

Appendix A Project Plans

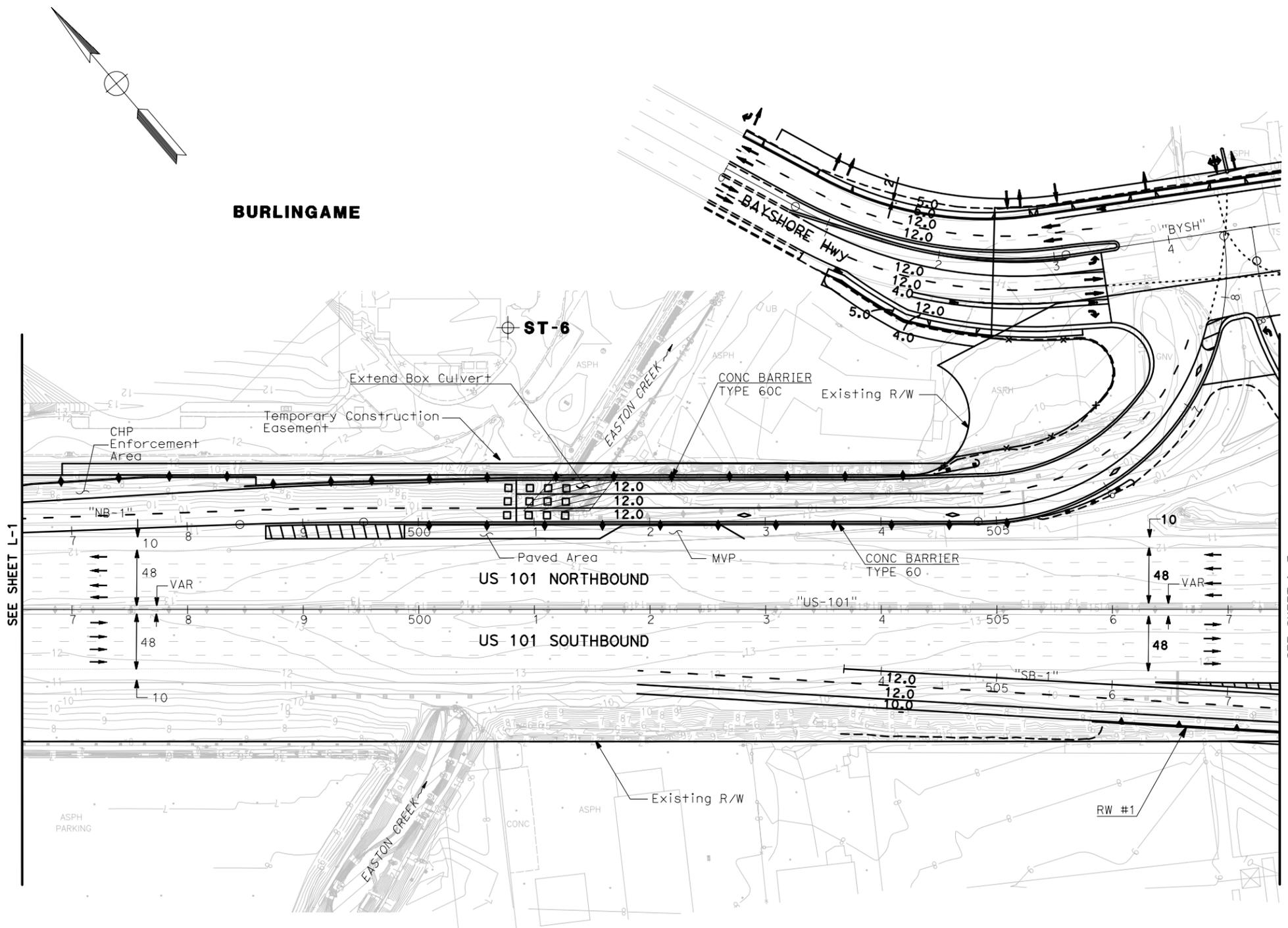
Layout sheets L-1 through L-6 illustrate the preliminary project plans. Sheets X-1 through X-10 depict typical cross sections for roadways in the project limits.

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ERDAL KARATAYLIOGLU
 RAMESH SATHIAMURTHY

REVISOR BY
 DATE REVISOR



PRELIMINARY PLANS
 SUBJECT TO REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	16.3/17.06		

REGISTERED CIVIL ENGINEER DATE _____

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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

LAYOUT L-2
 SCALE: 1"=50'

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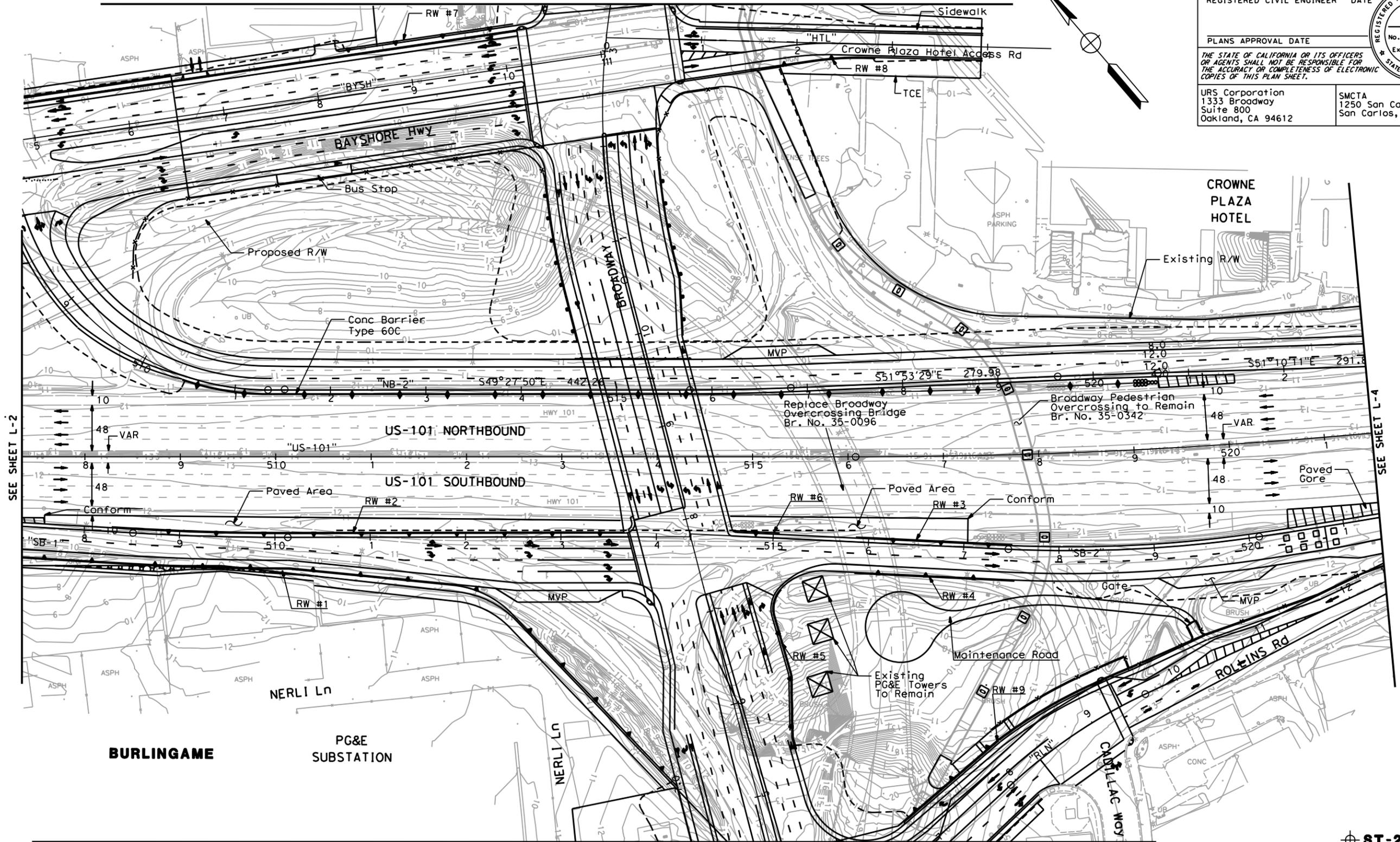
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SEE SHEET L-5



SEE SHEET L-2

SEE SHEET L-4

SEE SHEET L-6

**PRELIMINARY PLANS
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ST-2

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

LAYOUT L-3

SCALE: 1"=50'

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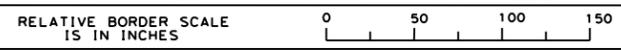
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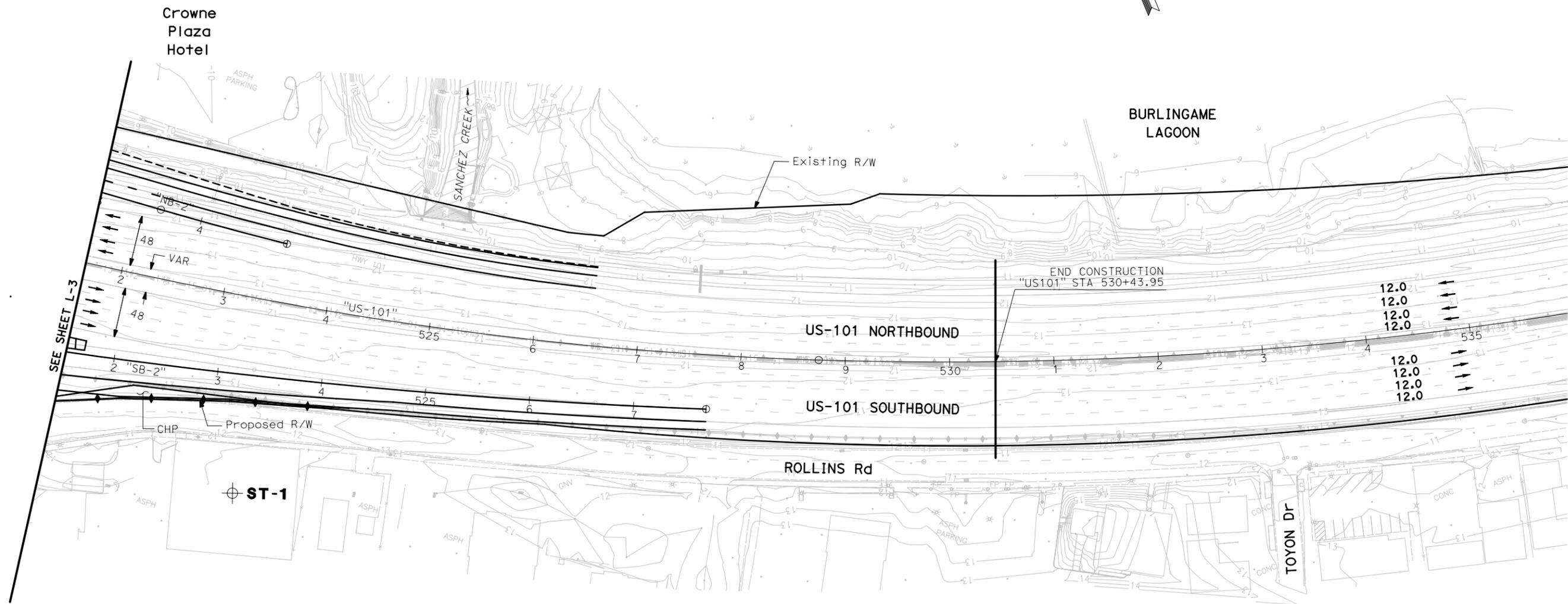
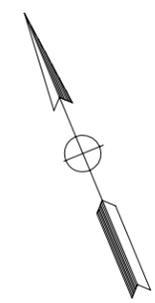
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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

LAYOUT L-4
 SCALE: 1"=50'

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RELATIVE BORDER SCALE IS IN INCHES
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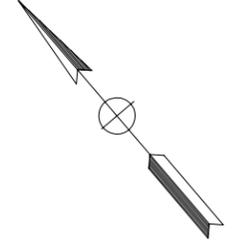
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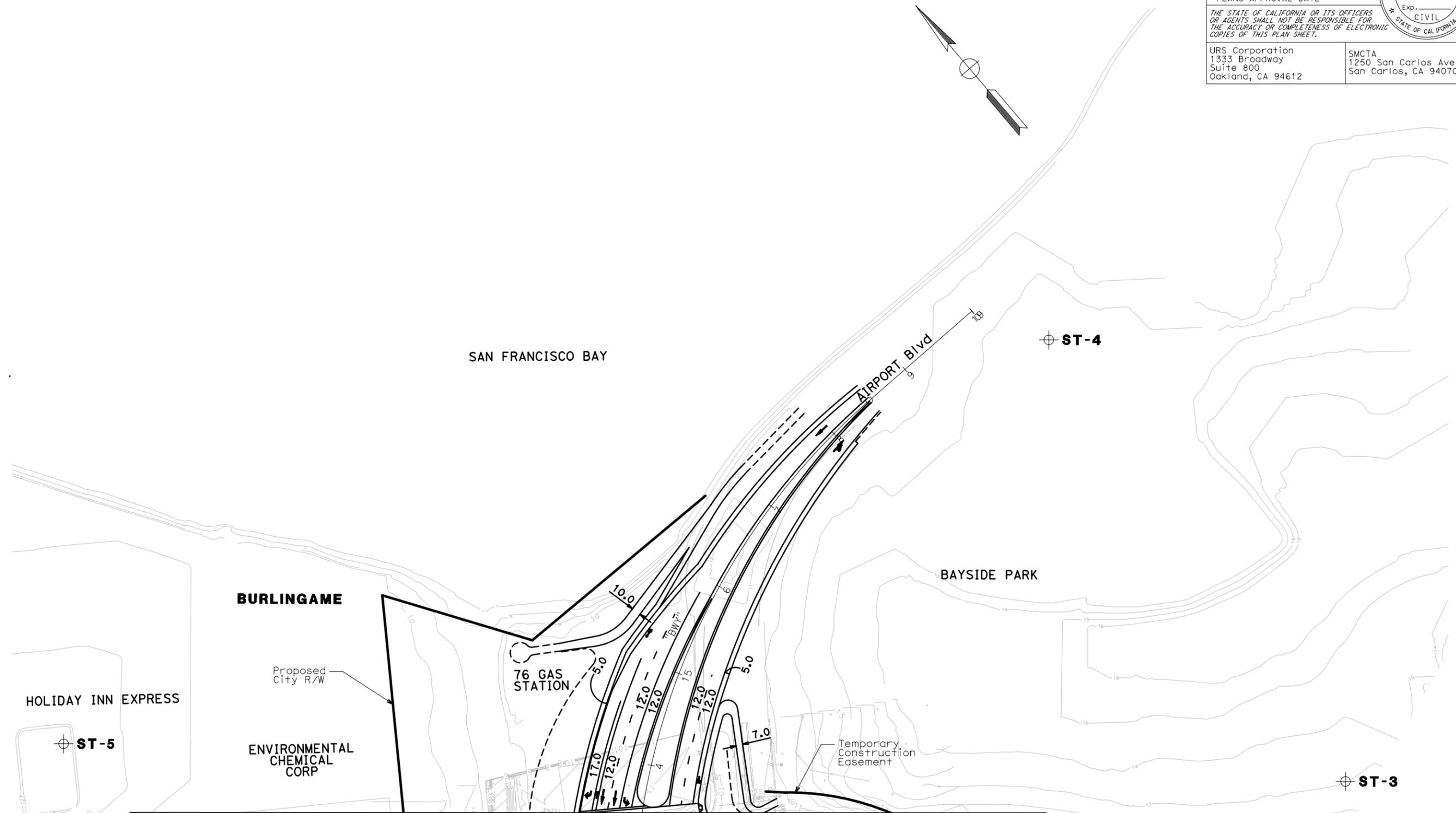


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SEE SHEET L-3

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LAYOUT L-5

SCALE: 1"=50'

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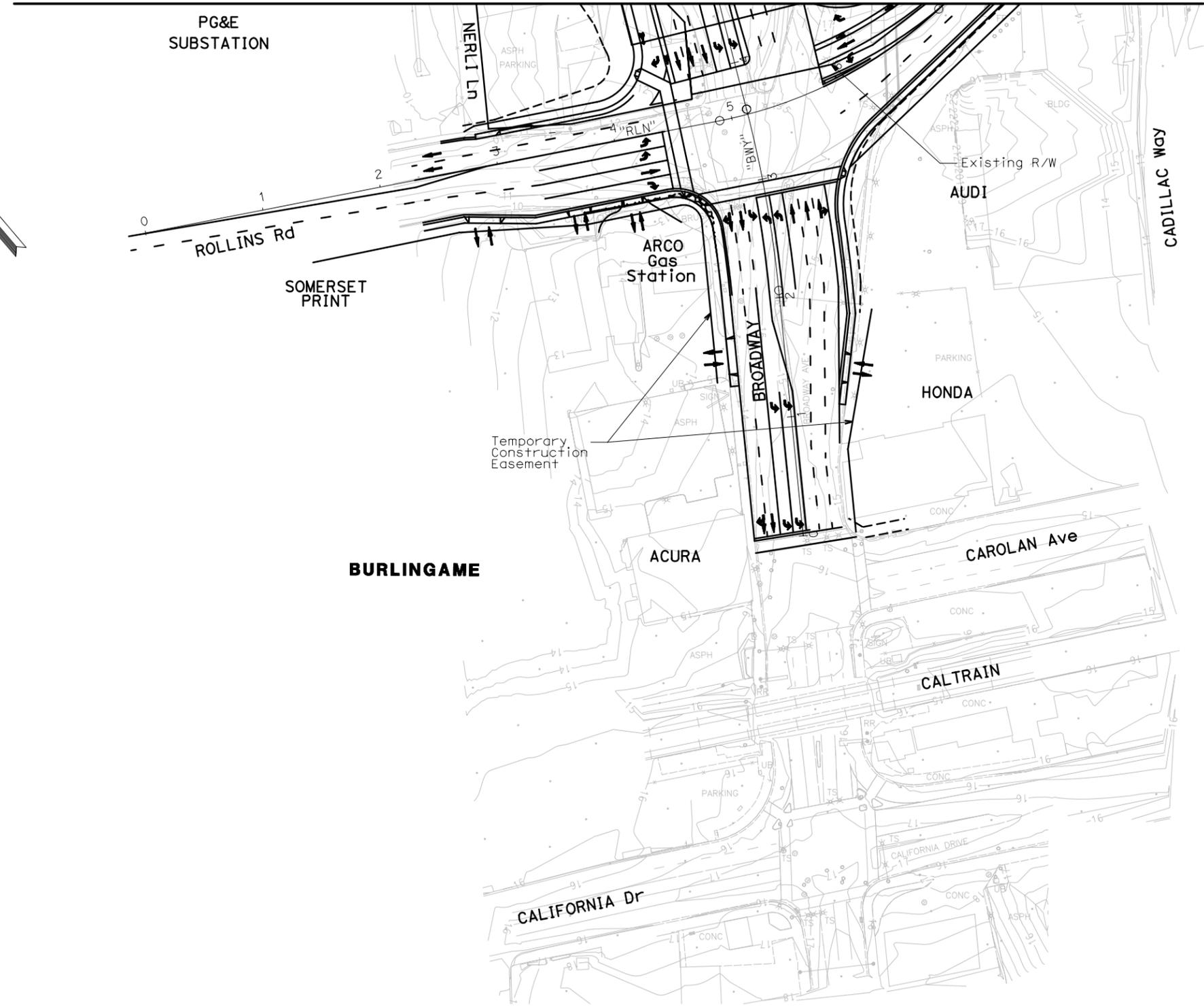
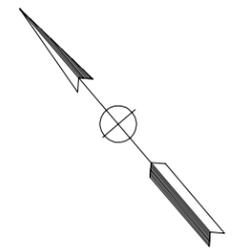
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SEE SHEET L-3



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ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

LAYOUT L-6
SCALE: 1"=50'

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NOTES:
 1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
 3. STRUCTURAL SECTION CALCULATIONS ARE BASED ON CALCULATED TI=14 AND R VALUE=5 FOR MAINLINE US101 AND TI=11 AND R VALUE=5 FOR RAMPS AND LOCAL STREETS.

PAVEMENT SECTIONS*

- 1 [6" AC (Type A)
9" C13 AB
6" C14 AS]
 - 2 [6" AC (Type A)
10" C13 AB
6" C14 AS]
 - 3 [2" OGAC
8" AC (Type A)
12" C13 AB
8" C14 AS]
 - 4 [6" PCC
4" C14 AS]
 - 5 [2" & Var AC Overlay]
 - 6 [2" OGAC
2" AC (Type A)]
- * Calculated based on Traffic Index.

ABBREVIATIONS:
 RAC RUBBERIZED ASPHALT CONCRETE
 HMA HOT MIX ASPHALT
 ATPB ASPHALT TREATED PERMEABLE BASE
 AB AGGREGATE BASE
 AS AGGREGATE SUBBASE
 LCB LEAN CONCRETE BASE
 SW SIDEWALK

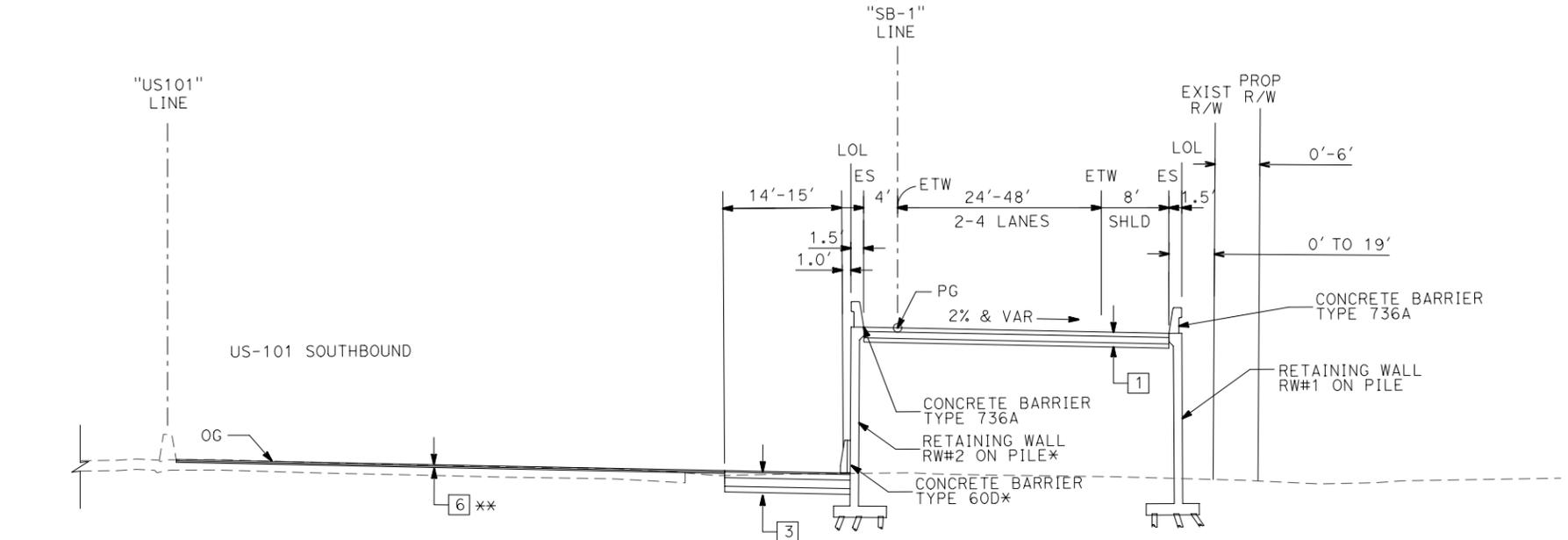
SEE CALTRANS STANDARD PLANS FOR ABBREVIATIONS NOT LISTED.

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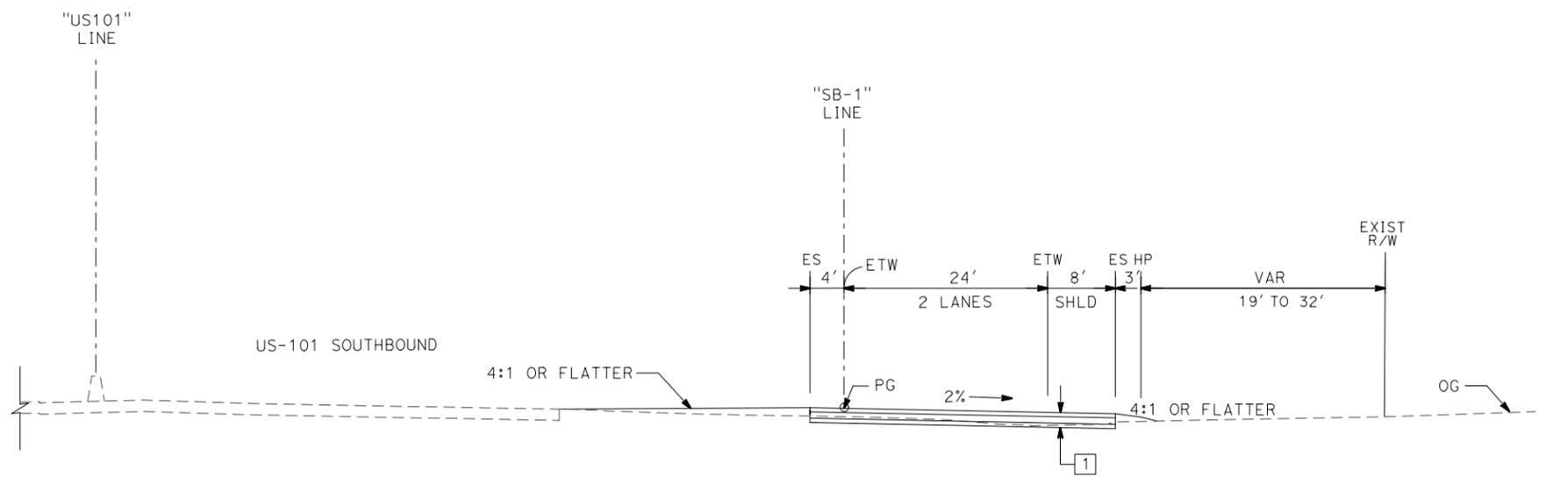
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OFF-RAMP - SB US101 TO BROADWAY

"SB-1" STA: 505+91.39 TO 511+87.46
 * "SB-1" STA: 507+78.53 TO 511+87.46
 ** "SB-1" STA 507+56 TO 511+87.46



OFF-RAMP - SB US101 TO BROADWAY

"SB-1" 503+67.71 TO 505+91.39

**PRELIMINARY PLANS
 NOT FOR CONSTRUCTION**

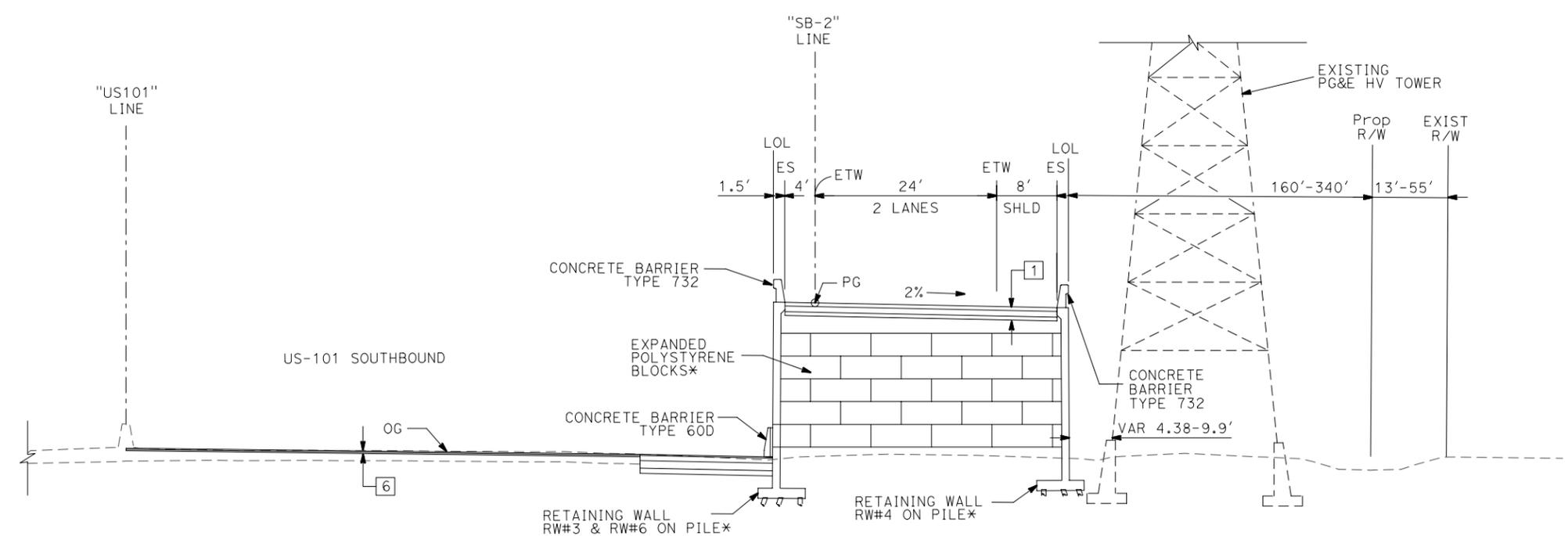
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**TYPICAL CROSS SECTIONS
 X-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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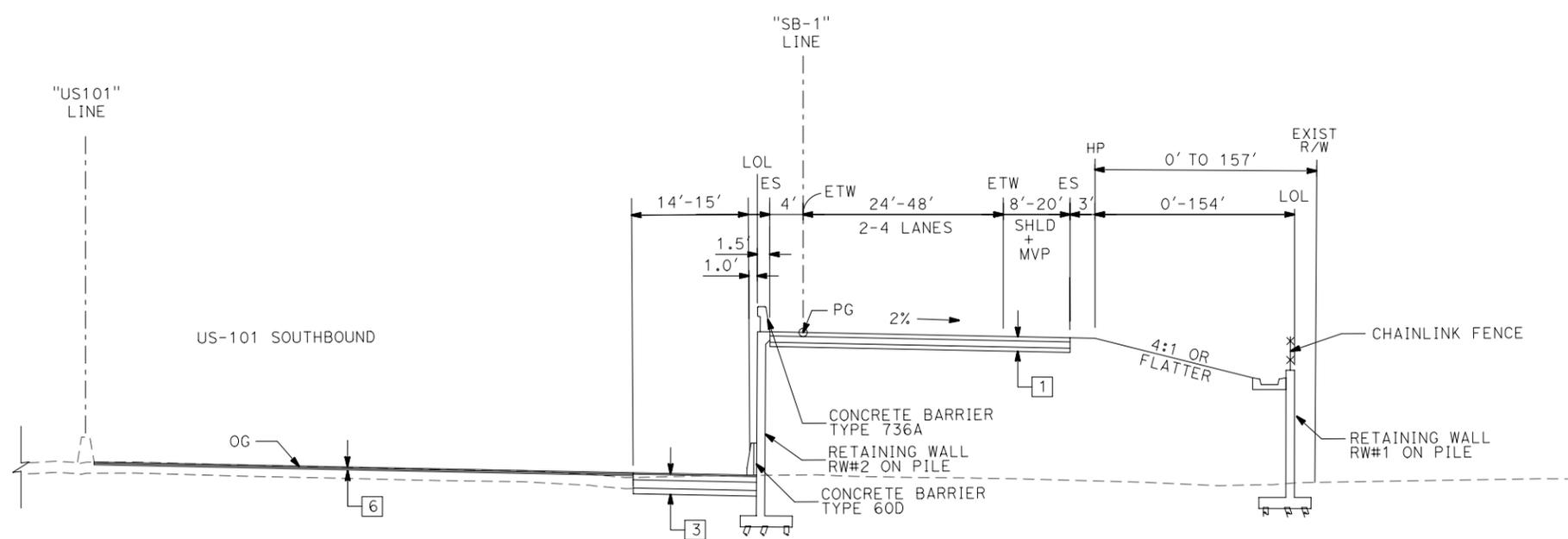
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ON-RAMP - BROADWAY TO SB US101

"SB-2" STA: 514+61.15 TO 517+70.48
 * "SB-2" STA: 515+06.66 TO 515+86.66
 Design Alternatives for the proposed structure under evaluation.



OFF-RAMP - SB US101 TO BROADWAY

"SB-1" STA: 511+87.46 TO 513+74.20

PRELIMINARY PLANS
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No Scale
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TYPICAL CROSS SECTIONS
X-2

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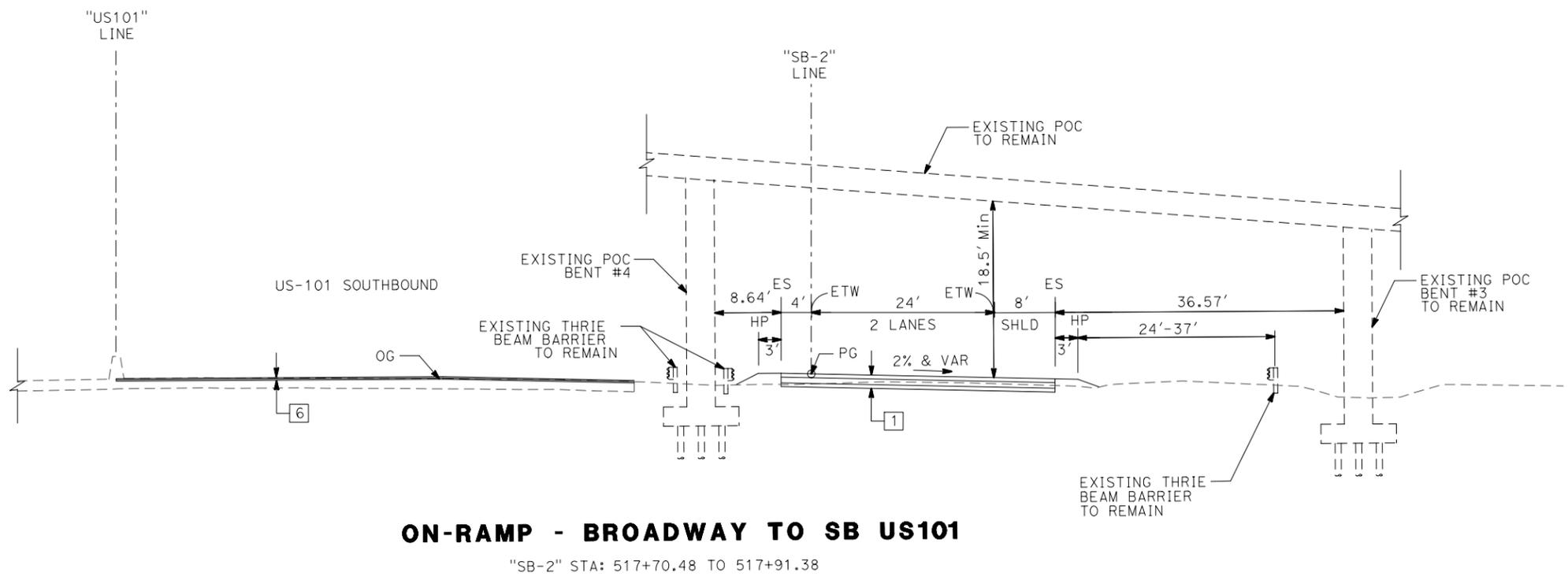
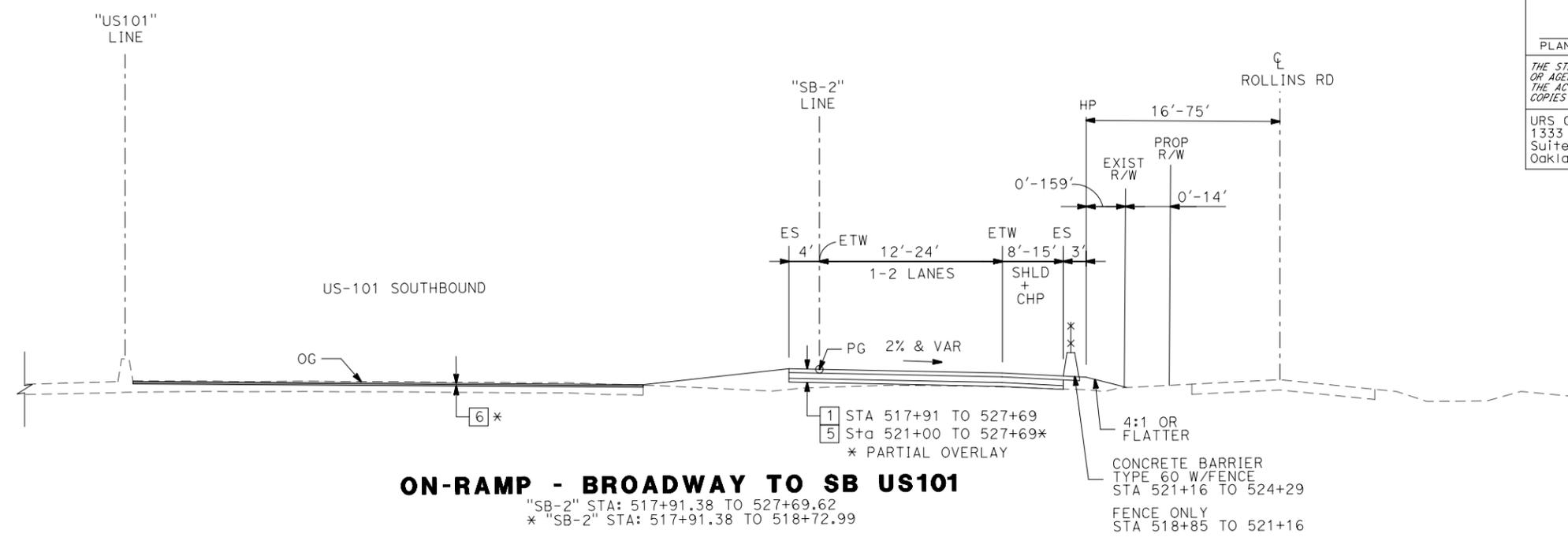


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No Scale
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TYPICAL CROSS SECTIONS X-3

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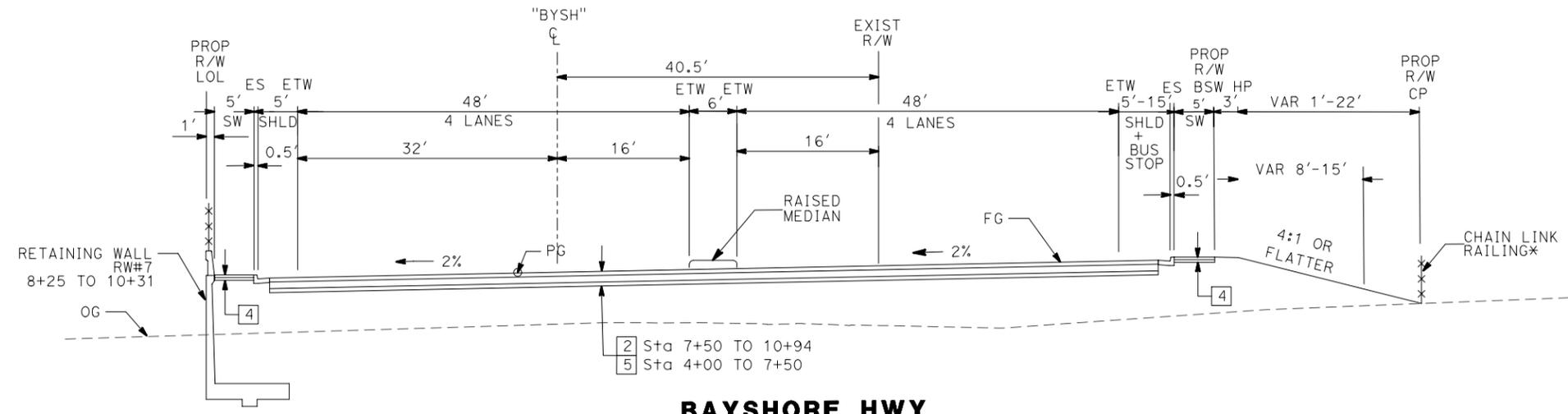
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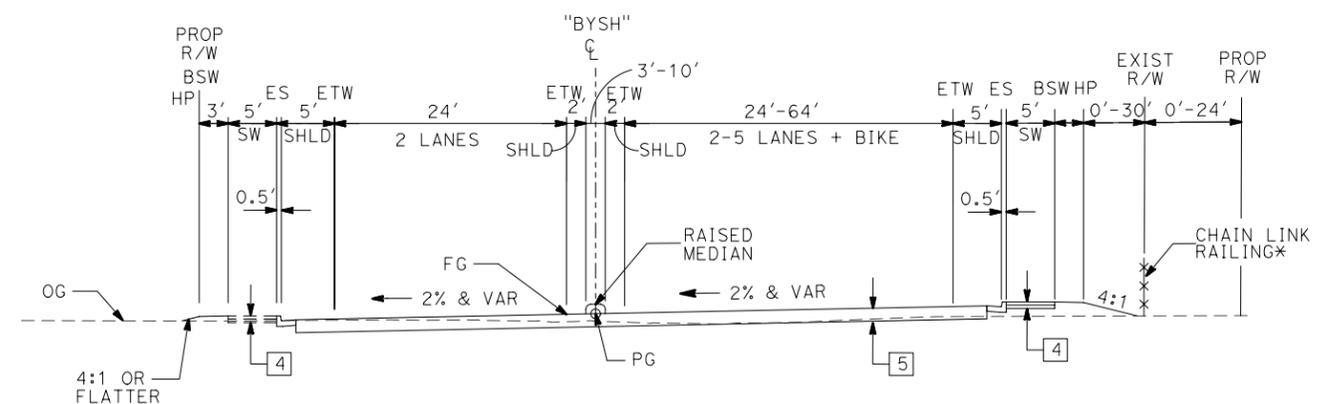
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BAYSHORE HWY

"BYSH" STA: 4+00.00 TO 10+94.00
 *"BYSH" STA: 5+80.00 TO 10+20.00



BAYSHORE HWY

"BYSH" STA: 0+00.00 TO 4+00.00
 * "BYSH" STA: 2+45.00 TO 3+40.00

PRELIMINARY PLANS
 NOT FOR CONSTRUCTION

No Scale
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TYPICAL CROSS SECTIONS
X-4

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BORDER LAST REVISED 3/1/2007



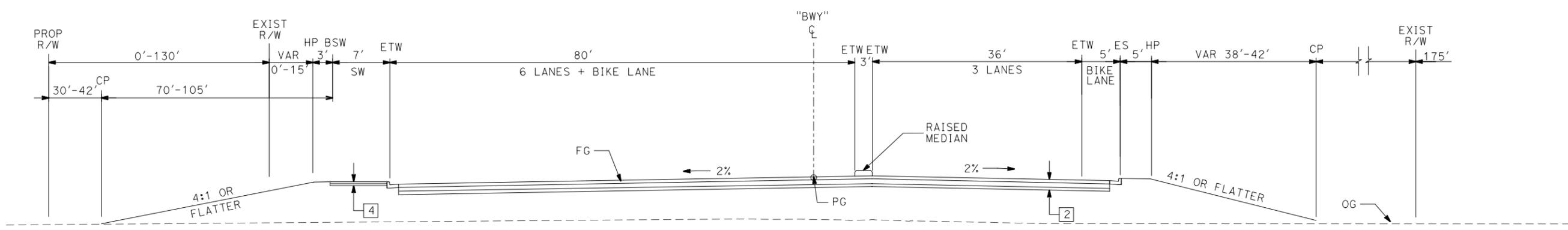
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CU 04226

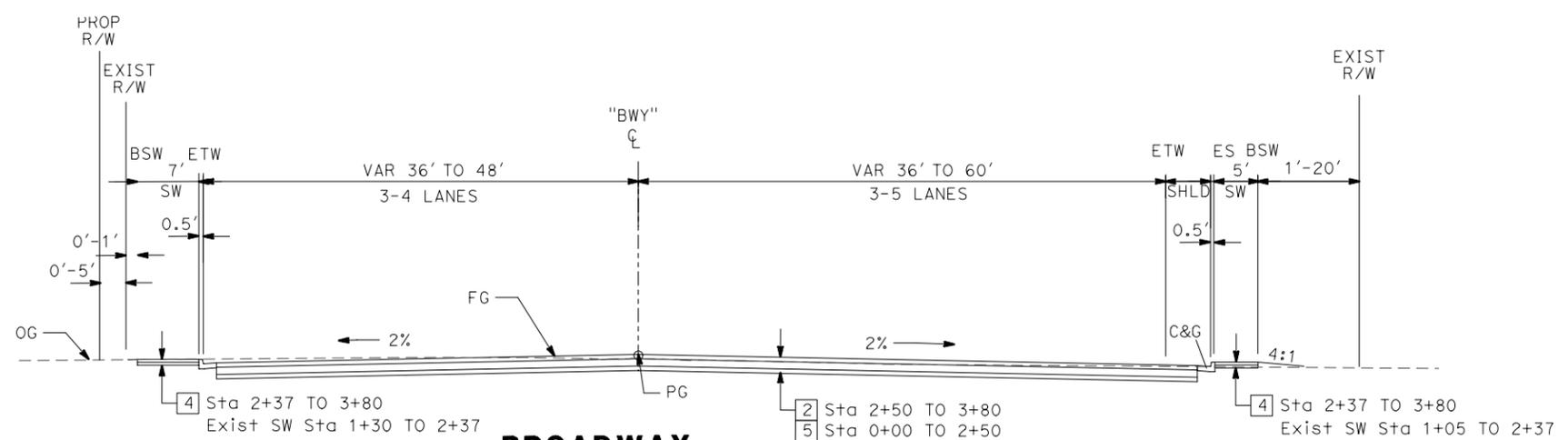
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04	SM	101	16.3/17.06		
REGISTERED CIVIL ENGINEER DATE					
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BROADWAY
"BWY" STA: 3+80.00 TO 5+43.98



BROADWAY
"BWY" STA: 0+00.00 TO 3+80.00

PRELIMINARY PLANS
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No Scale
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TYPICAL CROSS SECTIONS
X-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

ERDAL KARATAYLOGLU
RAMESH SATHIAMURTHY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

REVISOR BY DATE REVISOR

BORDER LAST REVISED 3/1/2007



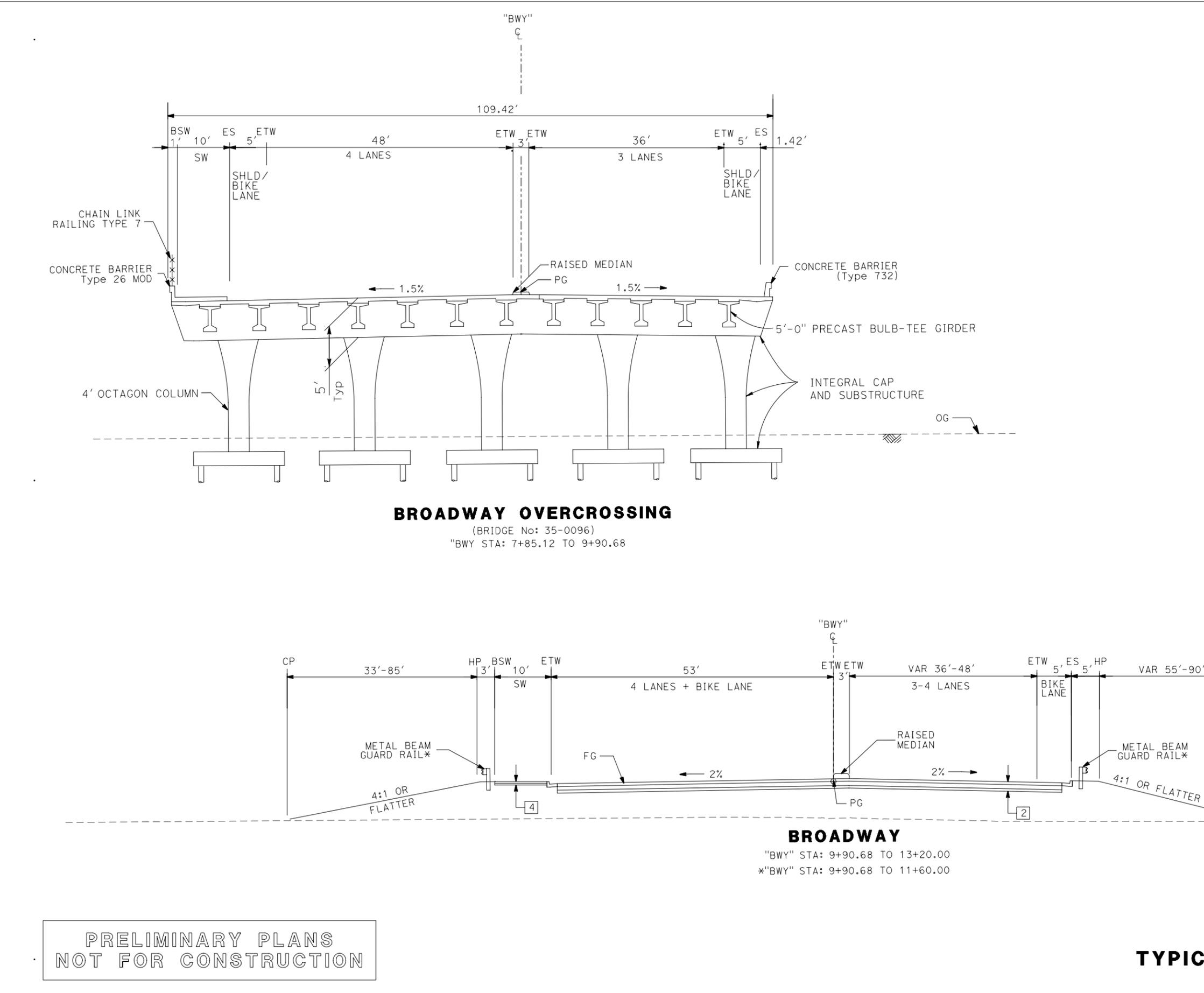
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CU 04226

EA 235840

LAST REVISION DATE PLOTTED => 5/12/2010
12-08-08 TIME PLOTTED => 5:22:14 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	16.3/17.06		

REGISTERED CIVIL ENGINEER DATE _____
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 X-7**

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EA 235840

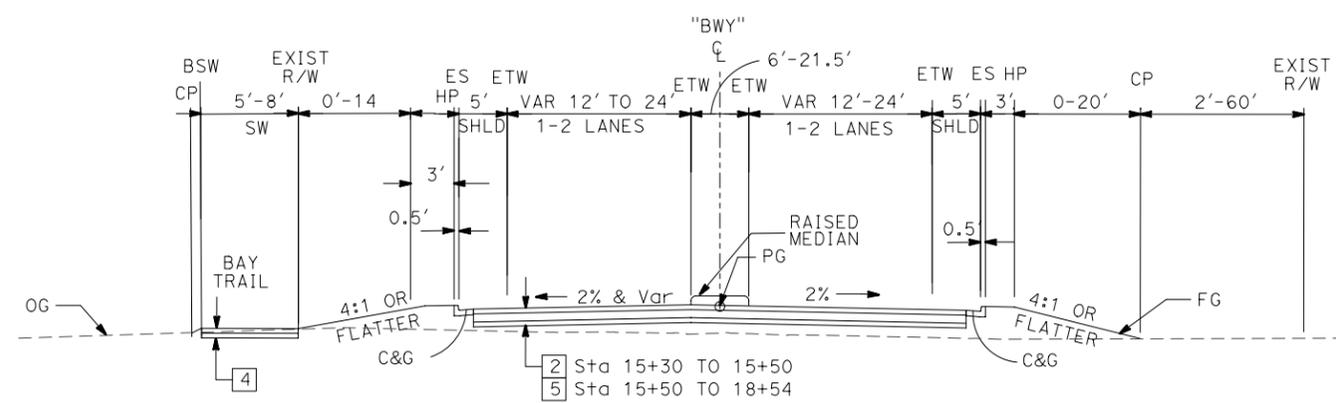
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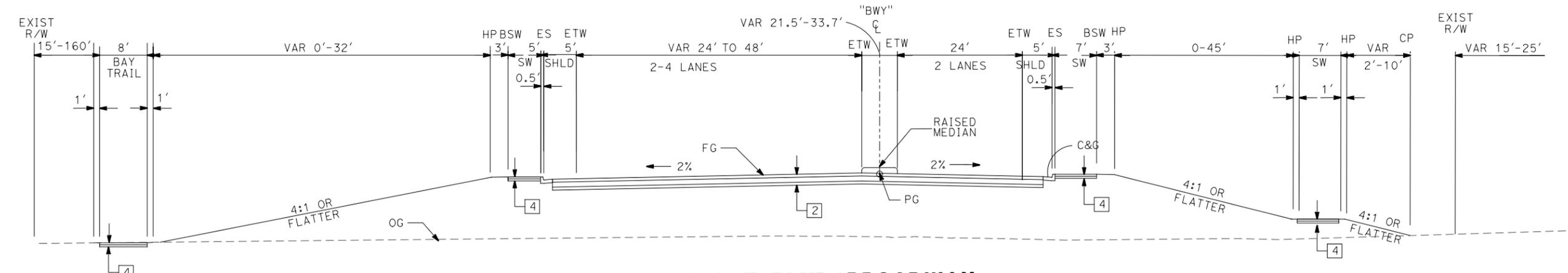
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AIRPORT BLVD/BROADWAY
"BWY" STA: 15+30.00 TO 18+54.72



AIRPORT BLVD/BROADWAY
"BWY" STA: 13+30.00 TO 15+30.00

PRELIMINARY PLANS
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No Scale
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TYPICAL CROSS SECTIONS
X-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISOR	DATE
Caltrans		ERDAL KARATAYLIOGLU	RAMESH SATHIAMURTHY		

BORDER LAST REVISED 3/1/2007



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EA 235840

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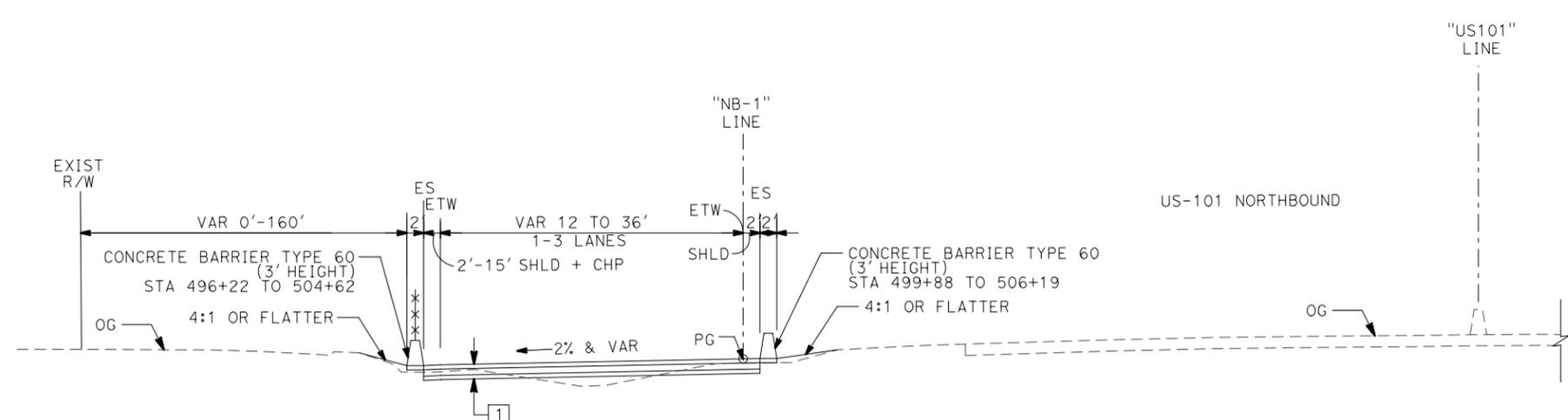
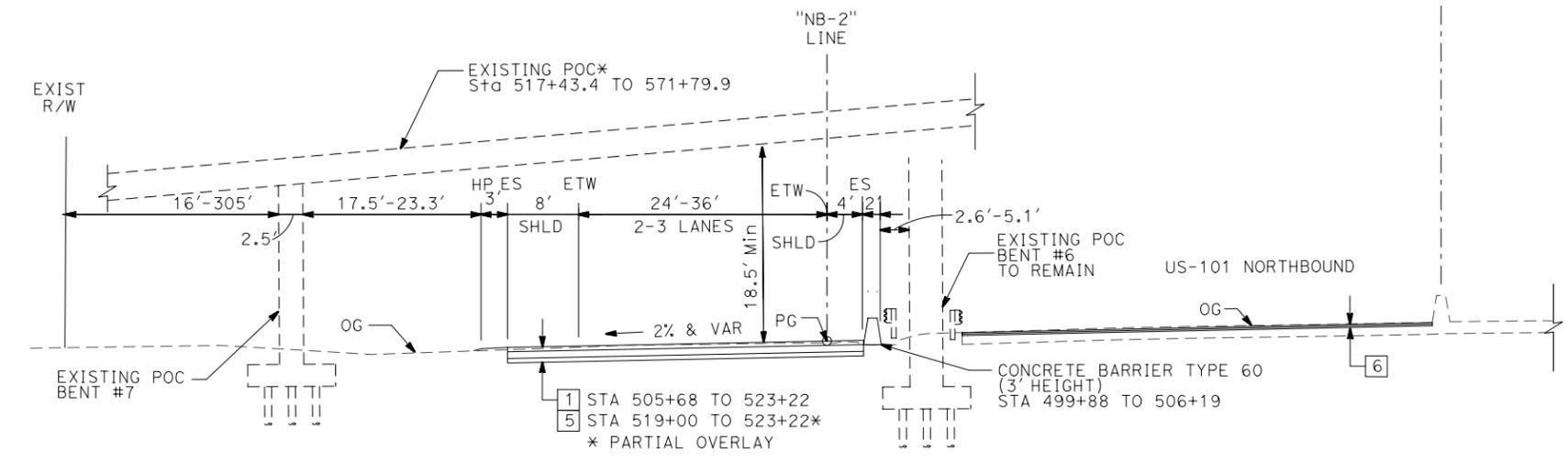
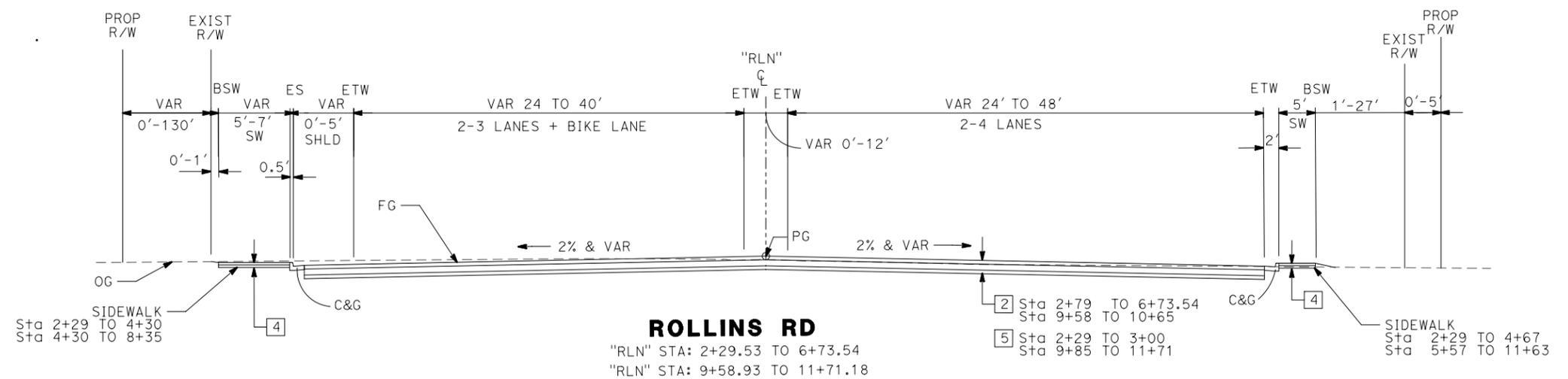
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	101	16.3/17.06		

REGISTERED CIVIL ENGINEER DATE _____
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**TYPICAL CROSS SECTIONS
 X-9**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REVISOR
 DATE

ERDAL KARATAYLIOGLU
 RAMESH SATHIAMURTHY

CALCULATED-DESIGNED BY
 CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

DEPARTMENT OF TRANSPORTATION

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CU 04226 EA 235840

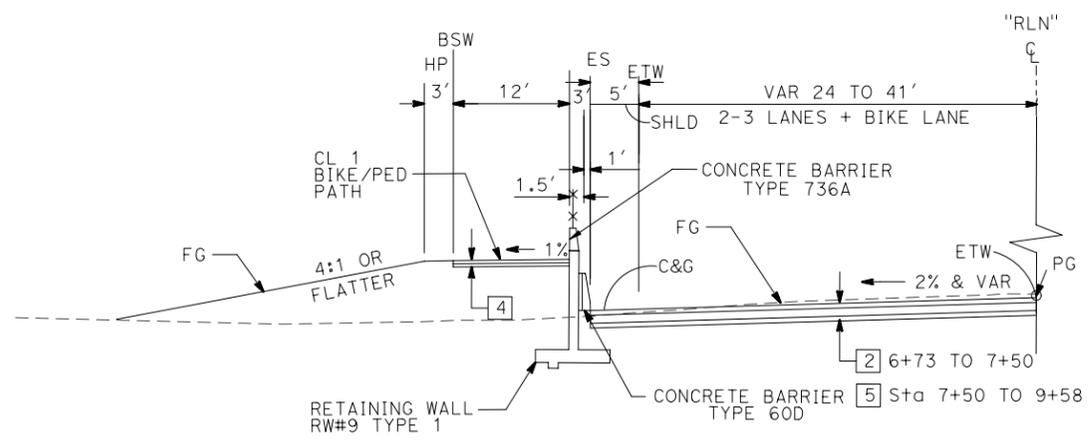
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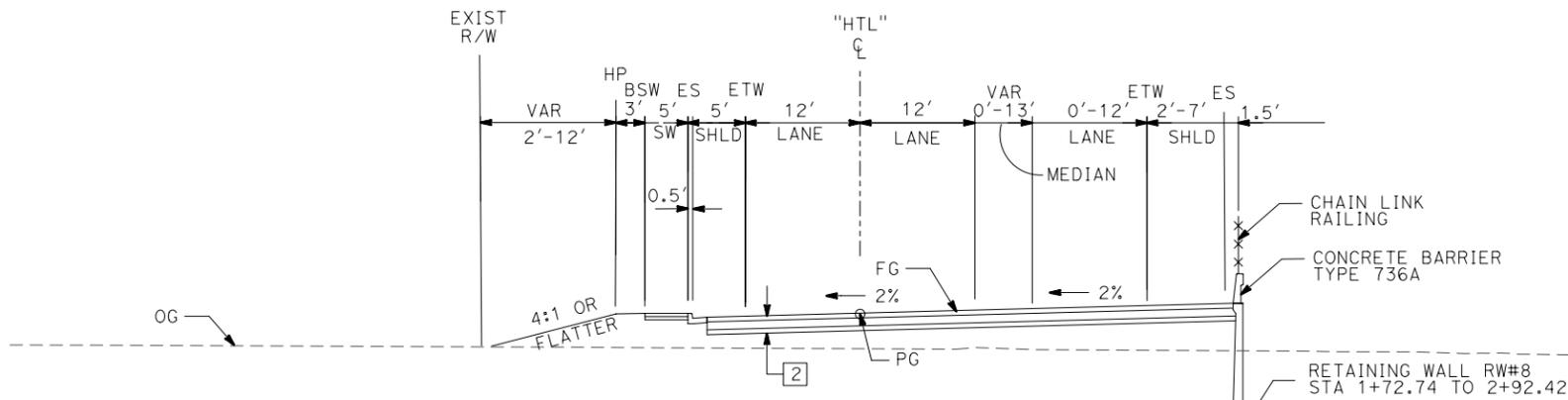
REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

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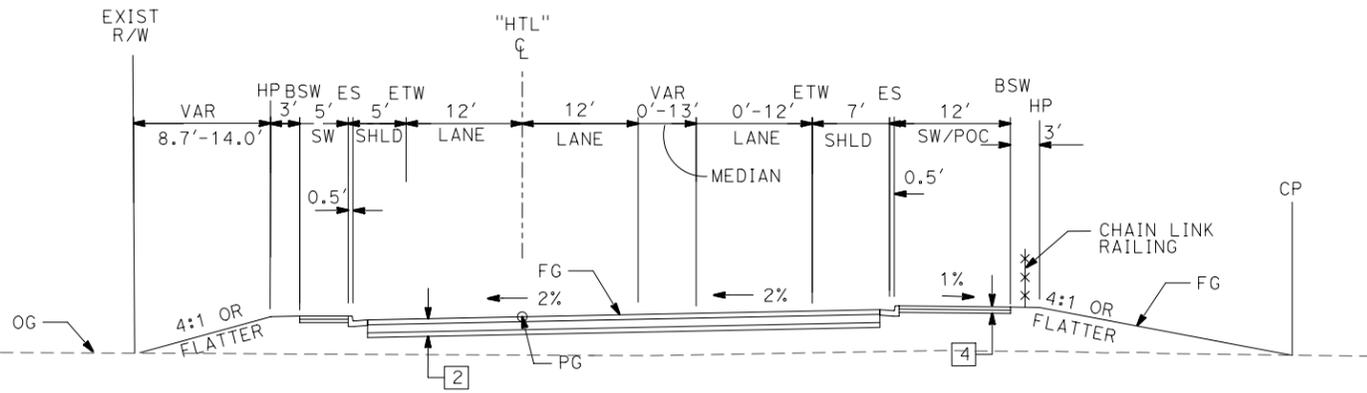
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ROLLINS RD
"RLN" STA: 6+73.54 TO 9+58.93



CROWNE PLAZA HOTEL ACCESS RD
"HTL" STA: 1+72.74 TO 4+04.76



CROWNE PLAZA HOTEL ACCESS RD
"HTL" STA: 0+63.93 TO 1+72.74

**PRELIMINARY PLANS
NOT FOR CONSTRUCTION**

No Scale
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**TYPICAL CROSS SECTIONS
X-10**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

REVISOR: ERDAL KARATAYLIOGLU, RAMESH SATHIAMURTHY
CALCULATED/DESIGNED BY: [blank]
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CONSULTANT FUNCTIONAL SUPERVISOR: [blank]

BORDER LAST REVISED 3/1/2007



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LAST REVISION: DATE PLOTTED => 5/12/2010
12-08-08 TIME PLOTTED => 5:25:17 PM

Appendix B CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

CEQA Environmental Checklist

04-SM-101

16.30/17.06

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E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VII. GREENHOUSE GAS EMISSIONS: Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Appendix C Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
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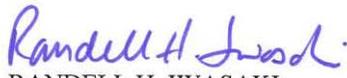


*Flex your power!
Be energy efficient!*

August 25, 2009

TITLE VI POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.


RANDELL H. IWASAKI
Director

"Caltrans improves mobility across California"



Appendix D Summary of Relocation Benefits

Declaration of Policy

“The purpose of this title is to establish a *uniform policy for fair and equitable treatment* of persons displaced as a result of federal and federally assisted programs in order that such persons *shall not suffer disproportionate injuries* as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the U.S. Constitution states, “No Person shall...be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations, Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

Fair Housing

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This Act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations, and also are given a detailed explanation of the Caltrans Relocation

Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

Relocation Assistance Advisory Services

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are “decent, safe and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (For business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning Federal and State assisted housing programs, and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe and sanitary” replacement dwelling, available on the market, is offered to them by Caltrans.

Residential Relocation Payments

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property.

Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property in order to be eligible for relocation payments.

Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is \$22,500. If the total entitlement (without the moving payments) is in excess of \$22,500, the Last Resort Housing Program will be used (See the explanation of the Last Resort Housing Program below).

Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable “decent, safe and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit

designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the *Down Payment* section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is \$5,250. If the total entitlement for rent supplement exceeds \$5,250, the Last Resort Housing Program will be used.

In order to receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe and sanitary” replacement dwelling within one year from the date the Department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment

The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans’ initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of \$5,250. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the \$22,500 and \$5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced;
- Specific arrangements needed to accommodate any family member(s) with special needs;
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family;

- Preferences in area of relocation;
- Location of employment or school.

Nonresidential Relocation Assistance

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the Right of Way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to \$2,500, for reasonable expenses actually incurred.

Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to \$10,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses which meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than \$1,000 nor more than \$20,000.

Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, *except* for any Federal law providing local “Section 8” Housing Programs.

Any person, business, farm or nonprofit organization which has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right of Way. California’s law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Important Notice

To avoid loss of possible benefits, no individual, family, business, farm or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Department of Transportation relocation advisor at:

State of California
Department of Transportation, District #4
111 Grand Avenue
Oakland, CA 94612

Appendix E Glossary of Technical Terms

This appendix briefly explains the technical terms and names used in this IS/EA. Appendix G provides a list of acronyms.

Best Management Practice (BMP)	Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.
Basin Plan	A specific plan for control of water quality within one of the nine hydrologic basins of the State under the regulation of a Water Quality Control Board.
Buttonhook (or Hook) ramp	A ramp shaped like the letter “J.”
Cloverleaf interchange	An interchange type that has two or four loop ramps. The example below is a four-loop cloverleaf interchange with collector-distributor roads. A two-loop cloverleaf is sometimes called a partial cloverleaf interchange.

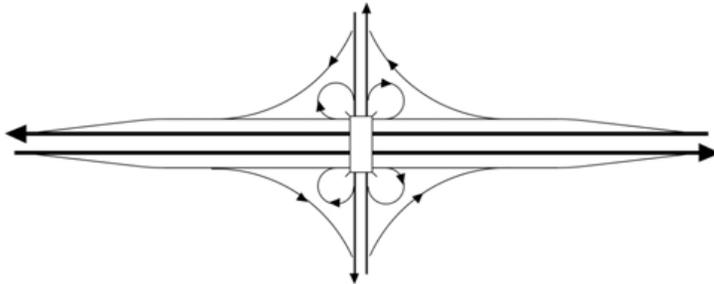


Image source: Highway Design Manual, Chapter 500, Department 2009g.

Cumulative effects	Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.
Decibel	A numerical expression of the relative loudness of a sound.

Diamond interchange An interchange type that has two or four diagonal ramps that form a diamond shape. The example below has four diagonal ramps. A two-ramp diamond is sometimes called a partial diamond interchange.

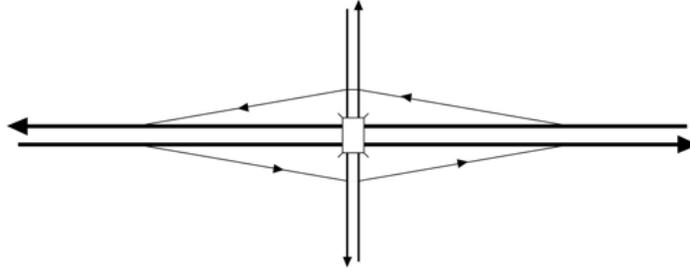


Image source: Highway Design Manual, Chapter 500, Department 2009g.

Encroachment (floodplain)

An action within the limits of the 100-year floodplain.

Endangered

Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.

Erosion

The wearing away of the land surface by running water, wind, ice, or other geological agents.

Federal Register

Federal publication that provides official notice of federal administrative hearings and issuance of proposed and final federal administrative rules and regulations.

Floodplain (100-year)

The area subject to flooding by a flood or tide that has a one percent chance of being exceeded in any given year.

FONSI

Finding of No Significant Impact, issued by the Department under its responsibilities pursuant to 23 United States Code (USC) 327 upon approval of the NEPA review process.

Habitat

The place or type of site where a plant or animal naturally or normally lives and grows.

Hectare

A unit of surface measure in the metric system, equal to 10,000 square meters.

Initial Study (IS)

Environmental review document prepared to comply with CEQA

Initial Site Assessment

A Department of Transportation term for an initial study to determine hazardous waste issues on a project.

L_{eq}	A unit used for evaluation of sound impacts, L_{eq} is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually one hour).
Level of Service (LOS)	A measurement of capacity of a roadway.
Mitigation	Compensation for an impact by replacement or provision of substitute resources or environments. Mitigation can include avoiding an impact by not taking a certain action, minimizing impacts by limiting the degree of an action, or rectifying an impact by repairing or restoring the affected environment.
Negative Declaration (ND)	Issued upon approval of the environmental review process under CEQA
NPDES	National Pollutant Discharge Elimination System. A permit regulated by the Regional Water Quality Control Board that is required if more than one acre of original ground is graded. One condition of this permit is that the contractor must submit a Storm Water Pollution Prevention Plan (SWPPP), which is similar to the Water Pollution Control Plan required by Caltrans' Standard Specification 7-1.01G.
Practicable	An action that is capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.
Receptors	Term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.
Regulatory agency	An agency that has jurisdiction by law.
Responsible agency	A public agency other than the Lead Agency that has responsibility for carrying out or approving a project under CEQA.
Right-of-way	A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

- Riparian** Pertaining to the banks and other adjacent terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, estuaries, and surface-emergent aquifers, whose transported freshwater provides soil moisture sufficient in excess of that available through local precipitation to potentially support the growth of vegetation.
- RTP** Regional Transportation Plan, prepared by the Metropolitan Transportation Commission (MTC), the regional agency responsible for transportation planning and funding.
- Special-status species** Plant or animal species that are either (1) Federally listed, proposed for or a candidate for listing as threatened or endangered; (2) bird species protected under the Federal Migratory Bird Treaty Act; (3) protected under State endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies; (4) recognized by national, State, or local environmental organizations (e.g., California Native Plant Society).
- STIP** The State Transportation Improvement Program, updated every two years, is the California Transportation Commission's priorities for improvements on and off the State highway system.
- SWPPP** A Storm Water Pollution Prevention Plan is prepared to evaluate sources of discharges and activities that may affect storm water runoff, and implement measures or practices to reduce or prevent such discharges.
- Threatened** A species that is likely to become endangered in the foreseeable future in the absence of special protection.
- Trumpet interchange** An interchange type that is typically used for three-way interchanges, with one ramp that makes a 270-degree loop.

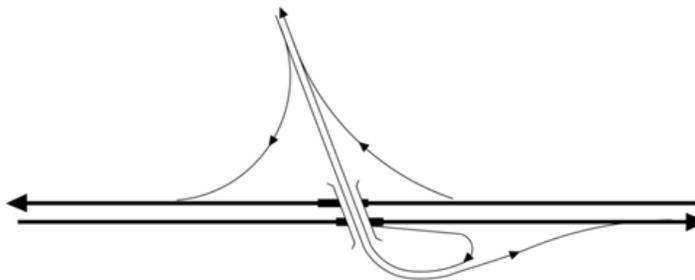


Image source: Highway Design Manual, Chapter 500, Department 2009g.

Waters of the United States

As defined by the USACE in 33 Code of Federal Regulations 328.3(a):

1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundment of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs 1-4;
6. The territorial seas;
7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1-6.

Wetlands

When used in a formal context, such as in this IS/EA, wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances will support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)].



Appendix F Minimization and/or Mitigation Summary

G.1 Avoidance and Minimization Measures

Land Use

The Department and SMCTA will develop a trail closure plan during the final design phase and before submitting the BCDC permit application for the proposed project.

The trail closure plan will:

- Minimize the number of days that the Bay Trail and Bay Trail extension will be closed to the public;
- Include a mandatory signage plan notifying Bay Trail users of closed segments or full closures. Notices will be posted at Bay Trail access points as appropriate; and
- Provide a detour or alternate route for trail users during construction. If safety concerns prevent use of another route, the trail closure will be kept to the minimum period possible.

A Transportation Management Plan (TMP) will be developed as part of the project to address impacts to motor vehicle, bicycle, and pedestrian access during project construction. The plan will maintain bicycle and pedestrian access to the maximum extent feasible as part of construction staging. The plan will include briefing local public officials and developing a public information program to notify the public of project progress and upcoming closures and detours. The public information program will include outreach to ride sharing agencies, transit operators, and neighborhood and special interest groups.

Utilities and Emergency Services

Avoidance measures would be implemented to protect the three existing PG&E transmission towers and their foundations during construction. A longitudinal encroachment policy variance may be necessary for the high-voltage transmission lines suspended from these towers.

A TMP will be developed as part of the project to address traffic impacts from staged construction, detours, and specific traffic handling concerns such as emergency access during project construction. Access will be maintained for emergency response vehicles, and no disruption to existing emergency service access is expected.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Impacts to traffic circulation and pedestrian and bicycle access during project construction would be minimized by implementation of the TMP. A detailed TMP will be prepared during the final design phase to minimize delay and inconvenience to the traveling public, in accordance with Department requirements and guidelines. The TMP will address traffic impacts from stage construction, detours, and specific traffic handling concerns such as emergency access during project construction. The TMP would include briefing local public officials and developing a public information program to notify the public of project progress and upcoming closures and detours. The public information program would include outreach to ride sharing agencies, transit operators, and neighborhood and special interest groups. Impacts to pedestrians and bicyclists, as well as access to local developments, would all be carefully considered in the staging plans.

Visual/Aesthetics

The measures listed below would be considered to minimize visual impacts from the proposed project.

Project Feature	Measures
Replacement Planting	Replacement tree planting would help to create a coherent, recognizable gateway identity at the new interchange, re-establishing vividness and intactness of the city entry image through use of locally appropriate trees of tall stature. Replacement tree planting would restore and enhance the interchange gateway/entry statement in the long term. Clinging vines would soften the appearance of concrete retaining walls.
Structure Design Measures	Structure design measures would maintain design consistency within the project limits and maintain visual consistency and coherence within the wider US 101 corridor. Architectural treatments, particularly surface texture treatment, for major structures including the overcrossing parapet and all visible retaining walls would reduce surface reflectivity, brightness, and visual monotony associated with untextured concrete walls. Surface texture treatments that visually relate to those on the existing pedestrian overcrossing should be considered. Upgraded fencing and ornamental light fixtures (examples shown in Figure 2.5-2) will be considered for the Broadway overcrossing. This would improve the aesthetic quality of the overcrossing compared to the existing condition. Ornamental light fixtures will also be considered where appropriate for Broadway, Bayshore Highway, and Airport Boulevard in the project limits.

Project Feature	Measures
Locations of Special Interest	<p>Replacement tree planting is recommended in the following locations:</p> <ul style="list-style-type: none"> • At the southbound on- and off-ramps and in the northeast quadrant of the interchange. • Along the west side of Bayshore Highway. • At the gas station at the corner of Bayshore Highway and Airport Boulevard, which is proposed to be acquired and removed for the project. • Along the Bay Trail. <p>Other landscaping would be considered for the area between the project and the Bay Trail to replace lost trees, shrubs and lawn in the area northeast of Airport Boulevard, to soften the new earth embankment north of Airport Boulevard, to screen and soften the visual foreground of the new retaining wall along Bayshore Highway, and to enhance the landside trail environment.</p>

Cultural Resources

- CA-SMA-317 will be treated as a potential historic property eligible for inclusion in the NRHP. To ensure avoidance of CA-SMA-317, the site will be designated an ESA. The specific method of establishing the ESA will be determined during final design. With the protection afforded by these measures, no monitoring is proposed. With the exception of these measures, no further archeological work is required.
- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the District Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

Water Quality and Storm Water Runoff

Permanent erosion control best management practices (BMPs) will be included in the project, including feasible temporary (short-term) and permanent (long-term) BMPs.

The required Storm Water Pollution Prevention Plan (SWPPP) will include storm water BMPs for temporary soil stabilization and sediment control.

Temporary (Short-term) BMPs

- Earth-moving activities are anticipated to be necessary during construction. Stabilized construction entrances/exits would be used to prevent the tracking of mud and dirt off-site. Temporary BMPs would be implemented during project construction to comply with the NPDES conditions and would meet Caltrans Best Available Technology/Best Conventional Technology for construction projects. Compliance with the NPDES conditions and adherence to the City of Burlingame and San Mateo County requirements would reduce or eliminate potentially adverse construction-related effects. The most effective BMPs that can be used to minimize erosion include:
 - Preserving existing vegetation;
 - Avoiding or minimizing work during the rainy season and during any rainfall events or immediately following precipitation when the ground surface is wet;
 - Limiting the amount and length of exposure of graded soil and soil stockpiles; and
 - Protecting exposed spoils through the use of mulches or erosion control blankets/mats.
- Approved erosion control BMPs are described in the Caltrans Construction Site Best Management Practices Manual (Caltrans 2003). Temporary erosion control and water quality measures would be defined in detail in the project SWPPP and designated as line items in the Plans, Specifications, and Estimates (PS&Es). Table 2.8-1 lists the minimum requirements to be implemented during project construction.

Permanent (Long-term) BMPs

- Permanent (post-construction) BMPs include the minimization of land disturbance and impervious surfaces, treatment of runoff, and energy dissipation devices. Permanent BMPs included with the project would reduce the suspended particulate loads (and thus pollutants associated with the particulates) entering waterways after construction is completed. This category of water quality control measures can be identified as including both Design Pollution Prevention BMPs and Treatment BMPs.
- The proposed project would not be required to consider permanent treatment BMPs within the Department's right-of-way because the project would result in less than one acre of net increase in impervious area or rework of existing

impervious area. However, the project would be required to consider storm water treatment in accordance with County of San Mateo requirements, as the project would result in the net increase or rework of more than 10,000 square feet of impervious area.

- Permanent Storm Water Treatment BMPs will be included. Vegetated swales and buffer strips and tree well filters have been identified as potentially feasible for this project.

Geology, Soils, and Seismicity

Additional geotechnical subsurface and design investigations will be performed during the final design and engineering phase for the project. The investigations will include site-specific evaluation of subsurface conditions at the locations of proposed foundation features during final design. Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project location and site conditions (liquefaction, settlement, and corrosion). No further avoidance, minimization, and/or mitigation is needed.

Hazardous Waste and Materials

Further investigation of the sites identified in Table 2.10-1 is recommended due to the potential presence of petroleum hydrocarbons, solvents, and ADL in soil and/or groundwater. The following measures would be included in the project to identify the presence and extent of potential hazardous materials.

- For project excavations that extend to groundwater, groundwater sampling, analysis, and characterization would take place before construction commences. Treatment and disposal options for extracted groundwater should be determined before dewatering.
- If soil excavation is planned near properties where petroleum hydrocarbon-impacted soils may be present, the soil should be sampled, tested, and characterized.
- If soil excavation is planned near properties where chlorinated compounds may be present, the soil and groundwater should be sampled, tested, and characterized for chlorinated compounds.
- During final design, surface soils should be tested for ADL and heavy metals. The results of the testing will be used to determine the soil management options and any special soils handling requirements for the construction contractor, including implementing a health and safety plan.

- Structures that will be removed or modified by the project should be tested for hazardous materials such as lead-based paint and asbestos by a qualified and licensed inspector.
- Contaminated soil, groundwater, and other hazardous materials should be properly characterized and disposed of at an appropriate facility per applicable regulations.

Air Quality

The Department's Special Provisions and Standard Specifications include the requirement to minimize or eliminate dust through the application of water or dust palliatives. Implementation of the measures below could further minimize air quality emissions during construction. Appropriate measures from among the following will be considered during development of PS&Es for the project construction contract.

- Water all active construction areas daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard.
- Pave, apply water daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (nontoxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

In addition, pollutant emissions in construction equipment exhaust can be mitigated by the following:

- Keeping engines properly tuned;
- Limiting idling; and

- Avoiding unnecessary concurrent use of equipment.

To avoid or minimize potential impacts from naturally occurring asbestos and structural asbestos, the following measure would be implemented:

- During final project design, a qualified and licensed asbestos inspector should evaluate and sample existing structures scheduled for demolition or modification for the presence of potential asbestos-containing materials. If present, these materials will be handled and disposed accordingly.

Noise

To abate potential noise impacts from project construction, the following measures will be implemented through requirements set for the construction contractor:

- Prohibit unnecessary idling of internal combustion engines within 100 feet of residences.
- Avoid staging of construction equipment within 200 feet of residences and locate stationary noise-generating construction equipment, such as air compressors, portable power generators, or self-powered lighting systems away from noise-sensitive residences.
- Require all construction equipment to conform to Section 14-8.02, Noise Control, of the latest Standard Specifications.
- Demolition involving impact tools (e.g., hoe-rams) will be necessary at night. The Department will require the contractor to implement a construction noise monitoring program and if feasible provide additional mitigation as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receivers.

Natural Communities

A project landscaping plan will be developed during final design. The plan will include areas that were previously covered in pavement and areas that were temporarily disturbed during construction, where feasible. The landscaping plan will include tree planting ratios of 1:1 or greater and the use of native species where possible.

Tree removal would take place before the start of the nesting season for raptors and migratory birds (February 1) to avoid impacts to birds that are protected under the Migratory Bird Treaty Act (MBTA). Vegetation would be preserved in areas of the project limits where no construction is planned.

Wetlands and Other Waters of the United States

The Department's Standard Specifications require the Contractor to submit a storm water pollution prevention plan (SWPPP). This plan must meet the standards and objectives to minimize water pollution impacts set forth in section 7-1.01G of the Department Standard Specifications. The SWPPP must also comply with the goals and restrictions identified in the Regional Water Quality Control Board's (RWQCB's) Basin Plan. Any additional measures included in the Section 401 certification, Section 1602 Agreement, or Section 404 permit would be implemented. The contractor would also comply with the following standards/objectives, at times referred to as BMPs, including but not limited to:

- Where work areas encroach on live or dry streams, lakes, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems would be constructed and maintained between working areas and streams, lakes, and wetlands.
- Discharge of sediment into streams would be held to a minimum during construction of the barriers.
- Discharge would be contained through the use of RWQCB-approved measures that would keep sediment from entering jurisdictional waters beyond the project limits.
- All off-road construction equipment should be cleaned of potential noxious weed sources (mud and vegetation) before entering the project area and after entering a potentially infested area before moving on to another area. The contractor would employ whatever cleaning methods (typically spraying with a high-pressure water hose) are necessary to ensure that equipment is free of noxious weeds. Equipment would be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required. Equipment washing stations would be placed in areas that afford easy containment and monitoring (preferably outside of the project area), and that do not drain into sensitive (riparian, wetland, etc.) areas.

Native salt marsh vegetation along the unnamed drainage channel will be removed and restored. Options for restoration may include preserving the native plants in a nursery and replanting them after construction is complete, or replanting using plugs from the surrounding remaining vegetation. The specific method and design of channel improvements and replanting options will be further defined during final design and will include coordination with appropriate agency staff.

Animal Species

Special-Status Birds

- Schedule vegetation removal during nonbreeding season: To avoid disruption or impacts to nesting raptors and other nesting birds, removal of vegetation (trees and ground cover) in the project's construction area should occur during the nonbreeding season, from September 1 to February 1.
- Focused preconstruction surveys: If construction is scheduled during the nesting season (February 1 through August 30), trees and vegetation within and extending approximately 500 feet from the perimeter of the construction area would be subject to a preconstruction survey. The Broadway overcrossing and pedestrian overcrossing would be included in the survey to identify nesting activity on or underneath these structures. The preconstruction survey should be completed no more than 15 days prior to ground-disturbing activities.
- Establish buffer areas if active nesting is identified: If an active nest is found, a temporary buffer area may be defined to restrict construction activities. A qualified biologist would determine the appropriate buffer size based on the type of construction activity and type of affected species, and delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape. The size of the buffer may vary for different species. A 300-foot radius buffer would be used unless otherwise defined by the biologist. Clearing and construction within the buffer would be postponed until the active nest is vacated and the juveniles have fledged, as determined or verified by the biologist, and there is no evidence of second nesting attempts.
- Biological monitoring: If nesting activity is identified within the project's construction area and a buffer area is established, a qualified biologist would check the nest area approximately weekly for potential disturbances associated with construction. Construction within the buffer would be prohibited until the biologist determines the nest is no longer active. In the event that nesting birds are present and attempt to build nests during construction, a biologist would work with CDFG to implement a strategy to prevent nests from becoming established.

Essential Fish Habitat

Standard Department BMPs for water pollution control (Section 2.8.4) and the general construction measures listed below would minimize project-related effects to EFH. No additional measures are proposed.

General Construction Measures

The measures listed below will be implemented as part of construction to minimize and/or avoid impacts to sensitive species and habitat as well as to common biological resources.

- **Construction Work, Access, and Staging Areas.** All proposed construction will be limited to the existing and proposed right-of-way. ESAs will be identified on contract plans and discussed in the Special Provisions. The ESAs will include areas designated in the environmental document and biological reports that support wetlands, waters, and/or habitats that potentially support listed species, and have been specifically identified to avoid during construction. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts. Contractor encroachment into ESAs will be restricted (including the staging/operation of heavy equipment or casting of excavation materials). ESA provisions will be implemented as a first order of work and remain in place until all construction is completed.
- **Work In Waterways.** One or more temporary cofferdam(s) will be required to install the Easton Creek culvert extension. Only clean gravel or sand fill will be used for construction of the cofferdams. The downstream outlet of the diversion pump will be screened with 1/4-inch to 5/8-inch mesh screen material during all dewatering. If sediment removal in the unnamed drainage channel is required, work will take place after upstream culvert work is complete. If the berm separating the unnamed drainage channel from San Francisco Bay is removed, it would be removed after completion of the culvert work (including excavation, if necessary) and during low tide.
- **Construction Discharges.** No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the United States or drainages. No discharges of excessively turbid water will be allowed, and all equipment will be well-maintained and free of leaks.
- **Onsite Construction Personnel Education Program.** Before the onset of construction and within 5 days of any new worker arrival, a USFWS-qualified biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of California red-legged frog

(CRLF), San Francisco garter snake (SFGS), and other listed species and their habitats; the potential occurrence of these species within the project area; an explanation of the status of these species and protection under the FESA, CESA, and all other federal, state, and local regulatory requirements; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur. A fact sheet conveying this information will be prepared and distributed to all construction crews and project personnel entering the project footprint. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all of the avoidance and minimization measures and implications of the FESA, CESA and all other federal, state, and local regulatory requirements.

- Erosion Control. Temporary erosion control and slope stabilization BMPs will be installed before the start of the wet season (October 15 through April 15). Erosion control measures may include silt fencing, straw wattles, coir blankets, sediment traps, and other protective measures to minimize the potential for erosion of sediment beyond the work area or degradation of water quality in adjacent aquatic habitats.
- Restoration/Revegetation. Upon project completion, the slopes at the foot of each end of the overcrossing will be regraded and revegetated with regionally appropriate native species or non-persistent hybrids, per recommendation of a Landscape Architect. A post-construction monitoring plan will be developed during final design, and re-establishment of vegetation and control of nonnative invasive species will be periodically monitored consistent with the plan.

Threatened and Endangered Species

California Seablite

A qualified botanist will conduct a focused preconstruction survey for California seablite during the blooming period for the species (July to October) in 2013. In the event that the species is identified in the BSA during the focused preconstruction survey, the USFWS will be contacted for guidance on exclusion buffers, and additional avoidance and minimization methods will be determined through supplemental consultation.

Southern DPS Green Sturgeon

The project design incorporates cofferdam installation requirements, Department BMPs for storm water pollution prevention, and the general avoidance and minimization measures listed in Section 2.16.4.2, which will reduce potential effects

to this species. In addition, the following conservation measures are proposed to further avoid and minimize effects:

- All in-stream work in Easton Creek (and, if necessary, the unnamed drainage channel) will take place during the dry season (April 15 through October 15) to minimize effects on creek flows and reduce the potential for sedimentation.
- The cofferdams required for work at Easton Creek will be installed during low tide, when green sturgeon will not be present. This will also prevent green sturgeon from being trapped above the cofferdams.
- Only clean gravel or sand fill will be used for construction of the cofferdams.
- A qualified biological monitor will be present during installation and removal of the cofferdams to ensure that impacts to Easton Creek and downstream waters are minimized.
- If the project restores the conveyance capacity of the unnamed drainage channel, all work in the channel will take place during low tide.

Critical Habitat for Southern DPS Green Sturgeon

The project design incorporates cofferdam installation requirements and Department BMPs for storm water pollution prevention. The measures outlined in Section 2.16.4.2 and the conservation measures for southern DPS green sturgeon will also avoid and minimize effects to critical habitat for the species. No additional measures are proposed.

Central California Coast Steelhead DPS

The general measures for work in waterways described Section 2.16.4.2 will minimize impacts to aquatic species. No additional avoidance and minimization measures for CCC steelhead are necessary.

California Red-Legged Frog

The Department will implement the following precautionary measures, as well as the general measures described in Section 2.16.4.2, to avoid or minimize impacts to the CRLF and its potential habitat.

- Exclusion fencing such as Ertec E-fence™ or an equivalent will be installed prior to any construction during the dry season (April 15 through October 15), when CRLF are not actively dispersing or foraging to prevent unintentional entrapment within the BSA. Exclusion fencing will be installed in the areas shown in Figure 10 to ensure a complete barrier to prevent CRLF from entering the BSA.

- To prevent CRLF from becoming entangled or trapped in erosion control materials, plastic monofilament netting (erosion control matting) or similar material will not be used for erosion control. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- A USFWS-approved biologist will conduct preconstruction surveys before any ground-disturbing activities take place in potential CRLF habitat. The survey will consist of walking transects while conducting visual encounter surveys in areas that will be subject to vegetation clearing, grubbing, grading, cut and fill, or other ground disturbing activities. If CRLF are found during the preconstruction survey, the USFWS will be contacted immediately, and work in the area will cease until the individual(s) are relocated to a suitable site in conformance with approved USFWS protocol.
- After vegetation removal in potential CRLF habitat, a USFWS-approved biologist will be on call as needed to monitor construction activities in potential habitat and inspect the exclusion fencing to ensure that it remains intact throughout the duration of construction. Through communication with the Resident Engineer or their designee, the biologist may stop work if deemed necessary for any reason to protect CRLF and will advise the Resident Engineer or designee on how to proceed accordingly. If a CRLF is found, work will be halted and the USFWS will be notified immediately. Work in the area will not resume until the individual(s) are relocated by the USFWS-approved biologist to a suitable site in conformance with approved USFWS protocol.

San Francisco Garter Snake

SFGS are not expected to be present in the BSA; however, the first two measures proposed for CRLF above, as well as the general measures described in Section 2.16.4.2, will avoid or minimize impacts to marginal potential habitat for SFGS. The following preconstruction survey and construction monitoring measures will also be implemented to avoid direct or indirect effects to SFGS.

- A CDFG/USFWS-approved biologist will conduct preconstruction surveys before any ground-disturbing activities take place in potential SFGS habitat. These surveys will consist of walking transects while conducting visual encounter surveys in areas that will be subject to vegetation clearing, grubbing, grading, cut and fill, or other ground-disturbing activities. If an SFGS is observed during a survey, the USFWS and CDFG will be notified, and the SFGS will be monitored until it leaves the area on its own accord.

- After vegetation removal in potential SFGS habitat, a CDFG/USFWS-approved biologist will be on call as needed to monitor construction activities in potential habitat and inspect the exclusion fencing to ensure that it remains intact throughout the duration of construction. Through communication with the Resident Engineer or their designee, the biologist may stop work if deemed necessary for any reason to protect SFGS and will advise the Resident Engineer or designee on how to proceed accordingly.

Invasive Species

In compliance with the Executive Order on Invasive Species, E.O. 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as noxious weeds. The following measures will also reduce the spread of invasive nonnative plant species and minimize the potential for construction disturbance to decrease palatable vegetation for wildlife to the greatest degree possible:

- No disposal of soil and plant materials should be allowed from areas that support invasive species to areas dominated by native vegetation;
- Resident Engineers should be educated on weed identification and the importance of controlling and preventing the spread of identified invasive nonnative species; and
- Gravel and/or fill material to be placed in relatively weed-free areas should come from weed-free sources. Certified weed-free imported materials (or rice straw in upland areas) will be used.

G.2 Mitigation Measures

Wetlands and Other Waters of the United States

If the minimization and avoidance measures listed in Section 2.14.4.1 are not sufficient to ensure that the adverse effects to the aquatic environment are minimal, other forms of mitigation (rectifying or compensating) may also be used.

Compensatory mitigation at a minimum 1:1 ratio is required for all permanent wetland impacts unless the USACE District Engineer determines and states in writing that other forms of mitigation are more appropriate. Compensation for permanent impacts to jurisdictional wetlands potentially includes one or a combination of the following measures:

- Purchase of wetland creation credits from a USACE-approved mitigation bank;
- Purchase of wetland preservation or enhancement credits from a USACE-approved mitigation bank;
- Onsite restoration or enhancement of wetlands and other waters; or
- Onsite creation of wetlands and other waters.

The mitigation must be available and feasible considering costs, technology, and logistics in light of overall project purposes.

A Compensatory Mitigation Proposal will be submitted to the USACE prior to construction. Proposed compensation includes restoring and revegetating all temporarily affected wetlands. Additional compensatory mitigation efforts will be determined in consultation with USACE. These may include, but are not limited to, reduction in the amount of impact, options to participate in regional habitat enhancement projects, or purchase of mitigation bank credits.

The BCDC may also require compensatory mitigation for any affected wetlands and the placement of Bay fill within its jurisdiction. This will be determined as part of the BCDC permitting process.



Appendix G List of Acronyms

AADT	Annual Average Daily Traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
APE	area of potential effect
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Bay	San Francisco Bay
BCDC	Bay Conservation and Development Commission
BMP	best management practice
BSA	biological study area
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCC	Central California Coast
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHRIS/NWIC	California Historic Resources Inventory System, Northwest Information Center
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO Protocol	<i>Transportation Project-Level Carbon Monoxide Protocol</i> (Garza, Graney, and Sperling 1998)
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CSS	context sensitive solutions
CT6054 BG5	Census Tract 6054, Block Group 5
CT6051 BG2	Census Tract 6051, Block Group 2
CWA	Clean Water Act
dBA	A-weighted decibel
dbh	diameter at breast height
DDT	dichlorodiphenyltrichloroethane
Department	California Department of Transportation
DPS	Distinct Population Segment
DSA	disturbed soil area
EA	Environmental Assessment
EDR	Environmental Data Resources, Inc.
EFH	Essential Fish Habitat
EO	Executive Order

ESA	environmentally sensitive area
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FMP	fisheries management plan
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
GHG	greenhouse gas
HFC-23	fluoroform
HFC-134a	s, s, s, 2-tetrafluoroethane
HFC-152a	difluoroethane
HHS	Department of Health and Human Services
HOV	high-occupancy vehicle
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ITS	Intelligent Transportation Systems
L _{eq}	equivalent sound level
L _{eq(hr)}	equivalent sound level per hour
LOS	level of service
LUST	leaking underground storage tank
M	moment magnitude, an earthquake intensity measure
μg/m ³	microgram(s) per cubic meter
MBTA	Migratory Bird Treaty Act
MCE	Maximum Credible Earthquake
mg/m ³	milligram(s) per cubic meter
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MOU	memorandum of understanding
mpg	miles per gallon
mph	miles per hour
MSAT	Mobile Source Air Toxic
MTC	Metropolitan Transportation Commission
MVM	million vehicle miles
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NO ₂	nitrogen dioxide
NOAA Fisheries	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NO _x	nitrogen oxide
NOC	Notice of Construction
NOCC	Notice of Completion of Construction
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone

OSHA	Occupational Safety and Health Act
PA	Programmatic Agreement
PCB	polychlorinated biphenyl
PDT	Project Development Team
PG&E	Pacific Gas and Electric Company
PM ₁₀	particulate matter less than 10 micrometers in diameter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
ppm	part(s) per million
PRC	(California) Public Resources Code
PS&E	Plans, Specifications, and Estimates
PSR	Project Study Report
RAP	Relocation Assistance Program
RCRA	Resource Conservation and Recovery Act of 1976
ROG	reactive organic gas
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SCH #	State Clearinghouse reference number
SFGS	San Francisco garter snake
SFO	San Francisco International Airport
SHPO	State Historic Preservation Office(r)
SIP	State Implementation Plan
SMCTA	San Mateo County Transportation Authority
SO ₂	sulfur dioxide
SPCA	Society for the Prevention of Cruelty to Animals
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TASAS	Traffic Accident Surveillance and Analysis System
TCE	temporary construction easement
TCM	Transportation Control Measures
TDM	Transportation demand management
TIP	Transportation Improvement Program
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TNM	Traffic Noise Model
TSCA	Toxic Substances Control Act
TSM	Transportation systems management
US 101	United States Highway 101
USACE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
VA	value analysis
VMT	vehicle miles traveled
WPCP	Water Pollution Control Plan



Appendix H List of Technical Studies

The following technical studies were prepared to support this environmental document:

- Air Quality Impact Assessment (URS, December 2009)
- Archaeological Survey Report (URS, December 2009)
- Biological Assessment (URS, August 2010)
- Community Impact Assessment (URS, November 2009)
- Geotechnical Impact Report (URS, May 2009)
- Historic Property Survey Report (URS, December 2009)
- Historic Resources Evaluation Report (JRP Historical Consulting, December 2009)
- Water Quality Study (WRECO, July 2009)
- Initial Site Assessment (URS, May 2009)
- Jurisdictional Delineation (URS, August 2010)
- Location Hydraulic Study (WRECO, November 2009)
- Natural Environment Study (URS, April 21, 2010)
- Noise Study Report (Illingworth and Rodkin, September 2009)
- Storm Water Data Report (WRECO, January 2010)
- Traffic Operations Analysis Report (URS, June 4, 2010)
- Visual Impact Assessment (William Kanemoto and Associates, December 2009)



Appendix I U.S. Fish and Wildlife Service Species List

A list of species of concern was obtained from the online database of the U.S. Fish and Wildlife Service (USFWS) Sacramento field office in February 2009 to assist in the identification of sensitive plant and wildlife species that might occur in the project region. Updated USFWS species lists were obtained in December 2009, June 2010, and August 2010. The August 2010 species list is attached.

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 100819111014

Database Last Updated: April 29, 2010

Quad Lists

Listed Species

Invertebrates

- Euphydryas editha bayensis*
bay checkerspot butterfly (T)
Critical habitat, bay checkerspot butterfly (X)
- Haliotes cracherodii*
black abalone (E) (NMFS)
- Haliotes sorenseni*
white abalone (E) (NMFS)
- Icaricia icarioides missionensis*
mission blue butterfly (E)
- Speyeria zerene myrtleae*
Myrtle's silverspot butterfly (E)

Fish

- Acipenser medirostris*
green sturgeon (T) (NMFS)
- Eucyclogobius newberryi*
tidewater goby (E)
- Hypomesus transpacificus*
delta smelt (T)
- Oncorhynchus kisutch*
coho salmon - central CA coast (E) (NMFS)
- Oncorhynchus mykiss*
Central California Coastal steelhead (T) (NMFS)
Central Valley steelhead (T) (NMFS)
Critical habitat, Central California coastal steelhead (X) (NMFS)
- Oncorhynchus tshawytscha*
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Rana draytonii*
California red-legged frog (T)
Critical habitat, California red-legged frog (X)

Reptiles

- Caretta caretta*
loggerhead turtle (T) (NMFS)
- Chelonia mydas (incl. agassizi)*
green turtle (T) (NMFS)
- Dermochelys coriacea*
leatherback turtle (E) (NMFS)
- Lepidochelys olivacea*
olive (=Pacific) ridley sea turtle (T) (NMFS)
- Thamnophis sirtalis tetrataenia*
San Francisco garter snake (E)

Birds

- Brachyramphus marmoratus*
Critical habitat, marbled murrelet (X)
marbled murrelet (T)
- Charadrius alexandrinus nivosus*
western snowy plover (T)
- Diomedea albatrus*
short-tailed albatross (E)
- Pelecanus occidentalis californicus*
California brown pelican (E)
- Rallus longirostris obsoletus*
California clapper rail (E)
- Sternula antillarum* (=Sterna, =albifrons) browni
California least tern (E)

Mammals

- Arctocephalus townsendi*
Guadalupe fur seal (T) (NMFS)
- Balaenoptera borealis*
sei whale (E) (NMFS)
- Balaenoptera musculus*
blue whale (E) (NMFS)
- Balaenoptera physalus*
finback (=fin) whale (E) (NMFS)
- Enhydra lutris nereis*
southern sea otter (T)
- Eubalaena* (=Balaena) glacialis
right whale (E) (NMFS)
- Eumetopias jubatus*
Steller (=northern) sea-lion (T) (NMFS)
- Physeter catodon* (=macrocephalus)
sperm whale (E) (NMFS)
- Reithrodontomys raviventris*
salt marsh harvest mouse (E)

Plants

- Cirsium fontinale* var. fontinale
fountain thistle (E)
- Eriophyllum latilobum*
San Mateo woolly sunflower (E)
- Hesperolinon congestum*
Marin dwarf-flax (=western flax) (T)
- Potentilla hickmanii*
Hickman's potentilla (=cinquefoil) (E)

Proposed Species

Amphibians

- Rana draytonii*
Critical habitat, California red-legged frog (PX)

Quads Containing Listed, Proposed or Candidate Species:

MONTARA MOUNTAIN (448C)

SAN MATEO (448D)

County Lists

No county species lists requested.

Key:(E) *Endangered* - Listed as being in danger of extinction.(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened. (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) *Vacated* by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed

and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 17, 2010.