock placement and tree removal

Air – Equipment emissions, dust

MITIGATION MEASURES



Detour Routes & Flaggers



Vibration Monitoring



Dust Control



Water & Air Quality Monitoring

VEGETATION & WILDLIFE



Trimming and Removing Trees Outside of Bird Nesting Season and to Protect Bats



New Riparian Forest Habitat



New Fish Habitat



Comprehensive Monitoring by Qualified Biologists

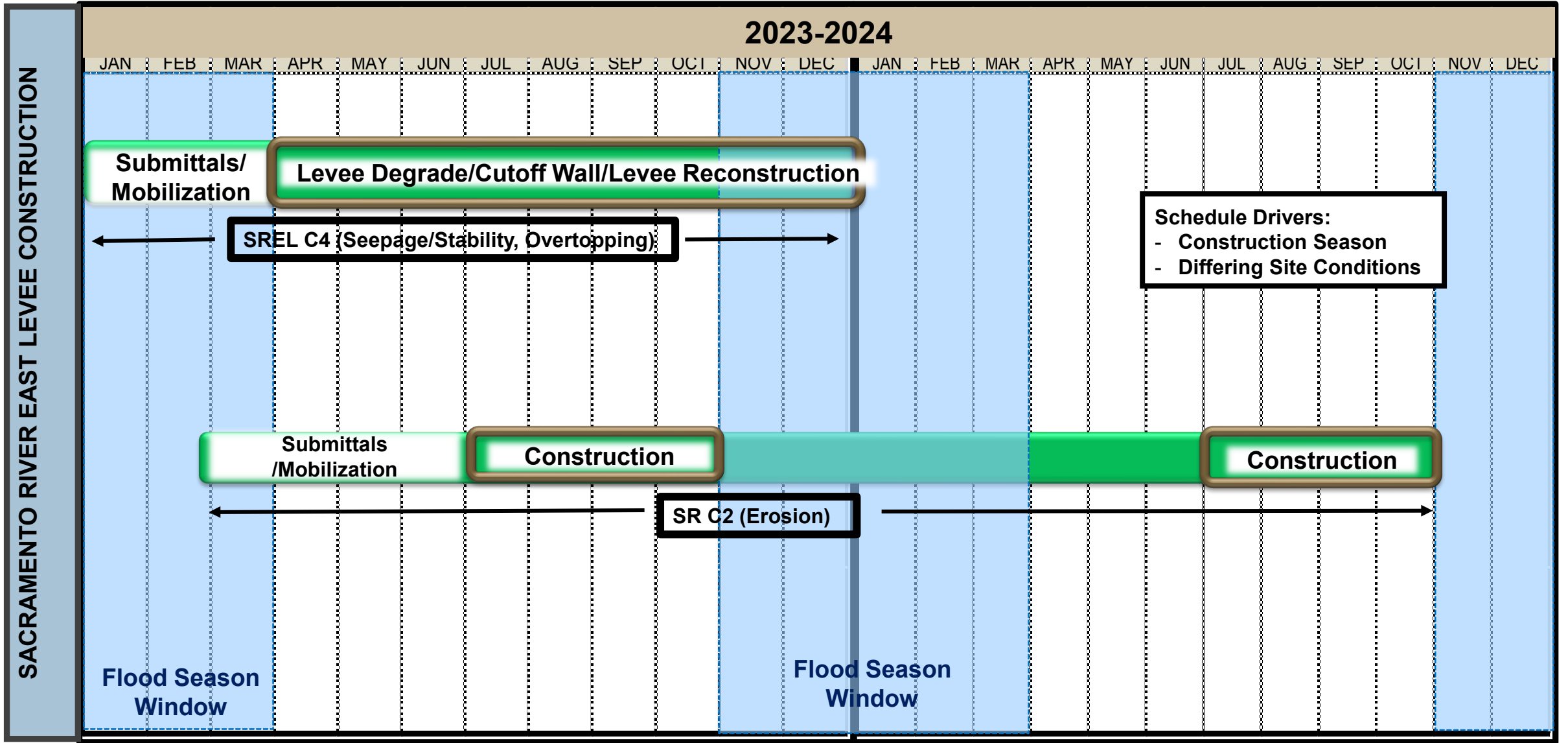
MITIGATING HABITAT IMPACTS



Beach Stone Lakes Mitigation Site



SACRAMENTO RIVER EAST LEVEE SCHEDULE





FOR MORE INFORMATION...

US Army Corps of Engineers Sacramento District Website

Project Overview

- American River Levees
- Sacramento River Levees
- Sacramento Weir

Subscribe for Construction & Traffic email updates

Project Information Tri-fold

Reducing flood risk in Sacramento

Greater Sacramento, California, is often considered to be the most at-risk region in America for catastrophic flooding, relying on an aging system of levees, weirs and bypasses and Folsom Dam to reduce its flood risk. But that system, just like a chain, is only as strong as its weakest link. Together, the U.S. Army Corps of Engineers, California's Central Valley Flood Protection Board, California Department of Water Resources, and the Sacramento Area Flood Control Agency have made tremendous progress in reducing the flood risk, but more work remains. Through the Bipartisan Budget Act, the Corps has received full upfront funding to modernize Sacramento's aging flood infrastructure. This allows us to more efficiently implement nearly \$1.8 billion in upgrades to Sacramento's flood risk management system. The authorized work includes up to: 13 miles of seepage cutoff walls, 21 miles of bank protection, 5 miles of levee stabilization, 5 miles of levee raises and widening the Sacramento Weir and bypass.

Current Project Activities

- Sacramento River East Levee Contract 1 Construction

sacleveeupgrades.com



Submit Questions to spk-pao@usace.army.mil



- *This is an **exciting opportunity***
- ***You** are a part of it*
- *There will be **temporary inconvenience***
- *We will **mitigate** and strive to **minimize***
- *We will be **transparent***
- *We will be **honest***
- *We will keep **communication** lines open*

www.sacleveeupgrades.com

**U.S. Army Corps of Engineers
Sacramento District
(916) 557-5100**

spk-pao@usace.army.mil

