

Route 84 Safety Improvement Project (Niles Canyon 2)



State of California
Department of Transportation
District 4

State Route 84: Niles Canyon Projects

ALA - 84 (Niles Canyon 1)
 Realignment & Widening
 from Rosewornes U.P. to Farwell U.P. (EA 174411)
 Length: 2.2mi
 Cost: \$12.5M (SHOPP/Safety)
 Env. Doc: ND/FONSI
 RTL: Spring 2010
 Construction Schedule: Fall 2010 - Fall 2013

ALA - 84 (Niles Canyon 3)
 Alameda Creek Bridge Replacement
 Cost: \$33.7 M (SHOPP/Bridge Rehab.)
 Length: 0.6mi
 RTL: Spring 2013
 Env. Doc: EIR/EA
 Construction Schedule: Summer 2013 - Fall 2015

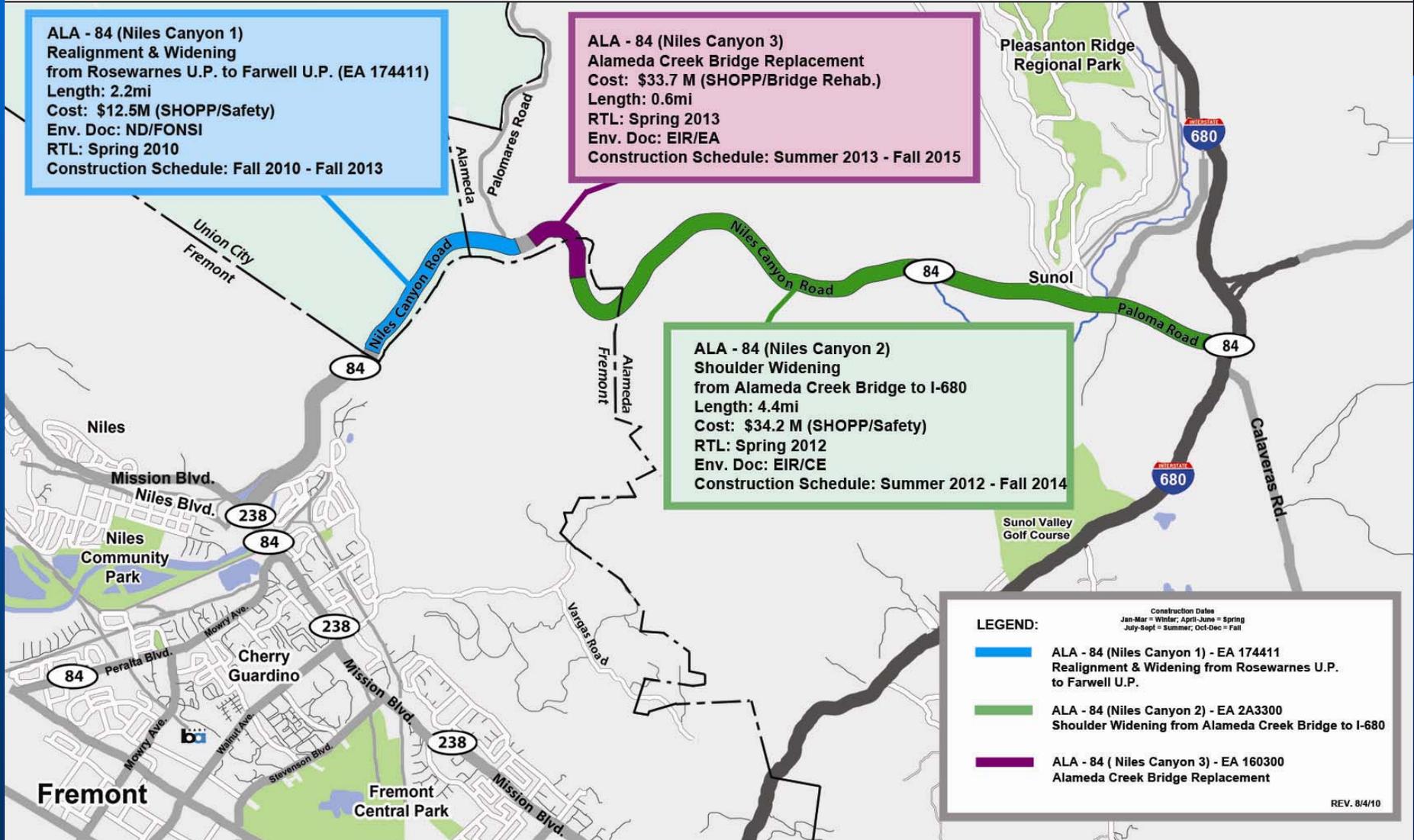
ALA - 84 (Niles Canyon 2)
 Shoulder Widening
 from Alameda Creek Bridge to I-680
 Length: 4.4mi
 Cost: \$34.2 M (SHOPP/Safety)
 RTL: Spring 2012
 Env. Doc: EIR/CE
 Construction Schedule: Summer 2012 - Fall 2014

LEGEND:

-  ALA - 84 (Niles Canyon 1) - EA 174411
Realignment & Widening from Rosewornes U.P. to Farwell U.P.
-  ALA - 84 (Niles Canyon 2) - EA 2A3300
Shoulder Widening from Alameda Creek Bridge to I-680
-  ALA - 84 (Niles Canyon 3) - EA 160300
Alameda Creek Bridge Replacement

Construction Dates
 Jan-Mar = Winter; April-June = Spring
 July-Sept = Summer; Oct-Dec = Fall

REV. 8/4/10



ROUTE 84 IN NILES CANYON

EXISTING CONDITIONS

- Two-lane conventional highway in a rural setting
- Narrow shoulders (2-8 feet in width)
- Typically curving horizontal alignment
- Generally bounded by a steep canyon wall, Alameda Creek, and railroad
- Regulatory speed is 45 MPH; curve warning speed signs to 30-35 MPH at spot locations
- 14,000 AATD with 2.5% truck traffic

EXISTING CONDITIONS



Sta 22+00

EXISTING CONDITIONS



Sta 146+80 Railroad & sack wall on left

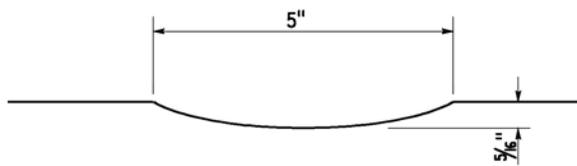
BACKGROUND

- In 2003 a Caltrans safety analysis found a rate of cross-centerline fatal collisions that were higher than statewide averages for similar facilities.
- Combined with higher anticipated future traffic volumes and accident history, Caltrans initiated a project to improve safety on Route 84 in Niles Canyon.
- Proposed safety improvements include the following:
 - Standard shoulders
 - Soft median barrier
 - Shoulder rumble strip

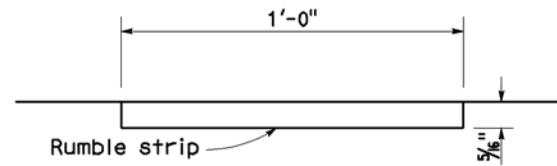
BACKGROUND – RUMBLE STRIP

- In March 1999 Caltrans placed a moratorium on the installation of ground in rumble strip due to concerns expressed by the bicycle community.
- In September 1999 Caltrans began a study with the goal of developing a shoulder rumble strip that was effective in reducing run-off the road accidents and could be traversed by bicyclists.
- Completed in May 2001, the study evaluated several designs and recommended use of a ground in rumble strip that became Standard Plan A40B that is used throughout the State today where bicycle travel is permitted.

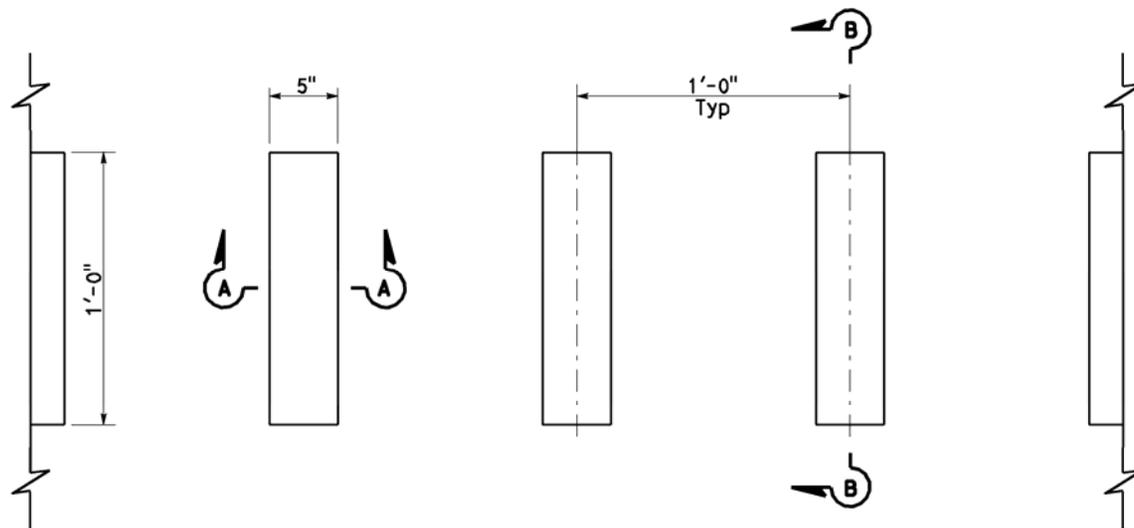
STANDARD PLAN A40B (GROUND IN RUMBLE STRIP)



SECTION A-A

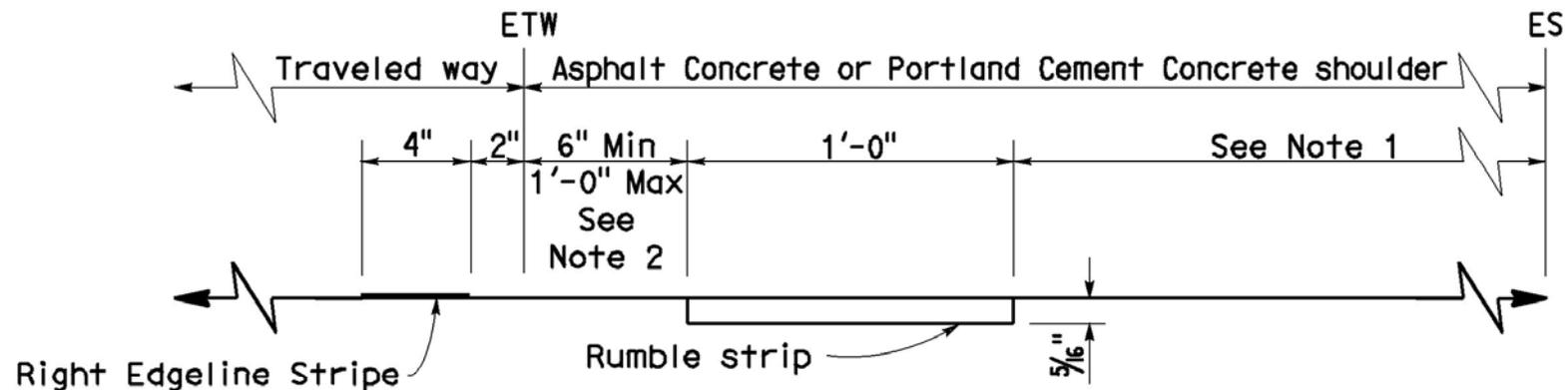


SECTION B-B



PLAN
GROUND-IN INDENTATIONS

STANDARD PLAN A40B (GROUND IN RUMBLE STRIP)



RUMBLE STRIP PLACEMENT RIGHT OF DIRECTION OF TRAVEL

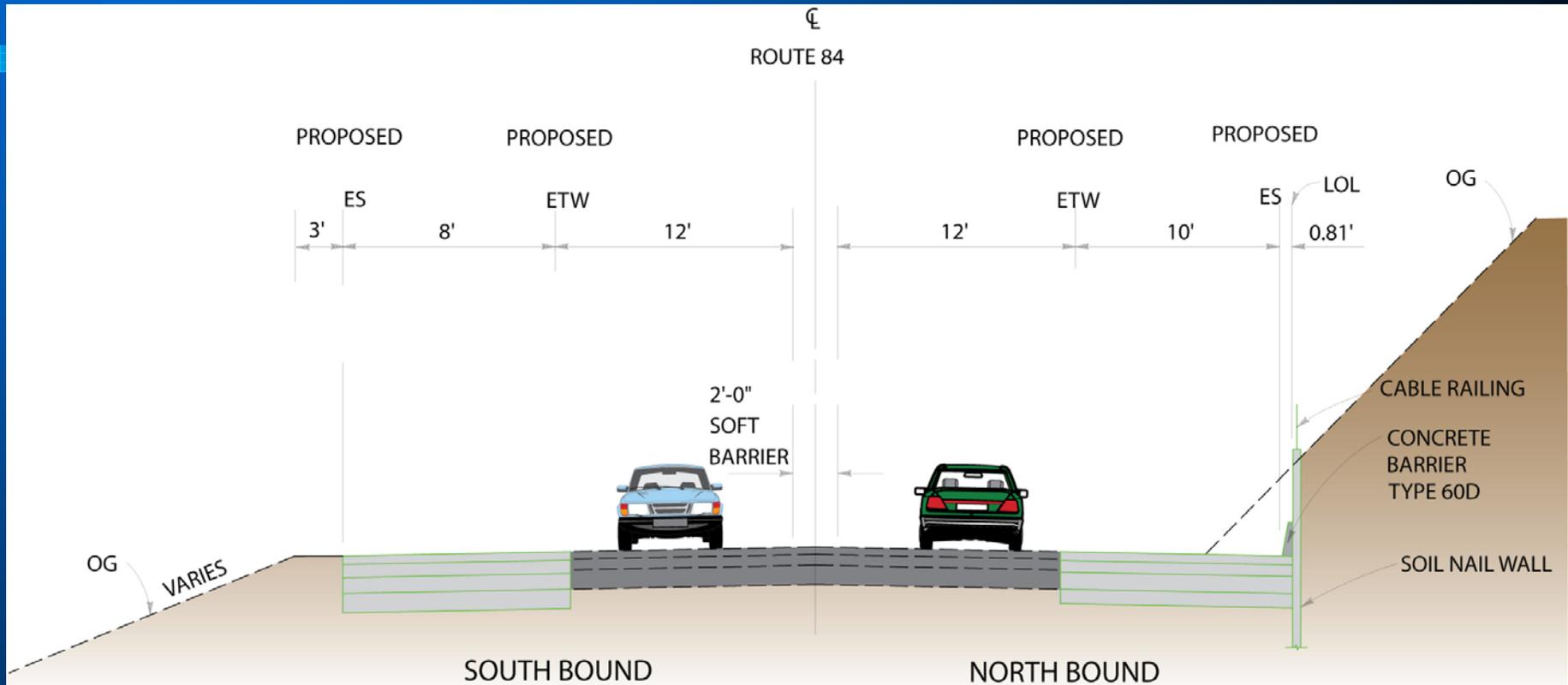
TYPICAL GROUND-IN RUMBLE STRIP SHOULDER PLACEMENT

NOTES:

1. Where bicycles are permitted, shoulder rumble strips should not be used right of direction of travel unless a minimum of 5'-0" of clear shoulder width for bicycle use is available between the rumble strip and the outer edge of the shoulder. Where bicycles are not permitted, a minimum of 4'-0" of distance is required between the rumble strip and the outer edge of the shoulder.
2. Unless otherwise shown on the plans or specified in the special provisions, the 6" offset from the edge of traveled way to the edge of the rumble strip shall be used for rumble strip placement right of the direction of travel.

PROJECT DESCRIPTION

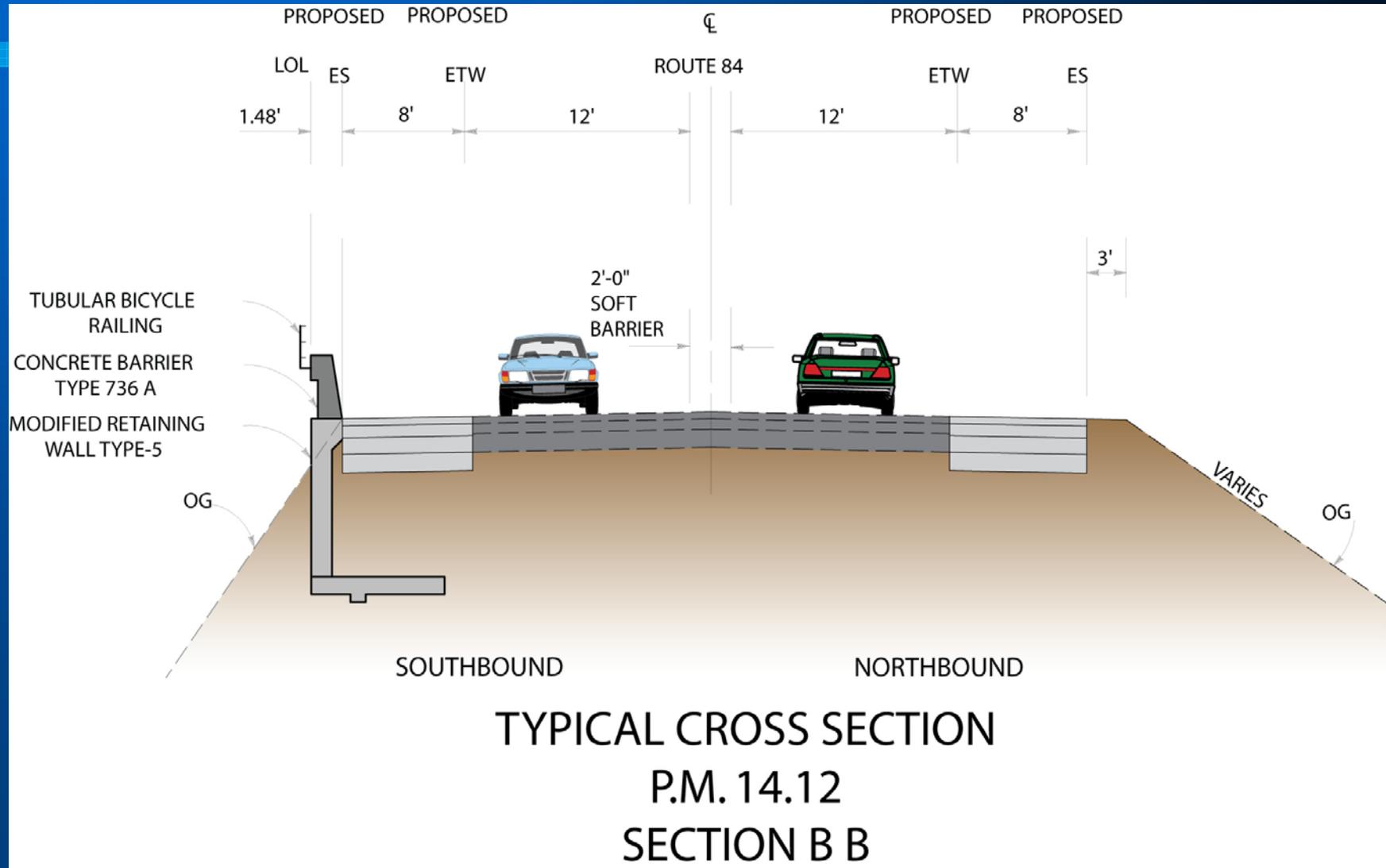
TYPICAL CROSS SECTION (CUT SLOPE)



TYPICAL CROSS SECTION
P.M. 13.66
SECTION A A

PROJECT DESCRIPTION

TYPICAL CROSS SECTION (FILL SLOPE)



PROJECT BENEFITS

Standard shoulders provide the following safety improvements:

- Room for vehicles leaving the lane to safely recover, reducing run-off the road and hit obstacle accidents
- Reduce head-on collisions due to driver overcorrection
- Room for emergency use by disabled vehicles
- Increased horizontal stopping sight distance on curves
- Improve safety for bicycle travel

PROJECT BENEFITS

- Soft median barrier (centerline rumble strip) acts a “buffer” that provides an audible and physical warning to motorists crossing over centerline towards oncoming traffic
- Shoulder rumble strip enhances bicycle safety as it acts as a “soft barrier” between vehicular and bicycle traffic and provides an effective means of locating the lane edge during inclement weather or poor/limited visibility

VISUAL IMPACTS



KEY VIEWPOINT – PALOMA WAY



**View
looking
west, just
west of the
I-680
offramp.**

- **Walnut tree removal along the northern half of the tree allee**
- **Walnut trees on the north side are in declining in health**
- **Save healthy Sycamore trees to the south**
- **Opens up views of the rolling hills beyond**

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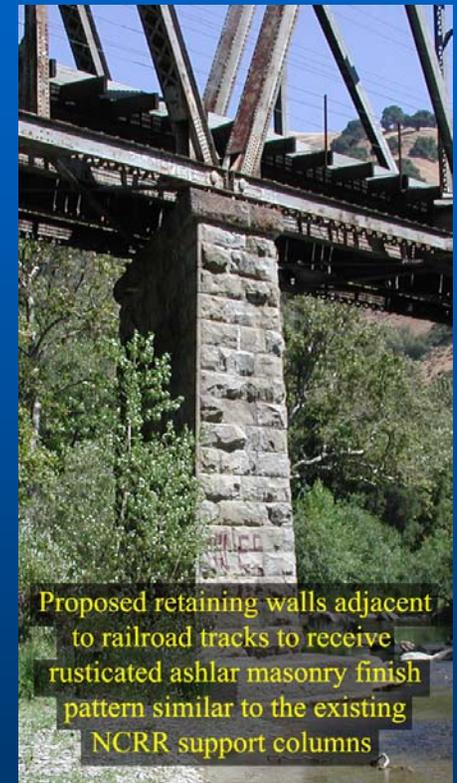
KEY VIEWPOINT – AT POST MILE 16.0



View looking westward, from a viewpoint just 1.0 mile east of the Niles Canyon Railroad maintenance yard.

- Install an 8-12 foot tall upslope retaining wall with rusticated ashlar masonry treatment
- Retain as much existing vegetation to the extent possible
- Relocate historic telegraph poles
- Stain concrete safety barrier to blend with wall

KEY VIEWPOINT – AT POST MILE 16.0

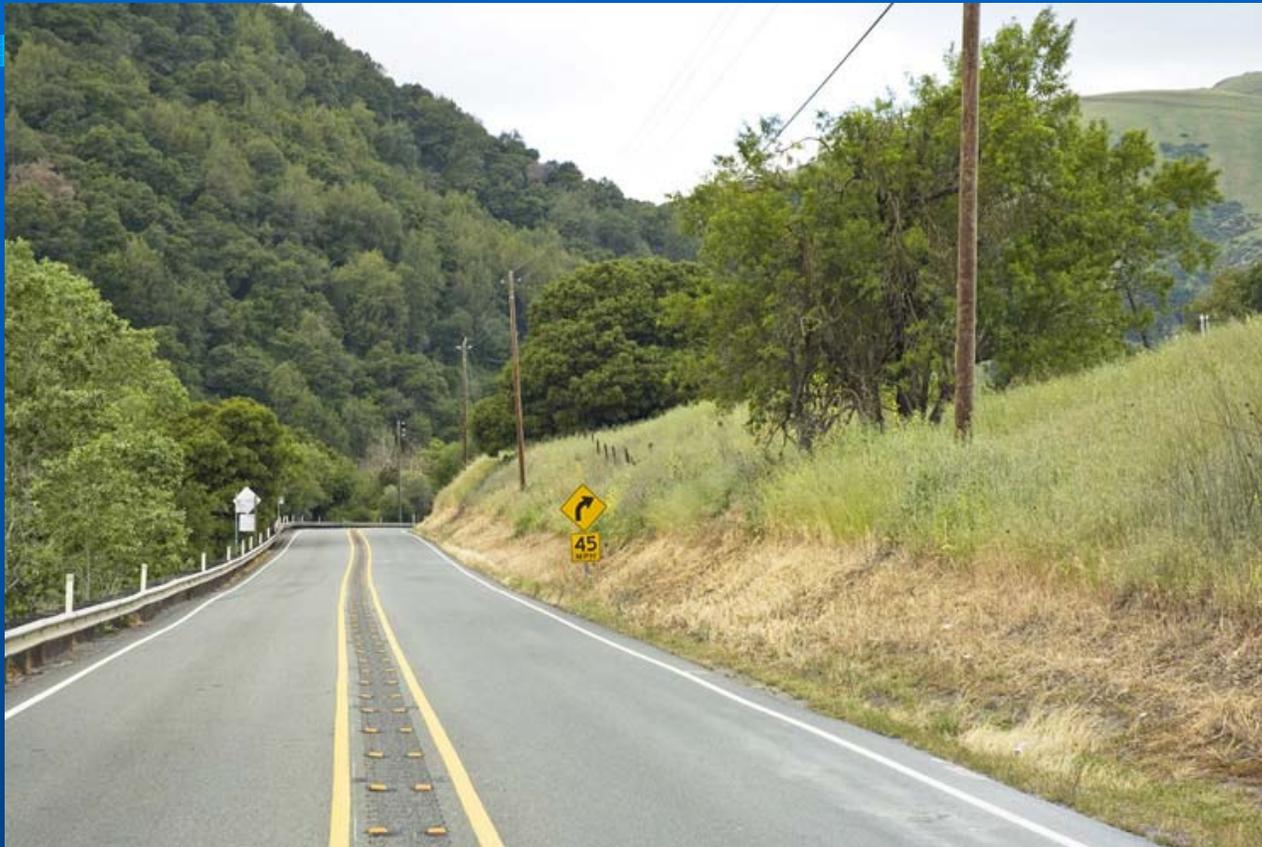


Proposed retaining walls adjacent to railroad tracks to receive rusticated ashlar masonry finish pattern similar to the existing NCRB support columns

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KEY VIEWPOINT – NEAR POST MILE 15.5



View looking west at a location ± 0.5 mile east of the Niles Canyon Railroad maintenance yard.

- Install a maximum 20 foot tall upslope retaining wall, and 4-10 foot tall downslope wall
- Retain as much existing vegetation to the extent possible
- Stain concrete safety barrier to blend with wall
- Upslope wall to have rusticated ashlar masonry treatment

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KEY VIEWPOINT – NEAR POST MILE 14.1



View looking west, just west of where the aqueduct appears adjacent to the roadway.

- Install upslope retaining walls 9 to 17 foot tall, and a 6 to 10 foot tall downslope wall
- Retain as much existing vegetation to the extent possible
- Stain concrete safety barrier to blend with wall
- Removing the trees increases safety, sight distance and visibility

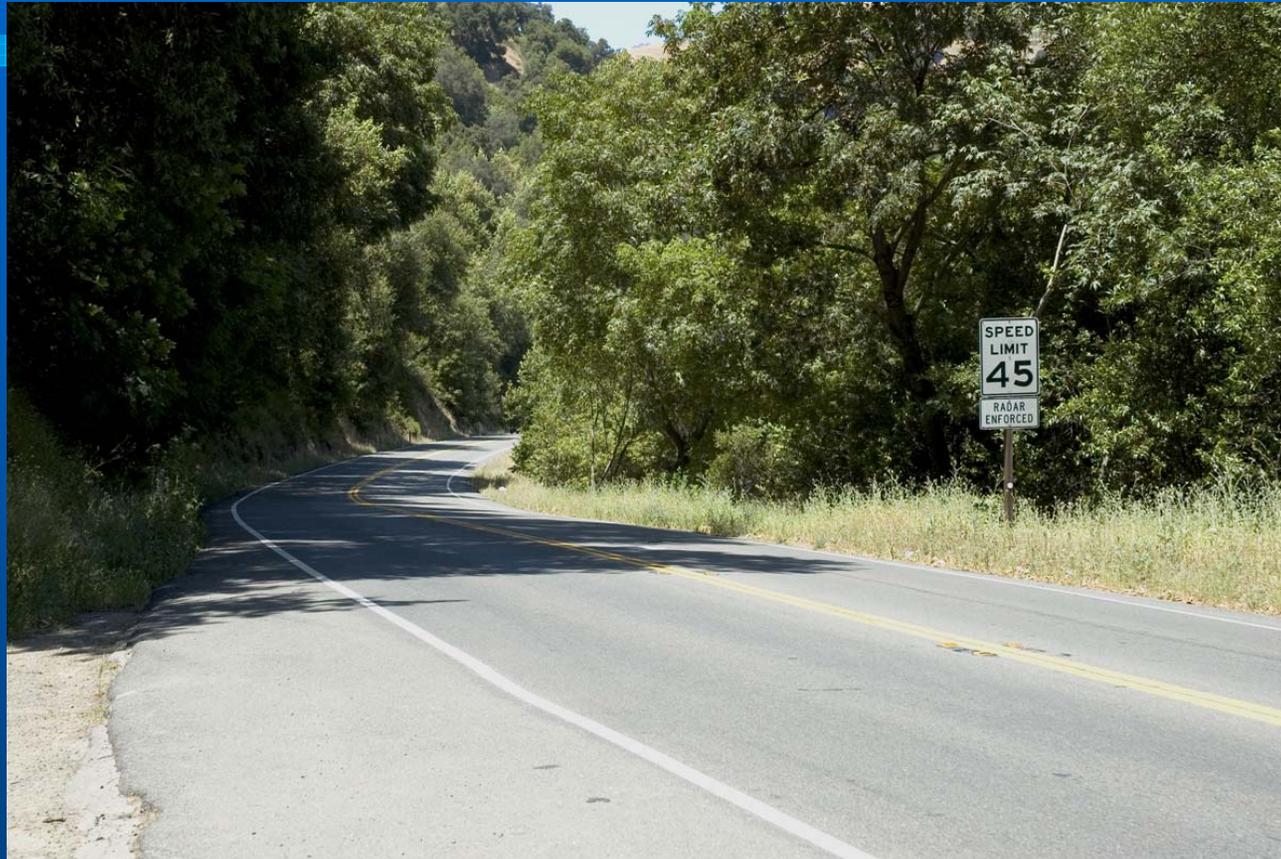
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View looking west, west of where the aqueduct appears adjacent to the roadway.

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KEY VIEWPOINT – NEAR POST MILE 14.0



View
looking
west from
the location
of the
Eucalyptus
trees.

- Removal of the Blue Gum eucalyptus trees along the east side of Route 84
- The grouping of eucalyptus were studied and not found to be identified as possessing historic significance, nor were they considered a scenic resource
- Removing the trees increases safety, sight distance, visibility and opens up a scenic vista
- Install upslope retaining walls 10 to 14 foot tall

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PROJECT COST

Construction Cost	\$ 34.2 M
R/W Cost	<u>\$ 1.8 M</u>
Total Capital cost	\$ 36.0 M
Funding	SHOPP *

* State Highway Operations & Protection Program

PROJECT SCHEDULE

- Draft Environmental Document July 2010
- Environmental Approval Feb 2011
- Design Engineering Complete May 2012
- Right-of-way Certification May 2012
- Advertise Project Aug 2012
- Start Construction Dec 2012
- Construction Complete Dec 2014

END



"Simulation accurate as per current design information available as of 09/2009"