

# Point Reyes - Giacomini Public Access



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# Meeting Purpose

- Review Marin County Trails Objectives
- Presentation on public access options at Giacomini/Point Reyes
  - Potential non-vehicular bridge across Lagunitas Creek
  - Potential Levee Road Alignment
- Identify community interest and need in additional public access
  - Reinitiate community discussion
  - Initial input on public access options

# Agenda

- Welcome
- Meeting format
- Background
  - Cross-Marin Trail
  - Giacomini Wetland Restoration Project
- Public Access Concepts
  - Lagunitas Creek Bridge
  - Levee Road Trail
- Public Breakout/Comment period
- Next Steps

# Cross Marin Trail Background

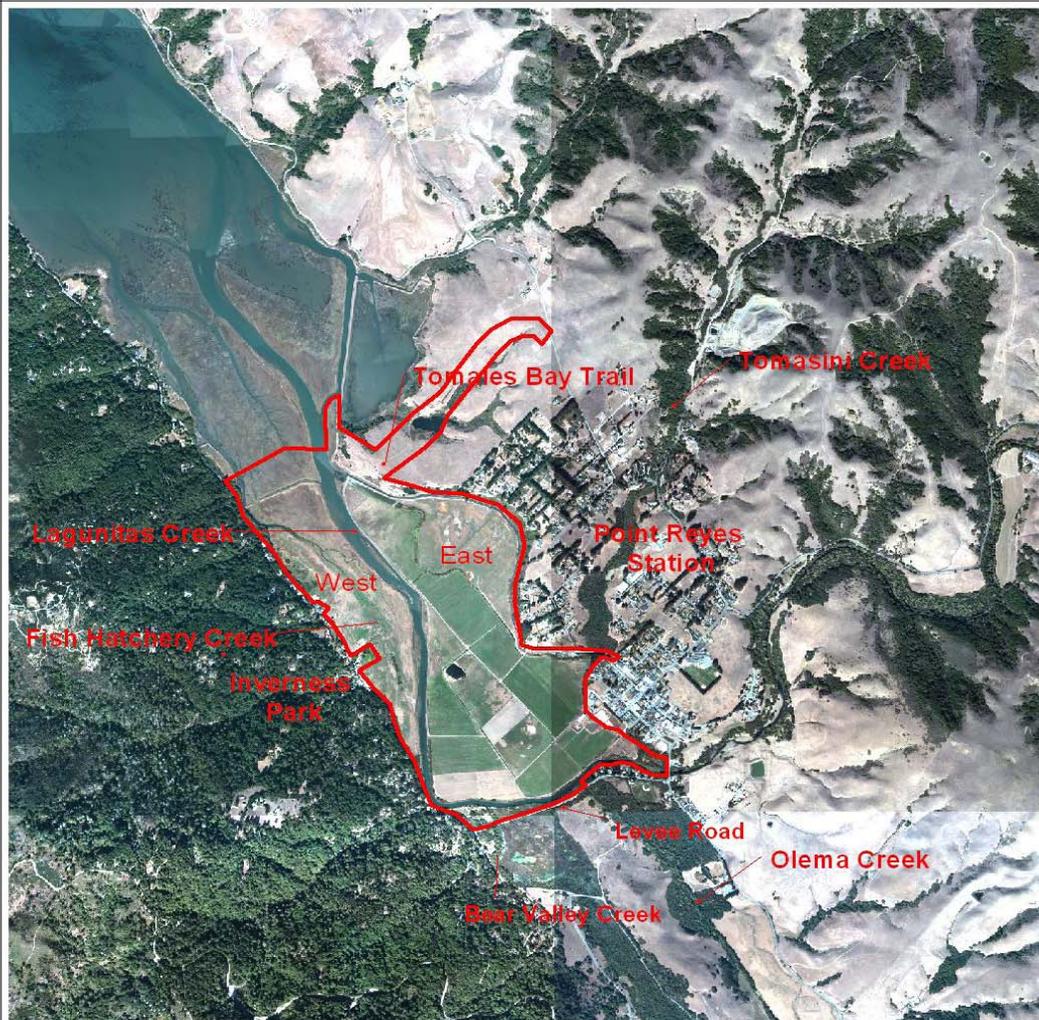


# Giacomini Wetland Restoration Project Update



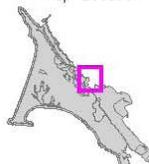
# Project Area Location

## Giacomini Wetland Restoration Project



1000 0 1000 2000 Feet

Map Location



National Park Service  
Golden Gate National Recreation Area/  
Point Reyes National Seashore

Figure 1. Location of Giacomini  
Wetland Restoration Project Area

# Relationship to Giacomini Wetland Restoration Project

## Public Access-Related Project Goal

*Enable the public to experience the restoration process as long as opportunities do not conflict with the project's purpose.*

## ➔ Primary Project Purpose

*Restore natural hydrologic and ecological processes and functions in a significant portion of the Project Area*



# Relationship to Giacomini Wetland Restoration Project

## Development of Restoration and Public Access Components as Part of Alternatives

- Conducted extensive surveys and investigations to identify site and resource conditions and, therefore, potential opportunities and constraints
- Used this information to guide development of restoration and public access components
- Landpeople Report, 2005



# Relationship to Giacomini Wetland Restoration Project

## Design Considerations and Constraints

- > 90% of Project Area is already wetland
  - *Wetlands occur on edge and perimeter, as well as interior*
  - *>40% subject to tides on a daily basis; will increase with sea level rise*
- Project Area in 100-Year Floodplain
  - *Project Area and adjacent areas flood regularly even on small events*
  - *Removal of levees will direct brunt of flood flows onto Giacomini Ranch*
- Existing and Potential Future Habitat and Use by Threatened and Endangered Species
- Accessibility Considerations

# Relationship to Giacomini Wetland Restoration Project

- Four alternatives developed
  - ***Degree of restoration and public access varied***
    - Alternative A – least restoration; most public access
    - Alternative D – most restoration; least public access
    - All components meet goal of allowing public to experience and enjoy restored wetlands
  - ***Bridge across Lagunitas Creek incorporated in three alternatives (A-C)***
    - 200-foot prefabricated structure
    - Located at old summer dam
  - ***Levee Road***
    - Evaluated in technical studies
    - Referenced in EIS/EIR, but not carried forward in EIS/EIR for detailed analysis

# Relationship to Giacomini Wetland Restoration Project

## *Interactive and Integrative Process*

- Public Meeting and Scoping – Fall 2002/Winter 2003
- Four (4) Public Workshops – Spring/Summer 2004
- Five (5) Public Access Workshops – Spring 2005
- Release of DEIS/EIR – December 2006
  - *Public Meeting for DEIS/EIR – January 2007*

## Relationship to Giacomini Wetland Restoration Project

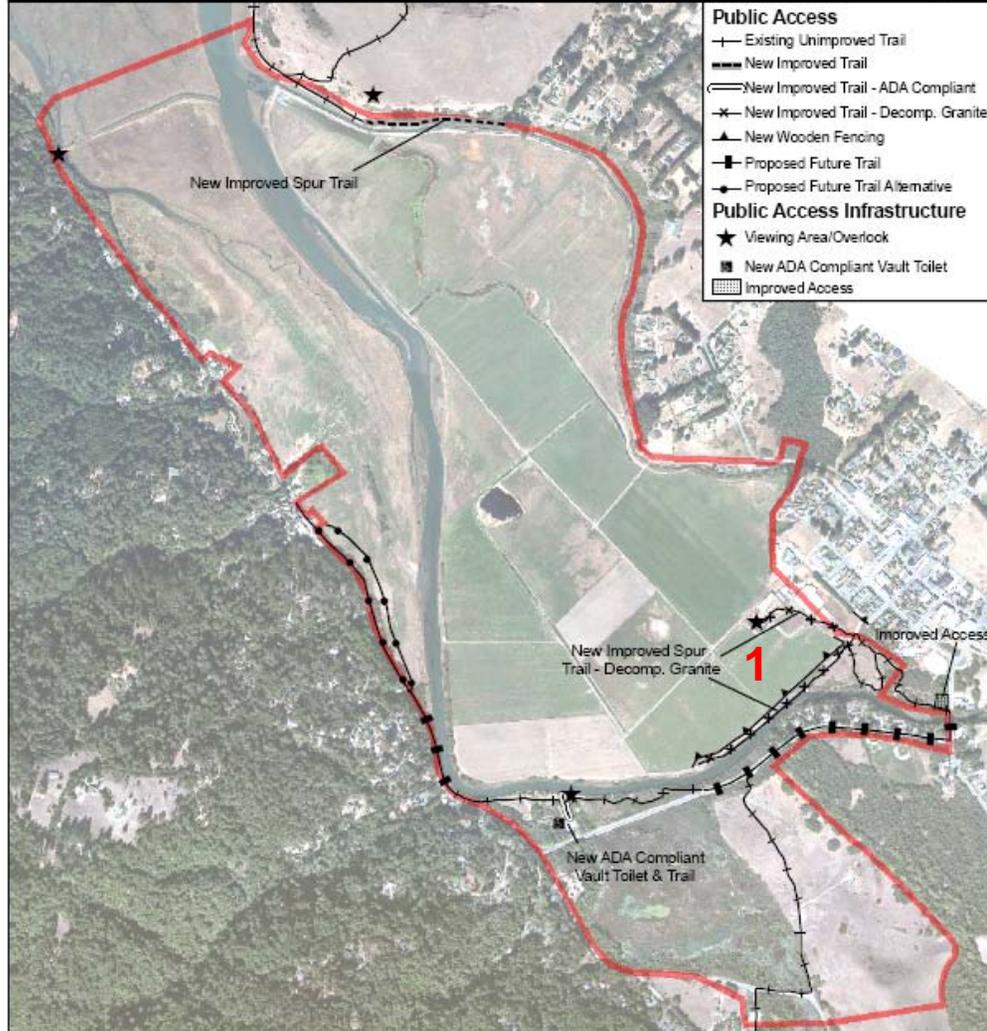
- Alternative C – which had bridge -- presented as Agency – preferred alternative at meeting
- During meeting and comment period, however, majority of comments supported selection of Alternative D, which had NO bridge
  - *All commenters supported maximum restoration*
  - *Most commenters did NOT want bridge*
  - *Some urged Park to reconsider Levee Road as an alternative to a bridge, including Levee Road residents*

## Relationship to Giacomini Wetland Restoration Project

- Structure of Certified FEIS/EIR and ROD
  - *Incorporates public access components in Alternative D*

# Alternative D - Public Access

## Giacomini Wetland Restoration Project



- Public Access**
- Existing Unimproved Trail
  - New Improved Trail
  - New Improved Trail - ADA Compliant
  - New Improved Trail - Decomp. Granite
  - New Wooden Fencing
  - Proposed Future Trail
  - Proposed Future Trail Alternative
- Public Access Infrastructure**
- Viewing Area/Overlook
  - New ADA Compliant Vault Toilet
  - Improved Access

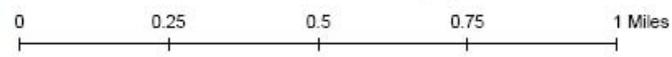
Location Map



National Park Service  
Point Reyes National Seashore/  
Golden Gate National Recreation Area  
Marin County, CA



Figure 17



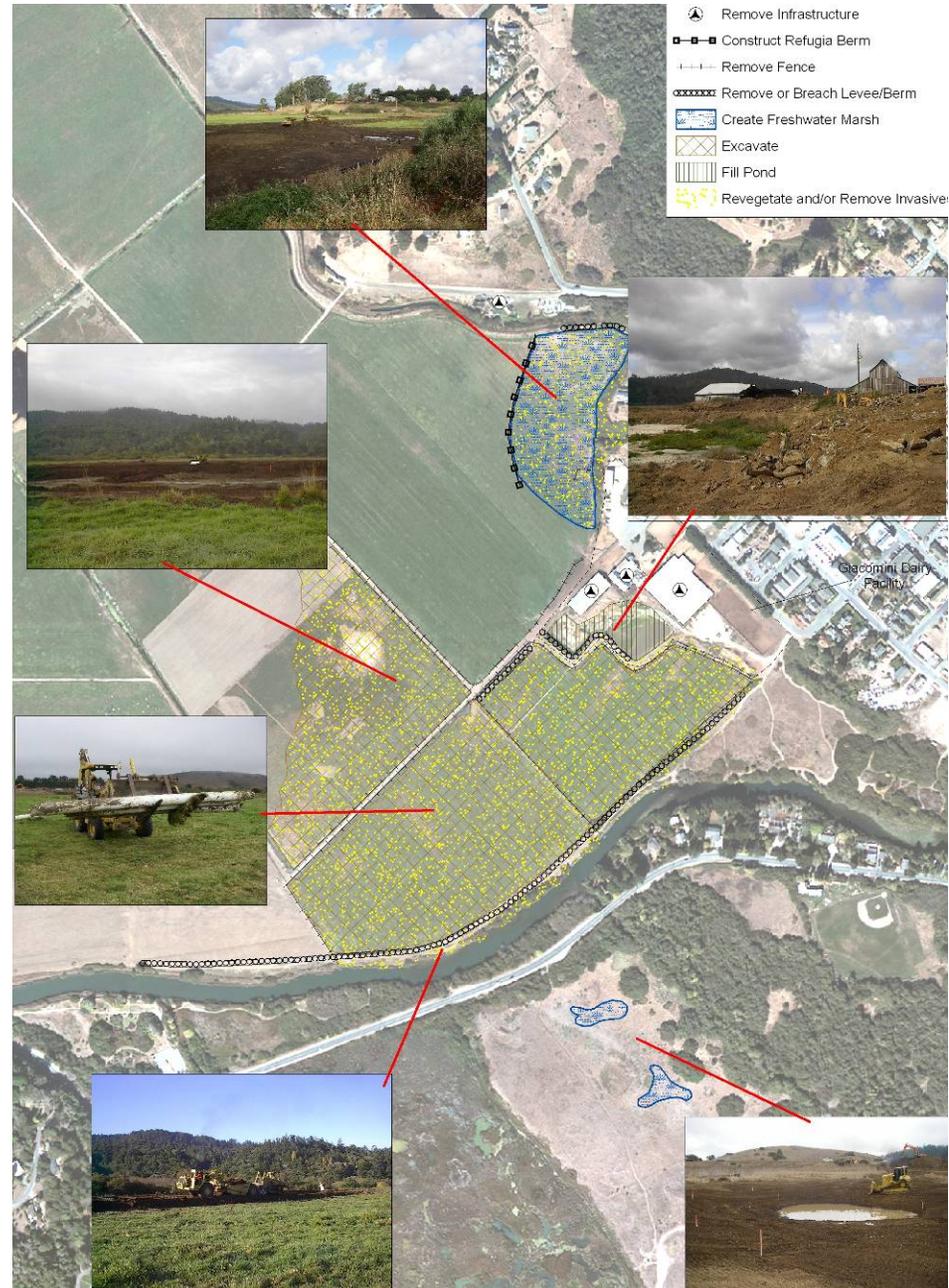
# Relationship to Giacomini Wetland Restoration Project

- Structure of Certified FEIS/EIR and ROD
  - *Incorporates public access components in Alternative D*
  - *Southern Perimeter Trail components incorporated as potential future collaboration with County of Marin*
    - Lack of community consensus suggested that these elements “not ripe for decision” by NEPA project-planning standards
    - Need to bring to table all agencies with stake in lands, including County of Marin
    - NPS committed to working with County of Marin on reevaluating access options, including:
      - *Bridge across Lagunitas Creek*
      - *Levee Road*
      - *Extension of trail from White House Pool park to Inverness Park*

# Relationship to Giacomini Wetland Restoration Project

## Phase I – Restoration

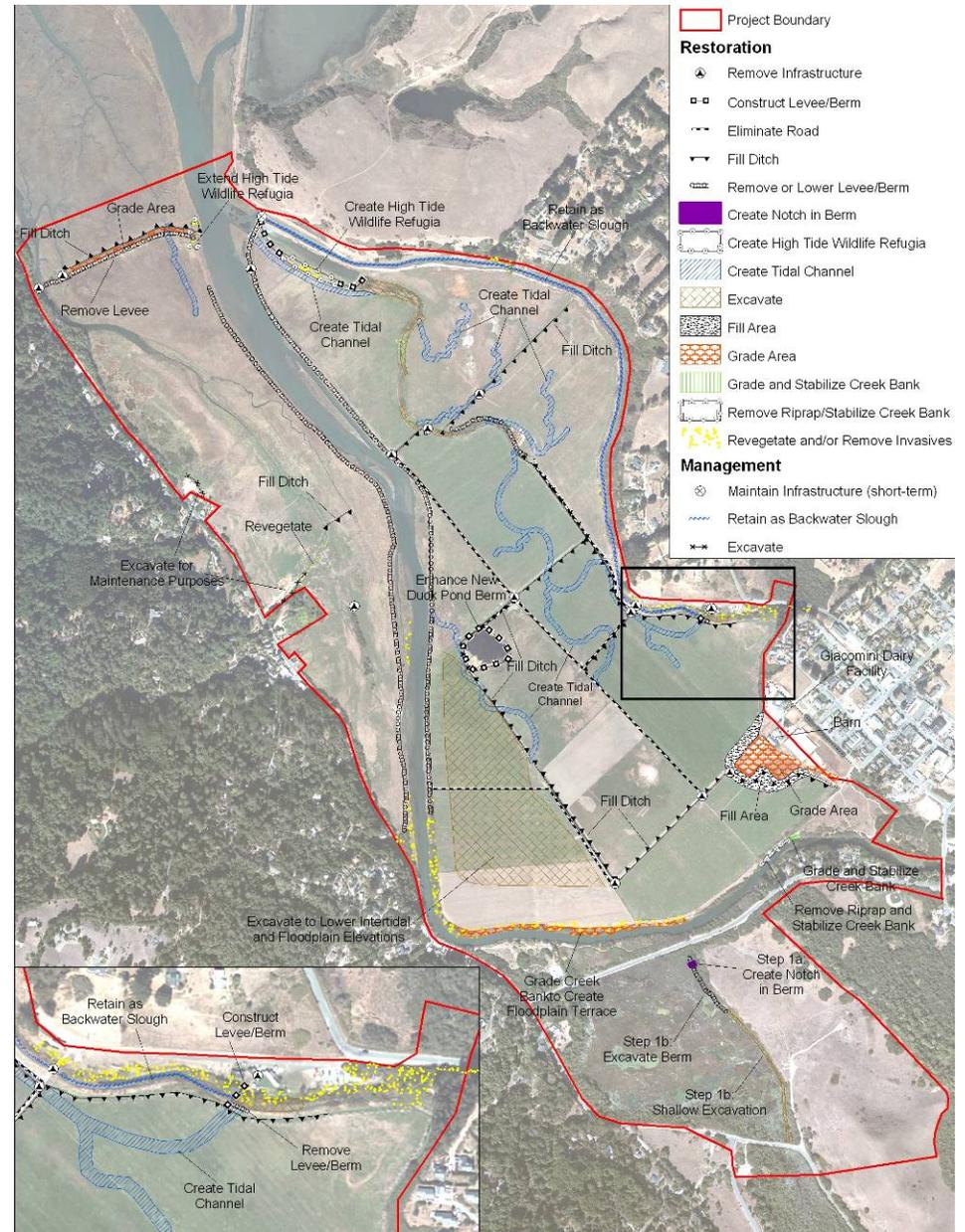
Fall 2007



# Relationship to Giacomini Wetland Restoration Project

## Phase II – Restoration

Summer – Fall 2008



# Relationship to Giacomini Wetland Restoration Project



*Beginning of  
pasture  
conversion  
following flood-  
related levee  
breach*



*Resurgence in  
native grasses*



Meadow  
barley



Wildrye



*Former levee  
area floods  
after big  
storm*



# Point Reyes - Giacomini Public Access



## Background – Point Reyes-Giacomini Public Access

- The National Park Service and County of Marin initiated additional investigation of this expanded public access from Point Reyes to White House Pool in fall 2007
- Extension of a trail to Inverness Park will be a later phase

# Point Reyes-Giacomini Public Access

## *Who are the partners and potential partners?*

- **National Park Service**

- Owns Giacomini Ranch and portion of Olema Marsh, south of Levee Road

- **County of Marin**

- Leases White House Pool County park, Green Bridge County park
- Owns Levee Road

- **State of California**

- Owns center of Lagunitas Creek in Giacomini Ranch
- Owns Green Bridge and White House Pool County park

- **California Department of Transportation**

- Owns State Route 1

# Point Reyes-Giacomini Public Access

## ***Community-public access interests identified in preliminary meetings:***

- Increase community connectivity
- Increase pedestrian and bicyclist safety
- Increase opportunities for use of alternative transportation
- Provide additional opportunities for viewing restored Olema Marsh and Giacomini Ranch

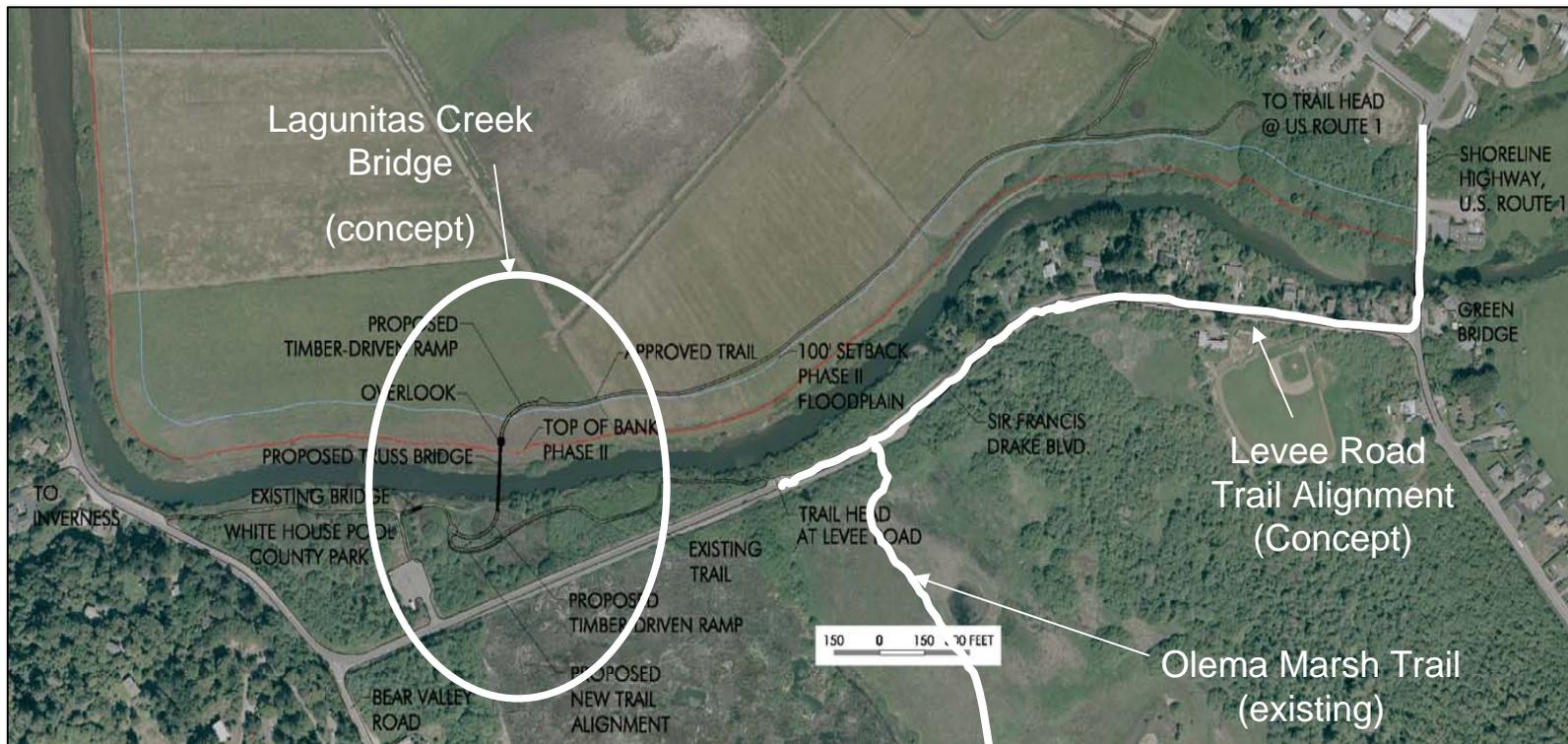
# Point Reyes-Giacomini Public Access

## *Reinitiate Community Discussion*

- **What Was Needed for the Community and the Public to Adequately Understand Options**
  - Photomontage of bridge showing what potential feasible bridge structure might conceptually look like
    - Required that some initial design work be conducted, however:
    - Meant to be conceptual and not representation of type of bridge that would actually be built
  - Better understanding of type of path possible and desirable on Levee Road and constraints

# Conceptual Pedestrian Alignments

- **Lagunitas Creek Bridge:** Provides connection from White House Pool County Park to Lagunitas Creek spur trail, ending at Green Bridge County Park
- **Improve Levee Road and potentially Green Bridge Pedestrian Causeway:** Provides connection from White House Pool County Park to Green Bridge via Levee Road, ending at Green Bridge County Park



# Point Reyes-Giacomini Public Access

## *Design Considerations for Both Options*

- **Flooding**
- **Accessibility requirements**
- **User groups and associated requirements (e.g., pedestrians, cyclists, horses, etc.)**

# Lagunitas Creek and Levee Road Flood Data



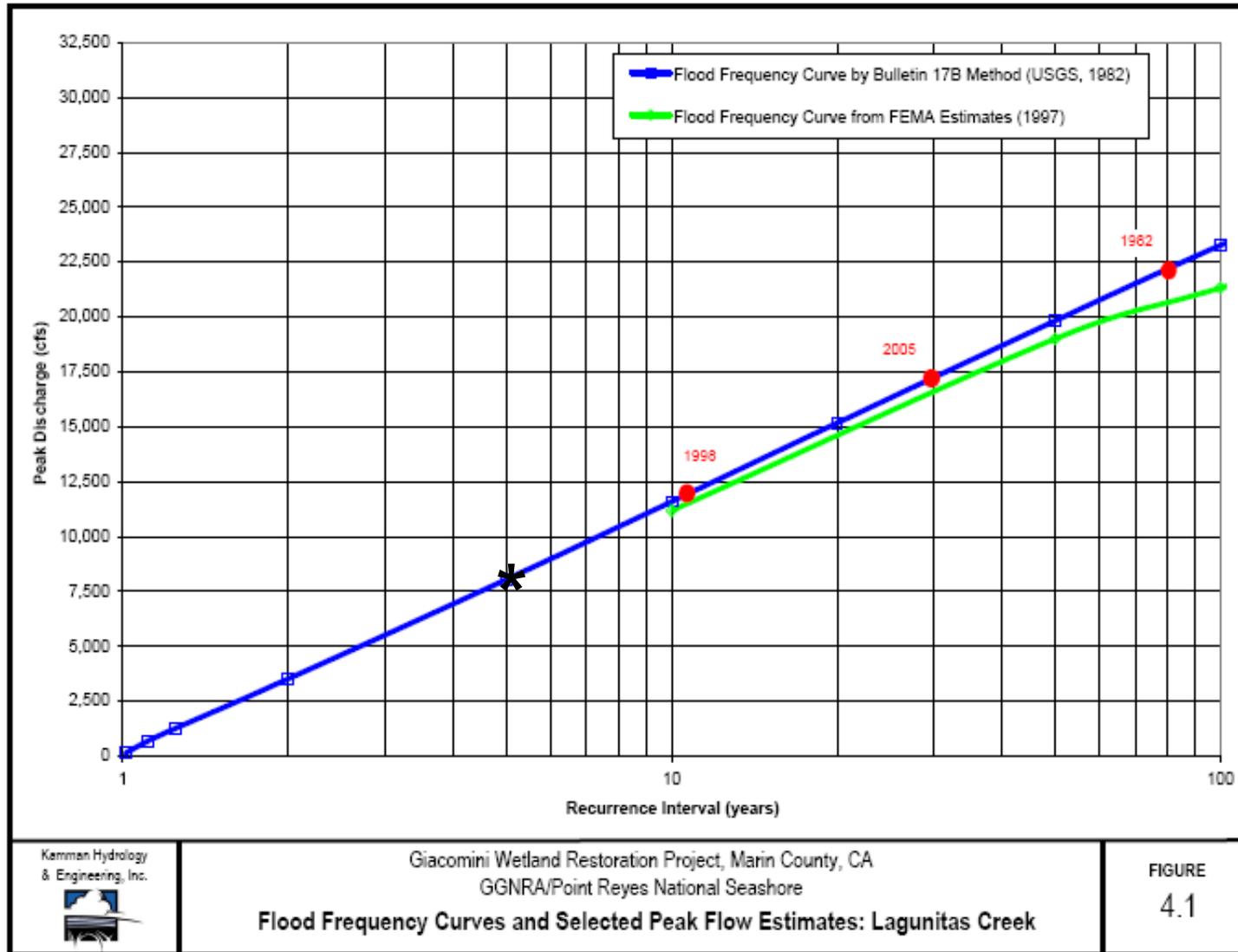
# Lagunitas Creek Watershed

- Supports 10-15% of remaining coho salmon population in Central California Coast ESU
- 2/3 freshwater inflow to Tomales Bay
- Lagunitas Creek/Levee Road
  - Confluence of Lagunitas Creek, Olema Creek, Bear Valley Creek and Tomales Bay
  - Daily tides to the Green bridge
  - Flooding is influenced by both watershed discharge and tides.

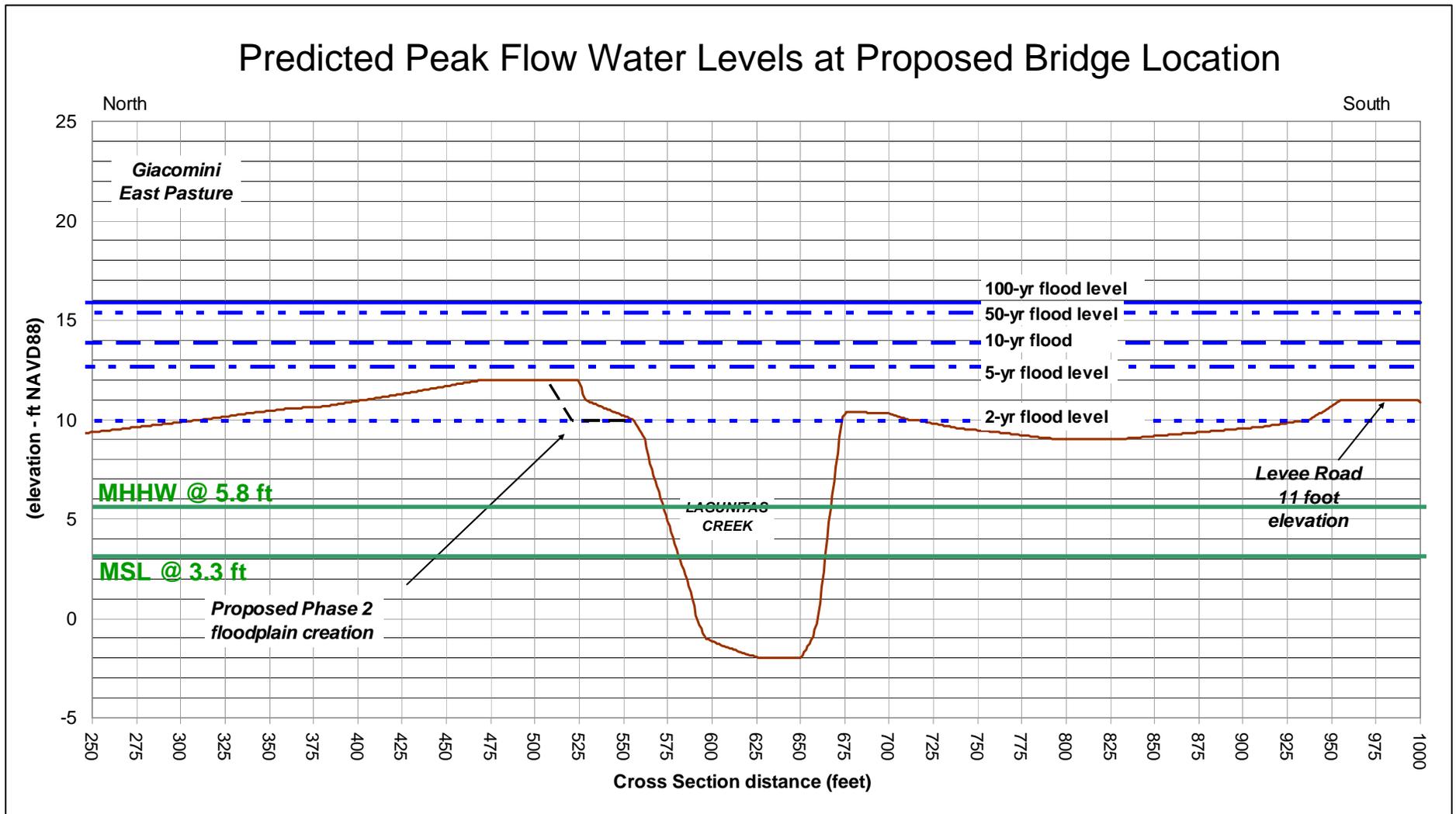
# Lagunitas Creek

- Detailed and comprehensive analysis of existing and anticipated creek and tidal hydraulics.
- Planning and modeling information was used to identify the general constraints related to trail development in this area.
- All available information has been used to support bridge design to date.
- Hydraulic assessment does not address sea-level rise.

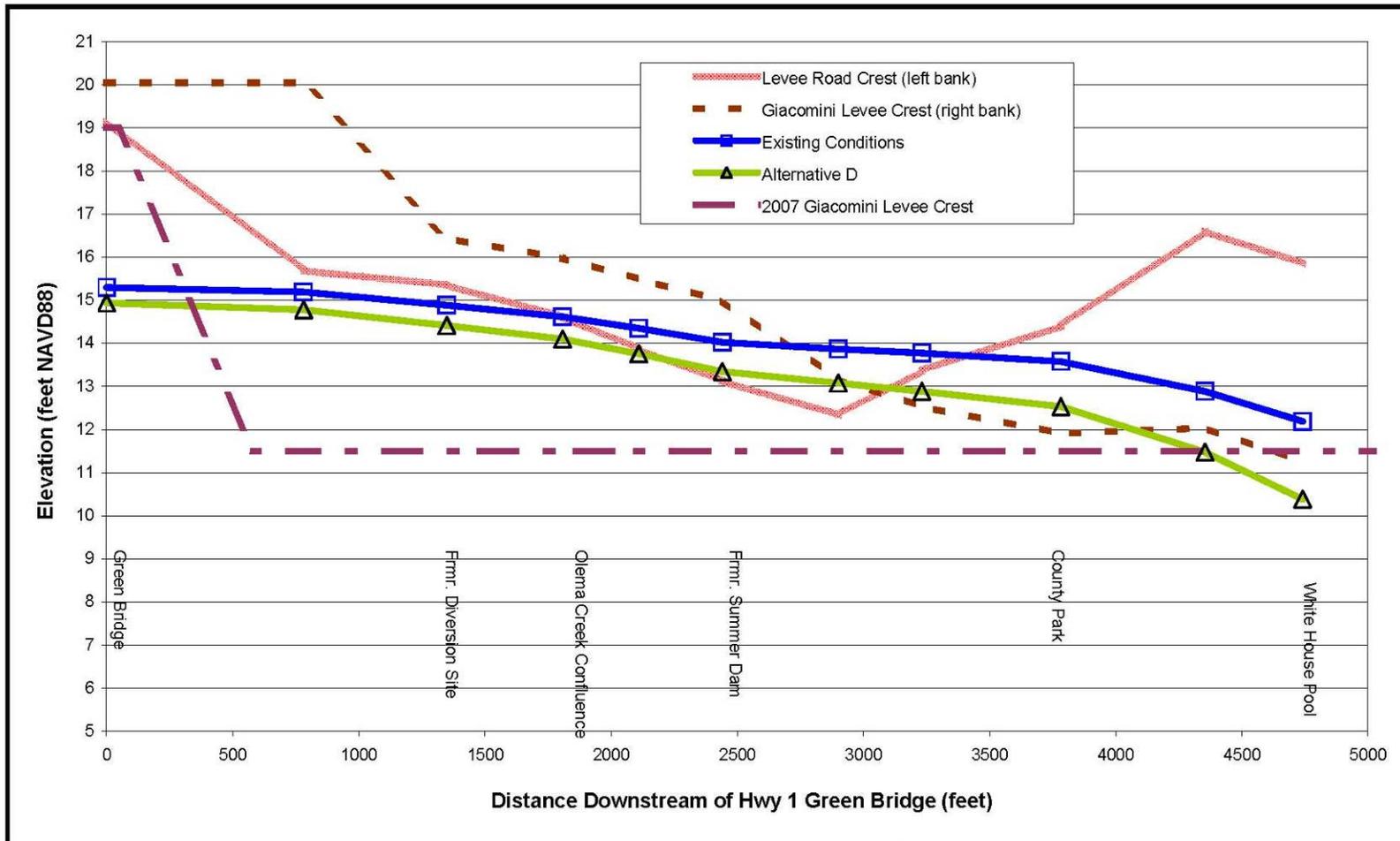
# Lagunitas Creek Flood Frequency



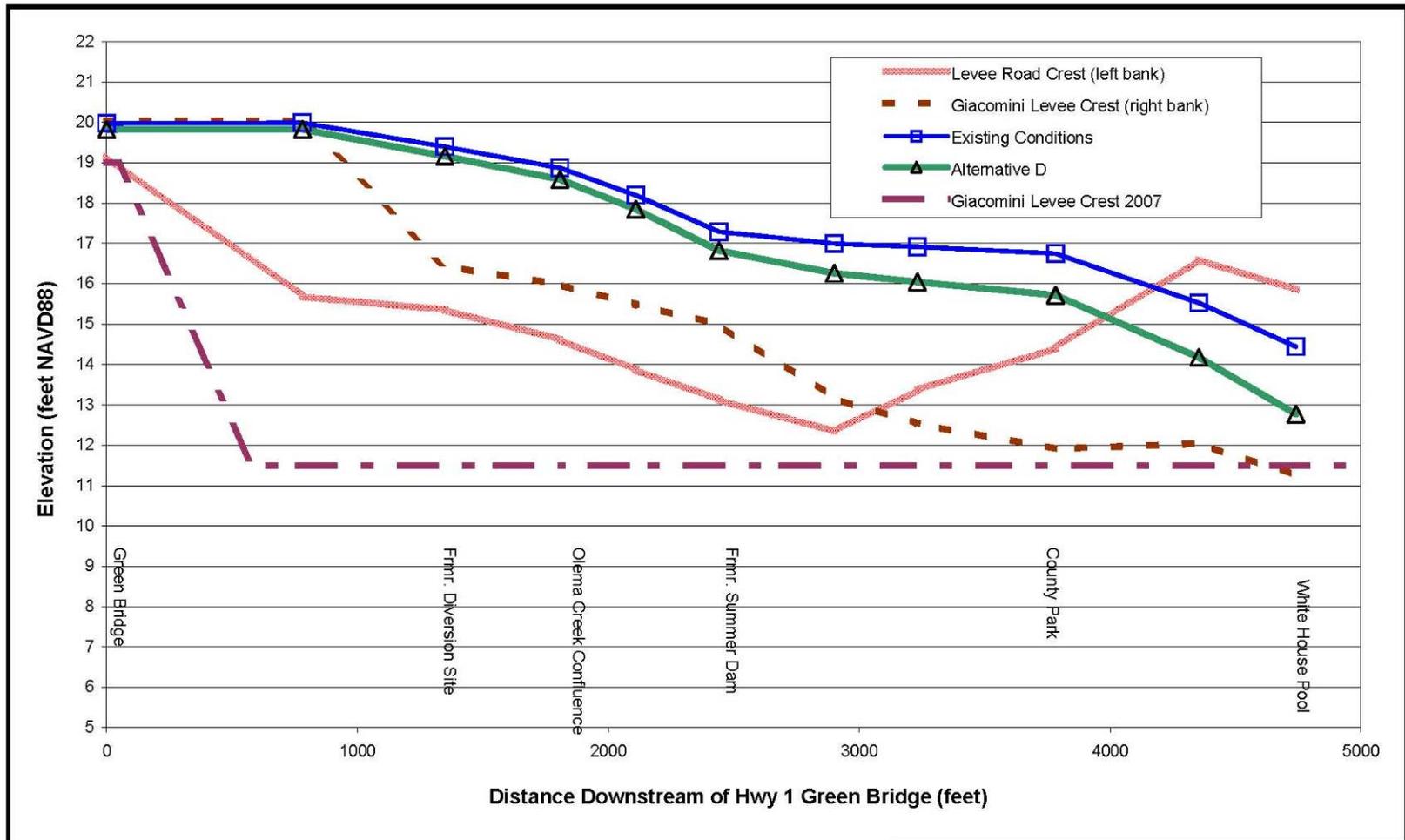
# Lagunitas Creek Site Cross-Section



# 5-year flood - Levee Road Profile



# 100-year flood - Levee Road Profile



Kamman Hydrology & Engineering, Inc.



Giacomini Wetland Restoration Project, Marin County, CA  
 GGNRA/Point Reyes National Seashore

Simulated Lagunitas Creek Water Surface Elevations along Levee Road: 100-Year Flood Event

FIGURE  
 7.17

# Levee Road Public Access Pathway

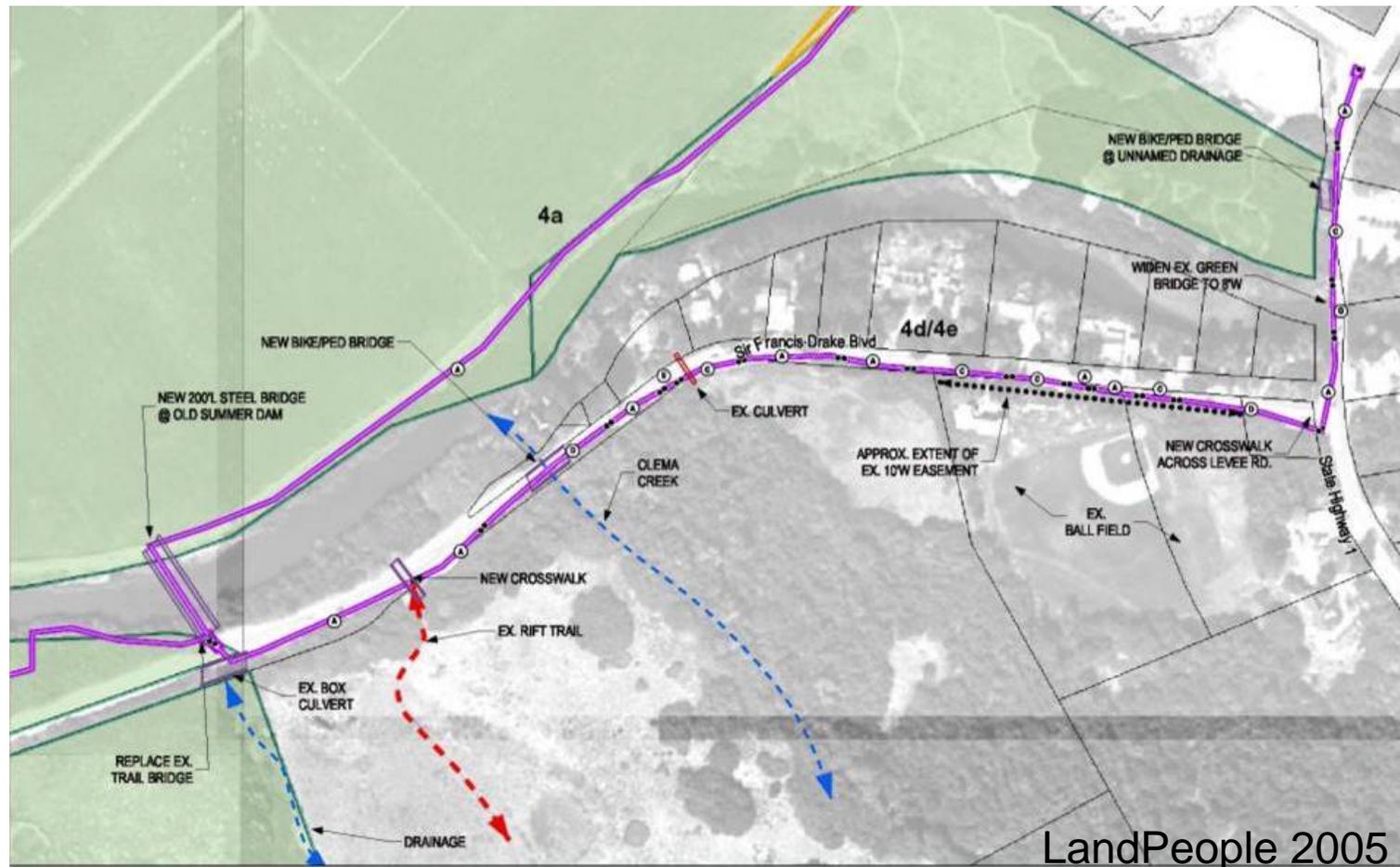


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# Levee Road Trail Alignment Concept

- Alignment would include access improvements along Levee Road and State Route 1.
  - Both north and south sides of road evaluated in technical public access studies conducted in 2004 and 2005

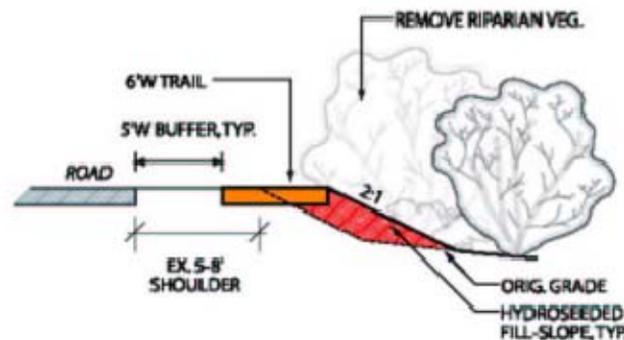


# Levee Road Trail Alignment Concept

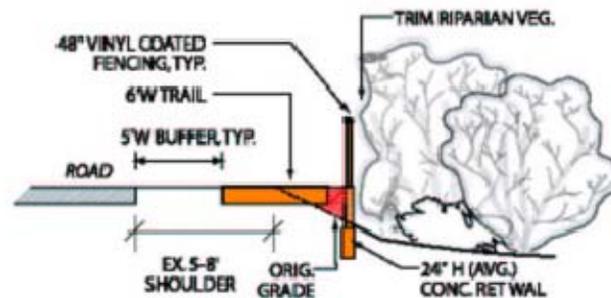
- Design Considerations - Levee Road Trail Alignment
  - Possible expansion of road width to accommodate trail
  - Creation of pedestrian causeway on Olema and Bear Valley Creek bridges, State Route 1 un-named bridge
  - Improvement of causeway on Green Bridge
  - Possible need for cross walk and/or light at State Route 1/Levee Road intersection
  - Relocation of power poles

# Levee Road Trail Alignment Concept

- Degree of widening of Levee Road would depend on the type or classification of recreational facility constructed
  - Expanded shoulder would require either fill slope, retaining wall with fill, or cantilevered boardwalk or combination



Fill Slope



Retaining wall

# Levee Road Trail Alignment Concept



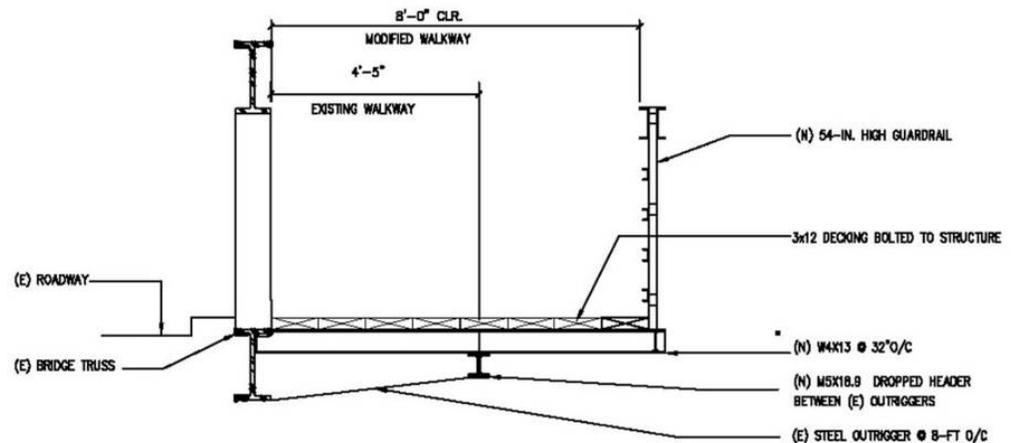
*Pedestrian Causeway needed-Unnamed cement bridge*

# Levee Road Trail Alignment Concept



*Improvement of Existing Pedestrian Causeway –Green Bridge*

*Landpeople (2005) proposed modified canteliver*



# Public Access Bridge Concept Lagunitas Creek



# Lagunitas Creek Bridge Concept

## ***Design Considerations – Type of Bridge***

- Concepts show pre-fabricated bridge structure because most economical
  - *One shown in concept is similar to prefabricated bridge at Inkwells*
- Bridge concepts presented here are representative of potential scale to span the creek at this site.
- Concepts are for discussion: other structures possible
  - Engineered Bridge: *Potentially more costly*
  - Seasonal Bridge: *Only available seasonally; costs associated with annual removal and installation*

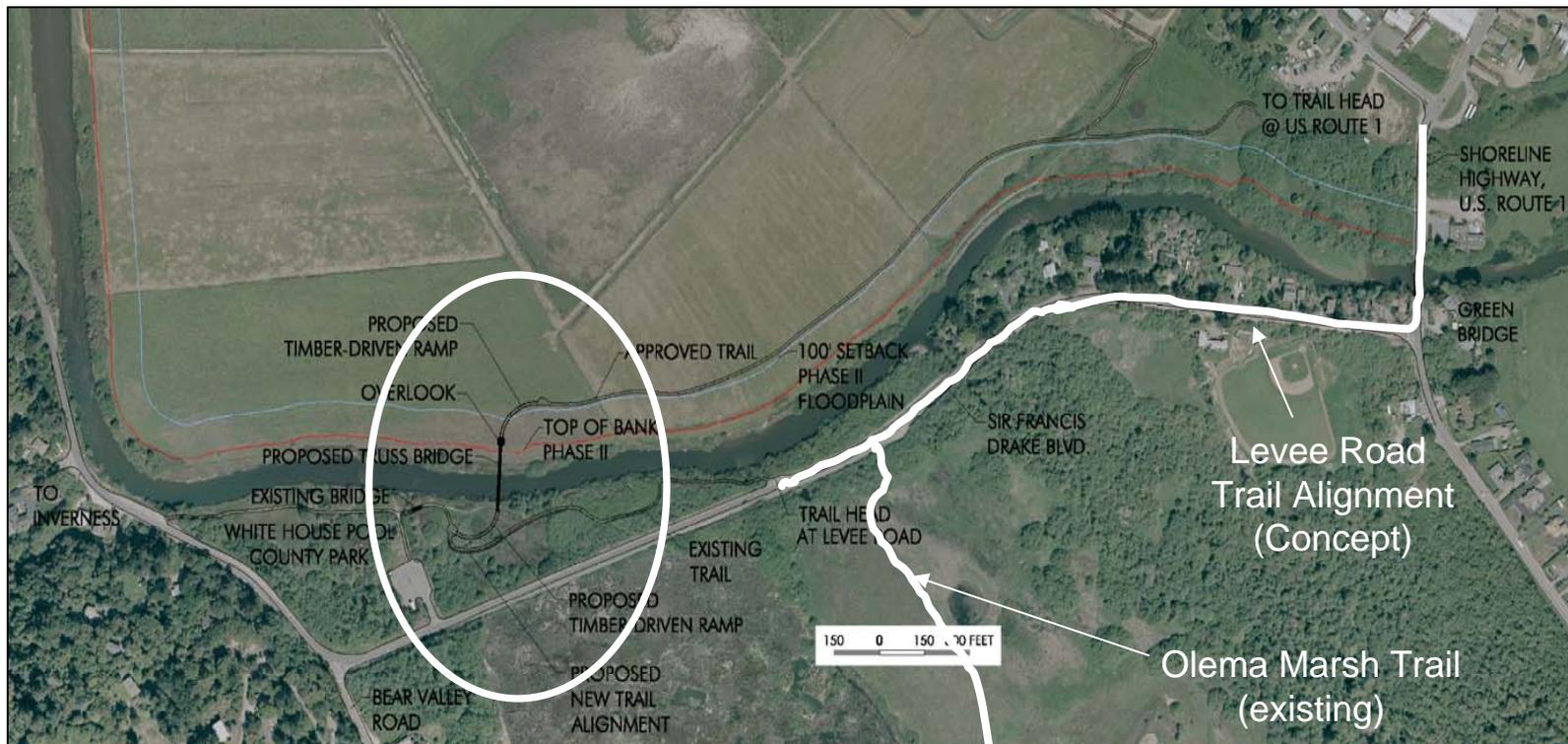
# Lagunitas Creek Bridge Concept



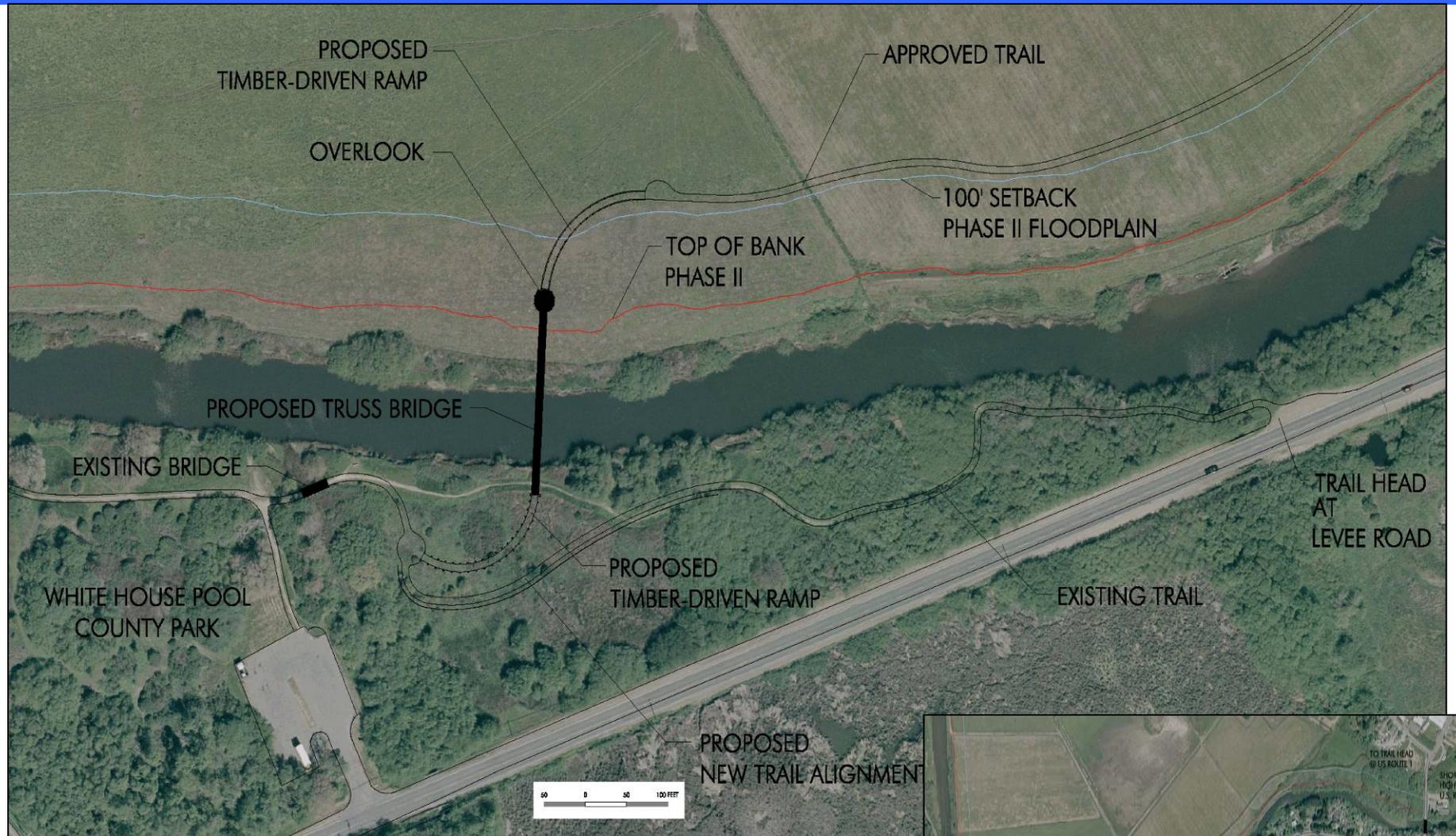
# Lagunitas Creek Bridge Concept

## ***Design Considerations – Location***

- Switch of Location from Old Summer Dam in EIS/EIR to adjacent to White House Pool County park parking lot
  - *Not enough room for ADA-compliant ramps at former location*
- Flood model re-run for this area to generate location-specific flood heights
  - *Flood modeling assumes restored conditions or removal of adjacent levees on Giacomini Ranch*



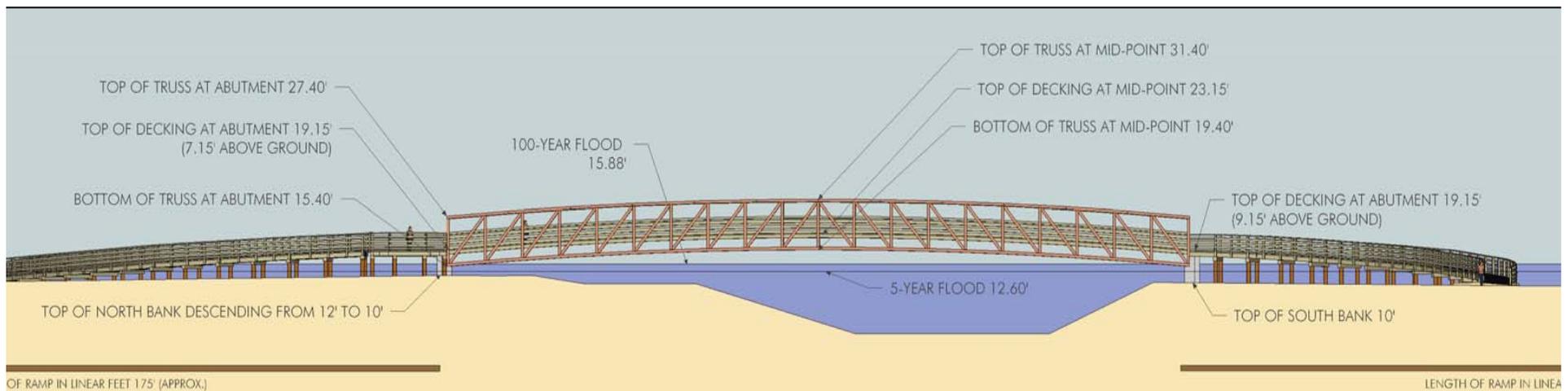
# Plan View of Conceptual Pedestrian Bridge



# Lagunitas Creek Bridge Concept

## *Design Considerations – Bridge Height*

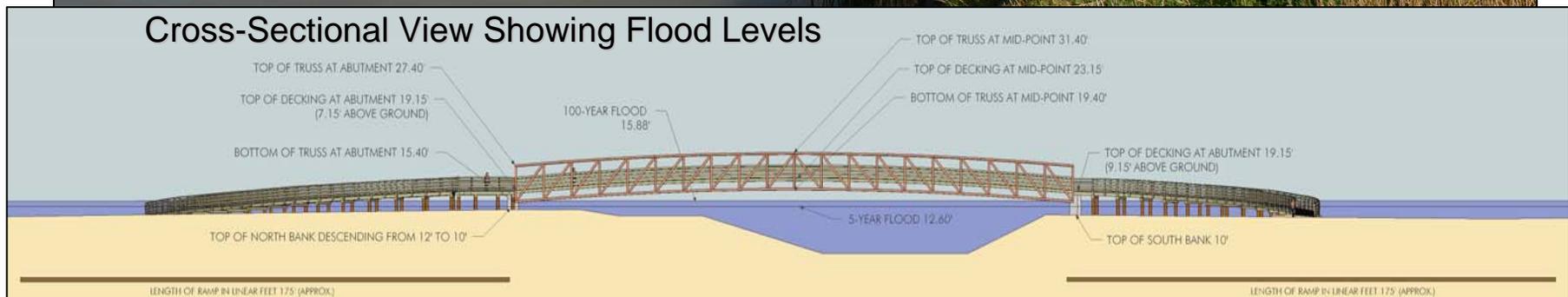
- Driven by predicted flood water surface elevations conveyed under bridge
  - *Concepts show heights for structures that convey 50-year and 5-year flood flows under bridge*
  - *Heights shown in graphic refer to a standard datum and NOT elevation relative to creek bottom or bank top*
    - *Datum is equivalent to MLLW datum shown in tide logs*
    - *For reference purposes, mean sea level is 3.25 feet, and mean high tide is 5.8 feet*



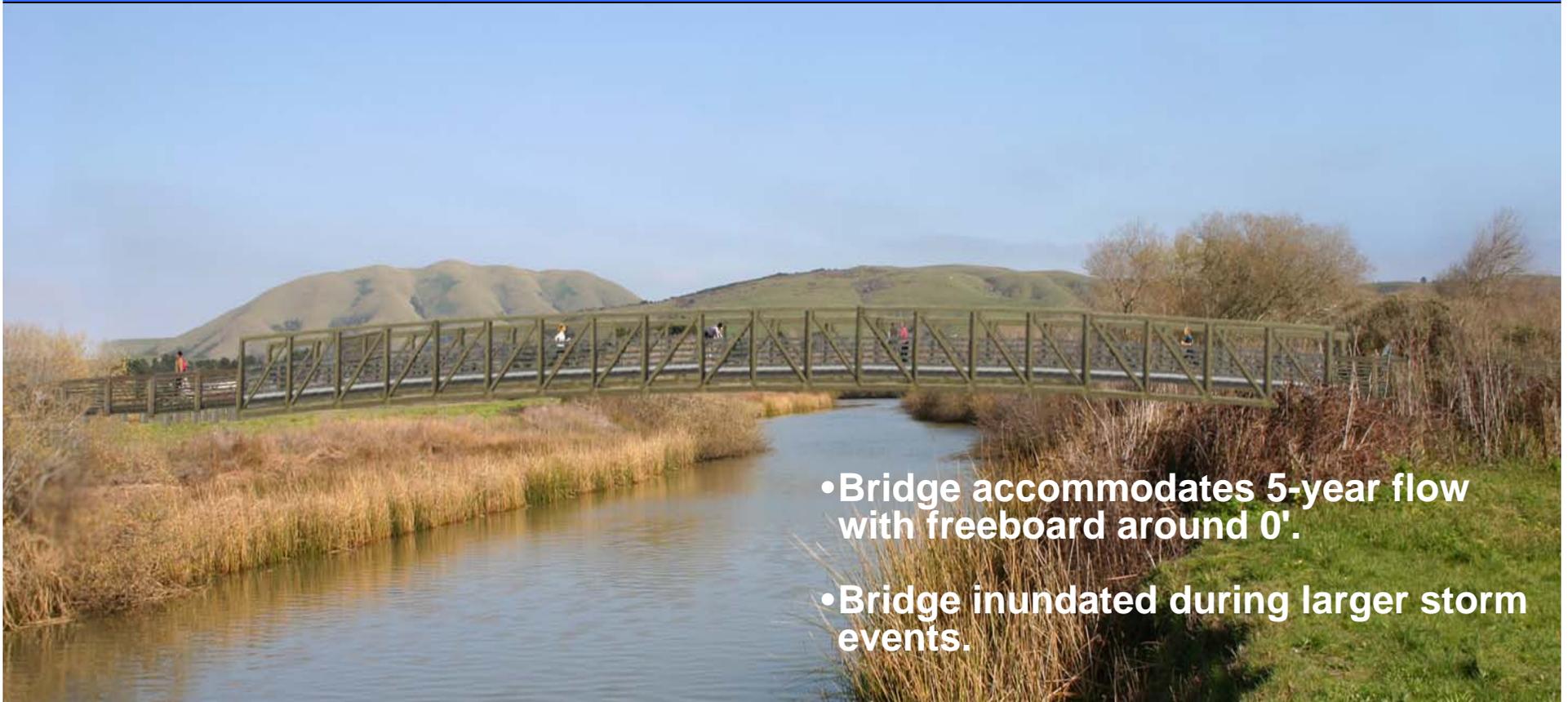
# Concept 1: Pedestrian Bridge at 15.4 feet -50 year flood



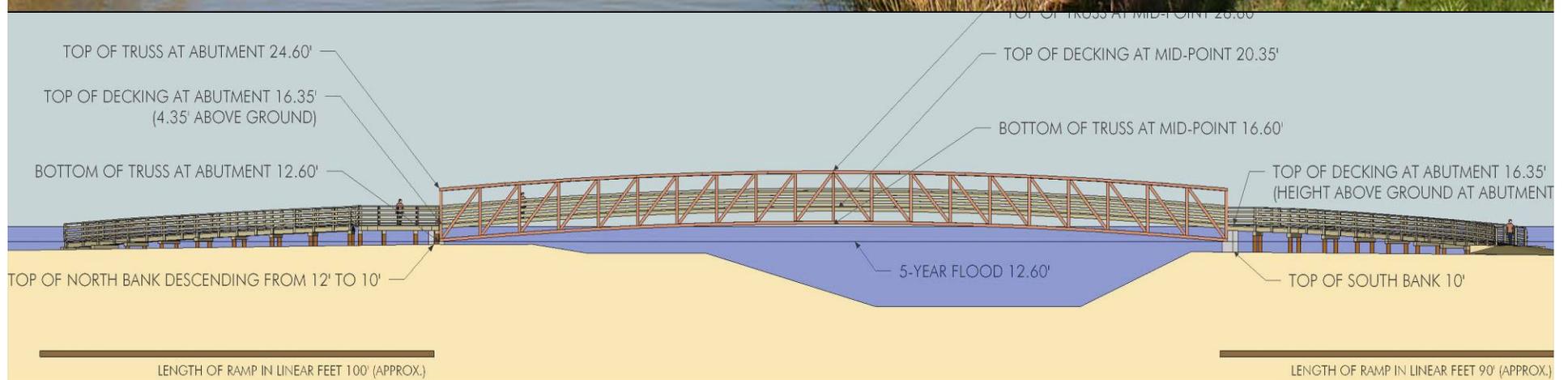
- Bridge accommodates 50-year flow with freeboard varying between 0' and 4'.
- Bridge inundated during larger storm events.



# Concept 2: Pedestrian Bridge at 12.6 feet - 5 year flood



- Bridge accommodates 5-year flow with freeboard around 0'.
- Bridge inundated during larger storm events.



# Lagunitas Creek Bridge Concept

## ***Design Considerations – Bridge Height***

- Why is flood conveyance an important consideration?
  - *Bridge truss, ramps for bridge act as “dams” and can increase upstream flooding and potential for creek diversion if not appropriately designed*
  - *Regulatory considerations*



*Floodwaters overtop Giacomini Ranch levee during 1982 flood*



*January 1, 2006 – White House Pool*

# Lagunitas Creek Bridge Concept

## ***Bridge Span Considerations***

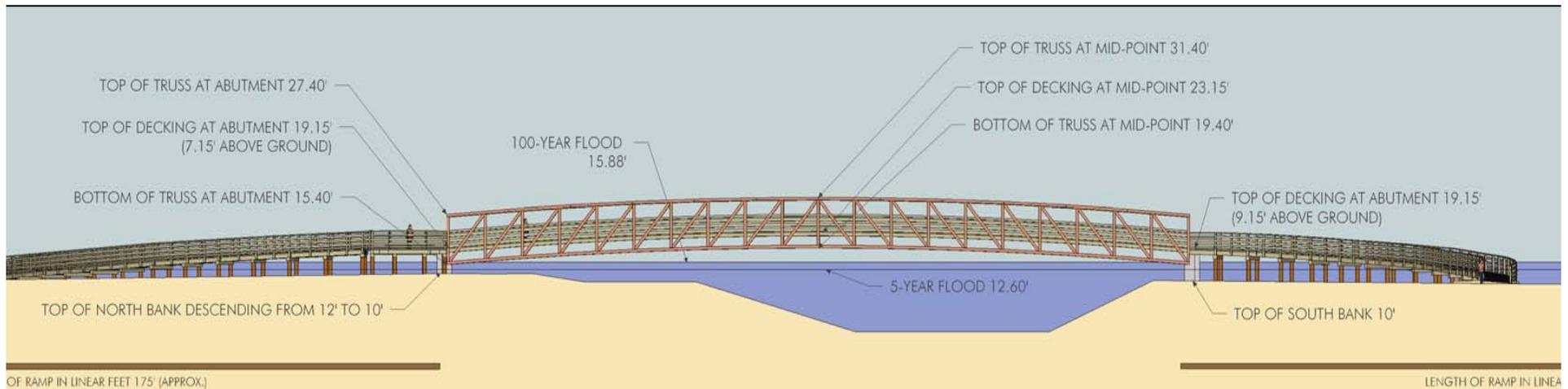
- *200- Foot structure*
- *Same as EIS/EIR*
- *Width from edge of bank to edge of bank is approximately 150 feet*
- *Extra 50 feet ensures that abutments are not placed directly adjacent to creek*
  - *Helps reduce need for riprap, potential for undercutting of abutments by erosion*



# Lagunitas Creek Bridge Concept

## *Design Considerations – Bridge Dimensions*

- Truss = Structural Support of Bridge
  - For 200-foot structure, need truss that is 12 feet tall and 10-feet wide
  - Height of truss above bridge decking
    - 8 feet
    - *Doubles as pedestrian safety*



# Lagunitas Creek Bridge Concept

## ***Design Considerations – Ramps***

- Flood Considerations
  - Went with timber-pile driven rather than earthen ramp to reduce resistance during flood flows
- Use considerations
  - Accommodate access for all abilities
  - Maximum of 5% grade (ADA-compliant)
    - *Can go up to 7.5%, but have to provide flat landings at regular intervals*
    - *County policy is 5%*
  - Affects Length of Ramps
    - *20 feet of length for every 1 foot of vertical rise*

**Concept 1: North End - Pedestrian Bridge at 15.4 feet - 50 year flood**



## Concept 1: South End Pedestrian Bridge at 15.4 feet - 50 year flood



## Concept 2: South End Pedestrian Bridge at 12.6 feet - 5 year flood event



**Concept 2: North End - Pedestrian Bridge at 12.6 feet - 5 year flood**



# Point Reyes-Giacomini Public Access

## ***Safety and Sustainability Considerations***

- **Bridge**

- *Flood-related and routine annual maintenance*
- *Flood-related and routine repair and/or replacement costs*
- *Public health hazards associated with potential use during high flow conditions*
- *Public health hazards associated with non-designed uses during non flood conditions*

- **Levee Road**

- *Flood-related and routine annual maintenance*
- *Flood-related and routine repair and/or replacement costs*
- *Public health hazards associated with potential use during high flow conditions*
- *Public health hazards associated with use during non-flood conditions (e.g., adjacency to roadway)*

# Point Reyes-Giacomini Public Access

	<b>Project Area Length, feet</b>	<b>Estimated Construction Cost</b>	<b>Annual Maintenance Cost</b>
<b>Levee Road Alignment</b>	<b>3,044</b>	<b>\$730,000 to \$1,200,000</b>	<b>\$15,000 to \$19,000</b>
<b>Non-vehicular Bridge and Ramps</b>	<b>440</b>	<b>\$820,000</b>	<b>\$13,000</b>

LandPeople, 2005

- 2008 non-vehicular bridge planning estimate, WRA Inc.
  - Includes bridge and access ramps on both sides, \$1.75 Million

# Point Reyes-Giacomini Public Access

- Either trail route would:
  - Link the Park Service trail with the White House Pool County park trail
  - Require Levee Road Crossing to link with Olema Marsh trail
- Subsequent phases would address the access north of Whitehouse Pool to Inverness Park

# Existing Bridges Along Cross Marin Trail



# Green Bridge



# Cross Marin Trail Bridge



# Platform Bridge



# Shafter Bridge



## Comment Breakout

- Giacomini Wetland Restoration Update
- Lagunitas Creek Hydraulics and Bridge Concept
- Levee Road Trail Alignment Concept
- Alternative Transportation

# Next Steps



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# Next Steps

- Additional written comments accepted until June 2, 2008
- Consolidate comments from this meeting and additional written comments
- NPS and County review comments