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# San Pablo Bay National Wildlife Refuge

## CULLINAN RANCH UNIT RESTORATION

Christy Smith  
John Bradley





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# San Pablo Bay National Wildlife Refuge

## CULLINAN RANCH UNIT RESTORATION ALTERNATIVES:

- No Action
  - Preferred Alternative -Full Tidal Restoration
  - Partial Tidal Restoration
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# Cullinan Ranch Restoration

- Approximately 1,500 Acres
  - Subsided lands 3 to 8 feet below sea level
  - Mixed upland and freshwater/seasonal wetland habitats – degrading value
  - Connectivity to surrounding marshes
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# Cullinan Ranch Restoration Regulatory Issues

- ❑ Wetlands Impacts - ACOE
  - ❑ Water Quality – RWQB
  - ❑ Anadromous Fish – NMFS
  - ❑ Endangered Species – FWS/CDFG
  - ❑ Coastal Act Consistency - BCDC
  - ❑ Design Review/ROW Encroachment permit –Caltrans
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# No Action



# Preferred Alternative: Full Tidal Restoration



# Partial Restoration





# Cullinan Ranch Restoration Impacts to Wetlands

- ❑ Buttress Levee
- ❑ On-site preparation: drainage ditches, armoring towers, boardwalk
- ❑ Pond 1 levee: raise and install water control structures

# On-Site Preparation

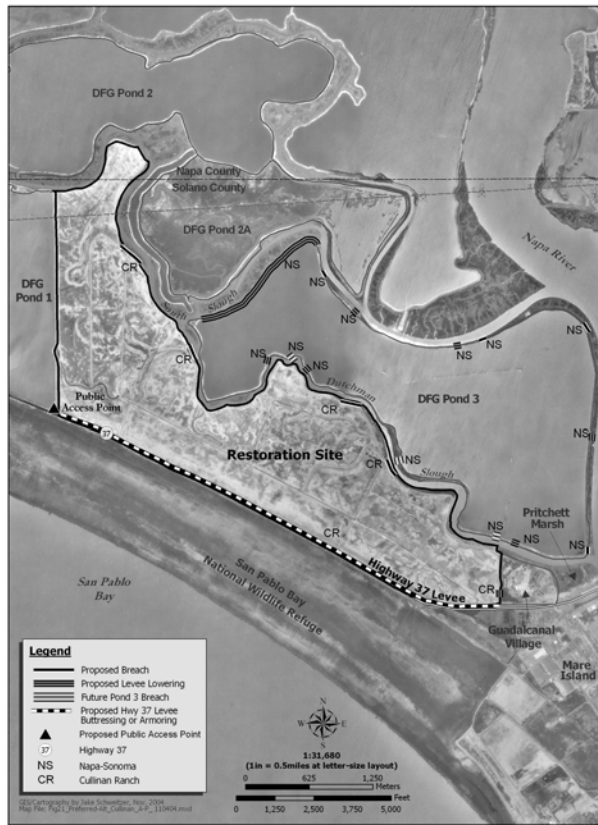


Figure 2-1. Preferred Restoration Alternative

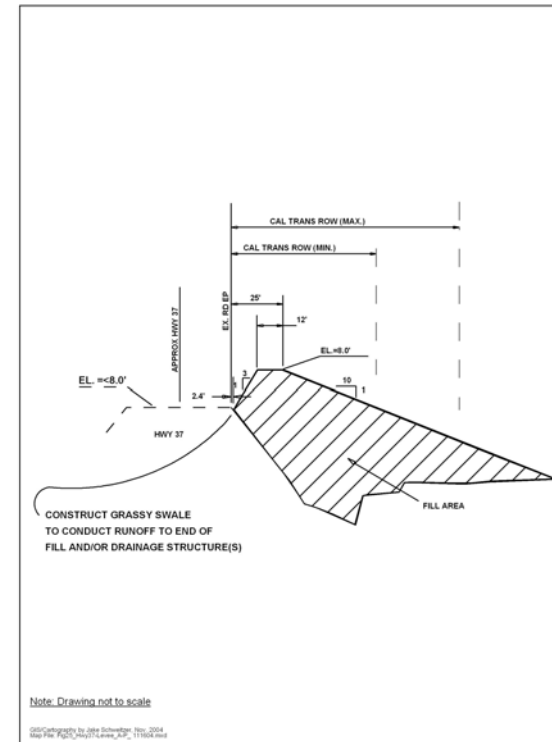


Figure 2-5. Cross Sections of Highway 37 Levee Improvements

# On-Site Preparation Continued

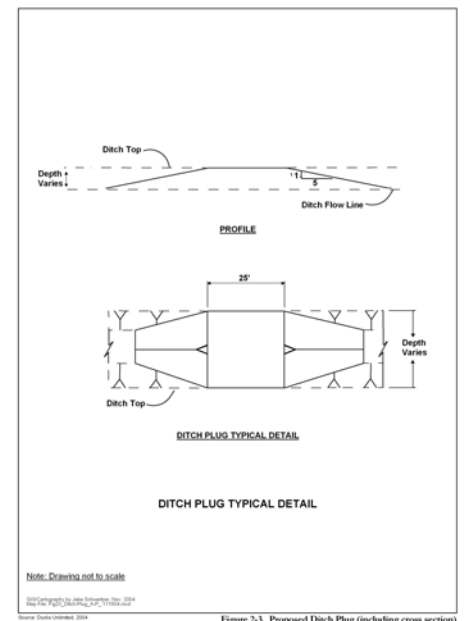
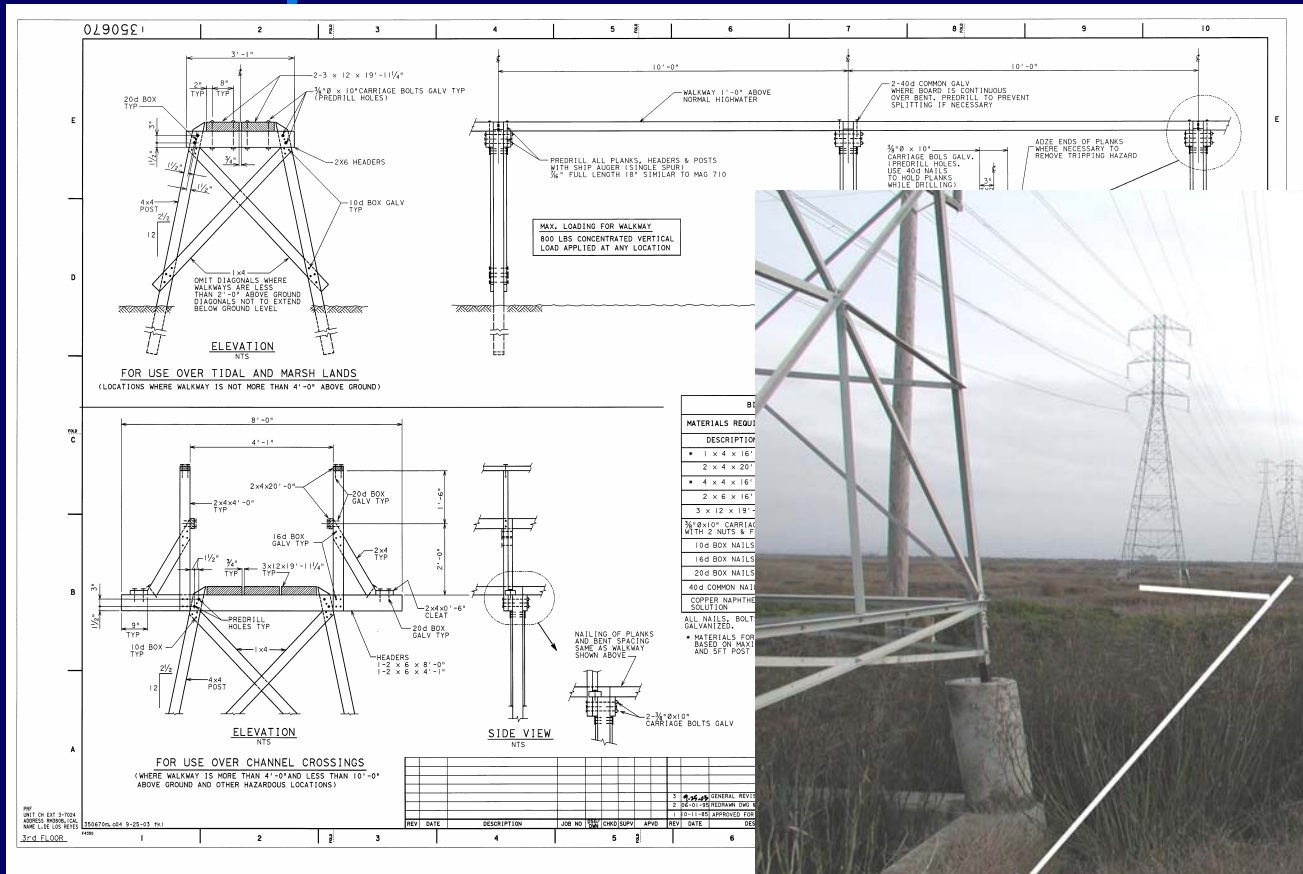


Figure 2-3. Proposed Ditch Plug (including cross section)

# Water Quality Pre-Flood and Breach



Figure 3.2-1. Existing Habitat Types at the Restoration Site

- Anadromous Fish
- Resident Wildlife

# Coastal Act Consistency Public Access

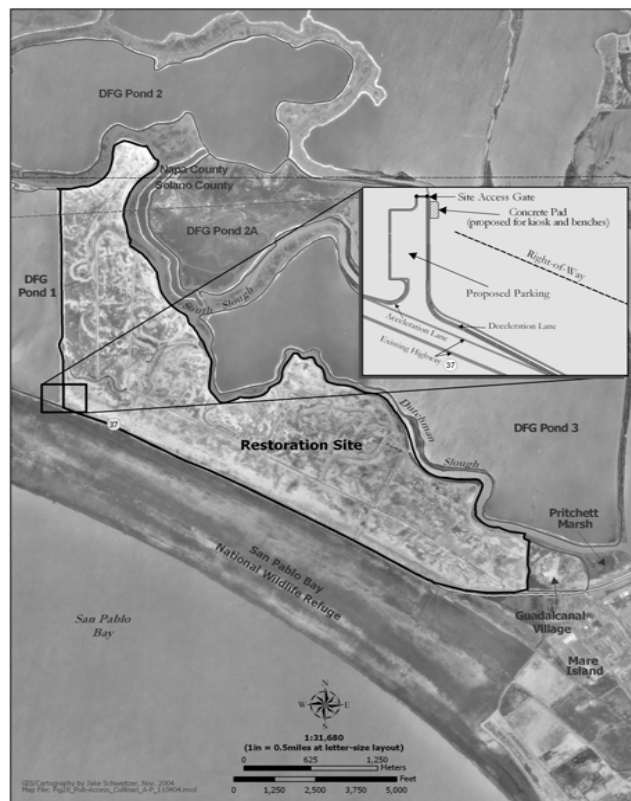


Figure 2-8. Proposed Public Access Area

- Information kiosks
- Wildlife Observation Deck
- Fishing and Kayak Access
- Parking
- Deceleration/Acceleration Lanes



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# Cullinan Ranch Restoration Questions???

- Wetlands Impacts
  - Water Quality
  - Anadromous Fish
  - Endangered Species
  - Coastal Act Consistency
  - Design Review/ROW Encroachment
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