Santa Ana Boulevard Bridge

**Goal:** build a new, longer, taller replacement bridge to reduce flood risks and improve sediment transport through this reach of the Ventura River

**Status:** construction underway since April 2021

**Construction cost:** $13.4m under CDFW implementation grant - 100% funded

**Completion target date:** end of 2022

**Comments:**
- First essential downstream infrastructure component to be implemented as part of the Dam removal effort
• Widen river 150 ft to 230 ft
• Improve fish and sediment passage
• Retain existing bridge until new bridge completed
Construction Details

• Construction Costs
  • Veg Removal – $96,801
  • Bat and Bird Protection - $45,800
  • Security Paving - $11,478,754

• Construction Management Transferred to Roads and Transportation
  • Design Consultant – Quincy Engineering
  • Inspection and CM – Filippin Engineering
  • Bio-monitoring – Rincon Consultants
Camino Cielo Bridge

Goal: new bridge for improved fish passage, sediment transport and safe river crossing during/after major storm events

Status: 30% design under CDFW planning grant

Est. remaining design cost: $806k (8/20)
- $735k in SCC planning grant - 70% Design + CEQA
- $TBD in WCB pre-application - Final Design + adjustments

Shovel ready target date: mid-2025 in WCB pre-app

Est. construction cost: TBD

Completion target date: end of 2027

Comments:
- Value engineering review to evaluation cost, other uncertainties?
Alternative 2 – Road Layout
Alternative 2 – Direct Access Ramp Bridge
Alternative 2 – Retaining Wall

CAMINO CIELO ROAD
"C-2A" LINE 504+31.19 TO 508+60.00
"C-2B" LINE 203+58.88 TO 210+88.00
NOT TO SCALE
Alternative 2 – At Existing Alignment

Looking north on Camino Cielo Road

Looking upstream at Existing Bridge

Roadway Elevation
Alternative 2 – At Existing Alignment

Looking east on Camino Cielo Road
Looking west on Camino Cielo Road

Roadway Elevation
Alternative 2 – At Existing Alignment

Looking south on Camino Cielo Rd at Conform

Looking east on Camino Cielo Road
Alternative 2A – River Bridge
Alternative 2B – River Bridge

DEVELOPED ELEVATION

230’ Bridge

TYPICAL SECTION
Property Owner Outreach

• Alternative 2B requires significant property acquisition
• Alternative 2A, closer to existing alignment.
• Owner is currently not a willing seller, but has indicated willingness to grant easement.
Camino Cielo Bridge Construction Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>Alt 2A Cost*</th>
<th>Alt 2B Cost*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadwork</td>
<td>$2,910,000</td>
<td>$2,920,000</td>
</tr>
<tr>
<td>Retaining Walls</td>
<td>$4,780,000</td>
<td>$4,780,000</td>
</tr>
<tr>
<td>River and DAR Bridges</td>
<td>$8,360,000</td>
<td>$6,570,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>$16,050,000</strong></td>
<td><strong>$14,270,000</strong></td>
</tr>
</tbody>
</table>

*Includes 25% Contingency. Cost in 2020 Dollars
Cost Saving Alternatives

• Conform road to existing as quickly as possible.
  • Existing road remains in floodplain and within 25 yr. storm
  • Retaining wall costs greatly reduced
  • Savings ~$3.0 M

• Eliminate DAR to Auric and leave existing road in place
  • Access will be via new road, then U-Turn back onto existing road
  • Savings ~$3.5 M
Levee Locations

- Casitas Springs Levee
  - Existing Levee
  - Left Bank of River
  - 5,877 ft (1.11 mi) Long

- Live Oak Acres Levee
  - Existing Levee
  - Right Bank of River
  - 5,635 ft (1.07 mi) Long

- Meiners Oaks Levee
  - New Levee
  - Left Bank of River
  - 4,480 ft (0.85 mi) Long
Casitas Springs Levee

**Goal:** upgrade existing levee to provide flood safety for adjacent community

**Status:** 30% design in-progress under DWR LLAP grant

**Est. remaining design cost:** $919k in WCB planning grant

**Shovel ready target date:** mid-2024 in WCB planning grant

**Est. construction cost:** $13.5m (8/20)
- **NRCS Watershed Program (up to 100% prospective)**

**Completion target date:** end of 2026

**Comments:**
- Setback alternative would require additional time and funding
Casitas Springs Levee

ALIGNMENT C

• Pros
  • Reduced Permanent and Temporary Impacts in the River
  • Restores Connectivity between Floodplain and River
  • Potentially Less Mitigation Required
  • Opportunity for Trail along Levee

• Cons
  • Relocation of Portion of Mobile Home Park
  • Requires ROW from City of Ventura and Mobile Home Park
  • Potentially Additional Earthwork and Material
Casitas Springs Levee Preferred Alternative

- Meeting with City of Ventura regarding their property
- Once determined whether Alts C and D are a possibility, revised costs will need to be computed and alternatives Ranked.
- DWR Local Levee Assistance Program grant expires at the end of March 2022.
- WCB Grant picks up after LLAP Grant.
Live Oak Acres Levee

**Goal:** upgrade existing levee to provide flood safety for adjacent community

**Status:** 30% design under CDFW planning grant

**Est. remaining design cost:** $1.2m in WCB planning grant

**Shovel ready target date:** end of 2024

**Est. construction cost:** $14.1m (8/20)

- NRCS Watershed Program (up to 100% prospective)

**Completion target date:** end of 2027

**Comments:**
- Design RFQ in progress, consultant selected and under contract by mid-2022
Live Oak Acres Levee

Alt 1

Alt 2

Legend

System Name

Live Oak Acres Levee System
Meiners Oaks Flood Protection

**Goal:** construct a new levee or alternative protection to provide flood safety for adjacent community

**Status:** 30% design under CDFW planning grant
- Additional design work on hold pending progress on Robles re-design

**Est. remaining design cost:** $1.0m in WCB planning grant

**Shovel ready target date:** late 2024 in WCB planning grant

**Est. construction cost:** $13.6m (8/20)
- NRCS Watershed Program (up to 100% prospective)

**Completion target date:** late 2027

**Comments:**
- Final design details will depend on preferred alternative for Robles re-design
Meiners Oaks Levee

Alt 1

Alt 2

Alt 3

Alt 4

Legend
System Name
Meiners Oaks Levee System
Landside Improvements

LANDSIDE IMPROVEMENT A
CONTINUATION OF RIVERSIDE MATERIAL ONTO CROWN AND LANDSIDE

LANDSIDE IMPROVEMENT C
WIRE MESH

LANDSIDE IMPROVEMENT B
GROUTED STONE ON LANDSIDE SLOPE

LANDSIDE IMPROVEMENT D
RAPTOR PERCH/OWL BOX
ESA Proposed Meiners Oaks Alternative

Conceptual alternative (to be evaluated hydraulically) for widening Ventura River main channel and filling secondary channel near Meiners Oaks. Approximate extent of cut shown in green, fill placement in red.
Questions?