



Corte Madera Creek Flood Risk Management Project, Phase 1: General Workshop

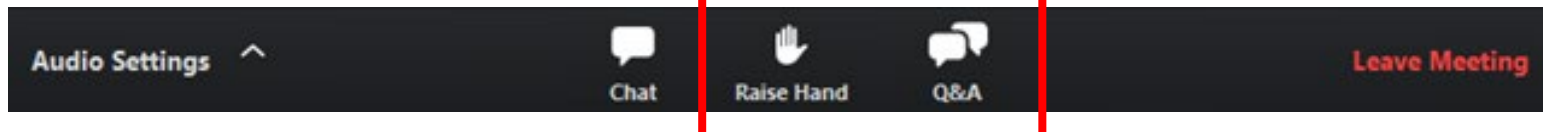
Public Meeting

June 25, 2020



How to Participate in the Workshop

- All attendees will be on mute until we open up the line for comments and questions
- To comment or ask questions, type your question into the question bar
- Only use the question bar to ask questions, the chat box has been disabled during this webinar
- To speak during the comment and question period, please click the hand icon to virtually raise your hand, and we will unmute you
- If you are joining by phone, please dial *9 to virtually raise your hand, and we will unmute you



How to Participate in the Workshop

- We will first address questions and comments received via the question bar. We will then open the line to comments and questions for individuals who have their hands raised.
- After the meeting you may email any comments/questions to cortemaderacreek@marincounty.org
- This meeting is being recorded and will be available at:
<https://www.marinwatersheds.org/resources/projects/corte-madera-creek-flood-risk-management-project>

Introduction

AGENDA

- How to Participate
- Project History
- Project Update
- Overview of Project
- Project Schedule
- Questions/Comments



Presenters



Joanna Dixon

Associate Engineer, Marin Flood Control and Water Conservation District
Project Manager for the Corte Madera Creek Flood Risk Management Project



Liz Lewis

Water Resources Manager, Marin Flood Control and Water Conservation District



Susanne Heim

Principal, Panorama Environmental, Inc.
Moderator and CEQA expert for the Corte Madera Creek Flood Risk Management Project



Raymond Wong

Senior Project Manager, GHD, Inc.
Design Engineer for the Corte Madera Creek Flood Risk Management Project



Jessica Hall

Landscape Architect, GHD, Inc.
Landscape Architect/Geomorphologist for the Corte Madera Creek Flood Risk Management Project



Matt Smeltzer

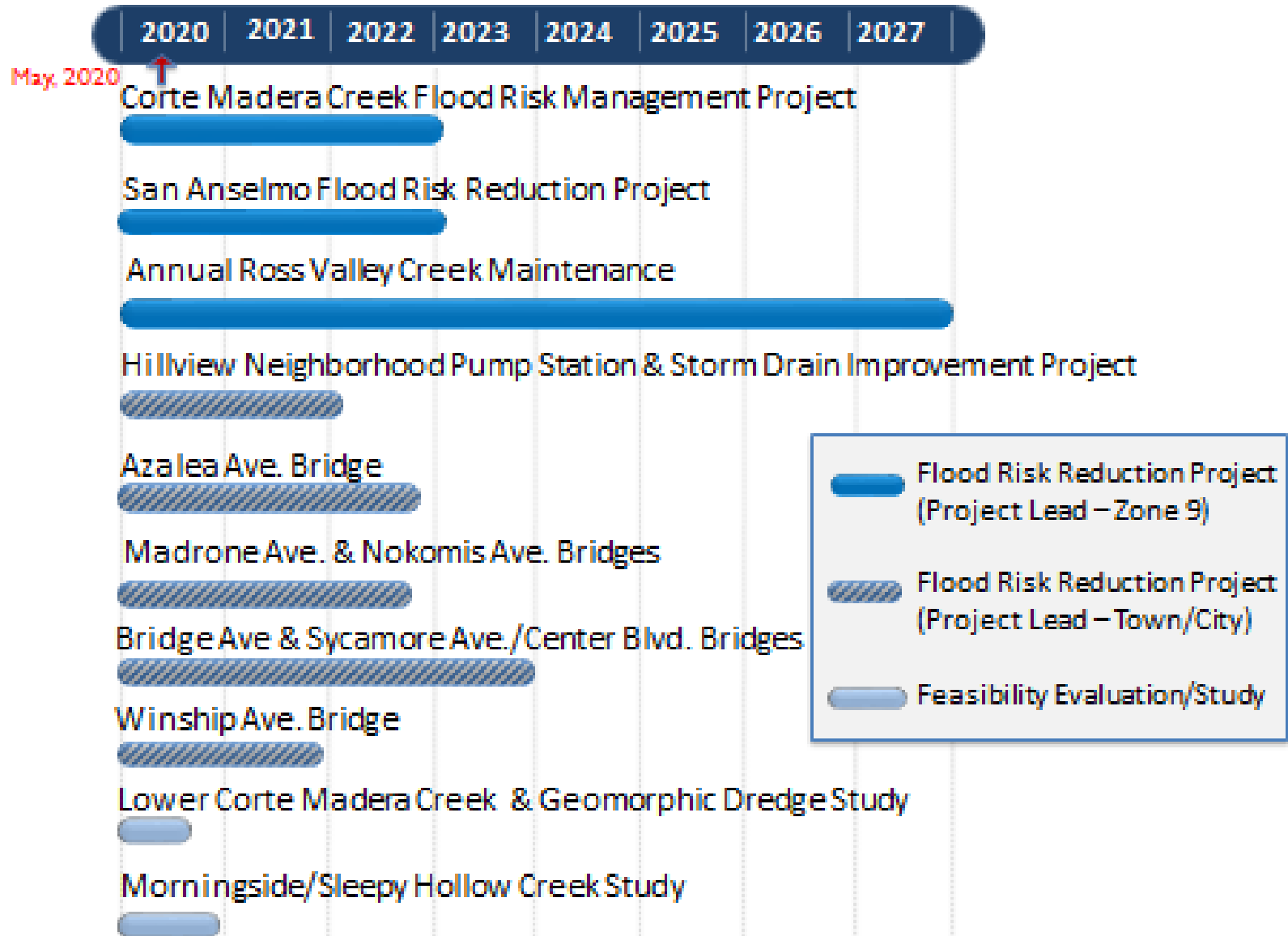
Water Resources Engineer/Fluvial Geomorphologist, geomorphDESIGN
Design Engineer for the Corte Madera Creek Flood Risk Management Project

Purposes of Meeting

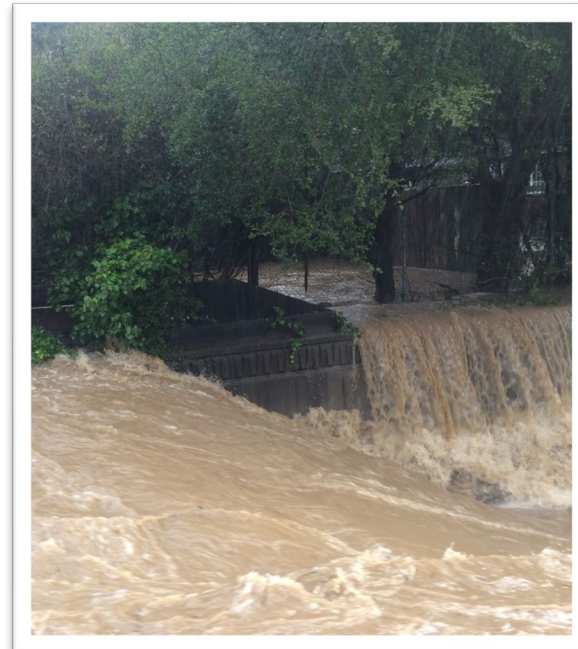
- Provide an update to the Corte Madera Creek Flood Risk Management Project and District activities in 2019 and 2020
- Introduce the project components and preview the design concepts and components
- Solicit public input before starting the EIR process
- Provide an outline and schedule for the project next steps

Ross Valley Watershed Program

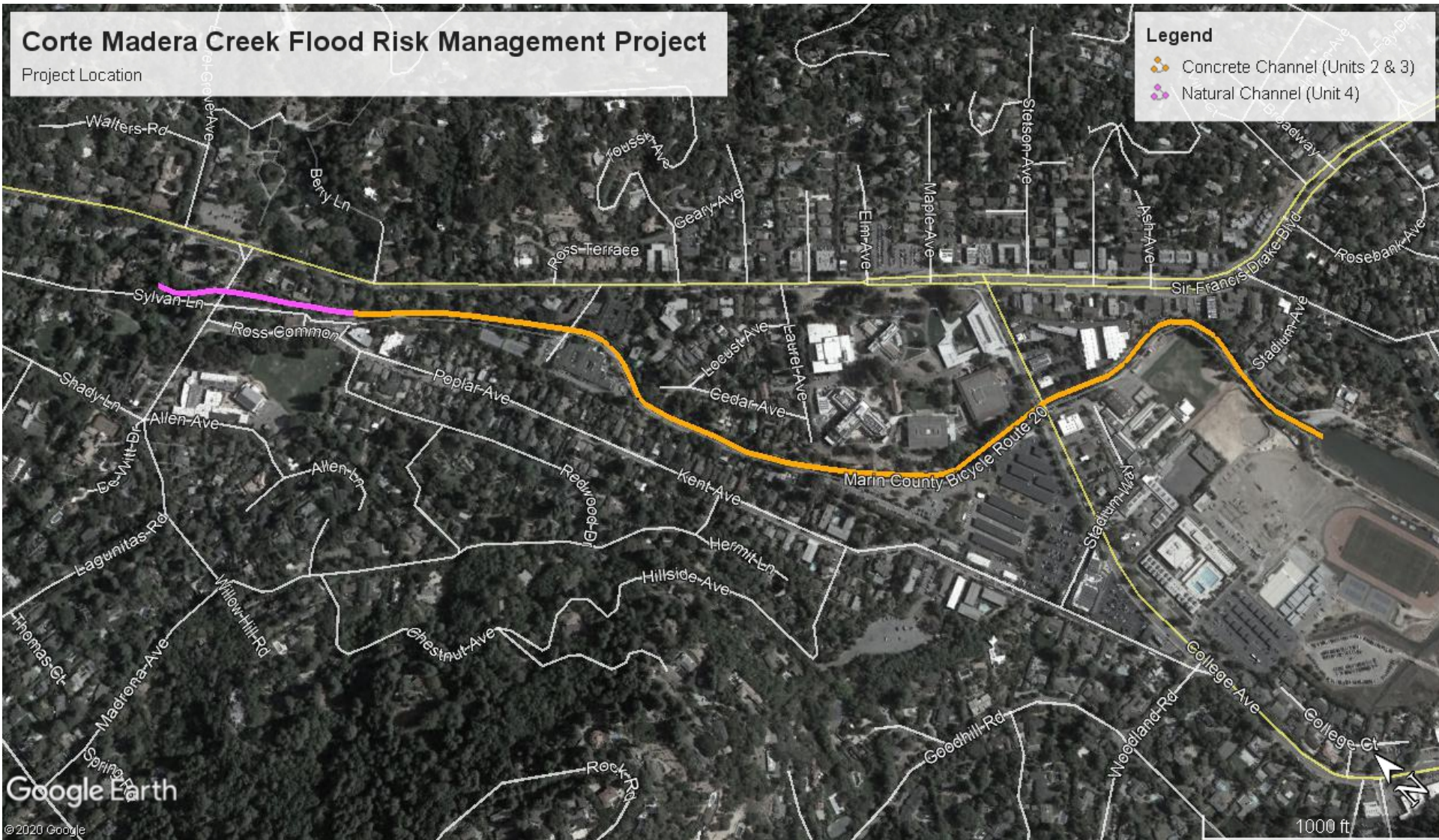
Ross Valley Flood Protection & Watershed Program - Work Plan Timeline



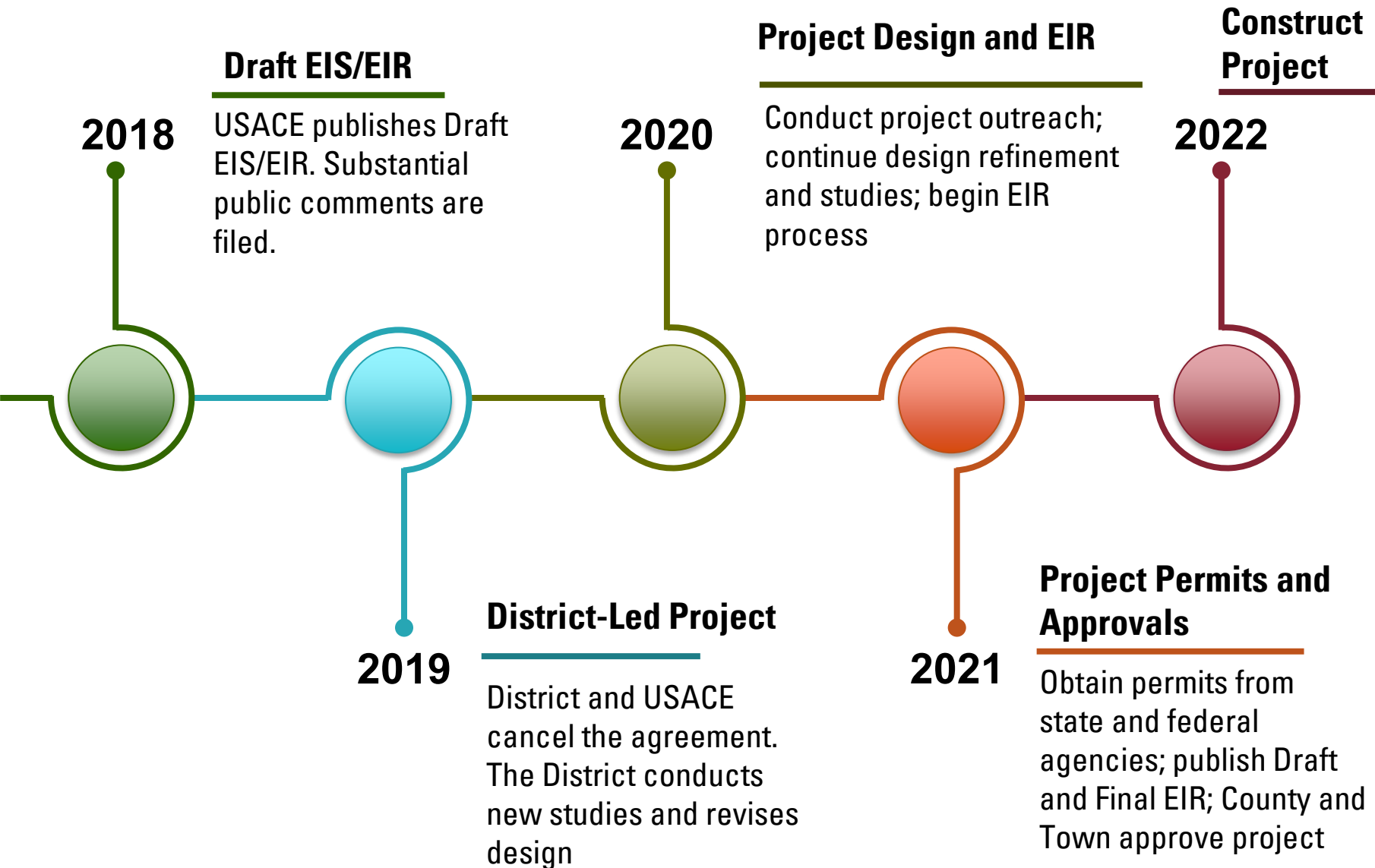
Project Update



Corte Madera Creek Flood Risk Management Project

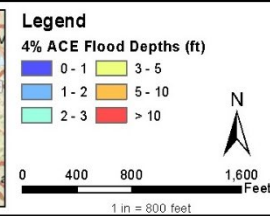
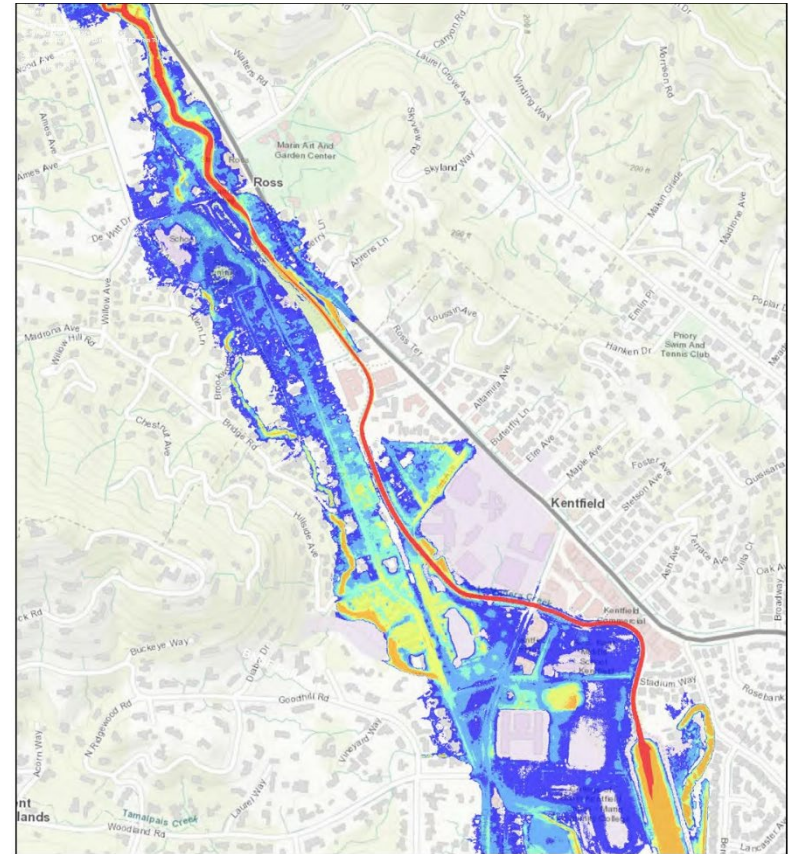


Project Timeline



Risk of Current Condition

- Flood risk in Lower Corte Madera Creek watershed
- Fish passage limitations in concrete channel
- Aging concrete channel infrastructure
- Limited habitats along channel corridor
- Limited access to channel corridor
- Projected sea level rise vulnerability
- DWR grant funding deadline to construct by Dec 2022



CORTE MADERA CREEK
FLOOD RISK MANAGEMENT PROJECT
MARIN COUNTY, CALIFORNIA

EXISTING WITHOUT PROJECT
4% ACE FLOOD
MAX DEPTH FLOODPLAIN

 U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES & SAN FRANCISCO
DISTRICTS

Draft Project Objectives



- **FLOOD RISK REDUCTION**

Reduce overall flood inundation extent and depth in the Town of Ross and Kentfield areas.

- **ENVIRONMENTAL BENEFITS**

Improve fish passage, natural creek processes, and fish and riparian habitat adjacent to the creek.

- **PUBLIC ACCESS AND RECREATIONAL QUALITY**

Maintain public access along the creek via the multi-use path and enhance the recreational experience and amenities along the creek corridor to meet Town of Ross and Kentfield area community needs.

- **OPERATIONAL RELIABILITY**

Improve operational reliability and reduce long-term maintenance costs through increasing maintenance access, improving channel stability, and protecting existing utilities.

- **REGULATORY COMPLIANCE**

Comply with local, state, and federal environmental laws and regulations.

- **FISCALLY RESPONSIBLE**

Implement a flood risk reduction project that can be accomplished with currently available local and grant funding and reasonably foreseeable grant funding opportunities.

Restart Project EIR Process

Collect Additional Information to Inform Project Design

- Concrete channel material testing
- Property boundaries mapping
- Tree survey

New Analysis to Validate Project Priorities

- Fish passage assessment
- Utilities constraints analysis
- Preliminary floodplain inundation analysis

Concept Design for Project Components

- Frederick Allen Park concept design
- Granton Park pump station concept design
- Concrete channel access ramp concept design
- Floodwall concept design
- Lower COM concrete channel removal design
- Construction methods, schedule, and planning level estimate

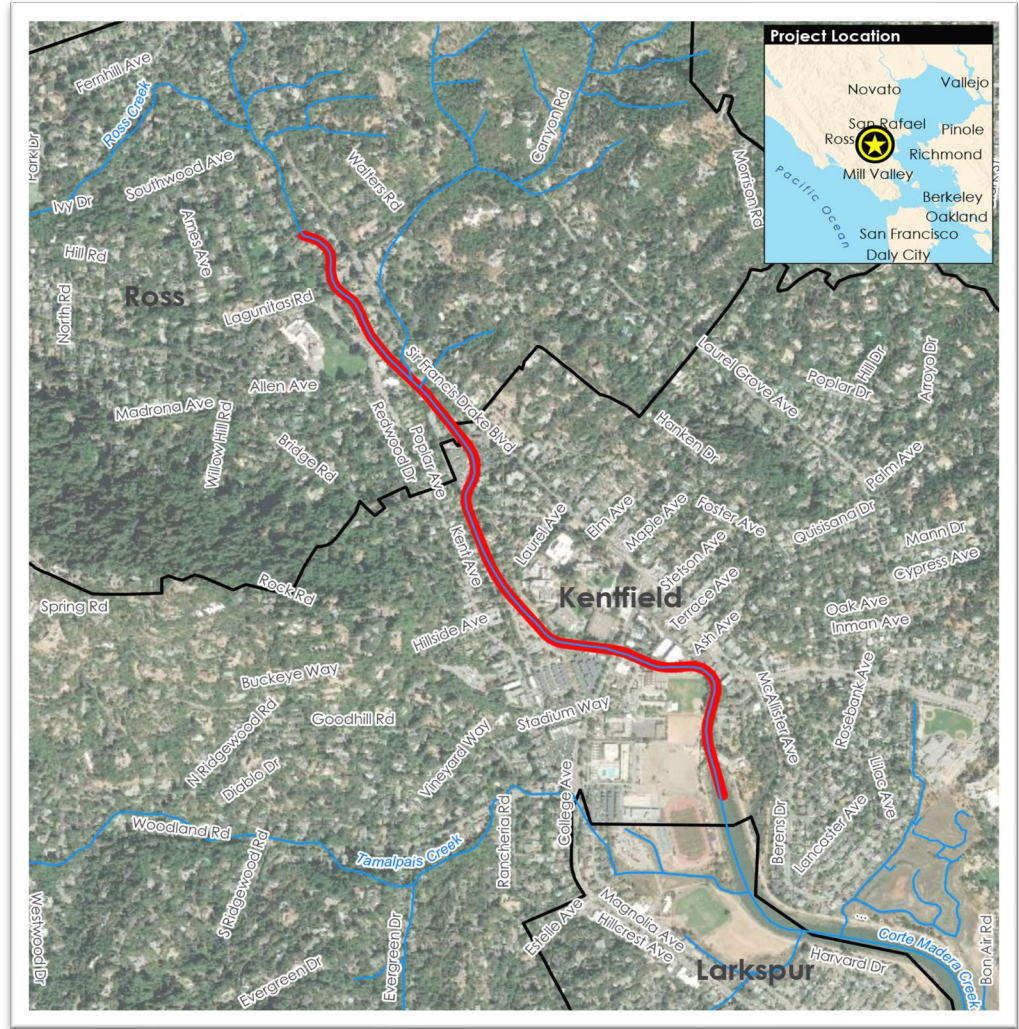
Agencies, Stakeholder, and Community Engagement

- Agency coordination meetings
- Technical coordination meetings with Town of Ross
- Pre-CEQA public workshops
- USACE and DWR coordination on partnership and funding

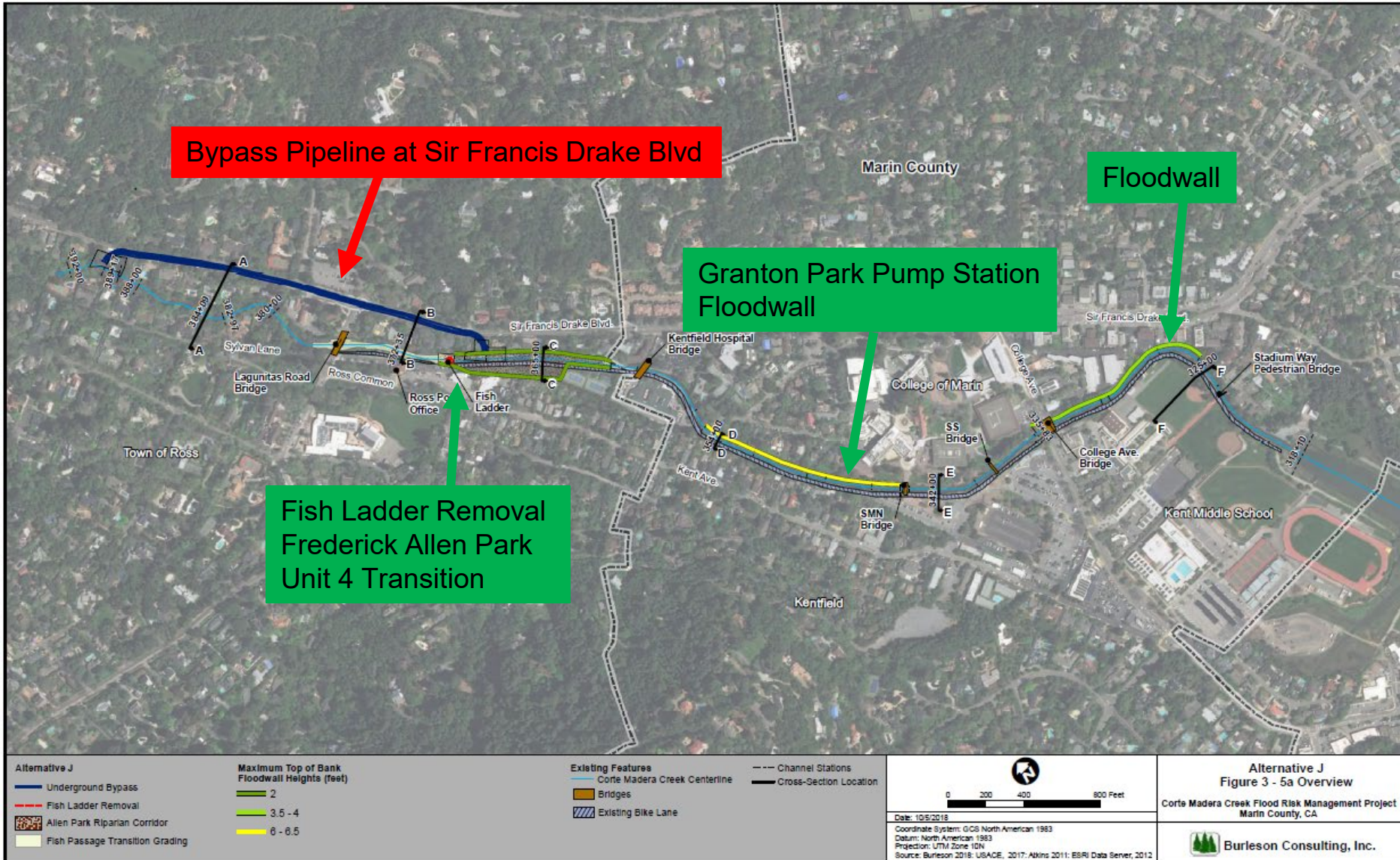
Current Efforts

Activity	Sponsor	Status
<p>Corte Madera Creek Flood Risk Management Project:</p> <ul style="list-style-type: none">• Unit 4 and Frederick Allen Park• Fish pool improvements• Floodwalls• Pump Station• Maintenance access ramp	District-Flood Zone 9	Funded through Flood Zone 9 and DWR matching grant funds. DWR grant requires construction to be completed by Dec. 31, 2022
Lower College of Marin Reach Concrete Channel Removal Project	Friends of Corte Madera Creek Watershed	60% design complete in Fall 2020. Seeking funding to complete design and construction.
Corte Madera Creek Fish Passage Project	Friends of Corte Madera Creek Watershed	30% design complete in early 2021. Seeking funding to complete design and construction.

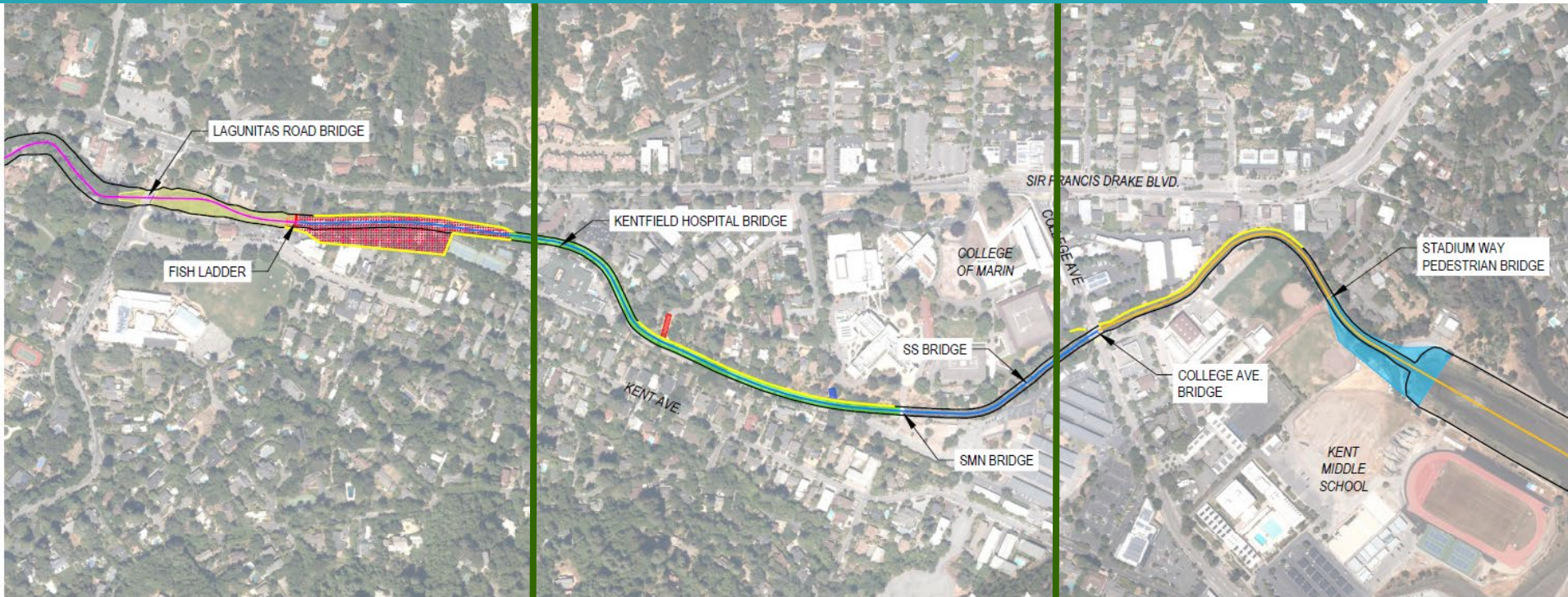
Project Components



Previous USACE-led Project (CLOSED) – Alternative J



Overview

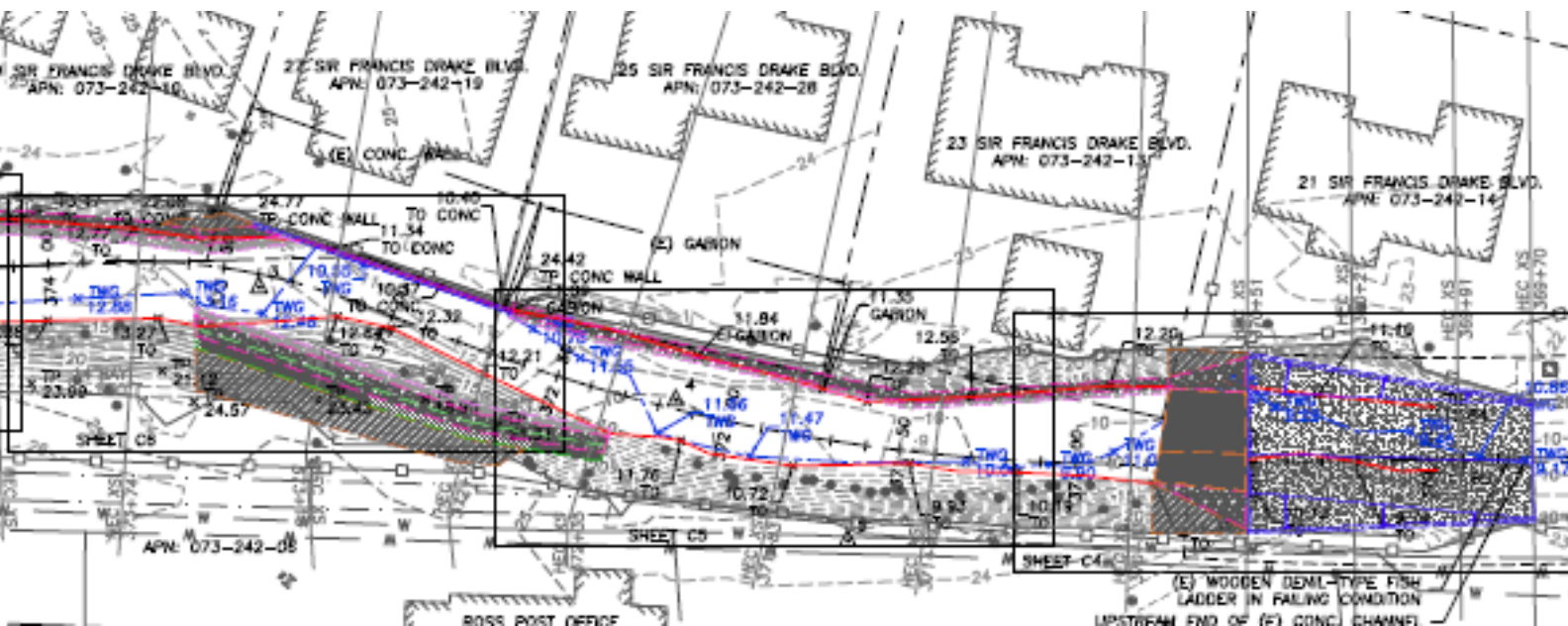
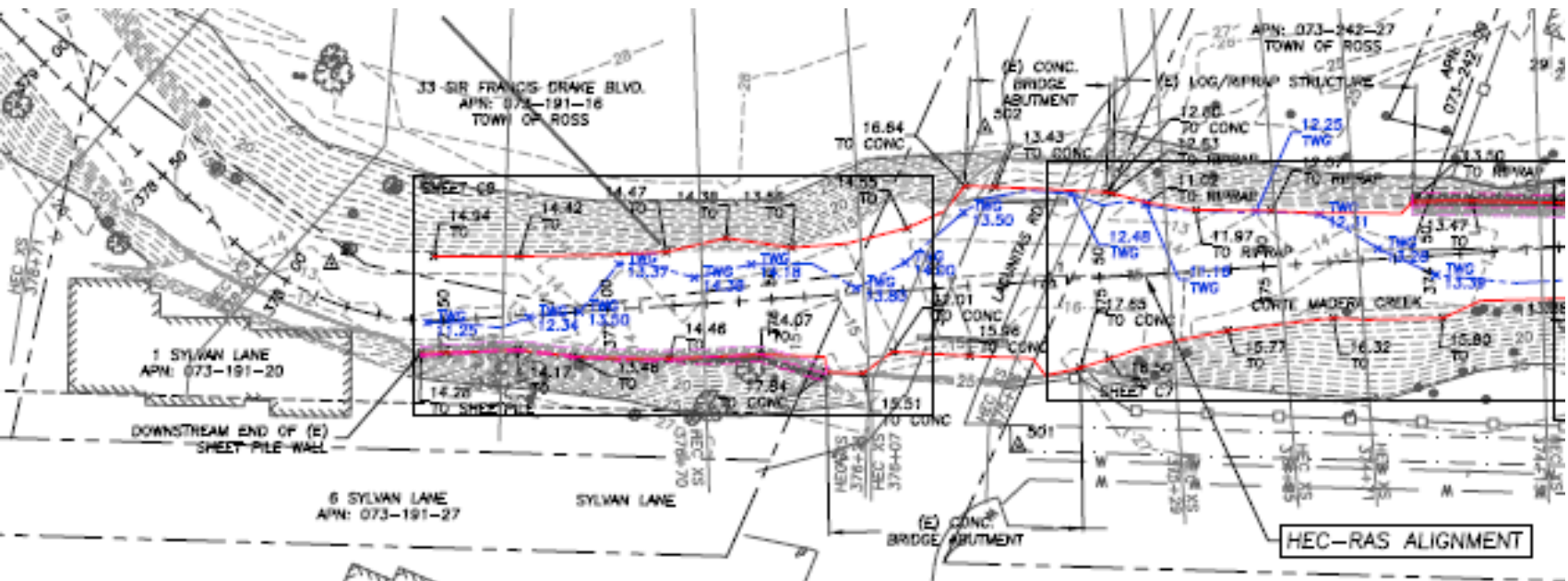


- Unit 4 channel improvements and fish ladder removal
- Frederick Allen Park floodplain restoration

- Granton Park floodwall
- Maintenance access ramp
- Granton Park stormwater pump station
- Concrete channel fish pool improvements

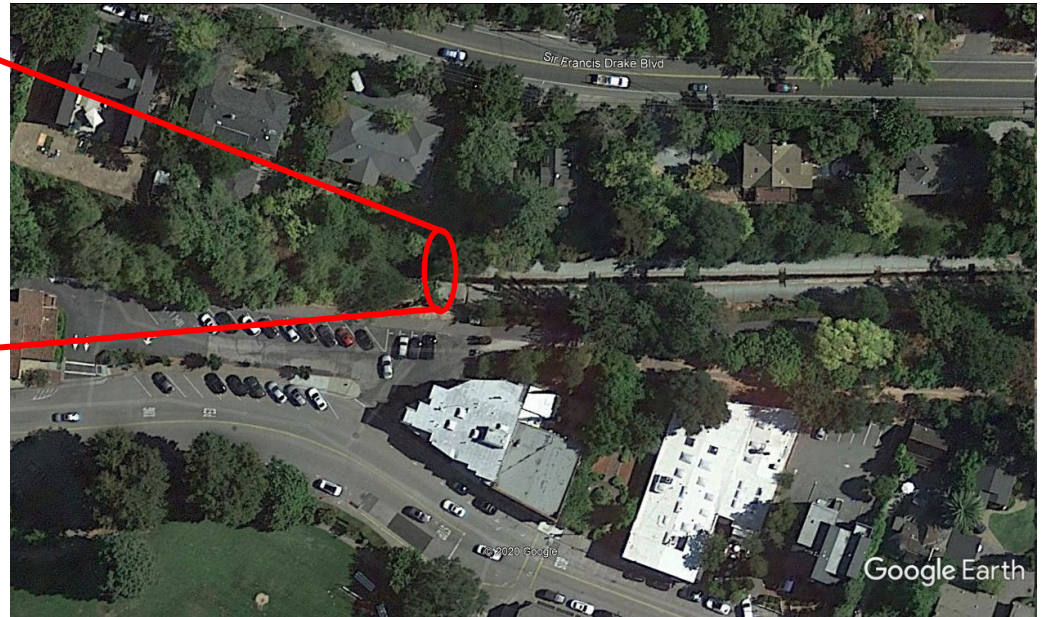
- College Ave and downstream floodwall
- Lower College of Marin reach concrete channel removal

Unit 4



Range of options in consideration at Frederick Allen Park

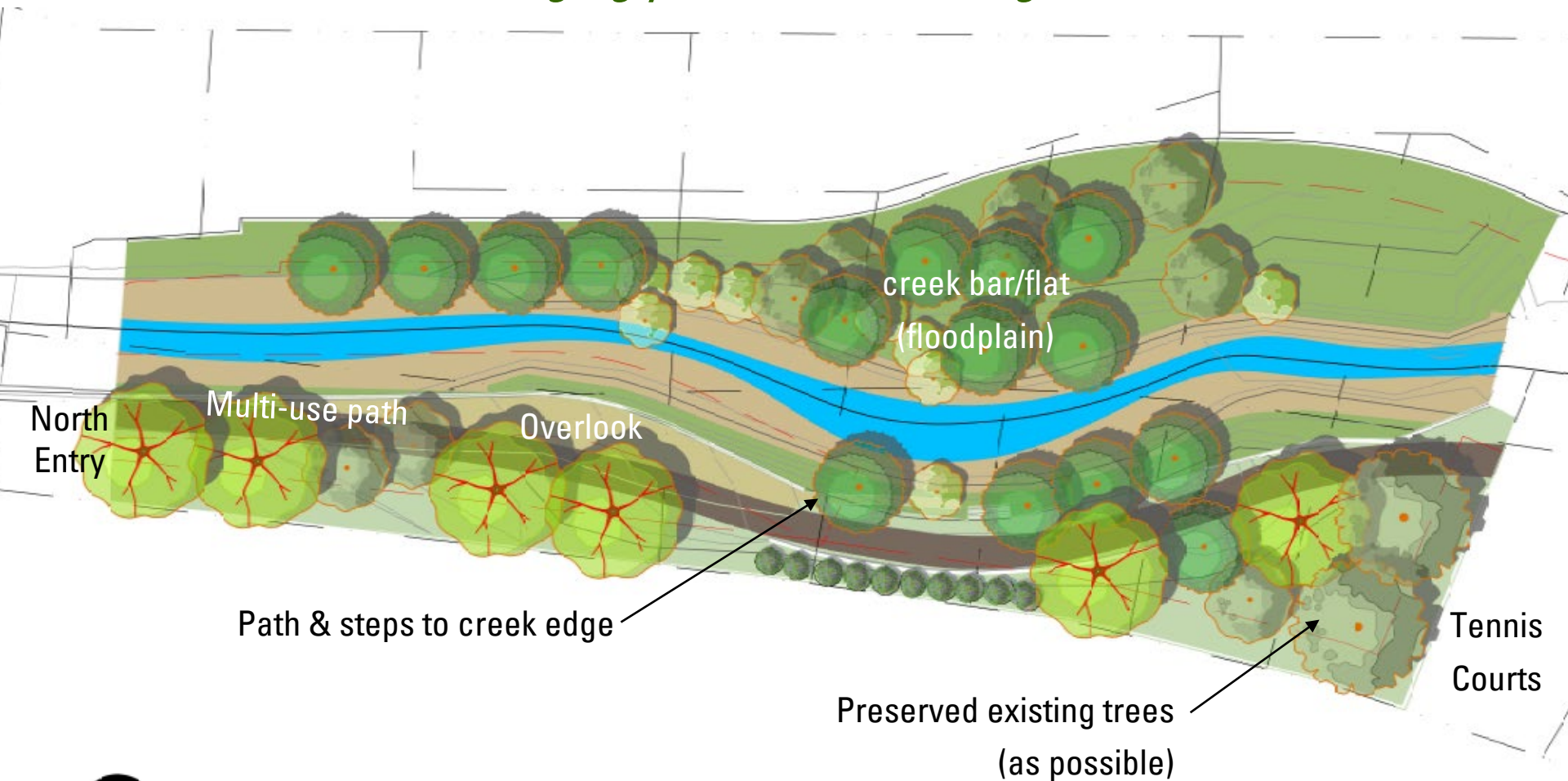
- Remove Unit 4 fish ladder only
- Left/Right Banks Improvements
- Full Improvements



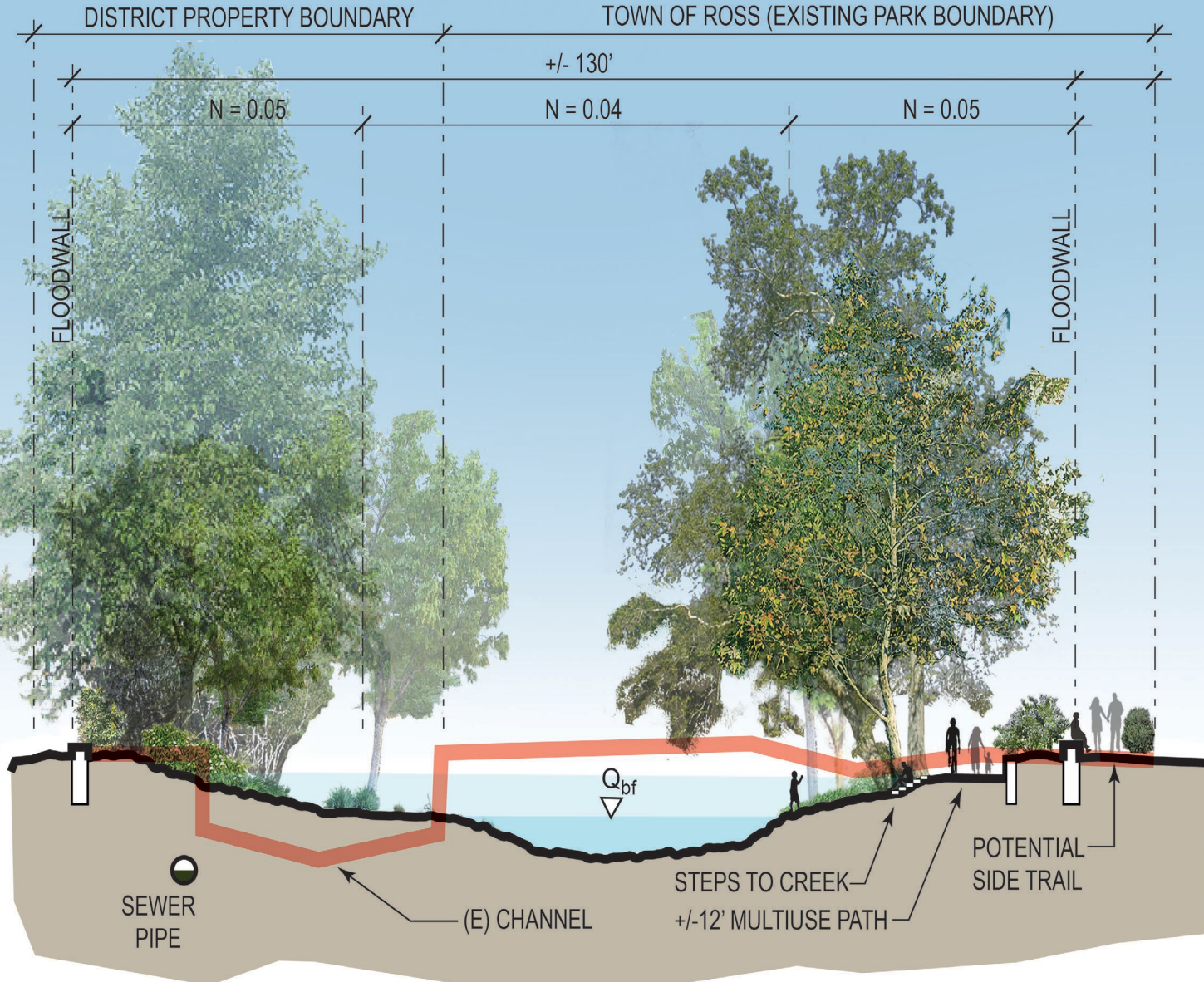
Frederick Allen Park

ALLEN PARK / CORTE MADERA CREEK CONCEPT

Bringing park and creek together

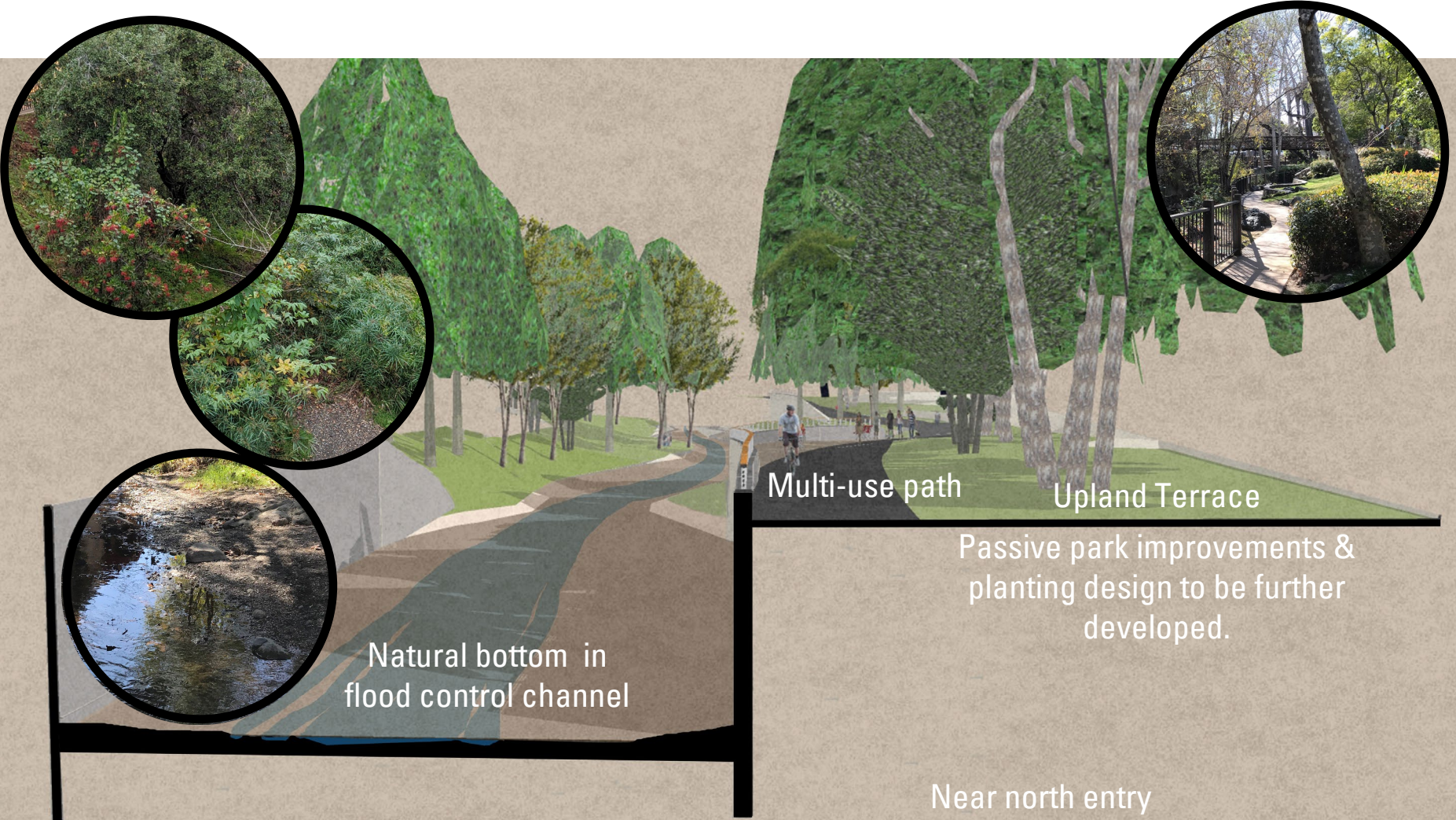


ALLEN PARK / CORTE MADERA CREEK CONCEPT SECTION



Frederick Allen Park

A walk through the park: sectional view at north entry



Frederick Allen Park

At the overlook



Frederick Allen Park

Section at widest part of creek



Upland Terrace

Floodplain

Active/ Bankfull Channel

Upland Terrace

Transition to box channel

Side path to creek

Floodplain

Multiuse Path

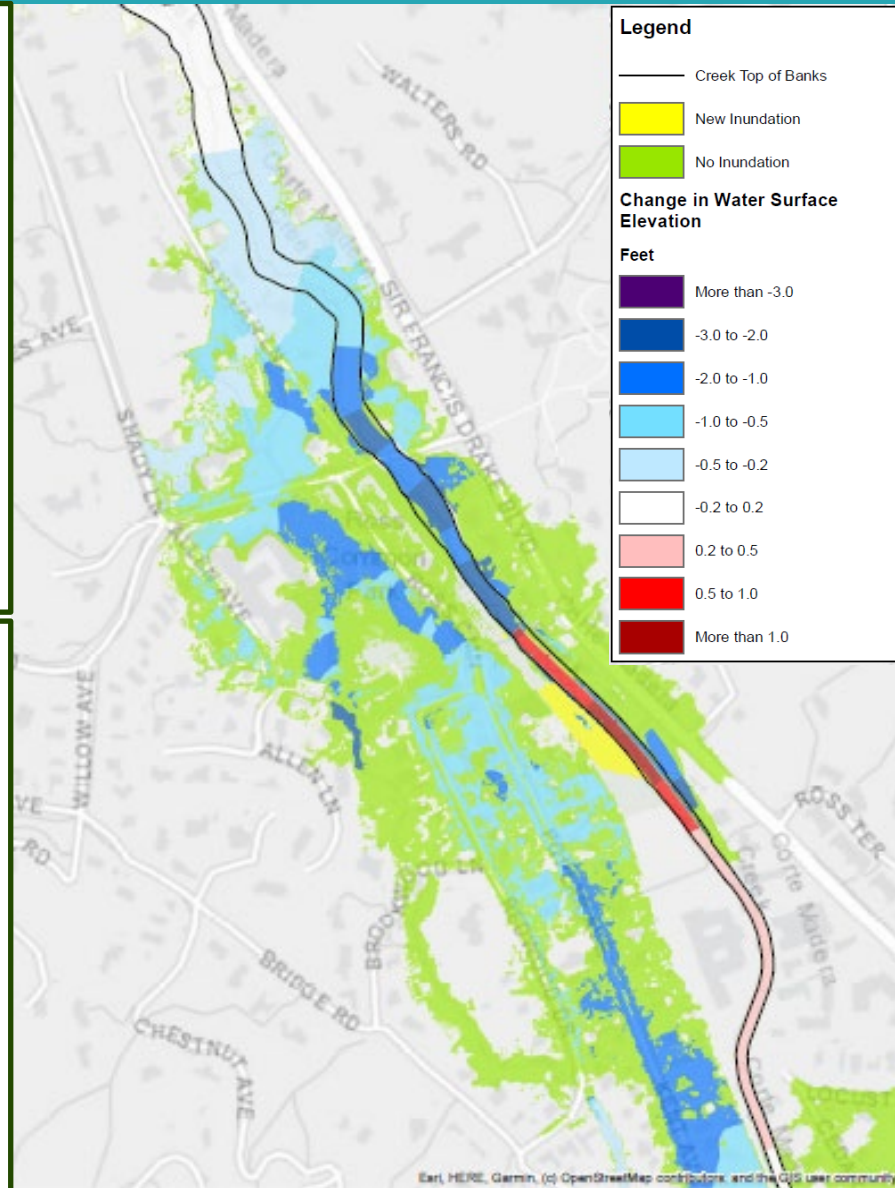
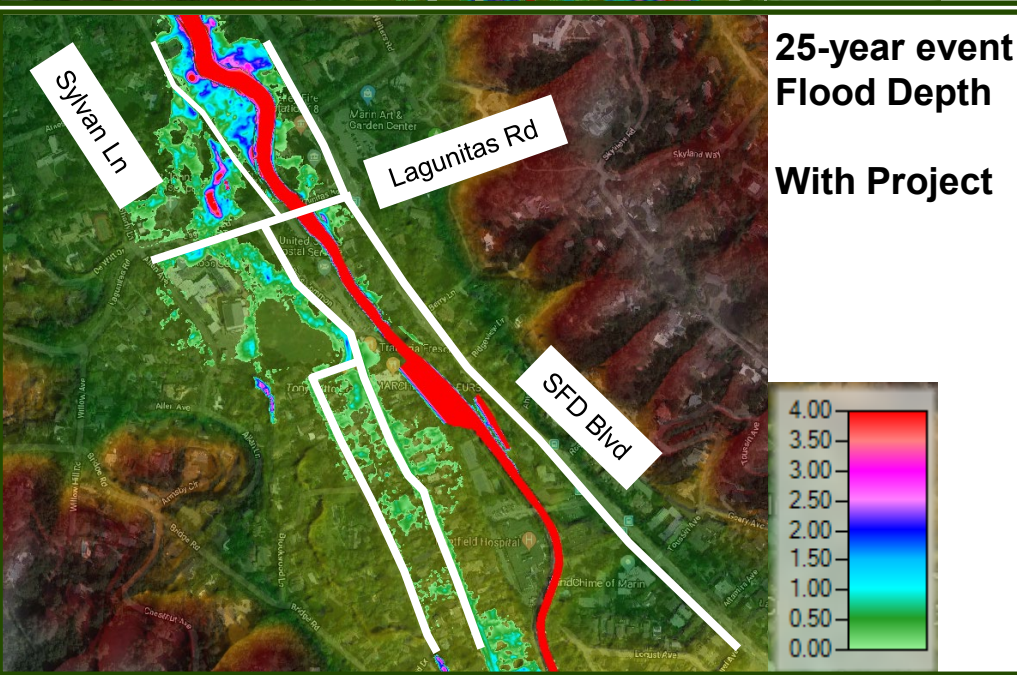
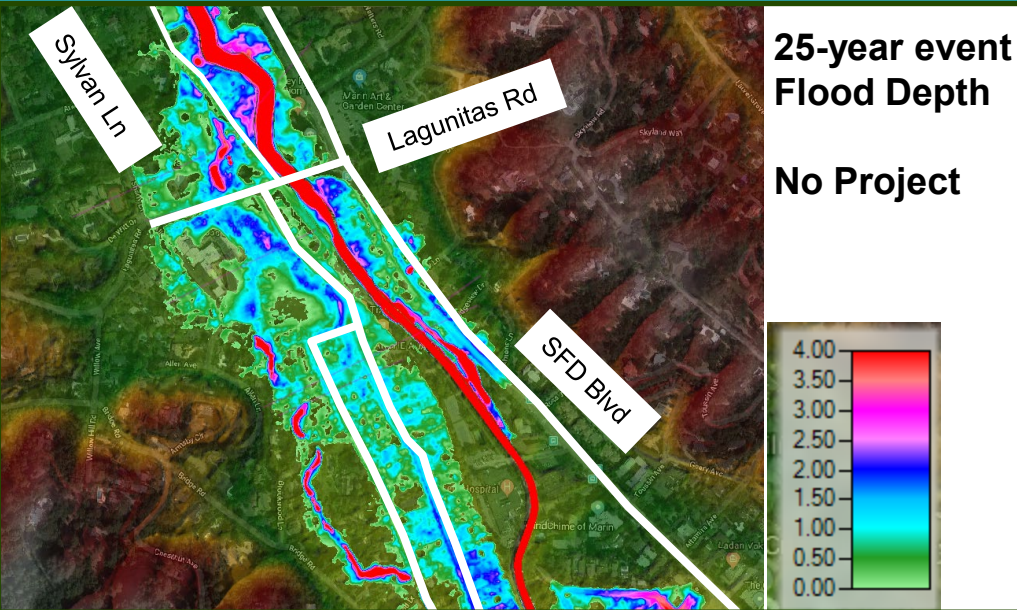
Frederick Allen Park

Looking back upstream



Preliminary Floodplain Analysis (Work-in-Progress)

Downtown Ross



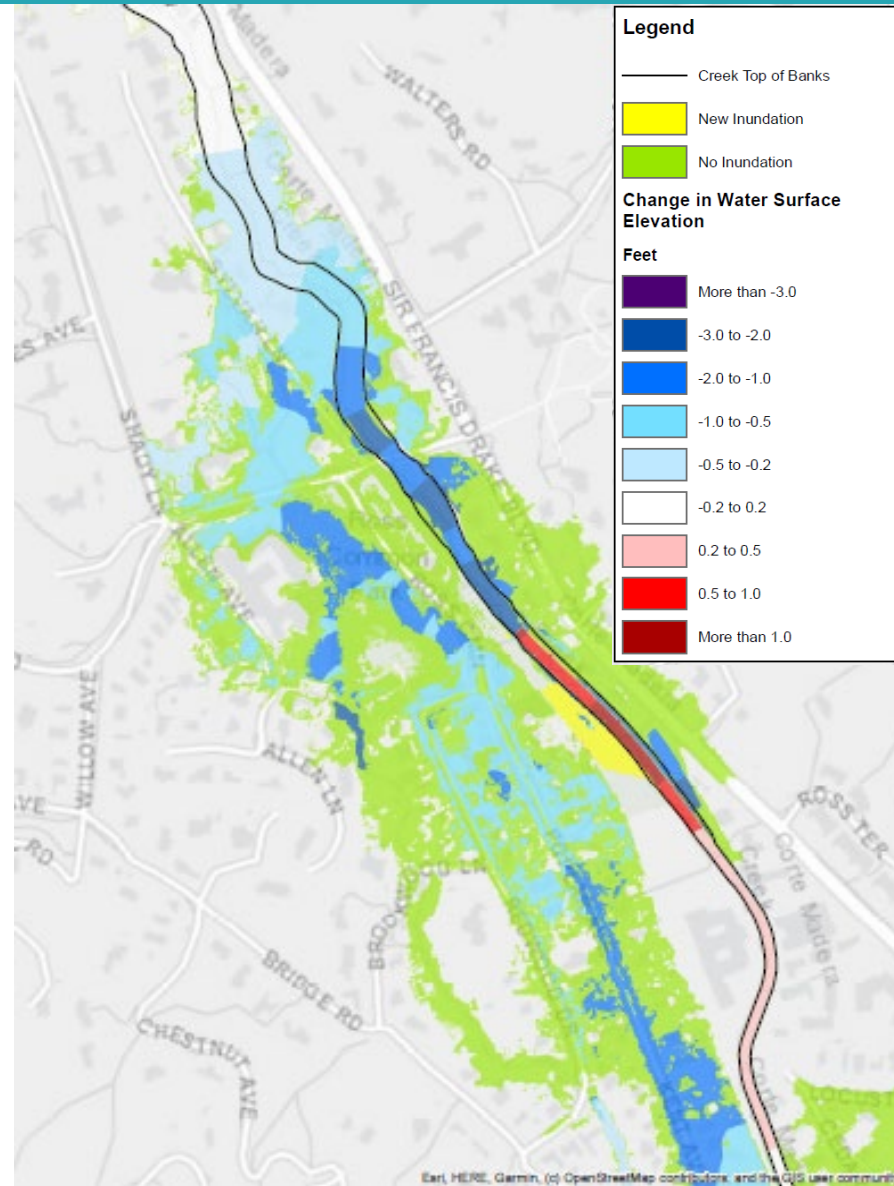
Preliminary Work-in-Progress Floodplain Change Map
25-year event, With Project minus Without Project

Preliminary Floodplain Analysis (Work-in-Progress) Downtown Ross



25-Year Event Future Condition	Allen Park Action	Water Depth
No Project	No Action	12" to 14"
With Project*	Left Bank Improvement	8" to 10"
	Right Bank Improvement	6" to 8"
	Full Improvement	6" to 8"
	Fish Ladder Removal Only	6" to 8"

* Fish passage improvement is currently in concept design and will be added into the analysis.



**Preliminary Work-in-Progress Floodplain Change Map
25-year event, With Project minus Without Project**

Granton Park Area



- | | | |
|---------------------------------|--------------------------|----------------------|
| FISH PASSAGE TRANSITION GRADING | STORM DRAIN PUMP STATION | USACE PROJECT UNIT 2 |
| ALLEN PARK RIPARIAN CORRIDOR | CHANNEL ACCESS RAMP | USACE PROJECT UNIT 3 |
| NEW FISH POOLS | (E) RVSD SAN. SEWER | USACE PROJECT UNIT 4 |
| LOW CHANNEL CONCRETE REMOVAL | FLOOD WALL | CHANNEL BANK |

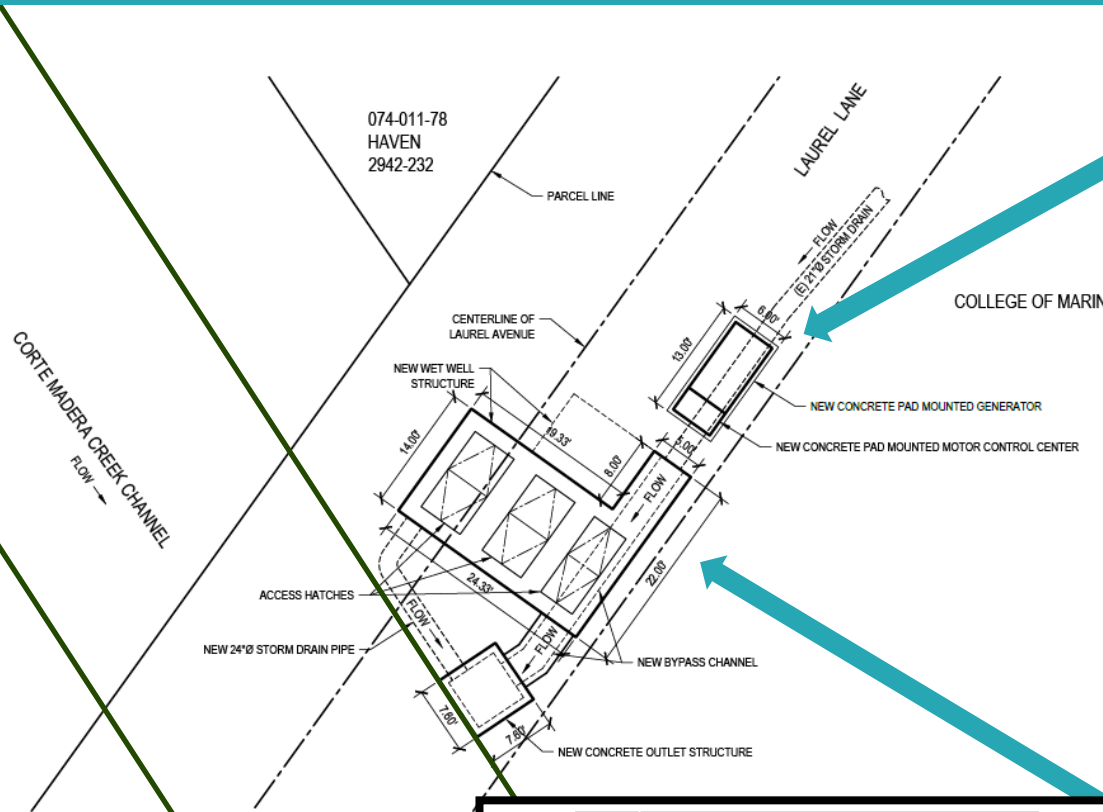
PLAN NORTH

0 50' 100'

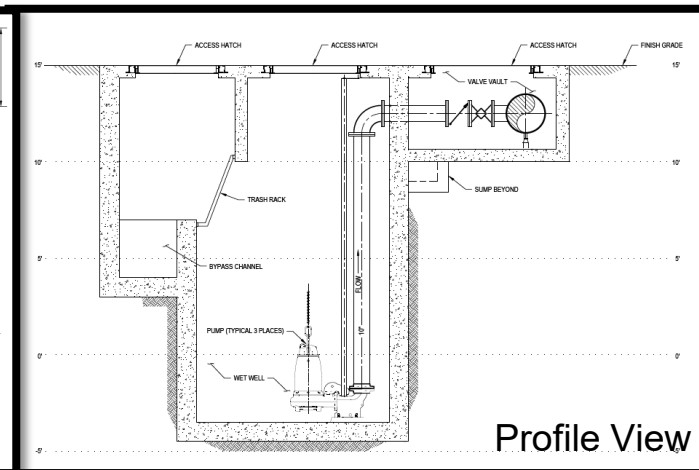
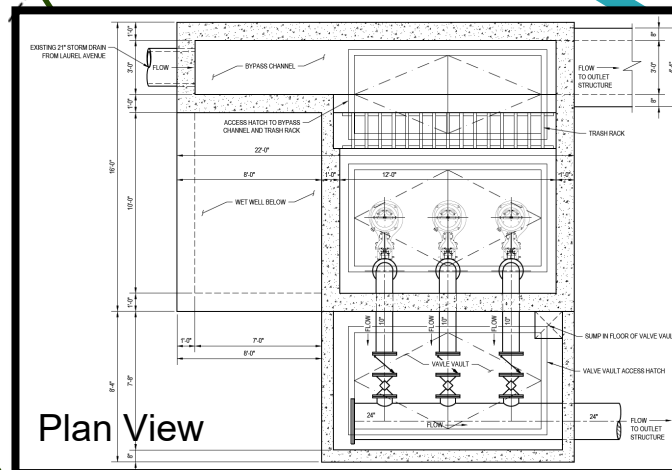
1"=100'

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Granton Park Stormwater Pump Station

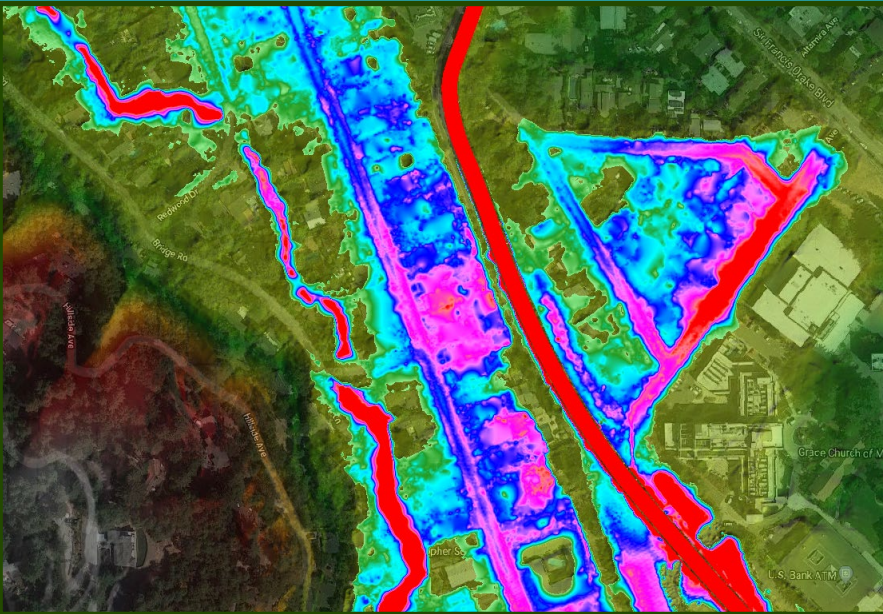


Above Ground Control Panel and Backup Generator (example)



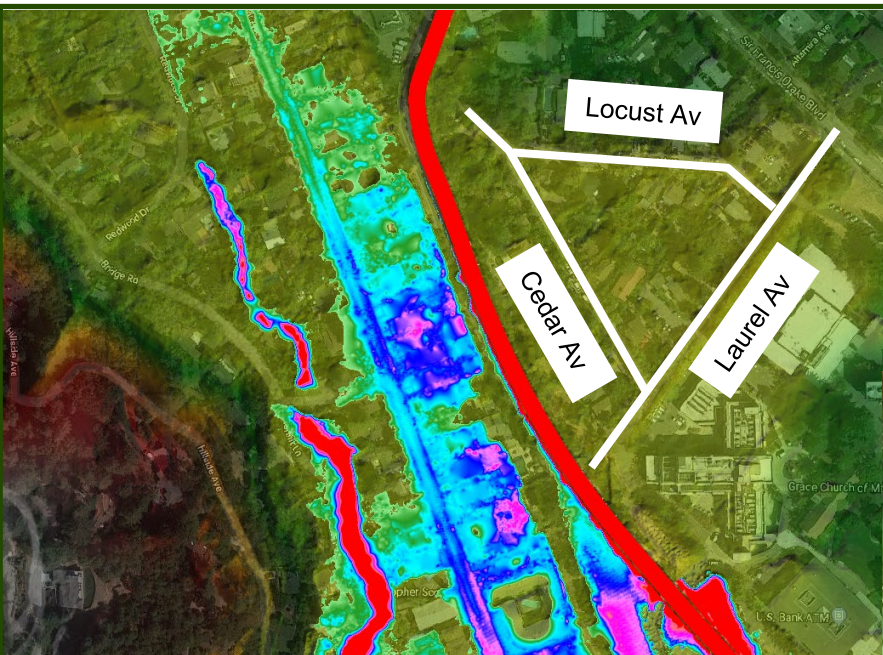
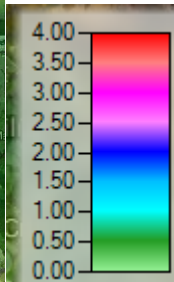
Preliminary Floodplain Analysis (Work-in-Progress)

Granton Park



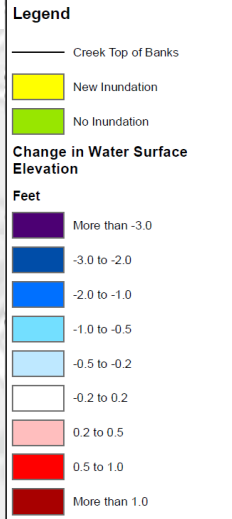
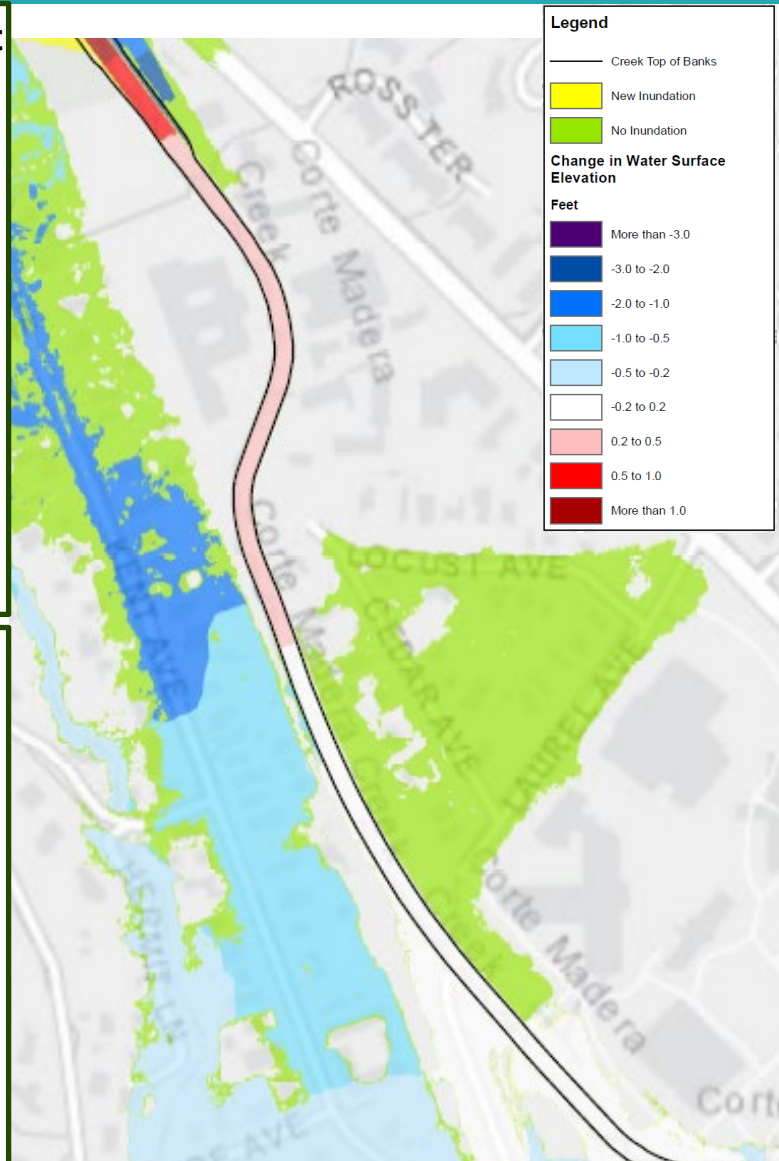
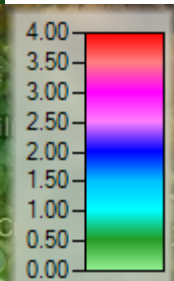
**25-year event
Flood Depth**

No Project



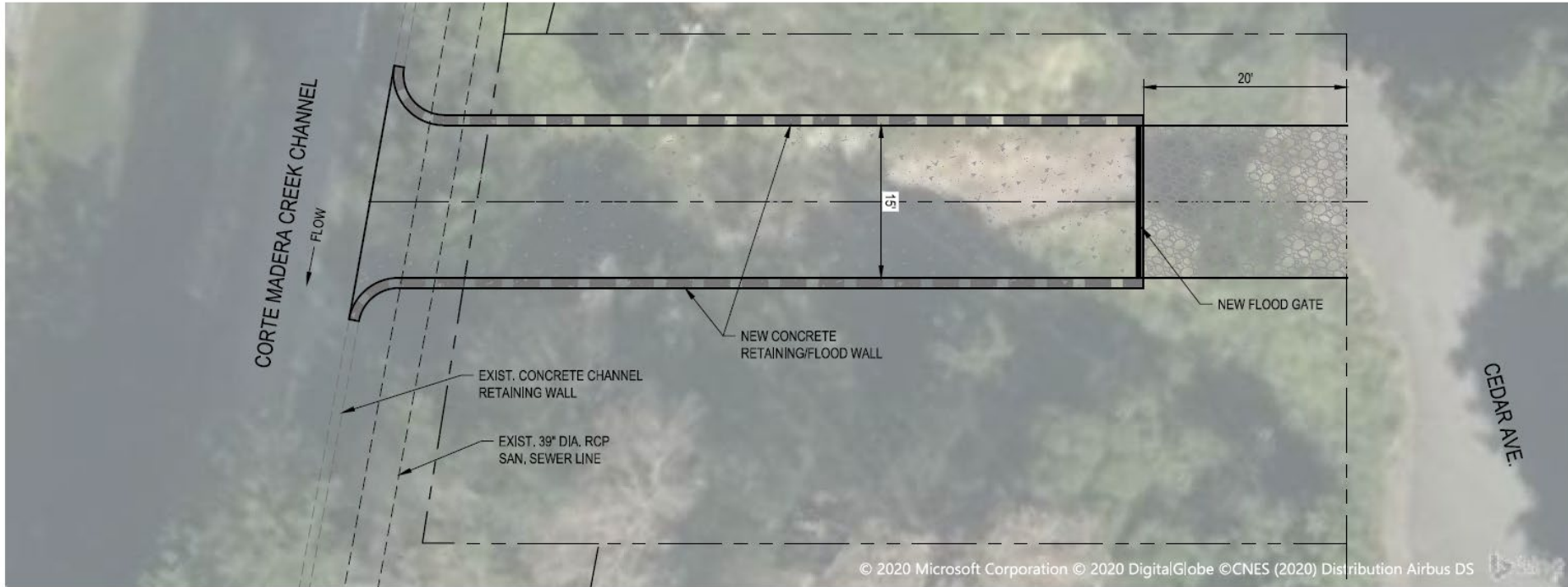
**25-year event
Flood Depth**

With Project

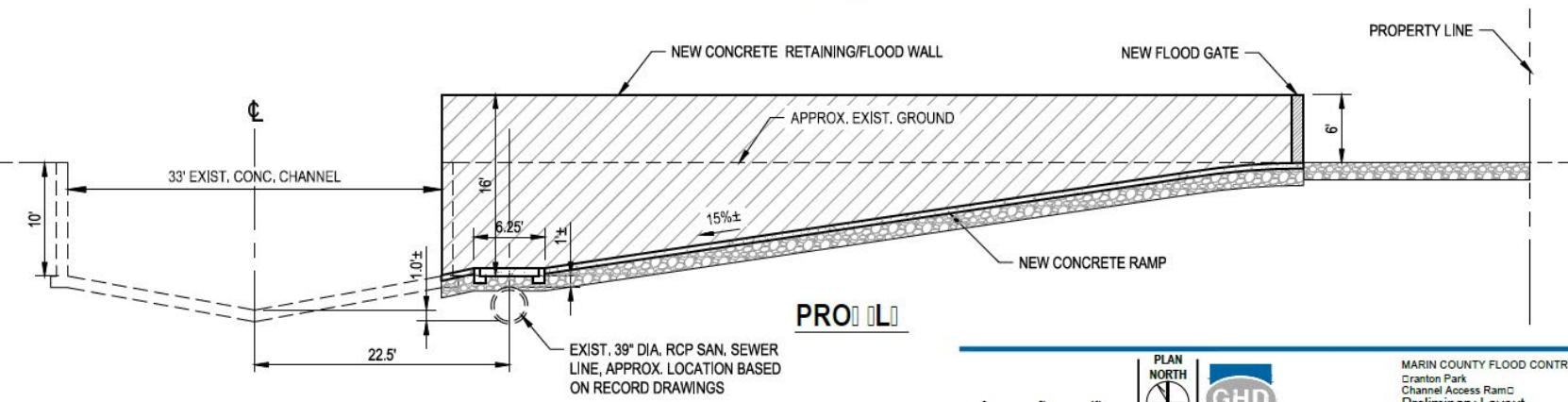


Preliminary Work-in-Progress Floodplain Change Map, 25-year event, With Project minus Without Project

Access Ramp



PLAN



1"=10'

0 5' 10'

PLAN NORTH

MARIN COUNTY FLOOD CONTROL
Cranton Park
Channel Access RamC
Preliminary Layout

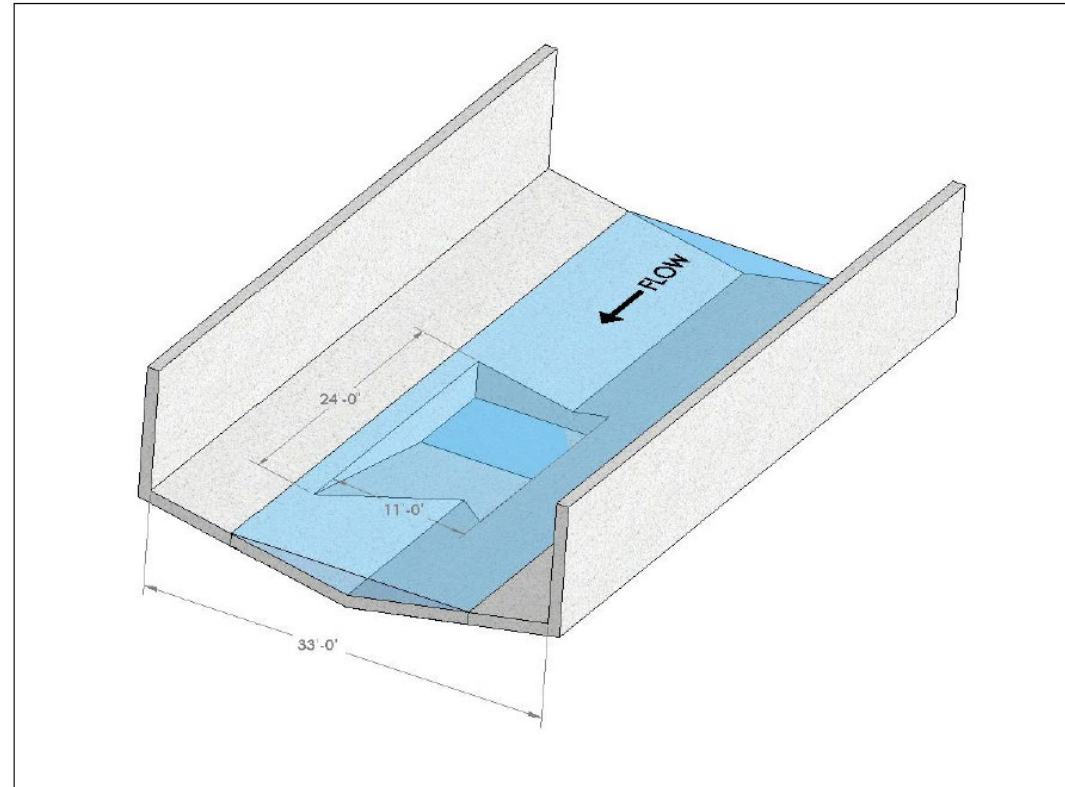
Job Number | 11188581
Revision |
Date | 02/23/2020

Figure 03

Fish Passage Improvement



4'x13' pools x 28, 64' apart



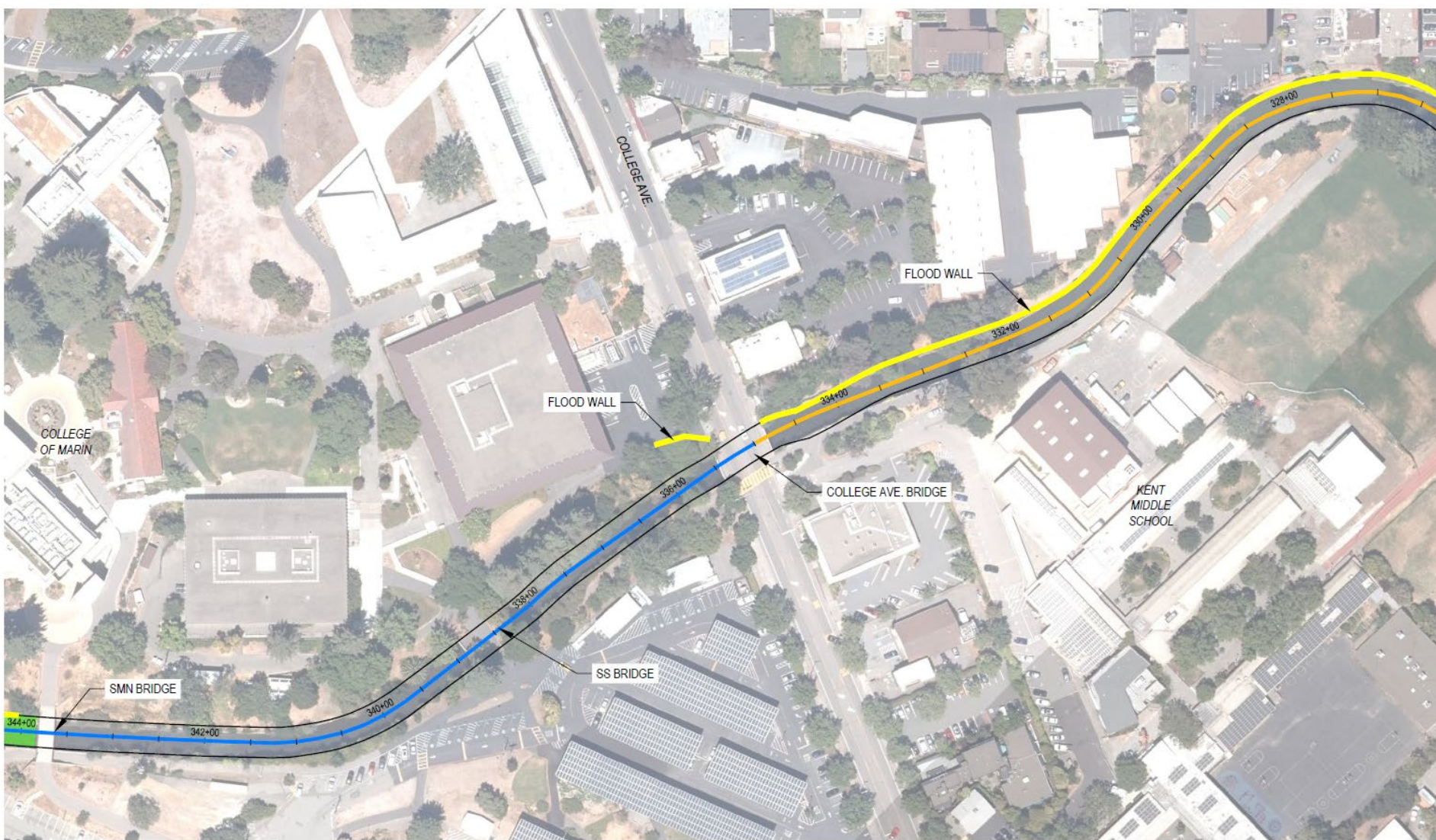
11 to 16 new pools
(MLA 2007, MLA 2019)

Concrete Channel Assessment



Photo 2-11: Concrete Cores 1 through 4 (Left to Right)

Lower College of Marin Reach



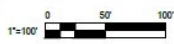
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| LOW CHANNEL CONCRETE REMOVAL | FLOOD WALL | CHANNEL BANK |

PLAN NORTH

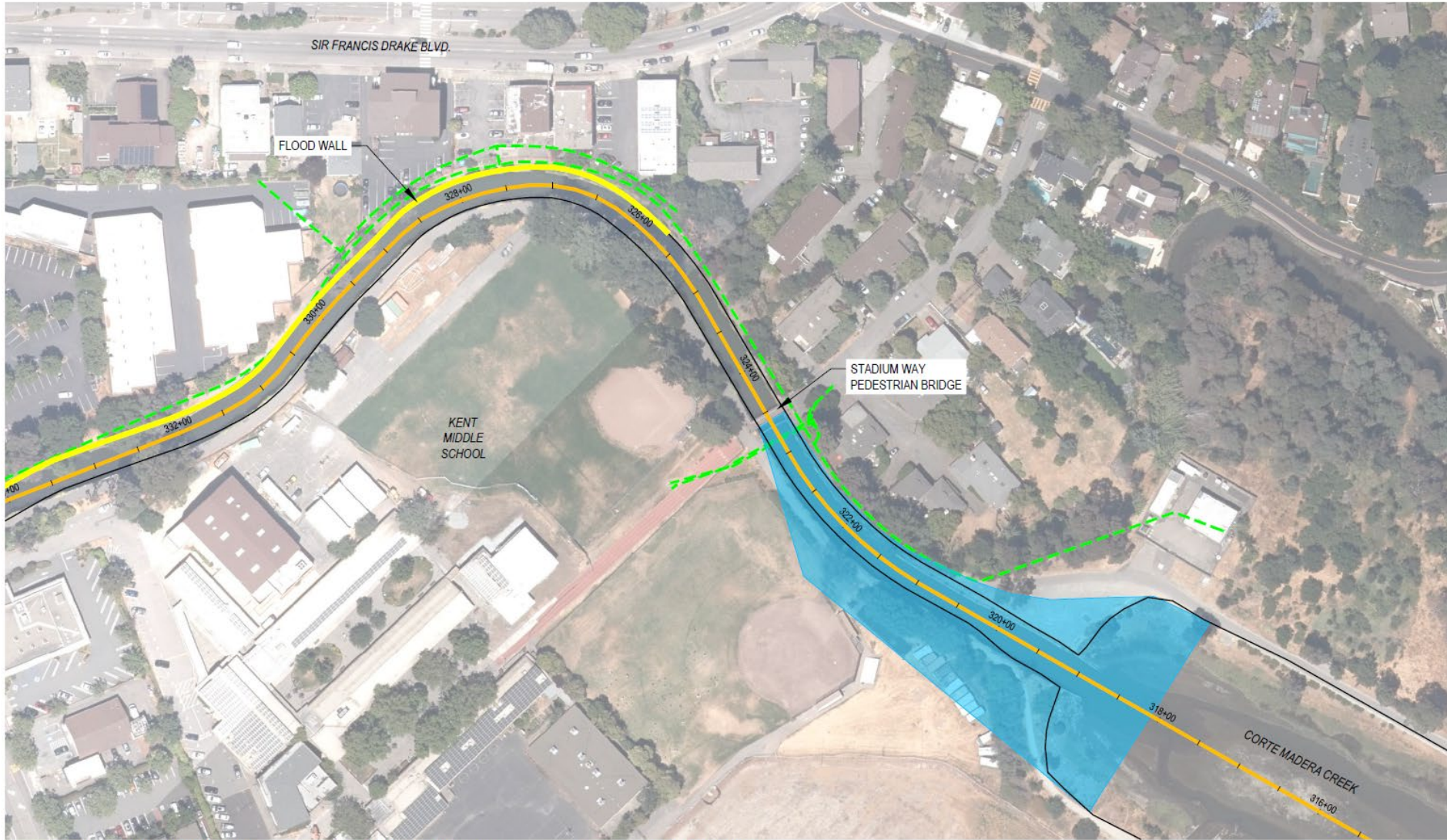
GHD

MARIN COUNTY FLOOD CONTROL
Corte Madera Creek
Flood Risk Management Project - Phase 1
Project Components
College of Marin to Kent Middle School

Job Number 11188581
Revision
Date Nov. 2019
Figure 01d



Lower College of Marin Reach



- | | | |
|---------------------------------|--------------------------|----------------------|
| FISH PASSAGE TRANSITION GRADING | STORM DRAIN PUMP STATION | USACE PROJECT UNIT 2 |
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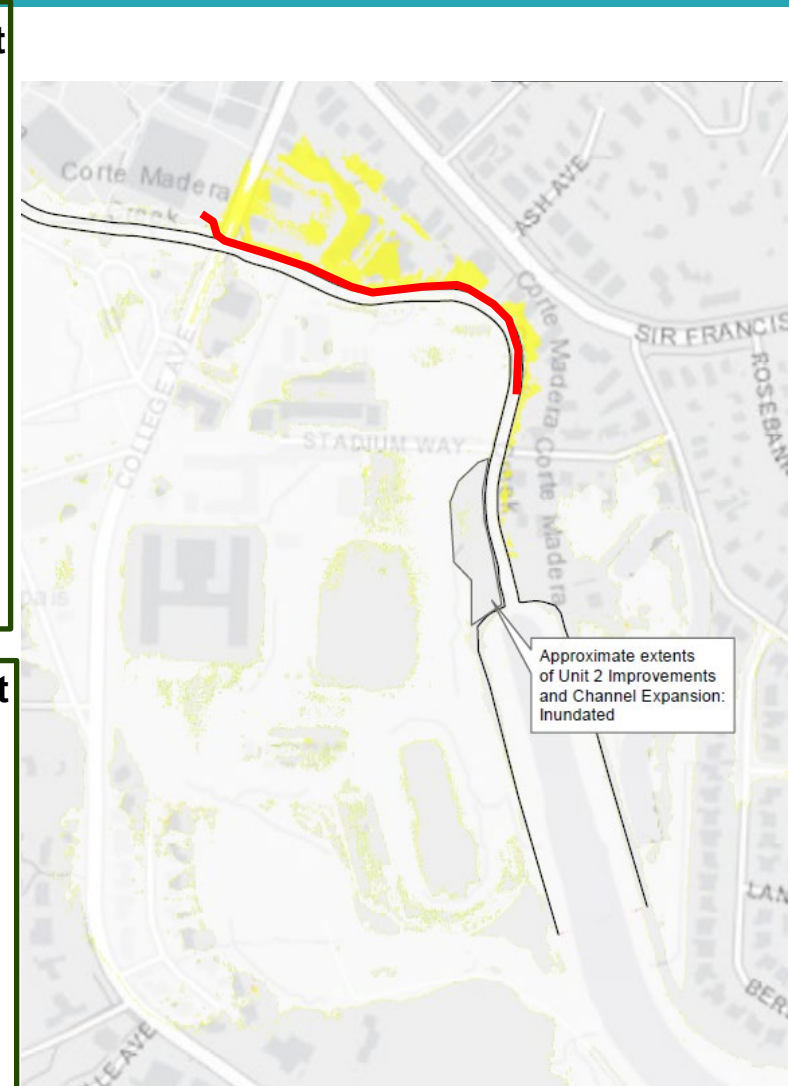
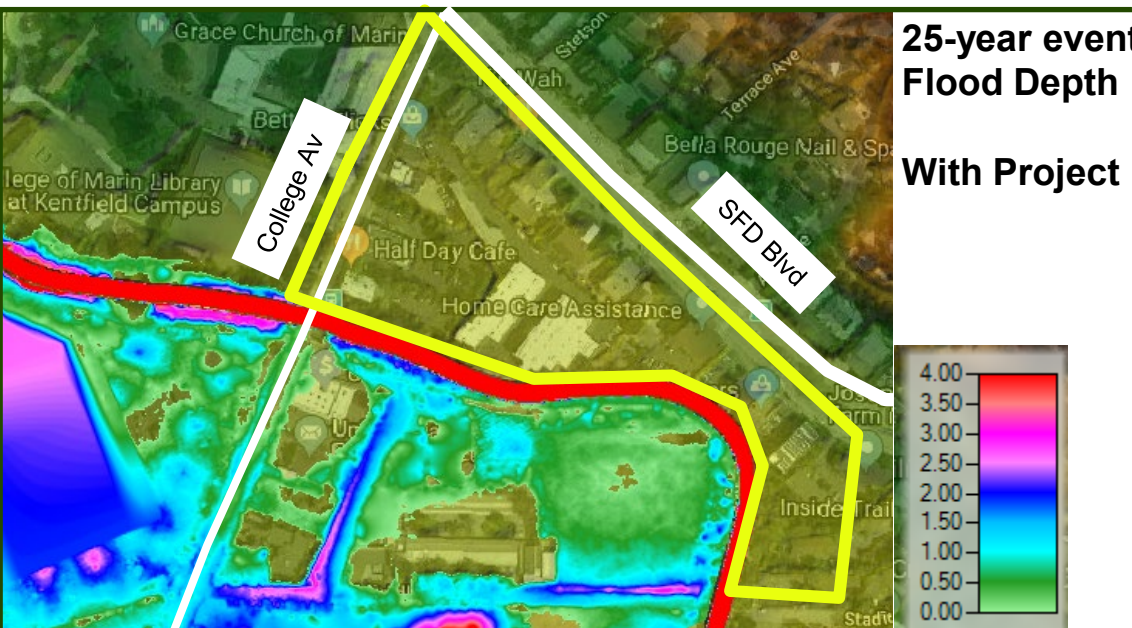
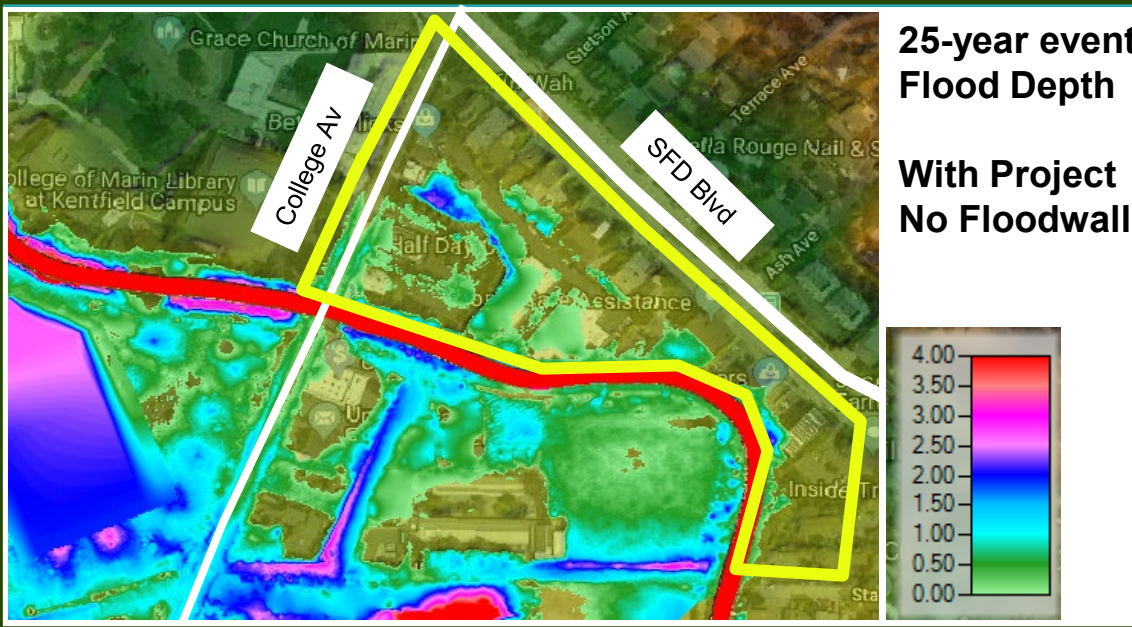
MARIN COUNTY FLOOD CONTROL
Corte Madera Creek
Flood Risk Management Project - Phase 1
Project Components
Kent Middle School to Downstream Limit

Job Number | 11188581
Revision
Date | Nov. 2019

Figure 01e

Preliminary Floodplain Analysis (Work-in-Progress)

Lower Reach



25-year event inundation areas eliminated from the proposed floodwall (Yellow)

Lower College of Marin Concrete Channel Removal



EXISTING CONDITIONS
 DATE OF FLIGHT: 5 FEB 2019 AT LOW TIDE (-0.3')
 (SEDIMENTATION DOWNSTREAM PREVENTS TIDE LEVEL
 FROM REDUCING BELOW 1.7' IN CONCRETE CHANNEL.)



PROPOSED CONDITIONS
 30% DESIGN PLAN CONCEPT
 (WATER LEVEL SHOWN AT 3.5', 2020 MSL.)



Redline

PHOTOSIMULATION
CORTE MADERA CREEK
 LOWER COM CONCRETE CHANNEL REMOVAL PROJECT

CONCEPT DESIGN No. 154
 San Rafael, CA 94901
 (415) 990-8800
www.geomorphix.com



Date: 8 MAY 2020
 Design by: MS
 Drawn by: BPS
 Checked by: MS
 Scale: NTS
 50% DESIGN PLAN SUBMITTAL

C2

Lower College of Marin Concrete Channel Removal



LEGEND

- 10 — 11 — EXISTING CONTOURS
- 100 — PROPOSED CONTOURS
- CORTE MADERA CREEK RIGHT OF WAY
- - - - - PROPERTY LINE
- △ SURVEY CONTROL POINT
- △ 75% SURVEY TOPO POINT (ELEV., DESOR)
- - - - - EXISTING EDGE OF PAVEMENT
- - - - - EXISTING EDGE OF GRAVEL PATH
- - - - - EXISTING BUILDING LINE (FROM MARINMAP GIS, APPROX.)
- ⊙ 12% EXISTING LIVE TREE
- SS UTILITIES LOCATED, MARKED, AND SURVEYED FEB 2020



SUITABLE ALL PAVEMENT CONSTRUCTION ACCESS FROM COLLEGE AVENUE

POTENTIAL CONSTRUCTION ACCESS THROUGH COM CAMPUS

(E) GROUTED ROCK

TAMALPAIS CREEK OUTLET CULVERT

CORTE MADERA CREEK

DOWNSTREAM LIMIT OF CONCRETE CHANNEL FLOOR
APN: 074-102-24 COLLEGE OF MARIN

THALWEG ALIGNMENT

UNPAVED PUBLIC PATH
MARIN COUNTY BIKE ROUTE 20

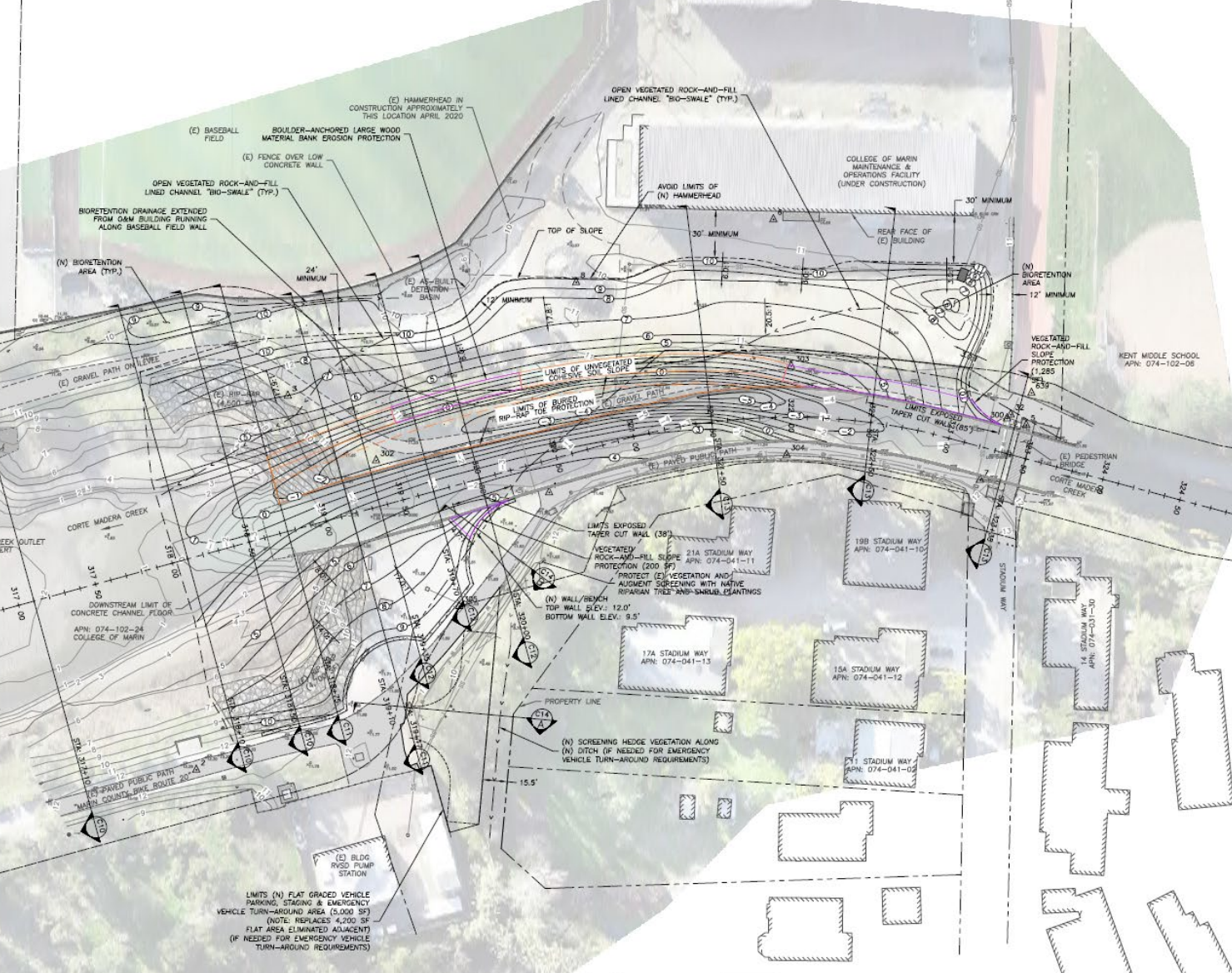
(E) BLDG RISER PUMP STATION

LIMITS (N) FLAT GRADED VEHICLE PARKING, STAGING & EMERGENCY VEHICLE TURN-AROUND AREA (5,000 SF)
(NOTE: REPLACES 4,200 SF FLAT AREA ELIMINATED ALIGNMENT (IF NEEDED FOR EMERGENCY VEHICLE TURN-AROUND REQUIREMENTS))

(E) BASEBALL FIELD

(E) HAMMERHEAD IN CONSTRUCTION APPROXIMATELY THIS LOCATION APRIL 2020

(E) BIOTECHNICAL BLDG



PROPOSED CONDITIONS SITE PLAN
SCALE: 1" = 30'



Redhead	

PROPOSED CONDITIONS SITE PLAN
CORTE MADERA CREEK
LOWER COM CONCRETE CHANNEL REMOVAL PROJECT

Geomorphic DESIGN
1460
San Rafael, CA 94901
(415) 218-1044
www.geomorphicsa.com



Dating	8 MAY 2020
Design by	MS
Drawn by	BRB
Checked by	MS
Scale	1" = 30'
30% DESIGN PLAN SUBMITTAL	

C4

Lower College of Marin Concrete Channel Removal



EXISTING CONDITIONS
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 (SEDIMENTATION DOWNSTREAM PREVENTS TIDE LEVEL
 FROM REDUCING BELOW 1.7' IN CONCRETE CHANNEL.)



PROPOSED CONDITIONS
 30% DESIGN PLAN CONCEPT
 (WATER LEVEL SHOWN AT 3.5', 2020 MSL.)



Revised:

PHOTOSIMULATION
CORTE MADERA CREEK
 LOWER COM CONCRETE CHANNEL REMOVAL PROJECT

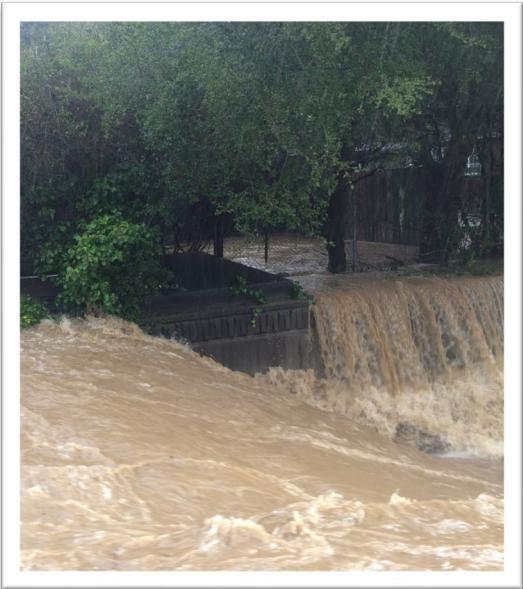
CONCEPT DESIGN No. 154
 San Rafael, CA 94901
 (415) 990-8800
www.geomorphix.com



Client:
 8 MAY 2020
 Design Int:
 MS
 Drawn By:
 BPS
 Checked By:
 MS
 Scale:
 NTS
 30% DESIGN PLAN
 SUBMITTAL

C2

Project Schedule



Next Steps

Consider public input in project components development

Complete creek hydraulic analysis and floodplain mapping

Refine Fredrick Allen Park design concept, with considerations of user experience and creek processes

Define project for the EIR process

Conduct environmental review and permitting

Project Schedule



CEQA / Public Comment

Milestone	Timing
Public Scoping/Publish NOP	August 2020
Draft EIR Published	February 2021
Final EIR Published	June 2021
Town of Ross Meeting	August 2021
District Hearing	September 2021

CEQA and Permitting to be completed by end of 2021 for construction to start in April 2022*.

Permitting

Item	File / Initiate Date	Issue / Approval Date
404 Permit	October 2020	October 2021
Section 7 Consultation	November 2020	June 2021
Section 106 Consultation	December 2020	January 2021
401 Water Quality Certification Application	November 2020	June 2021
1600 Permit Application	November 2020	June 2021
Section 408 Authorization	June 2021	September 2021

Tentatively Planned Project Construction Schedule



Phase – Proposed Components	Timeline
Construction Start	April 1, 2022
In-creek Construction Work	June 15 – October 15
Flood Wall (Segment #1) Construction	April 1 – July 7
Flood Wall (Segment #2) Construction	July 8 – August 25
Flood Wall (Segment #3) Construction	April 1 – July 14
Lower Channel Concrete Removal	June 8 – September 6
Fish Pool Construction	June 15 – October 11
Granton Park Storm Drain Pump Station Construction	April 1 – May 26
Channel Access Ramp Construction	April 1 – July 14
Frederick Allen Park Construction	June 1 – October 25
Fish Passage Transition Grading	June 15 – August 30
Construction End	October 25, 2022

All construction tied to the DWR grant funds must be completed by December 31, 2022.

More Information

Send comments or questions to:
cortemaderacreek@marincounty.org

Sign up for GovDelivery

Project webpage

<https://www.marinwatersheds.org/resources/projects/corte-madera-creek-flood-risk-management-project>

Coffee Talk with the District in July

Survey after this meeting

Comment during EIR process



Questions / Comments

Joining by computer or mobile device: Type your question into the question bar OR use the “Raise Hand” button to ask your question, and we will unmute you

Joining by phone: Press *9 to inform the moderator that you would like comment and we will unmute you

