

CITY OF PALO ALTO

# MATADERO CREEK RENATURALIZATION

December 5, 2019 // NVCAP Working Group Meeting



ENVIRONMENTAL CONSULTANTS

Fly's Electronics



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# Presentation Overview

- Project Status Update
- Planning Outcomes
- Design Alternatives
- Discussion
- Aesthetics



# Project Completion

- Design Planning – 90%
- Site Assessment – 100%
- Define Alternatives – 80%
- Hydraulic Modeling – 60%
- Site Concept Design – 35%
- Coordination - Ongoing



# Problems

- Poor habitat
- Poor aesthetics
- No public access
- No geomorphic function

# Opportunities

- NVCAP
- Redevelopment of 340 Portage
- City acquisition of 3350 Birch

# Objectives

- Beautify the creek corridor
- Create public access and connection to the creek
- Create habitat
- Provide mitigation planting



# Constraints

- Real estate
- Flood conveyance
- Public safety
- Groundwater plume
- Valley Water easement
- Maintenance access
- Maintenance cost
- Channel stability
- Bridge conveyance
- Provide mitigation planting
- Other city and public intereste

## Alternative #0: No Action

- Lowest cost
- No improvement

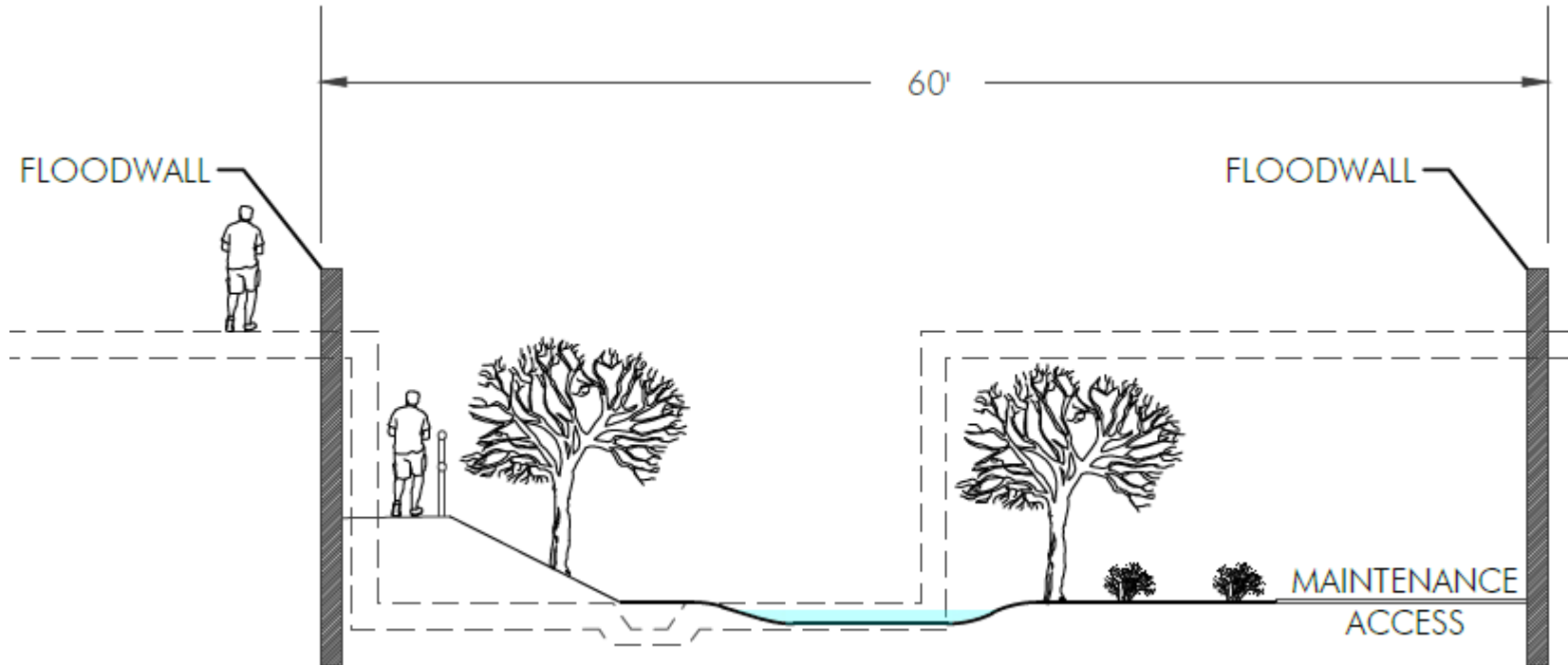




## Alternative #1:

- Work within boundaries of current SCVWD easement (60 ft)
- Lambert Ave to Park Blvd
- Earthen channel bottom
- Vertical sheet pile or concrete walls
- Riparian plantings
- Floodwalls to mitigate increase in 100-year flood WSEL
- Public access

# Alternative #1

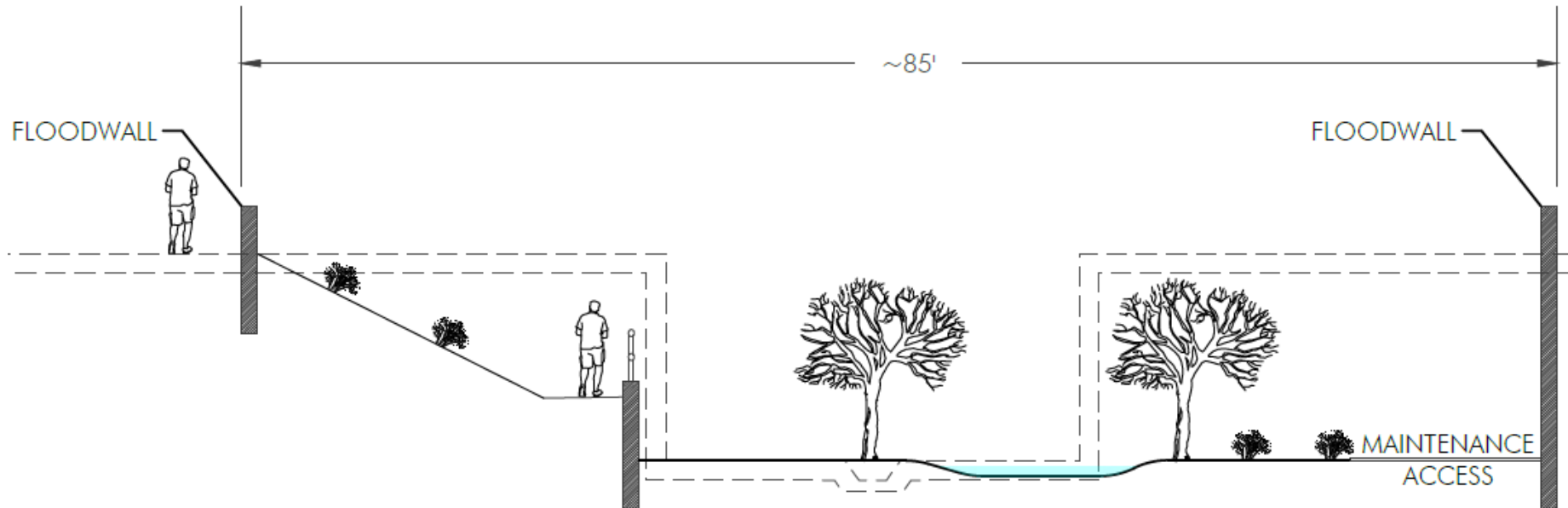


## Alternative #2:

- Provide access, form and function, with limited scope
- Lay left bank back, transitioning from vertical to 3:1 (H:V)
- Add walking paths and public access
- Same bottom width as existing
- Ornamental plantings
- Low-flow channel meanders
- Earthen channel bottom
- Floodwalls to manage flood risk



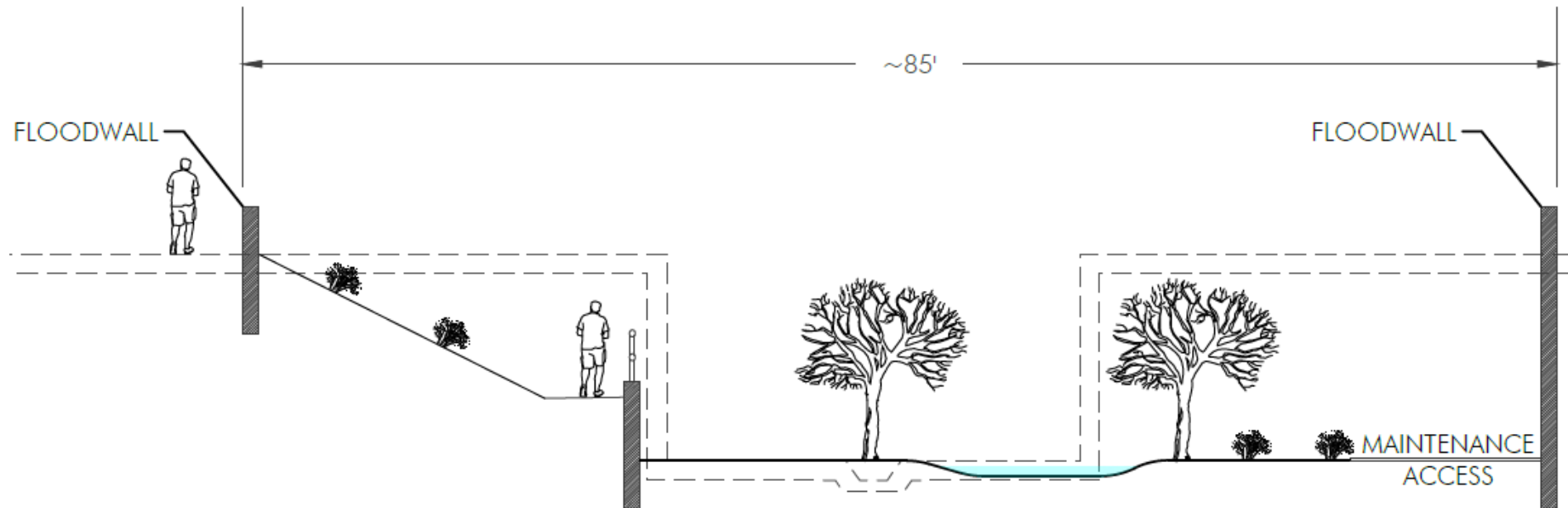
## Alternative #2



## Alternative #2A

- Same as Concept #2, but expand to include same approach in Boulware Park

# Alternative #2A

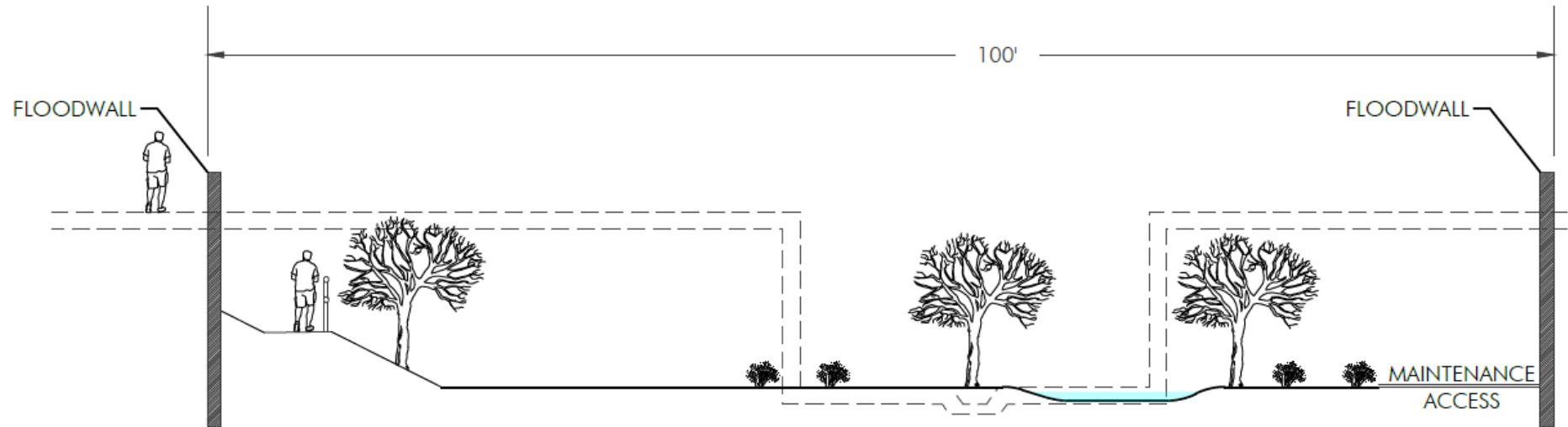




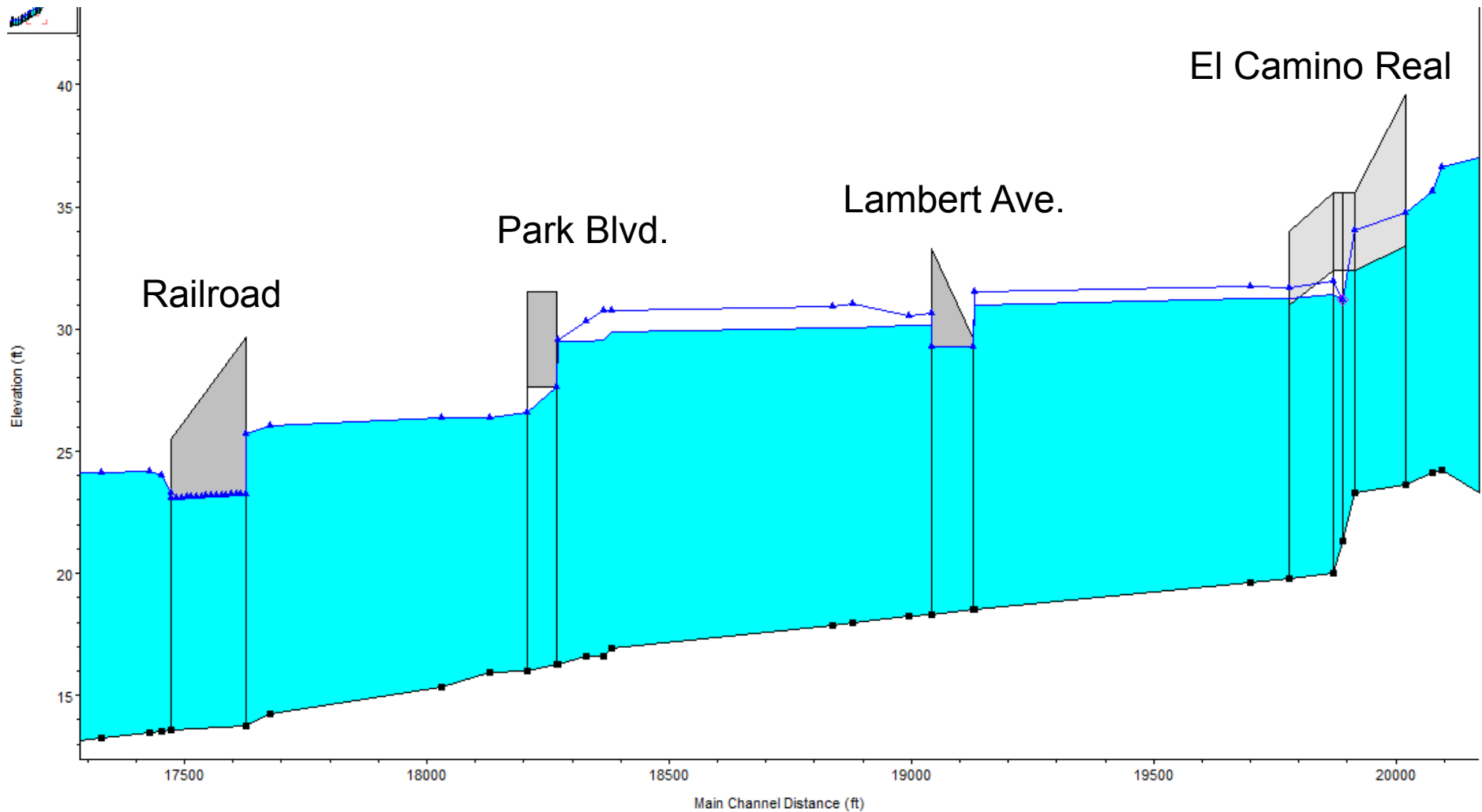
## Alternative #3

- Maximum ecological function
- Vertical walls
- Roughly 3.5 times existing width
- Geomorphic bankfull meanders from wall to wall
- New maintenance access ramps
- Public walking trail
- Replace Lambert Bridge and Park Blvd Bridge
- Acquire properties between Lambert and Park

# Alternative #3



# Alternative 1: Hydraulic Modeling, 1% Chance Event





## Next Steps

- Refinement of alternatives
- Hydraulic modeling of refined alternatives
- Coordination with Valley Water and Resource Agencies
- Documentation

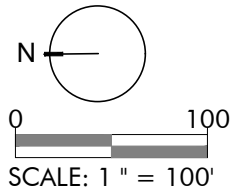
## **Plan View of All Concepts**



CITY OF PALO ALTO  
MATADERO CREEK  
RE-NATURALIZATION  
FEASIBILITY STUDY

PALO ALTO,  
CALIFORNIA

CONCEPT 1  
PLAN VIEW



DATE: DECEMBER 2019  
FIGURE BY: ACS  
IMAGE SOURCE: AUTOCAD ROADS MAP

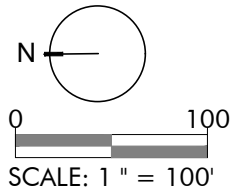




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RE-NATURALIZATION  
FEASIBILITY STUDY

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CONCEPT 2  
PLAN VIEW



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FIGURE BY: ACS  
IMAGE SOURCE: AUTOCAD ROADS MAP

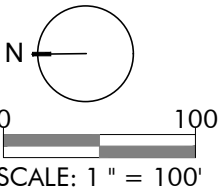




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CONCEPT 2A  
PLAN VIEW

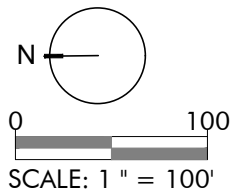




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FEASIBILITY STUDY

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CALIFORNIA

CONCEPT 3  
PLAN VIEW



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FIGURE BY: ACS  
IMAGE SOURCE: AUTOCAD ROADS MAP



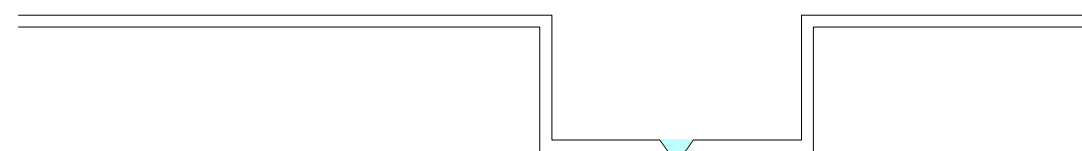


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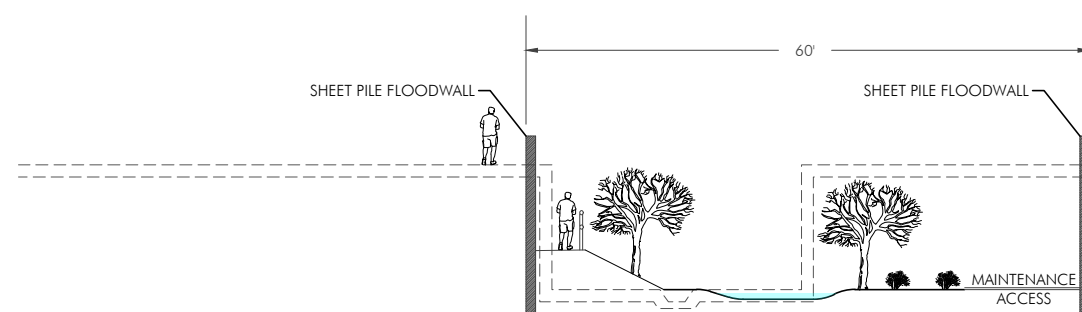
SECTION VIEWS

CONCEPT #0: NO ACTION ALTERNATIVE (30FT WIDTH)



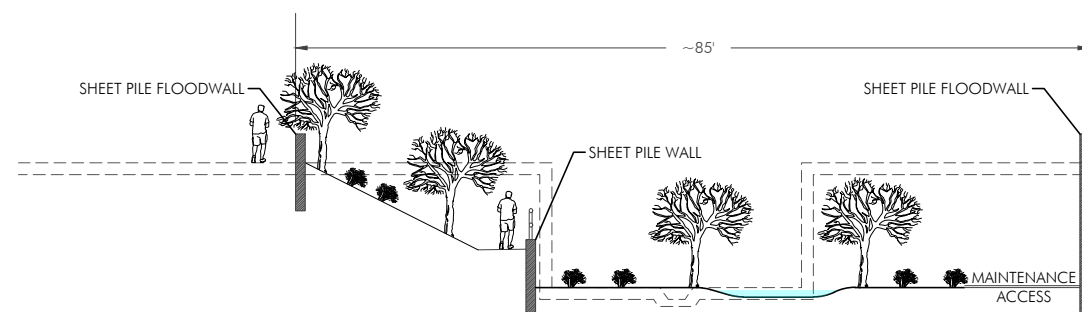
CONCEPT #1: SCVWD EASEMENT ONLY (60FT)

- WITHIN BOUNDARIES OF CURRENT SCVWD EASEMENT
- EARTHEN CHANNEL BOTTOM
- VERTICAL SHEET PILE WALLS
- RIPARIAN PLANTINGS
- FLOODWALLS TO MITIGATE INCREASE IN 100-YEAR FLOOD WSEL
- PUBLIC ACCESS



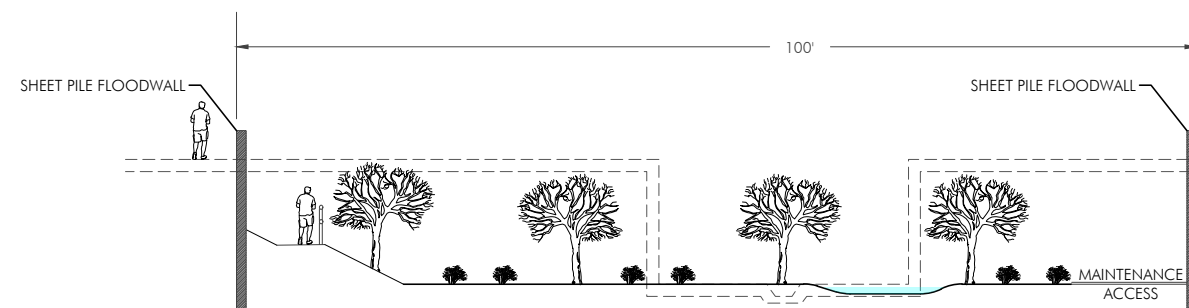
CONCEPT #2: SAN LUIS OBISBO-STYLE IN PARKING LOT (~85FT)

- OPTIMIZE ACCESS, FORM AND FUNCTION, WITH LIMITED SCOPE
- LAY LEFT BANK BACK, TRANSITIONING FROM VERTICAL TO 3:1 (H:V) WITH TERRACES
- ADD WALKING PATHS AND PUBLIC ACCESS
- SAME BOTTOM WIDTH AS EXISTING
- ORNAMENTAL PLANTINGS
- LOW-FLOW CHANNEL MEANDERS
- EARTHEN CHANNEL BOTTOM
- FLOODWALLS TO MANAGE FLOOD RISK



CONCEPT #2A: SAN LUIS OBISBO-STYLE FROM CHESTNUT TO PARK BLVD (~85FT)

- SAME AS CONCEPT #2, BUT EXPAND TO INCLUDE SAME APPROACH BOULEVARD PARK



CONCEPT #3: CHANNEL MIGRATION ZONE FROM CHESTNUT TO PARK BLVD (100FT)

- MAXIMUM FORM AND FUNCTION
- VERTICAL SHEET PILE WALLS
- ROUGHLY 4 TIMES EXISTING WIDTH
- GEOMORPHIC BANKFULL MEANDERS FROM WALL TO WALL
- NEW MAINTENANCE ACCESS RAMPS
- PUBLIC WALKING TRAIL
- REPLACE LAMBERT BRIDGE AND PARK BLVD BRIDGE
- ACQUIRE PROPERTIES BETWEEN LAMBERT AND PARK



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