Guadalupe Ditches

Between Guadalupe and Santa Maria in Santa Barbara County, California
05-SB-166-PM 0.9/2.4 and 3.8/4.8
ID #05000000560 (05-0G160)

Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact

Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S. Code 327.

November 2010

Caltrans®

General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Santa Barbara County, California. The document describes the proposed project, the existing environment that could be affected by the project, and potential impacts from the project, and the proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this Initial Study. Additional copies of this document as well as the technical studies are available for review at the Caltrans district office at 50 Higuera Street, San Luis Obispo, CA 93401 and City of Santa Maria Public Library at 4719 West Main Street, Guadalupe, CA 93434.
- Attend the Open Forum Public Hearing scheduled for Tuesday, December 7, 2010 at Santa Barbara County Public Works, 620 W. Foster Road, Santa Maria, CA 93455.
- We welcome your comments. If you have any concerns regarding the proposed project, please attend the public hearing at the Santa Barbara County Public Works Santa Maria Office at 620 W. Foster Road in Santa Maria, CA 93455, or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

  Attn: Matt Fowler, Environmental Central Coast Branch
  California Department of Transportation
  50 Higuera Street
  San Luis Obispo, CA 93401

  Submit comments via email to: Matt_C_Fowler@dot.ca.gov.
- Submit comments by the deadline: December 23, 2010.

What happens next?

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and build all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Matt Fowler, Environmental Central Coast Branch, 50 Higuera Street; (805) 542-4603 Voice, or use the California Relay Service TTY number, 1-800-753-2929 or dial 711.

05-SB-166-PM 0.9/2.4 and 3.8/4.8
EA # 05000000560

The California Department of Transportation (Caltrans) proposes to relocate drainage ditches along State Route 166 from post miles 0.9 to 2.4 (Location 1) and from post miles 3.8 to 4.8 (Location 2), between the City of Santa Maria to Guadalupe, California.

INITIAL STUDY
with Proposed Mitigated Negative Declaration
/ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C) and 23 U.S. Code 327

THE STATE OF CALIFORNIA
Department of Transportation

11/16/2010
Date of Approval

Richard Krumholz
District Director
Caltrans District 5

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to relocate drainage ditches along State Route 166 from post miles 0.9 to 2.4 (Location 1) and from post miles 3.8 to 4.8 (Location 2).

The replaced drainage ditches would be relocated at a minimum of 30 feet away from the edge of the traveled roadway. Fixed objects adjacent to State Route 166 within the 30-foot clear recovery zone would also be relocated. The project would relocate some of the existing irrigation systems, driveways, culverts, property fences, headwalls, and utility poles. Affected driveways would be changed and adjusted to grade. Fencing would be placed along the highway right-of-way at Location 2. Rock slope protection would be placed at ditches prone to channel erosion.

Draft

Determination

This proposed Mitigated Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision regarding the project is final. This Mitigated Negative Declaration is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the project would not have a significant effect on the environment for the following reasons.

The proposed project would have no effect on: aesthetics, forestry, air quality, cultural resources, geology/soil, greenhouse gas emissions, hazardous materials, hydrology and water quality, land use/planning, noise, population/housing, pubic services, recreation, or transportation/traffic.

In addition, the proposed project would have no significant effect on biological resources, agriculture, or utilities because the following mitigation measures would reduce potential effects to insignificance:

- Caltrans relocated several utility poles and extended guardrail to minimize farmland impacts.
- Advance notification and coordination with local property owners/growers would be done prior to construction activities.
- Soil amendment, if used, must comply with the requirements in the California Food and Agricultural Code.
- All property acquisition activities for the proposed project would be done in accordance with the Real Property Acquisition Policies Act of 1970, as amended.
- Utility companies would notify affected residents in advance of any disruption in service.
- Caltrans Maintenance would remove silt from drainage channels.
- Caltrans' Standard Specifications regarding Best Management Practices and Storm Water Pollution Prevention Plan would be applied.
- The disturbed soil areas from construction activities would be seeded with low grass to stabilize disturbed soil.
- If fossils or paleontology resources are found during construction operations, construction would be halted immediately.
- Caltrans would schedule work activities between May 1 and October 31
- Environmentally sensitive area fencing would be established, delineated in the field and on layout sheets.
- Found red-legged frogs would be relocated.
- Only U.S. Fish and Wildlife Service-approved biologists would participate in activities associated with California red-legged frogs.
- Ground disturbance would not begin until written approval from the U.S. Fish and Wildlife Service.
- U.S. Fish and Wildlife Service-approved biologists would survey the project site 48 hours before activities.

- Biologists would conduct a training session for all construction personnel.
- The biologist would be present at the work site until all California red-legged frogs have been removed.
- All trash that may attract predators would be properly contained, removed from the work site, and disposed of regularly.
- All refueling, maintenance, and staging of equipment and vehicles would occur at least 60 feet from riparian habitat or water bodies.
- Disturbed areas would be revegetated with native species.
- Habitat contours would be returned to their original configuration at the end of project activities.
- The number of access routes, size of staging areas, and the total area of the activity would be limited to the minimum necessary to achieve the project goal.
- Caltrans would attempt to schedule work activities for times of the year when impacts to the California red-legged frog would be minimal.
- To control sedimentation, Caltrans would implement best management practices outlined in any authorizations or permits, issued under the authorities of the Clean Water Act.
- Unless approved by the U.S. Fish and Wildlife Service, water would not be impounded in a manner that may attract California red-legged frogs.
- The biologist would permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), crayfish, and centrarchid fishes from the project area.
- The fieldwork code of practice developed by the Declining Amphibian Populations Task Force would be followed at all times.
- If one California red-legged frog is found dead or injured, Caltrans must contact the U.S. Fish and Wildlife Service immediately.
- Caltrans must test for Chytrid fungus from any captured California red-legged frog.

- Caltrans must provide a written report to the U.S. Fish and Wildlife Service within 90 days following completion of the proposed project.
- Caltrans Standard Specification pertaining to dust control and dust palliative requirements would be implemented.
- All work would be done during the day, in accordance with Santa Barbara County's Noise Element.

_____ _____

Wendy Waldron
Acting Office Chief, Central Region
Environmental South

Date

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List of Abbreviated Terms

Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CRZ	Clear Recovery Zone
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FPPM	Farmland Mapping and Monitoring Program
NEPA	National Environmental Policy Act
NOAA	National Ocean Atmospheric Administration
NRCS	Natural Resources Conservation Service
PDT	Project Development Team
PM	Post mile
RWQCB	Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes safety improvements along State Route 166 between Guadalupe and Santa Maria in northern Santa Barbara County. The project proposes to relocate dirt drainage ditches along State Route 166 from post miles 0.9 to 2.4 (Location 1) and from post miles 3.8 to 4.8 (Location 2). See Figures 1-1 and 1-2, which show the project vicinity map and location map, respectively.

The existing drainage ditches are owned and maintained by Caltrans. The ditches run along on both sides of the roadway, parallel with State Route 166. From the edge of travel way, the ditches are setback at various distances that range from 10-feet to 19-feet. The ditches are not concrete-lined yet hold and convey highway runoff.

The project proposes to relocate these ditches to provide adequate area for a Clear Recovery Zone. A Clear Recovery Zone is an area free of fixed objects that allows errant vehicles more space to recover if they were to drive off the highway. The designated area would extend about 30 feet back from the edge of traveled roadway. The project would also relocate any fixed objects parallel to State Route 166 that sit in the established Clear Recovery Zone. Culverts, driveways, property fences, utility poles and minor irrigation systems would be relocated outside the Clear Recovery Zone. Affected driveways would be changed and adjusted to grade.

The project would require minor right-of-way acquisitions for placement of the relocated drainage ditches. A total of 9.1 acres would need to be acquired; of that total, 9.02 acres are identified as prime agricultural land. Partial acquisitions would consist of land slivers primarily at Location 1. These land slivers include narrow strips, about 25 feet wide, immediately adjacent to the existing Caltrans right-of-way.

The project is estimated to cost $4,828,000. This project is programmed in the 2008 State Highway Operation and Protection Program under the 201.015 (HB1) Clean Up Roadside Environment (CURE)/Safety Enhancements program for delivery in fiscal year 2012/2013. Project construction is anticipated to take less than 6 months.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to improve safety on State Route 166 by providing a 30-foot Clear Recovery Zone for errant vehicles. The 30-foot Clear Recovery Zone will allow errant vehicles more space to recover or stop safely if they were to drive off the highway.

1.2.2 Need

The need is based on traffic safety concerns. The collision rate within the project limits is higher than the statewide average for similar facilities. The statewide average is 0.94 collisions per million vehicles (MVM). Caltrans' Traffic Safety conducted a five year study of the project area between 1996 and 2000 and found the actual collision rate at Location 1 to be 1.69 collisions per MVM and Location 2 to have 1.46 collisions per MVM. In addition, a 33% of the collisions involve drivers traveling beyond the right shoulder and into the drainage ditches that closely parallel the highway on both sides of the road.

1.3 Alternatives

A build alternative and a no-build alternative are under consideration.

1.3.1 Build Alternative

Design Features of the Build Alternative

The proposed project would relocate existing drainage ditches outside the 30-foot Clear Recovery Zone. Location 1 sits between post miles 0.9 to 2.4, and Location 2 sits between post miles 3.8 to 4.8. The ditches would be relocated 30 feet away from the edge of the travel way. They would run along both sides of the roadway, parallel with State Route 166 in the project limits.

The new ditches would be similar to the existing ditches, with a 6-foot flat bottom and a 2:1 side-slope ratio. They would be about 20 feet wide and vary from 3.5 to 6 feet deep.

In addition, the project would replace culverts, add rock slope protection at the drainage outlet near Bonita School, install fencing along the Caltrans right-of-way, relocate utility poles, remove unauthorized access points, and extend the existing guardrail near Bonita School Road.

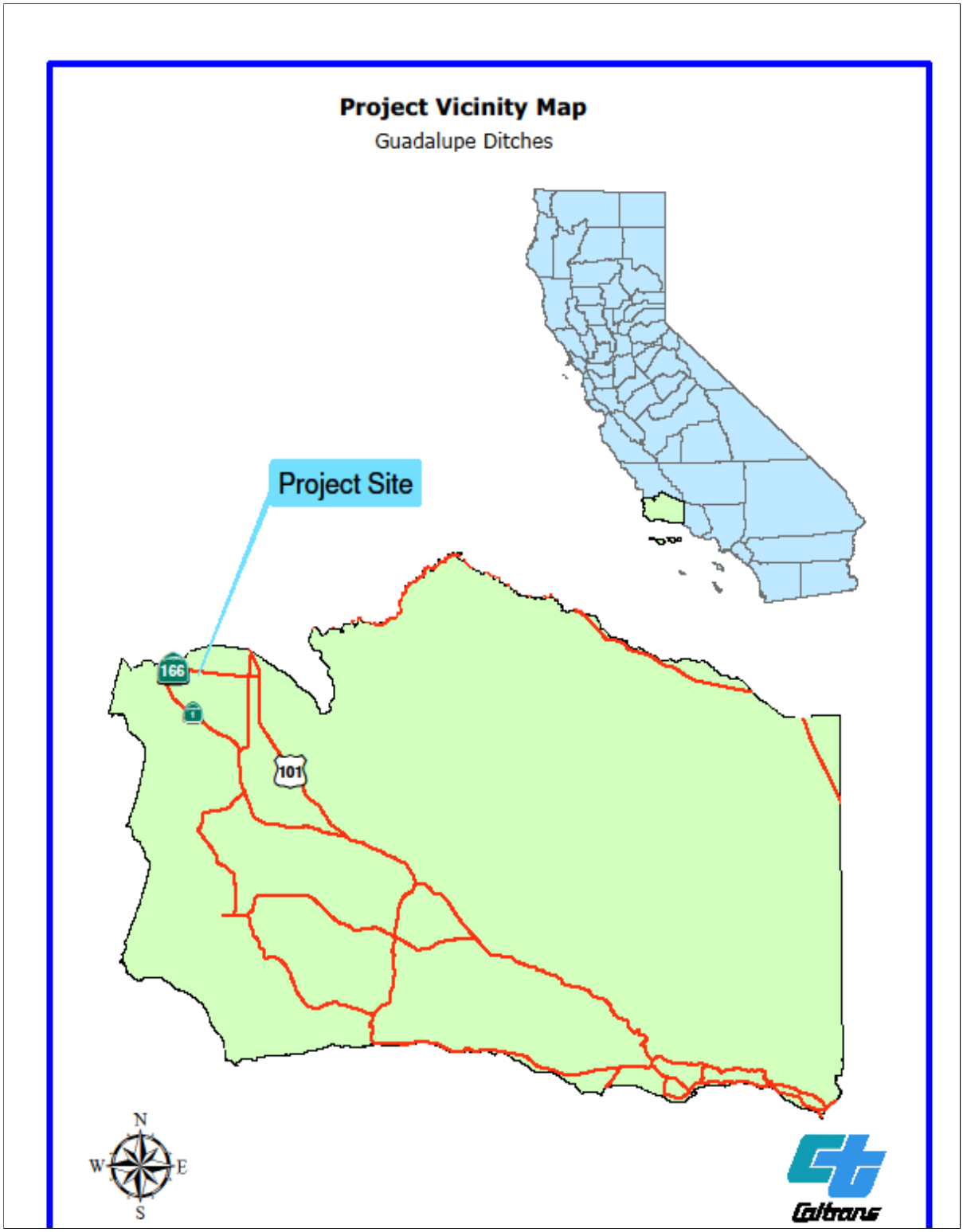

Figure 1-1 Project Vicinity Map

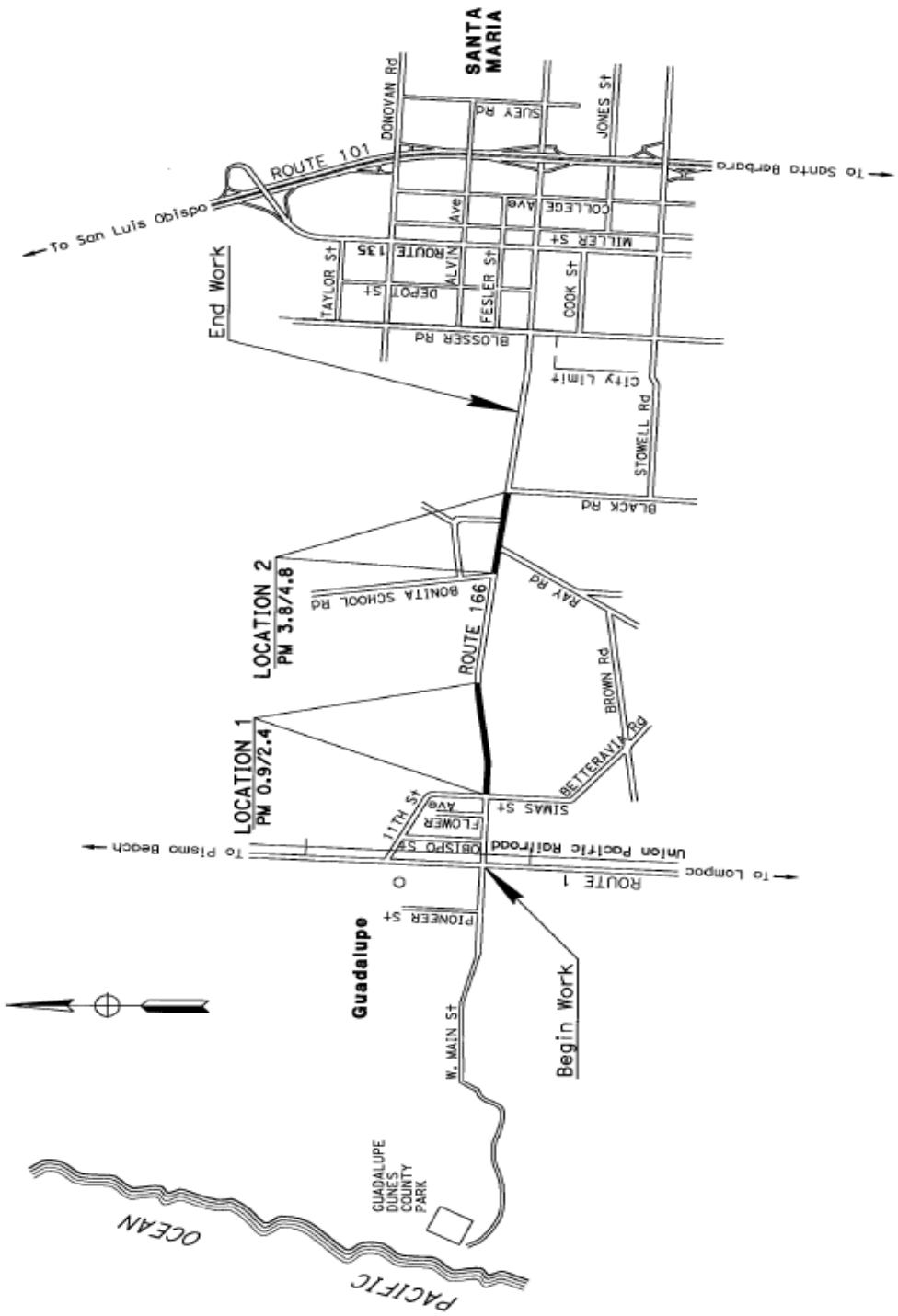

Figure 1-2 Project Location Map

1.3.2 No-Build Alternative

The no-build alternative would leave the existing drainage ditches and Clear Recovery Zone as they currently are. The Clear Recovery Zone would conflict with current Caltrans design standards, and safety issues would persist. No utilities would be relocated, and no right-of-way acquisitions would be made.

1.3.3 Comparison of Alternatives

The build alternative would relocate drainage ditches and fixed objects along the roadway to provide an adequate 30-foot Clear Recovery Zone for errant vehicles; the no-build alternative would leave the existing ditches and fixed objects in place.

The build alternative would require a Take Permit from the U.S. Fish and Wildlife Service for potential impacts to California red-legged frogs.

The build alternative would acquire 9.2 acres of new right-of-way (farmland); the no-build alternative would allow the 9.2 acres of prime farmland to remain in production.

After the public circulation period, all comments will be considered, and Caltrans will select a preferred alternative and make the final determination of the project's effect on the environment. In accordance with the California Environmental Quality Act, if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Mitigated Negative Declaration. Similarly, if Caltrans determines the action does not significantly impact the environment, Caltrans, as assigned by the Federal Highway Administration, will issue a Finding of No Significant Impact in accordance with the National Environmental Policy Act.

1.3.4 Alternatives Considered but Eliminated from Further Discussion

Ditches Along Future Expressway

This alternative proposed to relocate the new ditches along a future 4-lane expressway that was envisioned in the 1970s but was never built. This alternative was rejected by the Project Development Team (PDT) because of the excessive cost and multiple other unknown engineering factors. It is difficult to forecast the future 4-lane project limits, alignment, R/W, drainage, and storm water requirements. In addition, this alternative exceeds the project's scope for a clear recovery zone. For these reasons, this alternative was rejected.

Large Culvert

This alternative proposed to remove the ditches and install large culverts. This alternative was rejected due to maintenance problems and silting issues.

20-foot Clear Recovery Zone

This alternative proposed a 20-foot Clear Recovery Zone at Location 1. Please refer to *Project Location Map: Figure 1-2* for locations. This alternative was rejected because Traffic Safety recommends a 30-foot Clear Recovery Zone. In addition, the space between the edge-of-travel way and existing right-of-way is confined at Location 1. Utility poles reside approximately 32-feet from edge-of-travel way. In order to fit a 20-foot Clear Recovery and a 20-foot ditch, 86 utility poles would need to be relocated approximately 12-feet back from their current location. This alternative would still require right-of-way from farmland. The proposed project maintains the poles in their current location, yet places the drainage ditches on the backside of the poles.

Eliminate Ditches

This alternative proposed to fill in the existing ditches to create the Clear Recovery Zone. The alternative was rejected because the drainage ditches are critical for collecting highway runoff.

Relocate Ditches Outside Caltrans' Right-of-Way

This alternative proposed to relocate the ditches outside of Caltrans' right-of-way. This was immediately rejected because the adjacent property owners would be required to operate and maintain the ditches, yet Caltrans would be liable for highway flooding if proper maintenance was neglected.

Dual Drainage Ditches

This alternative proposed building two separate drainage ditches for highway and irrigation runoff. However, this alternative was rejected because it would produce a larger footprint for the project, impact additional farmland, and have an additional right-of-way cost.

1.4 Permits and Approvals Needed

Section 7 consultation was initiated with the Ventura office of the U.S. Fish and Wildlife Service in February 2010 for potential impacts to the California red-legged

frog. The Fish and Wildlife Service concurred with the determination that the project is "not likely to jeopardize the continued existence of the California red-legged frog" and issued a Biological Opinion in June 2010.

The California Department of Fish and Game would be contacted for a 1600 Streambed Alteration Agreement for work done at Location 2, where about 60 linear feet of rock slope protection would be placed at a drainage outlet.

The following permits, reviews, and approvals would be required for project construction:

Table 1.1 Permits Required

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species Take Permit	Non-jeopardy Biological Opinion issued on June 23, 2010.
California Depart of Fish and Game	1600 Streambed Alteration Agreement for work done at Location 2	Would be done before start of construction.
Regional Water Quality Control Board	401 Certification Permit for work with drainage ditches	Agency implied that they will not claim jurisdiction. However, if a 401 Permit is required, this would be done before construction.
State Water Resources Control board	National Pollutant Discharge Elimination System	Would be done before start of construction.

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Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts from each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- Land Use—The project site is zoned as a transportation corridor, and adjacent land uses are agricultural. There is no conflict with state, regional or local plans or zoning policies. The project limits are not in the coastal zone or near any wild or scenic rivers (Santa Barbara County Zoning Map).
- Growth—The project would not increase population growth. The safety project consists of relocating drainage ditches (project description 2010).
- Traffic and Transportation/Pedestrian and Bicycle Facilities—There would be no adverse impacts on traffic and transportation because traffic volumes are not expected to increase. There would be a beneficial impact by improving traffic safety. Errant vehicles would have a 30-foot Clear Recovery Zone where drivers could regain control of the vehicle if they were to run off the highway (project description 2010).
- Cultural Resources—No cultural resources are present at the project site (Cultural Resources Review Memorandum; May 2009).
- Geology/Soils/Seismic/Topography—The project would not affect geology and soils. The project is not in any fault zones as delineated by the California Department of Conservation (Fault Rupture Hazard Zones in California; Publication 42). The project area is considered prime agricultural land, which contains high quality soil and has been identified with a problem rating of “low” for expansive soil conditions (Santa Barbara County’s Compressible-Collapsible Soils Map).

- Hazardous Waste or Materials— There would be no impacts from hazardous waste. It is unlikely that the project would encounter any type of hazardous material (Initial Site Assessment; October 2009).
- Air Quality—The project would not violate any air quality standards. The California Air Resources Board had identified the project as being in the South Central Coast Air Basin. This basin is in attainment or unclassified for all national ambient air quality standards, and an air quality conformity determination is not required. Since the project would improve safety and not degrade local air quality, it is also deemed consistent with the local Santa Barbara Air Pollution Control District for ozone and PM_{10} fine particulate matter (Air Quality, Noise, and Paleontology Reports; April 2009).
- Noise and Vibration—There would be no long-term increase in ambient noise levels (Air Quality, Noise, and Paleontology Reports; April 2009).
- Visual Aesthetics—There would be no adverse impact to aesthetics (Visual Assessment; July 2010).
- Natural Communities—There are no wildlife corridors or fish passages within the project limits (Natural Environment Study; March 2010).
- Wetlands and other Waters—There would be no loss of Waters of the U.S. or any aquatic habitat with this project (Natural Environment Study; March 2010).
- Plant Species—The project would not affect any listed plant species (Natural Environment Study; March 2010).
- Animal Species—Except for the California red-legged frog potentially being affected, no sensitive animal species would be affected. The California red-legged frog is a federal Threatened species and a California State Species of Special Concern. The California red-legged frog is addressed in *Section 2.3.1: Threatened and Endangered Species.*

2.1 Human Environment

2.1.1 Farmlands/Timberlands

Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (FPPA, 7 USC 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as the Federal Highway Administration, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

Affected Environment

Applicable technical reports: Farmland Report, June 2010

The Guadalupe Ditches project runs along State Route 166 between the City of Santa Maria and Guadalupe in Santa Barbara County. The project limits fall within a productive agricultural corridor and adjacent to 21 farmland properties, one packing plant facility, and two homes. Several properties are owned and/or operated by the same individuals or companies. Currently, two adjacent property owners have a lease agreement with Caltrans that allows each to farm approximately three acres of State right-of-way. The total size of farmland properties within the project limits is approximately 2,858 acres, from parcels that range from 31 to 361 acres. Crops are planted and harvested continuously throughout the year, but the main crops are strawberries and leafy greens.

The California Department of Conservation's Farmland Mapping and Monitoring Program analyzes agricultural land uses and land use changes and their impacts to agricultural resources. There are various types of farmland classification. The most

critical types of farmland are identified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance.

Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime Farmland must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use (excerpted from the California Department of Conservation's Office of Land Conservation, A Guide to the Farmland Mapping and Monitoring Program, 1992. Publication Number FM-92-01).

Unique Farmland is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, and that is currently used for the production of specific high economic value crops (as listed in the last three years of California Agriculture produced by the California Department of Food and Agriculture). It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. It does not include publicly owned lands for which there is an adopted policy preventing agriculture use (excerpted from the California Department of Conservation's Office of Land Conservation, A Guide to the Farmland Mapping and Monitoring Program, 1992. Publication Number FM-92-01).

Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops. It must have been used for the production of irrigated crops within the last three years. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use (excerpted from the California Department of Conservation's Office of Land Conservation, A Guide to the Farmland Mapping and Monitoring Program, 1992. Publication Number FM-92-01).

The California Department of Conservation's Farmland Mapping and Monitoring Program identified all farmland properties within the project vicinity as being Prime Farmlands. The County of Santa Barbara Assessor's Office shows that all of these farmland properties, except for one property, are also subject to agricultural preserves

(Williamson Act contracts). An agricultural preserve defines the boundary of an area within which a city or county will enter into contracts with landowners. The boundary is designated by resolution of the board of supervisors or city council having jurisdiction. Only land within an agricultural preserve is eligible for a Williamson Act contract. Please see the *Regulatory Setting* of this section for the definition of Williamson Act land.

According to California Environmental Quality Act Guidelines Section 15206, cancellation of Williamson Act contracts for parcels exceeding 100 acres is considered to be "of statewide, regional, or areawide significance," and thus subject to additional noticing and review requirements under the California Environmental Quality Act.

Environmental Consequences

The project would require right-of-way acquisitions from 14 agricultural parcels to provide area for the relocated ditches. Within these farmland properties, 13 parcels are subject to the Williamson Act. The new right-of way would convert a total of 9.02 acres of productive agricultural land use to non-productive use. A total of 5 acres of productive land would be indirectly affected. This area is less than 0.5% of the available farmland in the vicinity and 0.012% of the available farmland in the County of Santa Barbara. The maximum take of any agricultural property would be about 1.7 acres from a 296 acres parcel. Refer to Table 2.1 and Figures 2-1 and 2-2.

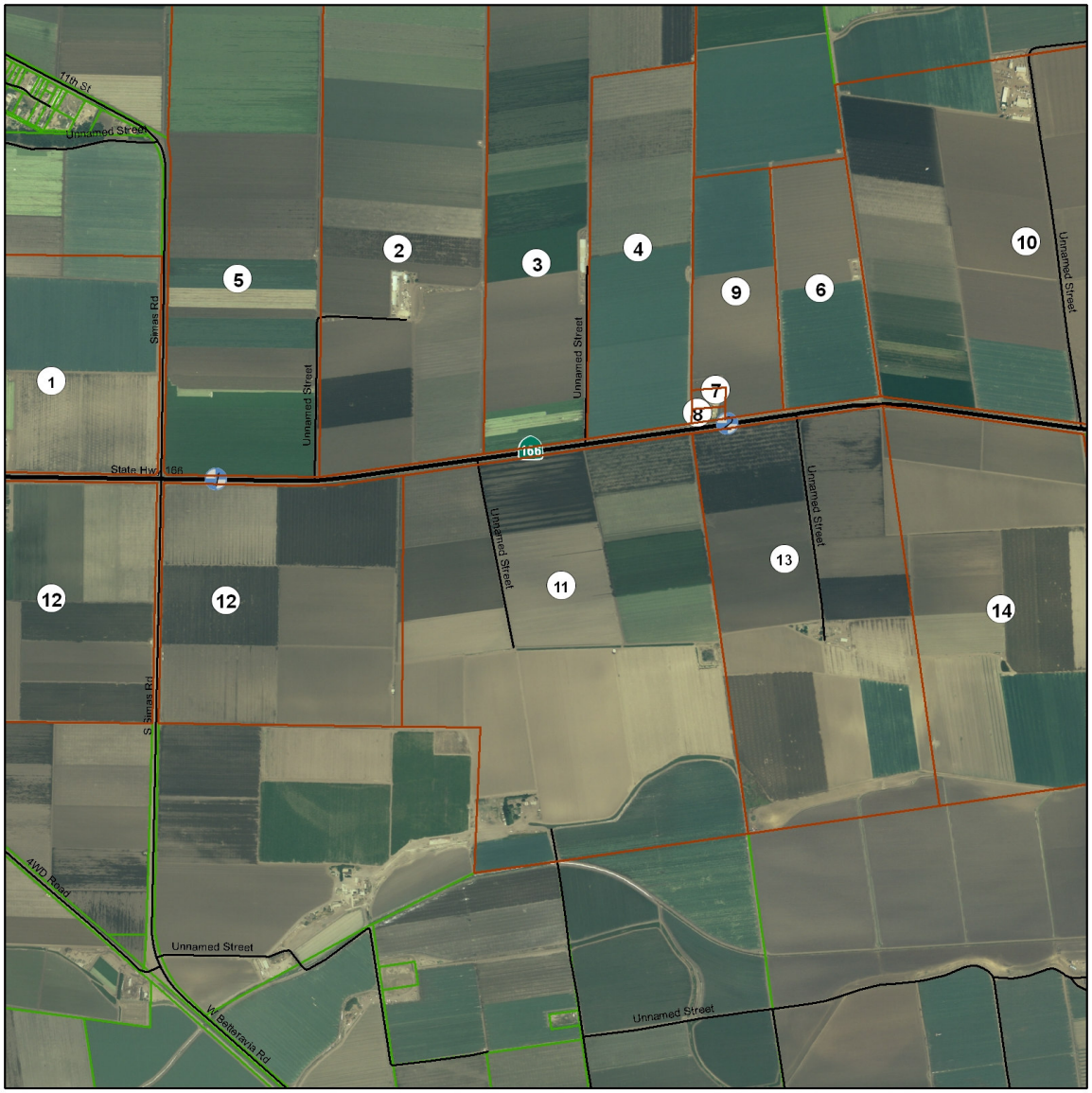
No Williamson Act contracts would be terminated, although parcels currently under contract would require minor revisions due to the new right-of-way acquisitions. The remaining acreage from each parcel would continue to meet Santa Barbara County's criteria for eligibility as Williamson Act contract parcels.

The project would directly convert approximately 9.02 acres of Prime Farmland. At the Location 1 site, 12 farmland properties would be affected by partial right-of-way acquisitions. About 8.84 acres of Prime Farmland from a total of 2179 acres would be acquired. At Location 2, one property would be affected by partial right-of-way acquisition. About 0.18 acre of Prime Farmland from a total of 687 acres would be acquired. Please refer to *Project Location Map: Figure 1-2* for location identification.

Table 2.1 Farmland Parcels Affected

ID	APN	Location	Size of Property (Acres) (* Residential property excluded from total farmland parcels affected)	Required Right-of-Way (Acres)	Land Use
1	113-040-003	1	105.57	0.07	Ag Preserve
2	113-040-006	1	214.07	0.97	Ag Preserve
3	113-040-007	1	183.06	0.63	Ag Preserve
4	113-040-009	1	89.58	0.61	Ag Preserve
5	113-040-011	1	208.14	0.92	Ag Preserve
6	113-050-003	1	52.30	0.56	Ag Preserve
7	113-050-028	1	1.50	0.00	Residential
8	113-050-027	1	1.00	0.12	Residential
9	113-050-029	1	49.72	0.36	Ag Preserve
10	113-050-050	1	361.18	0.19	Ag Preserve
11	113-080-006	1	295.99	1.74	Ag Preserve
12	113-080-023	1	250.25	1.47	Ag Preserve
13	113-090-001	1	185.07	1.13	Ag Preserve
14	113-090-002	1	181.16	0.19	Ag Preserve
15	113-050-051	2	42.43	0.00	Ag Preserve
16	113-050-064	2	82.62	0.00	Ag Preserve
17	113-090-020	2	131.24	0.00	Ag Preserve
18	113-120-024	2	31.18	0.18	Ag Preserve
19	113-120-032	2	105.63	0.00	Ag Preserve
20	117-160-038	2	4.99	0.00	Packing Plant
21	117-160-046	2	68.75	0.00	Ag Preserve
22	117-160-033	2	67.07	0.00	Ag Preserve
23	117-160-041	2	67.11	0.00	Ag Preserve
24	117-191-005	2	85.82	0.00	Agriculture but NOT Preserve
	Total Acreage		**2857.94**	***9.02**	

* Total only calculates Agricultural Preserve.
(Table 2-1 does not illustrate 5 acres of indirect farmland conversion located within Caltrans right-of-way)



N

Guadalupe Ditches Project - Location 1
Santa Barbara County, California
05-SB-166- Post Mile 0.9/2.4 and 3.8/4.8
EA No. 05-0G1600

0 0.25 0.5 1 Miles

Figure 2-1 Farmland Impact Map (Location 1)

N

Guadalupe Ditches Project - Location 2
Santa Barbara County, California
05-SB-166- Post Mile 0.9/2.35 and 3.8/4.8
EA No. 05-0G160_

0 0.25 0.5 1 1.5 2 Miles

Figure 2-2 Farmland Impact Map (Location 2)

Unusual Farmland Circumstances

In the 1970s, Caltrans purchased an extended amount of right-of-way at Location 2 for a proposed expressway that was never built. The state right-of-way ranges from 10 to 300 feet from the edge of the travel way throughout Location 2; however, the property lines were never formally fenced off during the 1970's purchase. Crop productions have encroached past property lines onto the state right-of-way. Without authorization, roughly nine acres of crop production occurs on Caltrans' right-of-way.

Within the Caltrans right-of-way at Location 2, about 15 acres of farmland would be converted to highway purposes. This acreage is fully planted with crops. It could be inferred that the fertile soil at this location is Prime Farmland based on the adjacent land parcels and crop yields within this designated area. On the Natural Resources Conservation Service assessment form, Caltrans identified this farmland conversion as "indirect farmland converted," though according to the Natural Resources Conservation Service website "construction within an existing right-of way purchased on or before August 4, 1984" is not subject to Farmland Protection Policy Act rule. Please refer to Chapter 3: *Comments and Coordination* for discussion with Natural Resources Conservation Service regarding unauthorized farmland on Caltrans right-of-way.

Since Location 2 is designated as an expressway, for which access control rights were purchased, Caltrans' Design Standards mandate that fencing be placed along Location 2's right-of-way. Iron post and barbed wire would be installed to distinguish Caltrans' existing right-of-way. The fence would restrict unauthorized access to and from the highway and eliminate unauthorized farming on Caltrans property. This area would no longer be able to be farmed.

Agricultural

When farmland is affected, Caltrans consults with the U.S. Department of Agriculture's Natural Resources Conservation Service. Caltrans uses the U.S. Department of Agriculture's Farmland Conversion Impact Rating Form NRC-CPA-106 to determine impacts to farmland. The evaluation form is submitted to the U.S. Department of Agriculture's Natural Resources Conservation Service, which assigns a score for a site's relative value. The Natural Resources Conservation Service returns the evaluation form, and Caltrans completes a site assessment with the score assigned from the Natural Resources Conservation Service. A combined score over 160 indicates no further consideration for protection. Government Code Section 658.4 c (3) of the Farmland

Protection Policy Act states that "sites receiving scores totaling 160 or more be given increasingly higher levels of consideration for protection."

A Farmland Conversion Impact Rating Form was submitted to the Santa Barbara County Natural Resources Conservation Service on August 17, 2010. A combined score of 184.5 points was the overall outcome (refer to the NRCA-CPA-106 Form in Appendix D).

Agricultural Preserves

Government Code Section 51291(b) requires an agency (Caltrans) to notify the Director of the California Department of Conservation and the local governing body responsible for the administration of the preserve (County of Santa Barbara Planning Department) of Williamson Act-contracted land proposed for acquisition for a public improvement project. On July 31, 2010, a letter was sent to the California Department of Conservation and the County of Santa Barbara Planning Department to notify them of the impact to the agricultural preserve. To date, no response has been received from either agency.

Table 2.2 Farmland Conversion by Alternative

Alternatives	Land Converted (acres)	Prime and Unique Farmland (acres)	Percentage of Farmland in County to be Converted	Percentage of Farmland in State to be Converted	Farmland Conversion Impact Rating
Build	15	9.02	0.012	0.00009	**184.5**
No-Build	0	0			

Source: Form NRCS-CPA-106 (Farmland Conversion Impact Rating for Corridor-Type Projects)

Avoidance, Minimization, and/or Mitigation Measures

The project proposes to incorporate the following avoidance and minimization measures for impacts to preserved agricultural land:

- Caltrans would relocate several utility poles and extend guardrail at the Bonita School Road intersection to minimize right-of way acquisitions of additional farmland.
- Notification and coordination, in advance, with local property owners/growers are recommended to minimize short-term impacts related to construction activities. Before any work that could interfere with underground infrastructure is started,

specifically water supplies, the work must be coordinated with appropriate property owners/growers.

- Soil amendment, if used, must comply with the requirements in the California Food and Agricultural Code. Soil amendment must not contain paint, petroleum products, pesticides or any other chemical residues harmful to animal life or plant growth.

2.1.2 Community Impacts

2.1.2.1 Relocations/Real Property Acquisition

Regulatory Setting

The Department's Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix F for information on the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.). See Appendix B for a copy of the Department's Title VI Policy Statement.

Affected Environment

The Guadalupe Ditches project sits along State Route 166 between the City of Santa Maria and Guadalupe in Santa Barbara County. The project limits fall within a productive agricultural corridor and adjacent to 21 farmland properties, one packing plant facility, and two homes. Several properties are owned and/or operated by the same individuals or companies. Currently, two adjacent property owners have lease agreements with Caltrans.

Environmental Consequences

There would be no relocations with this project; however, the project would require partial right-of-way acquisitions from 14 parcels. A total of 9.1 acres of new right-of-way would be acquired. The maximum take of any property would be about 1.7 acres from a 296-acre parcel. In addition, temporary construction easements would be required for the project from 17 parcels. A total of 4.60 acres would be temporarily

affected during construction activities. (Refer to Figures 2-1 and 2-2 for identification of the parcels affected).

At the Location 1 site, 13 properties would be affected by right-of-way acquisitions. About 8.9 acres from a total of 2,179 acres would be acquired. Sliver takes would occur on both sides of State Route 166 and run parallel with the roadway. These takes would be about 25 feet wide and 1.5 miles long. Also at this location, approximately four acres would be used with temporary construction easements.

At Location 2, one property would be affected by a right-of-way acquisition. The total acreage of adjacent properties at this location is 687 acres, in which a total 0.18 acre would be acquired. The property acquisition at Location 2 would be in the form of a sliver-take. The land sliver would measure 8-feet wide and run the stretch of the property adjacent to State Route 166. Also at Location 2, approximately two acres would be needed for temporary construction easements. All other remaining areas needed for drainage ditches at Location 2 would occur within existing Caltrans' right-of-way.

Iron post and barbed-wire fencing would be placed along the Caltrans right-of-way at Location 2. Fencing would be installed to establish Caltrans' existing access denial lines.

Avoidance, Minimization, and/or Mitigation Measures

All property acquisition activities for the proposed project would be done in accordance with the Real Property Acquisition Policies Act of 1970, as amended. The parcel owners would be fully informed of their rights, and objective and fair property appraisals would be conducted, in which offers would be prepared based on appraised fair market values.

2.1.3 Utilities/Emergency Services

Affected Environment

Various utilities reside within the project limits. Three overhead utilities exist within the project limits. A PG&E overhead electrical line runs along the eastbound shoulder of State Route 166. Comcast also has a fiber optic cable on the PG&E poles. Verizon overhead telephone lines run on the westbound side of the highway.

There are four underground utilities within the project limits. AT&T and Sprint have buried fiber optic lines along the shoulders in the Caltrans right-of-way. Southern California Gas Company has a 6-inch gas line and two 2-inch laterals along the eastbound shoulder of State Route 166. A Central Coast Water Authority 42-inch high-pressure water line crosses State Route 166 at the end of Location 2.

Environmental Consequences

The project would affect two utility companies that have overhead lines. The utility poles in conflict with the construction of the drainage ditches would have to be relocated outside the Clear Recovery Zone.

Verizon has a few utility poles that would have to be relocated. The company has been contacted and has agreed with the relocations. PG&E has 11 utility poles that would have to be relocated outside the Clear Recovery Zone. Caltrans proposes to place them on the back side of the new ditches.

All other utility companies' lines are buried and would not be affected.

Emergency services would not be impeded during construction.

Avoidance, Minimization, and/or Mitigation Measures

Utility companies would be responsible for moving their respective lines. Utility companies would notify affected residents in advance of any disruption in service during utility relocation.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

Affected Environment

Applicable technical reports: Hydraulics Design Memorandum, 2009; FEMA maps.

The project area consists of very flat terrain, with State Route 166 having a low elevation profile. The existing ditches are used to control flooding and reduce the risk of highway flooding. The ditches receive highway runoff during the rainy seasons and receive minor irrigation runoff throughout the year. Flooding often occurs near the Simas intersection (Location 1) during storms.

According to the Federal Emergency Management Agency's Flood Insurance Rate Maps, the project area is not located in a floodplain.

Environmental Consequences

The project would realign existing drainage ditches, but would not redirect flood flows. The project would keep the historical drainage patterns and would not substantially increase the rate or amount of surface runoff that could result in flooding.

The design of the new ditches is similar to the existing ditches. The flow profile grade is relatively flat due to the surrounding terrain. Low flow velocities are expected and may cause any silt in the runoff to drop out and build up in the ditches. The drainage ditches may need to be dredged in the same manner as the existing ditches. However, this impact from surrounding agricultural runoff would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans Maintenance would remove silt from drainage channels and clean the culverts as needed.

2.2.2 Water Quality and Storm Water Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, the Federal Water Pollution Control Act was amended, making the discharge of pollutants to the waters of the United States from any point source unlawful, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Federal Water Pollution Control Act was subsequently amended in 1977, and was renamed the Clean Water Act. The Clean Water Act, as amended in 1987, directed that storm water discharges are point source discharges. The 1987 Clean Water Act amendment established a framework for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System program. Important Clean Water Act sections are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for any federal project that proposes an activity, which may result in a discharge to waters of the United States to obtain certification from the State that the discharge will comply with other provisions of the act.
- Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharges (except for dredge or fill material) into waters of the United States. Regional Water Quality Control Boards administers this permitting program in California. Section 402(p) establishes addresses storm water and non-storm water discharges.
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers.

The objective of the Clean Water Act is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

State Requirements: Porter-Cologne Water Quality Control Act (California Water Code)

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives) required by the Clean Water Act, and regulating discharges to ensure that the objectives are met. Details regarding water quality standards in a project area are contained in the applicable Regional Water Quality Control Board Basin Plan. States designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are state listed in accordance with Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source controls, the Clean Water Act requires establishing Total Maximum Daily Loads. Total Maximum Daily Loads establish allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, water pollution control, and water quality functions throughout the state. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- National Pollutant Discharge Elimination System Program
- The State Water Resources Control Board adopted Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order No. 99-06-DWQ) on July 15, 1999. This permit covers all Department rights-of-way, properties, facilities, and activities in the State. National Pollutant Discharge Elimination System permits establish a 5-year permitting time frame. The permit requirements remain active until a new permit has been adopted.

  In compliance with the permit, the Department developed the Statewide Storm Water Management Plan to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The Statewide Storm Water Management Plan describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices. The proposed Project will be programmed to follow the guidelines and procedures outlined in the 2003 Statewide Storm Water Management Plan to address storm water runoff or any subsequent Statewide Storm Water Management Plan version draft and approved.

- Municipal Separate Storm Sewer System Program

  The U.S. EPA defines a Municipal Separate Storm Sewer System (MS4) as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, country, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water. As part of the National Pollutant Discharge Elimination System program, U.S. EPA initiated a program requiring that entities having MS4s apply to their local Regional Water Quality Control Boards for storm water

discharge permits. The program proceeded through two phases. Under Phase I, the program initiated permit requirements for designated municipalities with populations of 100,000 or greater. Phase II expanded the program to municipalities with populations less than 100,000.

- Construction Activity Permitting

  Section H.2, Construction Program Management of the Department's National Pollutant Discharge Elimination System permit states: "The Construction Management Program shall be in compliance with requirement of the NPDES General Permit for Construction Activities (Construction General Permit)." Construction General Permit (Order No. 2009-009-DWQ, adopted on September 2, 2009, will become effective on July 1, 2010. The permit will regulate storm water discharges from construction sites that result in a DSA of 1 acre or greater, and/or are part of a common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit.

  The newly adopted permit separates projects into Risk Levels 1–3. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring. Risk levels are determined during the design phase and are based on potential erosion and transport to receiving waters. Applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan.

  The Caltrans Statewide National Pollutant Discharge Elimination System Permit requires the Department to submit a Notice of Construction to the Regional Water Quality Control Board to obtain coverage under the Construction General Permit. On project completion, a Notice of Completion of Construction is required to suspend coverage. This process will continue to apply to Department projects until a new Caltrans Statewide National Pollutant Discharge Elimination System Permit is adopted by the State Water Resources Control Board. A Notice of Construction or equivalent form will be submitted to the Regional Water Quality Control Board at least 30 days prior to construction if the associated DSA is 1 acre or more. In accordance with the Department's Standard Specifications, a Water Pollution Control Plan is used for projects with DSA less than 1 acre.

During the construction phase, compliance with the permit and the Department's Standard Special Conditions requires appropriate selection and deployment of both structural and non-structural Best Management Practices. These Best Management Practices must achieve performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.

Affected Environment

Applicable technical reports: Water Quality Assessment, 2010.

The project is in the Santa Maria Hydrologic Unit. This portion of State Route 166 typically parallels farmland on both sides from Santa Maria to Guadalupe with a network of irrigation and drainage channels that service the local agricultural fields. A major irrigation channel is the Main Street Channel that extends west from Santa Maria near the proposed project. The basin supplies surface irrigation and municipal use waters from groundwater to various cities, governments, and individuals throughout the valley.

Environmental Consequences

The project would not increase the rate or amount of surface runoff water.

Short-term surface water quality impacts may result from implementation of the project. The main impact to surface water is from the erosion and transport of loose soil created during excavation of the new drainage ditches, grading, and/or filling activities. Other potential surface water quality impacts include increased sediments, turbidity and total dissolved solids, and toxicity due to chemical substances originating from construction activities.

Surface water quality impacts could potentially occur from agricultural runoff water. Impacts are influenced by agricultural runoff from the adjacent cultivated fields that may contain pesticides and herbicides. This runoff water may potentially be released into the ditches, unauthorized by Caltrans.

No groundwater impacts are expected.

Avoidance, Minimization, and/or Mitigation Measures

The drainage and physical factors affecting erosion and sedimentation are expected to be minimized with the application of Caltrans' Standard Specifications regarding Best Management Practices and Storm Water Pollution Prevention Plan (SWPPP). Standard

Specifications, Section 7-1.01G, requires the construction contractor to implement pollution control practices related to construction projects in a Storm Water Pollution Prevention Plan. Typical Best Management Practices that could be incorporated into the Storm Water Pollution Prevention Plan include, but are not limited to, the following:

- Diversion of off-site runoff away from the construction site
- Drop inlet protection (such as filters and sandbags or straw wattles), with sand back check dams
- Regular watering of exposed soils to control dust during construction
- Contained equipment wash-out and vehicle maintenances areas

The disturbed soil areas from construction activities will be seeded with low grass to stabilize disturbed soil. This vegetated area includes the 30-feet Clear Recovery Zone, the top half of the ditches' side slope, and berm.

2.2.3 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects (e.g., Antiquities Act of 1906 [16 USC 431-433], Federal-Aid Highway Act of 1956 [23 USC 305]). Under California law, paleontological resources are protected by the California Environmental Quality Act.

Affected Environment

Applicable technical reports: Paleontology Review Memorandum, October 2009.

The project lies in the Santa Maria Valley that is underlain by floodplain deposits of the Santa Maria River. Formations found within the project limits are alluvium deposits. Alluvium deposits are loose, unconsolidated soil and sediments reshaped by water that have been compressed to form a solid. These deposits, however, are very young in age on the geological time scale (Quaternary).

Environmental Consequences

The formation has a low potential to contain sensitive paleontological resources, and there appears to be very little probability of encountering paleontological resources with this project.

Avoidance, Minimization, and/or Mitigation Measures

If fossils or paleontology resources are found during construction operations, it is required that construction be halted in the immediate vicinity of the discovery until the District Archaeologist can review the site.

2.3 Biological Environment

2.3.1 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 United States Code (USC), Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species.

The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of the Federal Endangered Species Act defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats.

The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The

California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by the California Department of Fish and Game.

For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Game may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Affected Environment

Applicable technical reports: Natural Environment Study, March 2010; Biological Assessment, February 2010.

The Guadalupe Ditches project sits along State Route 166 between the City of Santa Maria and Guadalupe in Santa Barbara County. The project limits fall within a productive agricultural corridor composed of 21 adjacent farmland properties with a few residential homes scattered throughout. The topography of the area is flat and agricultural.

The project is within the geographic range for California red-legged frogs. California red-legged frogs (*Rana draytonii*) are listed by the U.S. Fish and Wildlife Service as federally Threatened and are a California State Species of Special Concern. The California Natural Diversity Database identified 21 occurrences within a 5-mile radius of the proposed project, including one observation of two of red-legged frogs within the biological study area.

The sighting for the California red-legged frogs within the biological study area occurred at post mile 3.8. An agricultural pond sits immediately adjacent to the proposed work area at this location of the project (Location 2). The triangular-shaped reservoir is about 6 feet deep and spans 200 feet across from bank to bank. The pond represents potential aquatic habitat for California red-legged frogs. Vegetation along the lower banks of the agricultural pond is a suitable environment for laying and protecting fertilized eggs. A minimum 20-foot dirt access road surrounds the outside perimeter of the pond. Beyond this dirt access road are rows of lettuce and strawberry; however, this vegetation is unsuitable upland habitat for California red-legged frogs.

Environmental Consequences

The project entails relocating roadside drainage ditches farther from the edge of traveled way to provide additional recovery area for straying vehicles. The existing drainages

would be filled in, packed, and then graded to produce the extended linear footage for the 30-foot Clear Recovery Zone. The project would entirely avoid the pond and would not affect any listed plant species or critical habitat for California red-legged frogs.

The project was determined to require Section 7 consultation with the U.S. Fish and Wildlife Service for the California red-legged frog. Caltrans initiated consultation with a Biological Assessment to U.S. Fish and Wildlife Service in February 2010. The Service concurred with Caltrans' determination of Section 7 consultation and issued a Biological Opinion on June 23, 2010. The U.S. Fish and Wildlife Service concurred with the findings that the proposed project is "not likely to jeopardize the continued existence of the California red-legged frog." For additional information, refer to *Appendix E: Biological Opinion.*

Avoidance, Minimization, and/or Mitigation Measures

The project proposes to incorporate the following avoidance and minimization measures for California red-legged frogs from the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Aid Program.

Caltrans will schedule work activities between May 1 and October 31 to minimize potential impacts to California red-legged frogs.

Environmental Sensitive Fencing will be established at the agricultural pond to avoid potential impacts to aquatic habitat. This will be delineated in the field and on layout sheets.

The proposed project may require the relocation of California red-legged frogs found in the work area. If adult or juvenile red-legged frogs are found on the project site, then they would be relocated to Santa Maria River at Highway 1, as described in the Biological Opinion issued on June 23, 2010.

The following additional avoidance and minimization measures would also be incorporated into the project:

- Only Service-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- Ground disturbance will not begin until written approval is received from the Service that the biologist is qualified to conduct the work.

- A Service-approved biologist will survey aquatic and riparian areas at the project site 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to move them from the site before work activities begin.

- Before any activities begin on the project, a Service-approved biologist will conduct a training session for all construction personnel to identify key concerns associated with California red-legged frog and its habitat.

- A Service-approved biologist will be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, the state or local sponsoring agency will designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist will ensure that this monitor receives the training outlined in bullet # 4 located above, and in the identification of California red-legged frogs. If the monitor or the Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected to a degree that exceeds the levels anticipated by the Federal Highway Administration and Service during review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the effect immediately or require that all actions which are causing these effects be halted. If work is stopped, the Service will be notified as soon as is reasonably possible.

- During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

- All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and preferably, not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Federal Highway Administration will ensure that a plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- Disturbed areas will be revegetated with native species. Invasive, exotic plants will be controlled to the maximum extent practicable. This measure will be implemented in all areas disturbed by activities associated with the project, unless the Service and Federal Highway Administration determine that it is not feasible or practical. (For example, an area disturbed by construction that would be used for future activities need not be revegetated.)

- Habitat contours will be returned to their original configuration at the end of project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the Service and Federal Highway Administration determine that it is not feasible.

- The number of access routes, size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

- Caltrans, as delegated by Federal Highway Administration, will attempt to schedule work activities for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and informal consultation between the Federal Highway Administration and Service during project planning should be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.

- To control sedimentation during and after project implementation, the Federal Highway Administration and sponsoring agency will implement best management practices outlined in any authorizations or permits, issued under the authorities of the Clean Water Act, that it receives for the specific project. If best management practices are ineffective, the Federal Highway Administration will attempt to remedy the situation immediately, in consultation with the

Service if a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering will be determined by the Federal Highway Administration in consultation with the Service on site-specific basis. On completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the stream bed will be minimized to the maximum extent possible; any imported material will be removed from the stream bed upon completion of the project.

- Unless approved by the Service, water will not be impounded in a manner that may attract California red-legged frogs.
- A Service-approved biologist will permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist will be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.
- To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.
- Additional measures contingent upon finding California red-legged frog can be found within the Biological Opinion in Appendix E.

2.4 Construction Impacts

Affected Environment

Applicable technical reports: Air Quality, Noise, and Paleontology Reports, April 2009.

Air Quality

The project is in the South Central Coast Air Basin as defined by the California Air Resources Board. The Santa Barbara County Air Pollution Control District is charged with establishing regulations to accomplish attainment of state and federal air quality standards in Santa Barbara County. Santa Barbara County is considered in non-attainment for state and federal air quality standards for ozone and state air quality

standards for fine particulate (PM_{10}). To meet these goals, the Santa Barbara County Air Pollution Control District has prepared a 2001 Clean Air Plan that details how the district will attain federal air quality standards for the 1-hour ozone standard. The Santa Barbara County Air Pollution is the applicable State Implementation Plan for Santa Barbara County.

Because the South Central Coast Air Basin is in attainment or unclassified for all national ambient air quality standards, an air quality conformity determination is not required for this project. Since the project would improve safety and not degrade local air quality, it is also deemed consistent with the Santa Barbara County Air Pollution Control District state air quality goals.

Noise Quality

A Noise Quality Report (2009) was prepared to evaluate the potential for adverse noise effects on noise-sensitive receivers. A few homes and Bonita Elementary School sit within the project limits.

Environmental Consequences

Air Quality

The proposed project is not expected to have any adverse impacts on long-term air quality because no additional lanes are being added to the highway. The project would cause a temporary and minimal increase in air emissions during the construction period. Although Santa Barbara County has no construction emissions thresholds, construction emissions produced from this project would be below thresholds maintained by many California Air Boards.

Noise Quality

There would be no long-term increase in ambient noise levels. There may be some temporary noise impacts to local residents and possibly to Bonita Elementary School from use of construction equipment during utility pole installation and grading.

Avoidance, Minimization, and/or Mitigation Measures

Air Quality

Caltrans Standard Specification pertaining to dust control and dust palliative requirements will be implemented to reduce emission impacts during construction (SSP Section 7 and 10). These specifications require the contractor to comply with the Santa Barbara County Air Pollution Control Districts' rules, ordinances, and regulations.

Noise

All work would be done during the day, in accordance with Santa Barbara County's Noise Element. The local residences and Bonita Elementary School would be notified in advance of construction activity near their locations.

2.5 Climate Change under the California Environmental Quality Act

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of greenhouse gas related to human activity that include carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change at the state level. AB 1493 requires the California Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, to enact the standards California needed a waiver from the U.S. Environmental Protection Agency. The waiver was denied by Environmental Protection Agency in December 2007 and efforts to overturn the decision had been unsuccessful (see *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011). However, on January 26, 2009, it was announced that U.S. Environmental Protection Agency would reconsider their decision regarding the denial of California's waiver.

On May 18, 2009, President Barack Obama announced the enactment of a 35.5-mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009, the U.S. Environmental Protection Agency granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that the California Air Resources Board create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and greenhouse gas reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing greenhouse gas emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency to regulate greenhouse gas as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, 549 U.S. 497 (2007). The court ruled that greenhouse gas does fit within the Clean Air Act's definition of a pollutant, and that the U.S. Environmental Protection Agency does have the authority to regulate greenhouse gas. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

On December 7, 2009, the U.S. Environmental Protection Agency Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)--in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor

vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. Environmental Protection Agency's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009[1]. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register[2].

The final combined U.S. Environmental Protection Agency and National Highway Traffic Safety Administration standards that make up the first phase of this National Program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards will cut greenhouse gas emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

According to *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of greenhouse gas. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

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[1] http://www.epa.gov/climatechange/endangerment.html

[2] http://www.regulations.gov/search/Regs/contentStreamer?objectId=0900006480a5e7f1&disposition=attachment&contentType=pdf

As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board recently released an updated version of the greenhouse gas inventory for California (June 26, 2008). Below is a graph from that update that shows the total greenhouse gas emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

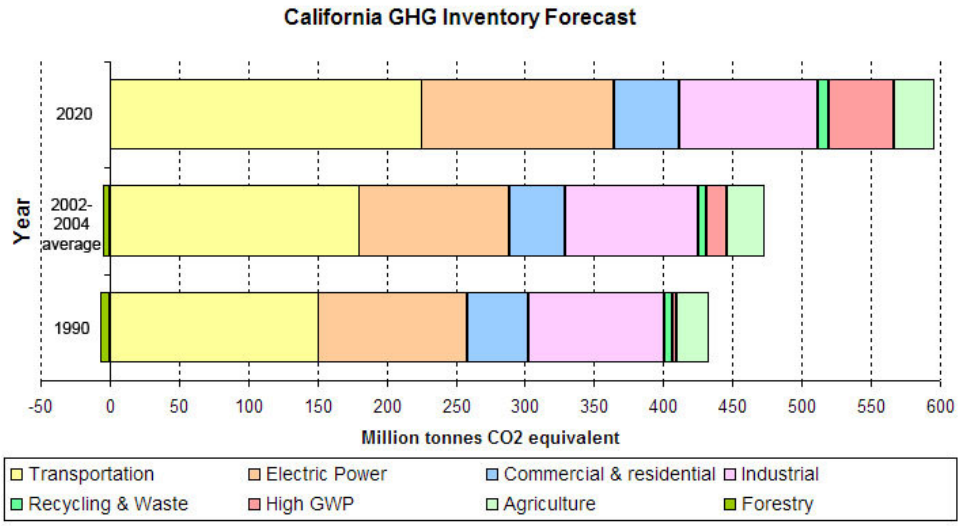

Figure 2-3 California Greenhouse Gas Inventory
Taken from: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California's greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made greenhouse gas emissions are from transportation (Caltrans, 2006b), Caltrans has created and is implementing the *Climate Action Program at Caltrans* that was published in December 2006.

Project Analysis

The proposed project consists of relocating drainage ditches, culverts, fencing, and utility poles to create a 30-foot Clear Recovery Zone.

The proposed project is expected to improve safety and reduce the number of errant drivers traveling beyond the shoulder and into the drainage ditches that closely parallel the highway on both sides of the road. When accidents occur along this route, traffic

backs up behind the accident on both sides of the route, leading to congestion and in the most severe cases stop-and-go conditions. To the extent that the project would help prevent accidents in this area and reduce related congestion, greenhouse gas emissions resulting from the baked-up traffic behind vehicular accidents on the two-lane road would be reduced.

Because the project would not increase capacity nor vehicle hours travelled, no increases in operational greenhouse gas emissions are anticipated. While construction emissions of greenhouse gases are unavoidable, there would likely be long-term benefits with improved safety.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as the California Air Resources Board works to implement the Governor's Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. As shown in the next figure, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gas emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems

approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

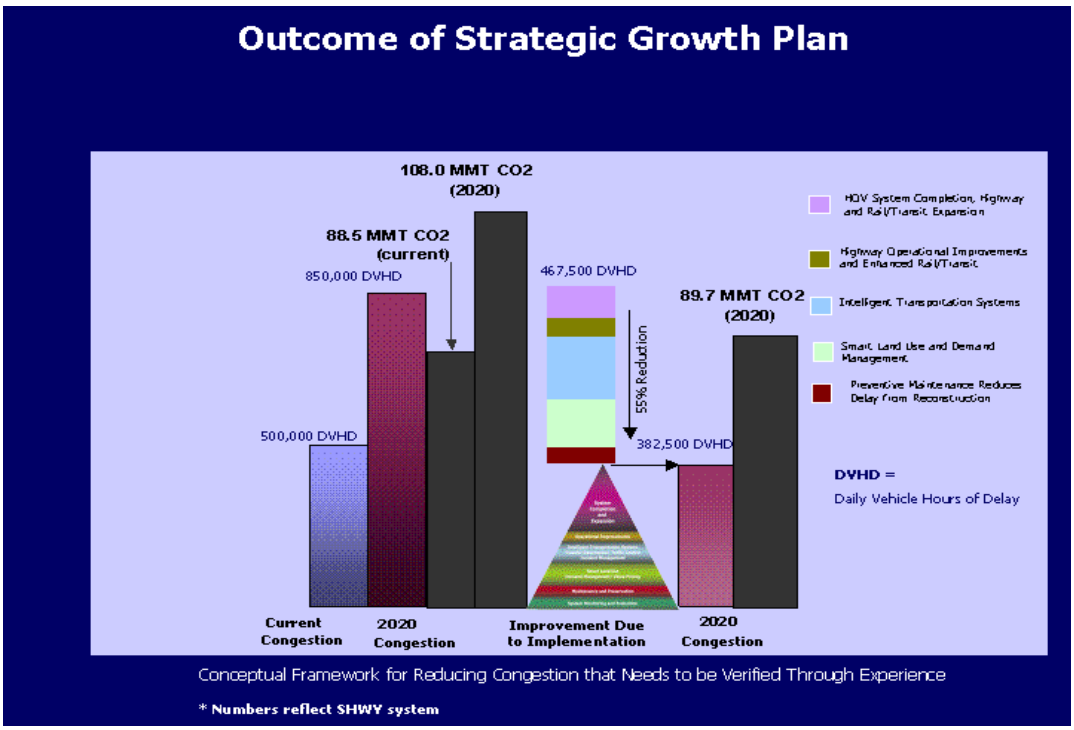

Figure 2-4 Outcome of Strategic Growth Plan

As part of the Climate Action Program (December 2006, http://www.dot.ca.gov/docs /ClimateReport.pdf), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority.

Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by the Environmental Protection Agency and the California Air Resources Board.

Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the University of California at Davis. Table 2-3 summarizes the Department and statewide efforts that Caltrans is implementing in order to reduce greenhouse gas emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006); it is available at http://www.dot.ca.gov/docs/ClimateReport.pdf.

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Table 2.3 Climate Change Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.007	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings (MMT)	
		Lead	Agency		2010	2020
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.67

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

Executive Order S-13-08 (signed by Governor Schwarzenegger in November 2008) directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final *Sea Level Rise Assessment Report* (due to be released in December 2010 from the National Academy of Sciences*)*, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge

and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement.)

This proposed project was programmed for construction funding in the 2008 SHOPP under the 201.015 (HB1) Clean Up Roadside Environment (CURE)/Safety Enhancement program, it is exempt at this time from the requirements to analyze the impacts of sea level rise as directed in Executive order S-13-08.

Currently, the Department is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, the Department will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, and public meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

Several project development team meetings have been held to date with representatives from various branches within Caltrans. Project development team meetings have occurred since the project's inception in 2001. Project development team meetings have been held on a quarterly basis over the last few years.

On June 24, 2008, a Farmland Conversion Impact Rating Form (NRCS-CPA-106) was submitted to the U.S. Department of Agriculture's Natural Resources Conservation Service. The form was signed by the Natural Resources Conservation Service and returned to Caltrans in July 2008. A revised CPA-106 Form was submitted to the Natural Resources Conservation Service on August 17, 2010 to reflect the 5 acres of Caltrans right-of-way currently being used for crop production. The form was signed by the Natural Resources Conservation Service and returned to Caltrans on August 20, 2010.

On January 28, 2009, Caltrans planner Samer Momani met with Santa Barbara County Agricultural Planning representatives Bill Gillette, Stephanie Stark and Mike Hays. The County provided its input and suggestions regarding the project's impact to farmland and provided contact names of the nearby farmland owners. In addition, the meeting identified a threshold for farmland impact significance to be approximately 30 acres. Lastly, Santa Barbara County Agricultural Planning staff attended and participated in the informational meeting with the local farmers.

On March 11, 2009, an information meeting took place from 2:30 p.m. to 4:30 p.m. at the County of Santa Barbara Department of Public Works office at 624 West Foster Road in Santa Maria. Several property owners near the proposed project as well as

government representatives attended the public meeting. Caltrans staff introduced the proposed project, listened to public concerns, and answered questions.

On February 22, 2010, Caltrans initiated formal consultation with the U.S. Fish and Wildlife Service and submitted a Biological Assessment for effects to California red-legged frogs. On June 23, 2010, the U.S. Fish and Wildlife Service issued a Biological Opinion with its determination and concurrence.

On July 1, 2010, a letter was sent to the California Department of Conservation and County of Santa Barbara Planning Department to notify them of the impact to agricultural preserve. To date, no response has been received from either agency.

On August 18, 2010, Caltrans planner Kelso Vidal contacted Natural Resources Conservation Service's John Bechtold regarding unauthorized farm production on Caltrans' right-of-way. The discussion was to notify the agency that a revised NRCS-CPA-106 Form was submitted to account for 5 acres of Caltrans' right-of-way that would be affected by the project, and that this property was identified as "converted indirectly." Natural Resources Conservation Service explained that the Department of Conservation has Assessor Parcel Maps that depict the property as Caltrans' right-of-way, and since the property acquisitions took place prior to 1984, then Caltrans' property at this location was not subject to the Farmland Protection Policy Act rule. A project development team meeting was held on August 26, 2010 where it was agreed that all unauthorized farmland on Caltrans' right-of-way be identified in the Environmental Document. However, since the Natural Resources Conservation Service is aware of the unauthorized encroachment and property acquisitions prior to 1984 are not subject to Farmland Protection Policy Act rule, no revised NRCS-CPA-106 Form has been submitted because it would not affect the Relative Value.

Caltrans planner Karen Bewley consulted with the Army Corps of Engineers between the end of March 2010 and the first week of April 2010 regarding jurisdiction within the project limits and application of the 404 Permit. On April 6, 2010, a phone conversation with Caltrans and Army Corps of Engineers concluded that the Corps did not want claim jurisdiction of the ditches and no 404 Permit was required.

Caltrans planner Karen Bewley corresponded via email with the Water Board between May 6, 2010 to May 18, 2010 regarding jurisdiction within the project limits and application of a 401 Permit. The outcome was that the Water Board felt it was "unlikely" that they would claim jurisdiction.

Chapter 4 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

Carr, Robert. Associate Landscape Architect. B.S., Landscape Architecture, California Polytechnic State University, San Luis Obispo; 20 years of experience preparing Visual Impact Assessments. Contribution: Wrote the Visual Impact Assessment.

Fowler, Matt. Senior Environmental Planner. B.A., Geographic Analysis, San Diego State University; 9 years of environmental planning experience. Contribution: Environmental Project Manager and final editing.

Levulett, Valerie. Senior Environmental Planner. Ph.D., Anthropology, University of California Davis; 40 years of experience in cultural resource and environmental studies. Contribution: Technical studies oversight.

Leyva, Isaac. Engineering Geologist. B.S., Geology, California State University, Bakersfield; A.S., Cuesta College, San Luis Obispo; 20 years of experience in petroleum geology, environmental, geotechnical engineering. Contribution: Initial Site Assessment and Paleontology review.

MacDonald, Christina. Staff Archaeologist/Associate Environmental Planner. M.A., Cultural Resources Management, Sonoma State University; 10 years of experience in California Prehistoric and Historic Archaeology. Contribution: Cultural Resources Review.

Mikel, Karl J, P.E. Transportation Engineer. B.S., Environmental Engineering, California Polytechnic State University-San Luis Obispo; M.S., Civil and Environmental Engineering, California Polytechnic State University-San Luis Obispo; 9 years of experience in environmental engineering. Contribution: Revised Air Quality and Noise Technical Reports.

Momani, Samer. Associate Environmental Planner. M.S., Environmental Studies, California State University, Fullerton; B.S., Biological Sciences, The University of Jordan; 6 years of environmental studies experience including wildlife conservation and water quality testing and compliance. Contribution: Farmland Report.

Mills, Wayne. Transportation Engineer. B.A., Earth Science, California State University, Fullerton; B.A., Social Science, San Diego State University; 24 years of air quality, noise, water quality, and paleontology studies experience. Contribution: Air Quality and Noise Technical Reports.

Robertson, Morgan. Associate Environmental Planner (Natural Sciences). M.S., Wildlife Biology, University of Alaska, Fairbanks, Alaska; B.S., Zoology, University of California at Davis; 15 years of experience in wildlife ecology. Contribution: Natural Environment Study.

Vidal, Kelso. Associate Environmental Planner. M.A., Sociology, California State University, Sacramento; 4 years of experience in environmental planning. Contribution: Wrote the Initial Study/ Environmental Assessment and coordinated the environmental process for the project.

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

Supporting documentation of all California Environmental Quality Act 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.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
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?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☒	☐

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:

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
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)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

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:				
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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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)?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
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?	☐	☐	☐	☒
(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?	☐	☐	☐	☒
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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
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?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

	Potentially significant impact	Less than significant impact 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

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Appendix B 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
FAX (916) 654-6608
TTY (916) 653-4086

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"

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Appendix C Minimization and/or Mitigation Summary

The project proposes to incorporate the following avoidance and minimization measures:

Farmland

Caltrans would relocate several utility poles and extend guardrail at the Bonita School Road intersection to minimize right-of way acquisitions of additional farmland.

Notification and coordination, in advance, with local property owners/growers are recommended to minimize short-term impacts related to construction activities. Before any work that could interfere with underground infrastructure is started, specifically water supplies, the work must be coordinated with appropriate property owners/growers.

Soil amendment, if used, must comply with the requirements in the California Food and Agricultural Code. Soil amendment must not contain paint, petroleum products, pesticides or any other chemical residues harmful to animal life or plant growth.

Community

All property acquisition activities for the proposed project would be done in accordance with the Real Property Acquisition Policies Act of 1970, as amended. The parcel owners would be fully informed of their rights, and objective and fair property appraisals would be conducted, in which offers would be prepared based on appraised fair market values.

Utilities

Utility companies would be responsible for moving their respective lines. Utility companies would notify affected residents in advance of any disruption in service during utility relocation.

Hydrology

Caltrans Maintenance would remove silt from drainage channels and clean the culverts as needed.

Water Quality and Storm Water Runoff

The drainage and physical factors affecting erosion and sedimentation are expected to be minimized with the application of Caltrans' Standard Specifications regarding Best

Management Practices and Storm Water Pollution Prevention Plan (SWPPP). Standard Specifications, Section 7-1.01G, requires the construction contractor to implement pollution control practices related to construction projects in a Storm Water Pollution Prevention Plan. Typical Best Management Practices that could be incorporated into the Storm Water Pollution Prevention Plan include, but are not limited to, the following:

- Diversion of off-site runoff away from the construction site
- Drop inlet protection (such as filters and sandbags or straw wattles), with sand back check dams
- Regular watering of exposed soils to control dust during construction
- Contained equipment wash-out and vehicle maintenances areas

The disturbed soil areas from construction activities will be seeded with low grass to stabilize disturbed soil. This vegetated area includes the 30-feet Clear Recovery Zone, the top half of the ditches' side slope, and berm.

Paleontology

If fossils or paleontology resources are found during construction operations, it is required that construction be halted in the immediate vicinity of the discovery until the District Archaeologist can review the site.

Threatened and Endangered Species

The project proposes to incorporate the following avoidance and minimization measures for California red-legged frogs from the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Aid Program.

Caltrans will schedule work activities between May 1 and October 31 to minimize potential impacts to California red-legged frogs.

Environmental Sensitive Fencing will be established at the agricultural pond to avoid potential impacts to aquatic habitat. This will be delineated in the field and on layout sheets.

The proposed project may require the relocation of California red-legged frogs found in the work area. If adult or juvenile red-legged frogs are found on the project site, then they would be relocated to Santa Maria River at Highway 1, as described in the Biological Opinion issued on June 23, 2010.

The following additional avoidance and minimization measures would also be incorporated into the project:

- Only Service-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

- Ground disturbance will not begin until written approval is received from the Service that the biologist is qualified to conduct the work.

- A Service-approved biologist will survey aquatic and riparian areas at the project site 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to move them from the site before work activities begin.

- Before any activities begin on the project, a Service-approved biologist will conduct a training session for all construction personnel to identify key concerns associated with California red-legged frog and its habitat.

- A Service-approved biologist will be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of habitat has been completed. After this time, the state or local sponsoring agency will designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist will ensure that this monitor receives the training outlined in bullet # 4 located above, and in the identification of California red-legged frogs. If the monitor or the Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected to a degree that exceeds the levels anticipated by the Federal Highway Administration and Service during review of the proposed action, they will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will either resolve the situation by eliminating the effect immediately or require that all actions which are causing these effects be halted. If work is stopped, the Service will be notified as soon as is reasonably possible.

- During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following

construction, all trash and construction debris will be removed from work areas.

- All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from riparian habitat or water bodies and preferably, not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Federal Highway Administration will ensure that a plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

- Disturbed areas will be revegetated with native species. Invasive, exotic plants will be controlled to the maximum extent practicable. This measure will be implemented in all areas disturbed by activities associated with the project, unless the Service and Federal Highway Administration determine that it is not feasible or practical. (For example, an area disturbed by construction that would be used for future activities need not be revegetated.)

- Habitat contours will be returned to their original configuration at the end of project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the Service and Federal Highway Administration determine that it is not feasible.

- The number of access routes, size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

- Caltrans, as delegated by Federal Highway Administration, will attempt to schedule work activities for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree

practicable, during the late summer and early fall. Habitat assessments, surveys, and informal consultation between the Federal Highway Administration and Service during project planning should be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.

- To control sedimentation during and after project implementation, the Federal Highway Administration and sponsoring agency will implement best management practices outlined in any authorizations or permits, issued under the authorities of the Clean Water Act, that it receives for the specific project. If best management practices are ineffective, the Federal Highway Administration will attempt to remedy the situation immediately, in consultation with the Service if a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering will be determined by the Federal Highway Administration in consultation with the Service on site-specific basis. On completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the stream bed will be minimized to the maximum extent possible; any imported material will be removed from the stream bed upon completion of the project.

- Unless approved by the Service, water will not be impounded in a manner that may attract California red-legged frogs.

- A Service-approved biologist will permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The Service-approved biologist will be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.

- To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.

- Additional measures contingent upon finding California red-legged frog can be found within the Biological Opinion in Appendix E.

- If one California red-legged frog is found dead or injured, Caltrans must contact US Fish and Wildlife immediately so they can review the project activities to determine if additional protective measures are needed.

- Caltrans must test for Chytrid fungus from any captured California red-legged frog.

- Caltrans must provide a written report to the U.S. Fish and Wildlife Service within 90 days following completion of the proposed project.

Construction Impacts to Air Quality and Noise

Caltrans Standard Specification pertaining to dust control and dust palliative requirements will be implemented to reduce emission impacts during construction (SSP Section 7 and 10). These specifications require the contractor to comply with the Santa Barbara County Air Pollution Control Districts' rules, ordinances, and regulations.

All work would be done during the day, in accordance with Santa Barbara County's Noise Element. The local residences and Bonita Elementary School would be notified in advance of construction activity near their locations.

Appendix D NRCS-CPA-106 Form

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
Santa Maria Service Center
920 E. Stowell Road
Santa Maria, CA 93454-7008

Telephone (805) 928-9269
Fax (805) 928-9644

August 19, 2010

To: Matt Fowler
Senior Environmental Planner
CA Department of Transportation
San Luis Obispo, CA

Subject: Farmland Conversion Impact Rating – Guadalupe Ditches

Dear Mr. Fowler:

Enclosed is a completed NRCS-CPA-106 for your Highway 166 right-of-way project. If you have any questions, you can call me at 805-928-9269, ext. 105.

Sincerely,

John Bechtold
District Conservationist, USDA-NRCS

Enclosed: NRCS-CPA-106

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U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 8/12/10	4. Sheet 1 of 1
1. Name of Project Guadalupe Ditches (0500000056)	5. Federal Agency Involved Caltrans as assigned by FHWA	
2. Type of Project Highway Safety Improvement	6. County and State Santa Barbara County	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS 8/18/10	2. Person Completing Form John Beckwold
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☒ NO ☐		4. Acres Irrigated 95091 / Average Farm Size 455 Ac.
5. Major Crop(s) cole crops, leafy greens, strawberries, grapes	6. Farmable Land in Government Jurisdiction Acres: 124,965 % 7	7. Amount of Farmland As Defined in FPPA Acres: 133,998 % 8
8. Name Of Land Evaluation System Used CA Storie System	9. Name of Local Site Assessment System N/A	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	10			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	5			
C. Total Acres In Corridor	15	0	0	0
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	15			
B. Total Acres Statewide And Local Important Farmland	0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.012			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	Data not available			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	94.5			

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area in Nonurban Use	15	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	20			
5. Size of Present Farm Unit Compared To Average	10	0			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	5			
8. On-Farm Investments	20	20			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	~~0~~ 90	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	94.5			
Total Corridor Assessment (From Part VI above or a local site assessment)	160	~~0~~ 90	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	~~0~~ 184.5	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	15	8/24/10	YES ☐ NO ☒

5. Reason For Selection:

TO IMPLEMENT HIGHWAY SAFETY IMPROVEMENT, CORRIDOR A IS THE ONLY OPTION AVAILABLE

Signature of Person Completing this Part: [signature] DATE 8/24/2010

NOTE: Complete a form for each segment with more than one Alternate Corridor

Appendix E Biological Opinion

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
81440-2010-F-0196

June 23, 2010

Chuck Cesena
Senior Environmental Planner
California Department of Transportation
50 Higuera Street
San Luis Obispo, California 93401-5415

Subject: Biological Opinion for the Guadalupe Ditches Project, San Luis Obispo County, California (8-8-10-F-19) (EA 05-0G1600)

Dear Mr. Cesena:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed Guadalupe Ditches Project (project) and the associated effects on the federally threatened California red-legged frog (*Rana draytonii*). The California Department of Transportation (Caltrans) is acting as the lead federal agency, authorized under a Memorandum of Understanding with the Federal Highway Administration (FHWA), pursuant to section 6004 of the 2005 Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. In your request, you determined that the proposed action meets the suitability criteria contained in the programmatic biological opinion for the California red-legged frog (1-8-02-F-68), dated April 24, 2003 (Service 2003). We concur with this determination. This biological opinion is issued in accordance with section 7 of the Endangered Species Act (Act) of 1973 as amended (16 U.S.C. 1531 et seq.).

This biological opinion was prepared using information contained in your request for consultation, dated February 22, 2010, and received on February 24, 2010, the programmatic biological opinion, the biological assessment (Caltrans 2010), communication between your staff and the Service (Robertson pers. comm. 2010), and information in our files. A complete administrative record for this biological opinion is on file at the Ventura Fish and Wildlife Office.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed project is located on State Route 166, a two-lane rural highway in northern Santa Barbara County that serves commuter, local, agricultural, and recreational traffic between the city of Santa Maria and the town of Guadalupe. The purpose of the project is to improve safety

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on State Route 166 between Guadalupe and Santa Maria by creating a 30 foot clear recovery zone (CRZ) next to the highway along two sections of the road. Location 1 is between post mile (PM) 0.9 and 2.35 and Location 2 is between PM 3.8 and 4.8.

The project would provide a 30 foot CRZ by relocating the agriculture drainage ditches adjacent to the highway. The drainage ditches would be relocated 30 feet away from the edge of the existing traveled way between Location 1 and Location 2. Any utility poles within the CRZ would be relocated outside the CRZ on both the north and south sides of State Route 166. Several culverts exist under the driveways of private property adjacent to Highway 166 to allow drainage ditches to flow past each property (Robertson pers. comm. 2010). The culverts and headwalls at each driveway would be relocated outside the CRZ. The culverts would either be relocated, or replaced by new culverts that are similar in size and capacity as the existing units. (Robertson pers. comm. 2010). Staging and storing sites have not been determined, but contractors will likely use agriculture areas directly adjacent to the CRZ (Robertson pers. comm. 2010).

The project would permanently disturb approximately 3.87 acres of agriculture land, and temporarily disturb approximately 5.17 acres of agriculture land, 21.12 acres of ruderal vegetation and road shoulders, and 3.42 acres of Waters of the U.S. (U.S. Army Corps of Engineers jurisdiction). All Waters of the U.S. would be replaced onsite. The new trapezoidal ditches would be 20 feet wide at the top, the width at the bottom would be 4 to 6 feet, and the sides would have a 2 to 1 slope ratio. Following construction, Caltrans would plant 4.9 linear miles of roadside banks with native seed mix to stabilize disturbed soils and decrease road run-off within the right of way.

At Location 2, a double-barreled culvert carries water under State Route 166 from ditches on the northern side of the road, connecting with ditches on the southern side of the road in a channel at PM 3.8. Currently, the channel banks are comprised of a mixture of concrete rip-rap, hard-packed earth, and sparse ruderal vegetation. The project would remove all concrete and non-native vegetation in the area where the roadside ditch and channel intersect. Banks would be graded according to Caltrans Best Management Practices and 60 feet of Rock Slope Protection (RSP) would be placed downstream of the culvert outlet to dissipate flow and prevent erosion. The surrounding slopes would be stabilized and re-vegetated with a mixture of native grasses and vegetation.

Temporary effects to water quality from increased erosion on new cut and fill slopes would be avoided by implementing the best management practices from Caltrans' National Pollution Discharge Elimination System permit. Work would not be performed in an actively flowing channel. Water diversions would be established as necessary.

A 0.41 acre agriculture pond is located immediately adjacent to the proposed work area at PM 3.8. The project would avoid the pond, which would be designated on project plans as an environmentally sensitive area (ESA) to exclude construction activity and equipment.

Construction is scheduled for 2012. The number of working days has not been established, but construction is expected to take less than 6 months. Caltrans would schedule work activities between May 1 and October 31, to minimize potential impacts to California red-legged frogs.

The proposed project may require the relocation of California red-legged frogs found in the work area. If adult or juvenile California red-legged frogs are found on the project site, they would be relocated to the nearest suitable habitat, which Caltrans has identified to occur at the Santa Maria River at Highway 1 approximately 1.5 to 5.5 miles northwest of the proposed project..

Caltrans would avoid or reduce the effects to California red-legged frogs and their habitat. Caltrans proposes to implement protective measures for the California red-legged frog that are contained in the programmatic biological opinion (Caltrans 2010).

ANALYTICAL FRAMEWORK FOR JEOPARDY DETERMINATIONS

Jeopardy Determination

The jeopardy analysis in this biological and conference opinion relies on four components: (1) the *Status of the Species*, which evaluates the range-wide conditions of the California red-legged frog, the factors responsible for those conditions, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the conditions of the California red-legged frog in the action area, the factors responsible for those conditions, and the relationship of the action area to the survival and recovery of this species; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the California red-legged frog; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on the California red-legged frog.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the current status of the California red-legged frog, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the California red-legged frog in the wild.

The jeopardy analysis in this biological opinion places an emphasis on consideration of the range-wide survival and recovery needs of the California red-legged frog and the role of the action area in the survival and recovery of this species as the context for evaluation the significance of the effects of the proposed federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

STATUS OF THE SPECIES

The programmatic biological opinion for the California red-legged frog (Service 2003) describes the basic ecology of the subspecies and the reasons for its listing. The California red-legged frog

was federally listed as threatened on May 23, 1996 (61 FR 25813). We designated critical habitat for the California red-legged frog in a final rule, dated March 13, 2001 (66 FR 14625). On November 6, 2002, the U.S. District Court for the District of Columbia set aside the designation and ordered the Service to publish a new final rule with respect to the designation of critical habitat for the California red-legged frog (Home Builders Association of Northern California et al. versus Gale A. Norton, Secretary of the Department of Interior et al. Civil Action No. 01-1291 (RJL) U.S. District Court, District of Columbia). Critical habitat was designated for the California red-legged frog on April 13, 2006 (71 FR 19243). On September 16, 2008, the Service proposed a new rule to designate 1.8 million acres as critical habitat for the California red-legged frog, an area that is 300 percent larger than the 2006 designation for the subspecies (73 FR 53492). The new proposal was developed "without using the previous final designation as a base from which to make changes due to the involvement of Department of Interior personnel which may have inappropriately influenced the extent and locations of critical habitat (FR p. 53500)." The new proposal was based on improved criteria, beginning with the 2002 Recovery Plan for the subspecies. On March 17, 2010, the Service published a revised critical habitat designation for California red-legged frog (75 FR 12816). More than three times larger than the 2006 rule it replaces, the 2010 rule designates 50 critical habitat units in 27 California counties. The subject project site is not within designated critical habitat for the California red-legged frog and it will not be discussed further in this biological opinion. The Service completed a recovery plan for the subspecies in 2002 (Service 2002).

Currently California red-legged frogs are only known from 3 disjunct regions in 26 California counties, and one disjunct region that is still present in Baja California, Mexico (Grismer 2002; Fidenci 2004; R. Smith and D. Krofta, in litt. 2005). Current threats to the California red-legged frog include direct habitat loss due to stream alteration and disturbance to wetland areas, indirect effects of expanding urbanization, and competition or predation from non-native species, and Chytrid fungus (*Batrachochytrium dendrobatidis*), a waterborne fungus that can decimate amphibian populations.

ENVIRONMENTAL BASELINE

The implementing regulations for section 7(a)(2) of the Act define the "action area" as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 *Code of Federal Regulations* 402.02). For the purposes of this biological opinion, we consider the action area to include the entire length of the CRZ along State Route 166 at Location 1 and Location 2, including the existing drainage ditches and where they would be relocated; the Santa Maria River at Highway 1; and an area extending 500 feet in all directions of each of these areas to account for the indirect effects of construction, and staging and storing of equipment on the California red-legged frog.

Currently, the roadside drainage ditches provide potential foraging, dispersal and breeding habitat for California red-legged frogs within the action area. No surveys were conducted for the California red-legged frog because the species was already known to occur within the action area.

The biological assessment (Caltrans 2010) included the following California red-legged frog sightings within a 5-mile radius of the proposed project, as described in the California Natural Diversity Database (CNDDB):

1. North side of State Route 166 (PM 3.8), just East of Bonita School, about 4 miles west of Santa Maria (2004). Two adults observed in pond.

2. Drainage canal just west of State Route 166 (PM 5.2), 0.45 mile east of Blackie Road (2000). Three adults.

3. Drainage canal just west of State Route 166 (PM 5.6), 0.25 mile west of Santa Maria (2003).

4. Drainage Canal just west of State Route 166 (PM 6), 0.25 mile west of Hanson Way (2000).

5. West side of Highway 1, 0.6 mile south of Guadalupe (2005). Two adults observed

6. East side of Bonita School Road, 0.6 mile south of the San Luis Obispo-Santa Barbara County line (2003). 14 adults (2003).

7. Two miles northwest of the intersection of Blosser Road and Donovan Road, northwest of Santa Maria (2003)

8. West side of Blosser Road, 0.3 mile north of Donovan Road, northwest edge of Santa Maria (2000).

9. Santa Maria River, approximately 3 miles downstream of the Highway 101 Bridge (2005, 2007).

10. Hobbs Basin, 0.9 mile northwest of Blosser Road and Betteravia Road, southwest of Santa Maria (2003)

11. North side of Betteravia Road, 0.5 mile east of Blackie Road, northwest of the Santa Maria Airport

12. Green Canyon where it intersects with Blackie Road, 0.5 mile north of Mahoney Road, southwest of Santa Maria (1995)

13. Drainage intersecting Black Road, just south of the Black Road/Mahoney Road intersection, southwest of Santa Maria (1995)

14. Abex Ditch. Around the edge of Sunset Ridge Golf Course. North of Santa Maria Airport (2003)

15. A North side of Mahoney Road, 0.4 mile northeast of Black Road, northwest of Santa Maria Airport (2001)

16. One half of a mile north of the Santa Maria River and 1.7 miles east of the mouth of the Santa Maria River, in the Guadalupe Oil Field (1995)

17. Oso Flaco Creek, 3.5 miles north of Guadalupe (2008). Twenty eight adults, 15 juveniles

18. West side of Blosser Road, 0.3 mile north of Donovan Road, northwest edge of Santa Maria (2000)

19. West side and near the north end of North Blosser Road, just south of the Santa Maria River, Santa Maria (2007)

20. Six tenths of a mile southwest of the intersection of Hutton Road and Moss Lane, on Nipomo Mesa just north of the Santa Maria River (2006)

21. One half of a mile north of the Santa Maria River channel and 2.7 miles west of Highway 101, northwest of Santa Maria (1995)

The roadside banks next to the highway are currently bare earth. The closest CNDDB record is located at the agriculture pond, located at PM 3.8 and within the action area, where two adults were observed on September 15, 2004 (CNDDB 2010). The triangular-shaped pond is approximately 6 feet deep in the center and its banks are about 200 feet across. Row crops surround the pond (primarily lettuce and strawberries), which is unsuitable upland habitat for California red-legged frogs, but may be suitable for dispersal. Although suitable uplands do not occur in the surrounding area, the agriculture pond represents potential aquatic habitat. Patches of bulrush (family Cyperaceae) along the lower banks are potential oviposition sites for California red-legged frogs. Several mature koi fish (*Cyprinus carpio*) were observed in the agriculture pond in July 2008. The presence of predatory fish may impair breeding success of California red-legged frogs at this site; however, adult frogs may attempt to breed in the pond, and the pond may serve as aquatic habitat for individuals traveling though the area.

No California red-legged frogs were observed in the action area during general wildlife surveys conducted by Caltrans in 2008 (Caltrans 2010). The agriculture ditches in the action area have limited water and do not normally contain deep, ponded water (Robertson pers. comm. 2010); however, other potential aquatic habitats within 1-mile of the project area consist of man-made ponds and agriculture ditches (Caltrans 2010). Because 21 California red-legged frog locations are known within 5 miles suggests that California red-legged frogs could occur in other local aquatic sites that have not been surveyed. They may occur anywhere in the action area where there is freshwater.

The Santa Maria River relocation site which is located on the south bank of the Santa Maria River at Highway 1 has pooled water during much of the year. Willow-riparian habitat lines the

north and south banks. Uplands are agricultural fields to the north and willow riparian, woodlands, and coastal scrub to the south and west. The Santa Maria River provides habitat for dispersal, offering barrier free upland and riparian habitat within three miles of the dune swale wetlands in the Guadalupe Oil Field and Oso Flaco Creek, where multiple California red-legged frogs have been discovered.

The agriculture drainage ditches are directly adjacent to the State Route 166 and active agriculture fields. Factors currently affecting California red-legged frogs in the action area likely include noise, dust, road runoff, trash, lighting, and human activity due its proximity to the State Route 166 road shoulder. In addition, vehicle and human disturbance, sedimentation, and pollution from pesticides and fertilizer likely impact the quality of the habitat within the action area.

EFFECTS OF THE ACTION

The programmatic biological opinion for the California red-legged frog (Service 2003) generally describes how the subspecies could be affected by actions such as the improvement of the safety and operation of highways. For this reason, use of the programmatic biological opinion is appropriate and we will not repeat that analysis herein. The following paragraphs describe affects to the California red-legged frog a result of the proposed project that are in addition to those described in the programmatic biological opinion (Service 2003).

The potential exists for California red-legged frogs to occur at the project site, or move through the area during construction where they are likely to be adversely affected by reconfiguring the road side ditches. Juvenile and adult California red-legged frogs may be killed or harmed when drainage ditches are filled, when they are captured and relocated to the Santa Maria River, when water within drainage ditches is diverted to facilitate construction work, or if California re-legged frogs attempt to return to the project site after being relocated to the Santa Maria River. Equipment may crush individual California red-legged frogs if they disperse through the action area during construction. Individual California red-legged frogs attempting to return to the project site following relocation efforts may be exposed to increased predation, exhaustion, starvation, desiccation, or barriers to dispersal. In addition, California red-legged frogs have been documented to travel as far as 2.2 miles from non-breeding to breeding habitats (Bulger et al. 2003). Because a portion of the proposed project is greater than 2.2 miles from the Santa Maria River, some relocated frogs may be unable to make the journey back to the project site, if attempted. However, adverse effects to suitable habitat are expected to be temporary in nature, and permanent impacts are not likely to occur. The project is not likely to permanently affect dispersal, or block or degrade links between aquatic sites. After reviewing our records and information from the CNDDB, we believe the number of individual California red-legged frog encountered during the proposed project is likely to be low due to the poor quality of habitat provided by the agriculture ditches. Additionally, Caltrans has proposed to implement the protective measures contained in the programmatic biological opinion (Service 2003).

All proposed Waters of the U.S., which include the agriculture ditches, would be replaced in-kind within the project limits. An ESA would be established to avoid the agriculture pond at PM 3.8, and no permanent loss of aquatic habitat is expected to occur; however, work near the pond may cause the indirect effects of construction, including human activity and noise to adversely affect California red-legged frogs. While these indirect effects are likely to occur, the observation of California red-legged frogs in the pond indicates that the species has already habituated to disturbance in and around the pond. The pond located directly adjacent to State Route 166, is utilized by water trucks, and heavily trafficked agriculture roads occur along all sides of the pond (Robertson pers. comm. 2010). The proposed project is not likely to exacerbate the disturbance of the area to such an extent that California red-legged frogs would discontinue utilizing the site.

Although the agriculture pond is the closest known potential relocation site for California red-legged frogs to the proposed project site, it currently contains non-native predators, particularly koi fish. Introduced fish species can threaten the diversity or abundance of native amphibians through competition for resources or by directly preying upon eggs, tadpoles, and adults. Predation by nonnative fish can contribute to declines of red-legged frogs in freshwater systems (Kiesecker and Blaustein 1998). Therefore, the agriculture pond would be unsuitable for the relocation of California red-legged frogs found within the action area. If adult or juvenile California red-legged frogs are found on the project site, they would be relocated to the nearest suitable habitat, which Caltrans has identified as the Santa Maria River at Highway 1. Because few California red-legged frogs are expected to occur at the project site, we expect that few California red-legged frogs would be relocated to the Santa Maria River.

Chytrid fungus is a water-borne fungus that can be spread through direct contact between aquatic animals and by a spore that can move short distances through the water. The fungus only attacks the parts of a frog's skin that have keratin (thickened skin), such as the mouthparts of tadpoles and the tougher parts of adults' skin, such as the toes. The fungus can decimate amphibian populations, causing fungal dermatitis which usually results in death in one to two weeks, but not before infected animals may have spread the fungal spores to other ponds and streams. Once a pond or waterway has become infected with Chytrid fungus, the fungus stays in the water for an undetermined amount of time. Chytrid fungus could be spread if infected California red-legged frogs are relocated and introduced into areas with healthy California red-legged frogs or vice versa. It is also possible that infected equipment or clothing could introduce Chytrid fungus into areas where it did not previously occur. Caltrans proposes to follow the fieldwork code of practice developed by the Declining Amphibian Populations Task Force, to minimize the potential for Chytrid fungus to be conveyed between work sites.

While the staging and storage locations have not been identified, it is unlikely that the staging and storing of equipment would have an adverse effect to the California red-legged frog. Caltrans has proposed to implement the protective measures contained in the programmatic biological opinion (Service 2003), which includes a measure which states that all refueling, maintenance, and staging of equipment and vehicles would not occur at least 60 feet from

riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat.

Several negative factors currently affecting the species in the action area are likely to be reduced as a result of the proposed project. The roadside banks of the ditches are currently bare earth. Caltrans would plant roadside banks and the banks of the channelized canal with a native grass mix along 4.9 linear miles of the action area to decrease run-off and sedimentation into the ditches. In addition, moving the ditches 30 feet away from regular State Route 166 traffic may reduce the risk of roadside contamination and disturbance. Therefore, the proposed project may result in beneficial effects to California red-legged frog habitat in the action area.

CUMMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. We are not aware of any non-federal actions that are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status of the California red-legged frog, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects; it is the Service's biological opinion that Caltrans' proposed Guadalupe Ditches Project located at two locations on State Route 166, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog. We have reached this conclusion for the following reasons:

1. California red-legged frogs appear to occur in low numbers in the action area; the proposed action is likely to adversely affect only a small number of California red-legged frogs.

2. A relatively small amount of habitat would be temporarily disturbed or lost in comparison with the amount of habitat available to the California red-legged frog throughout its range.

3. Caltrans has proposed numerous measures to reduce the adverse effects of the proposed work on the California red-legged frog (Service 2003).

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is

defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary and FHWA must include them as binding conditions of its authorization to Caltrans, for the exemption in section 7(o)(2) to apply. FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If the FHWA fails to require Caltrans to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to its authorization, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, FHWA must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Incidental take of California red-legged frogs will be difficult to detect because of their small body size and finding a dead or injured specimen is unlikely. Finding carcasses and assigning a cause of death are problematic, especially in the presence of numerous scavengers that are likely to find dead animals soon after they die. California red-legged frogs may be taken only within the defined boundaries of the work area. Given the avoidance and minimization proposed by Caltrans, we anticipate that take of the California red-legged frog will be limited to: harm or harassment due to work activities including noise, vibration, traffic, and temporary disturbance of habitat; injury or death of individuals by construction equipment if undetected in the project area, or spread of pathogens (e.g., chytrid fungus). All California red-legged frogs relocated from the project area are considered taken as a result of their capture. A subset of these captured individuals may be killed or injured as a result of their handling and relocation to other habitats, or if they attempt to return to the project site after they have been relocated to the Santa Maria River.

This biological opinion provides an exemption from the prohibition against the taking of listed species, contained in section 9 of the Act, only for the activities described in the Description of the Proposed Action section of this biological opinion.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of California red-legged frogs:

1. FHWA and Caltrans must ensure that the level of incidental take during project implementation is commensurate with the analysis contained in this biological opinion, and further reduced with the cooperation of a Service-approved biologist.

2. FHWA and Caltrans must avoid transferring disease or pathogens between aquatic habitats during surveys and relocation activities.

The Service's evaluation of the effects of the proposed action includes consideration of the measures to minimize the adverse effects of the proposed action on the California red-legged frog that were developed by FHWA and the Service and are included in the programmatic biological opinion for the California red-legged frog (Service 2003). Any subsequent changes in these measures may constitute a modification of the proposed action and may warrant re-initiation of formal consultation, as specified at 50 CFR 402.16. The above reasonable and prudent measures are intended to supplement the protective measures that were proposed by FHWA and Caltrans as part of the proposed action.

TERMS AND CONDITIONS

To be exempted from the prohibitions of section 9 of the Act, FHWA must ensure that the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The following term and condition implements reasonable and prudent measure 1:

    a. FHWA or Caltrans must request our approval of any additional biologists they wish to conduct activities pursuant to this biological opinion. Such requests must be in writing, and be received by the Ventura Fish and Wildlife Office at least 30 days prior to any such activities being conducted.

    b. If one California red-legged frog (adult, sub-adult, juvenile, or egg mass) is found dead or injured, FHWA or Caltrans must contact our office immediately so we can review the project activities to determine if additional protective measures are needed. Project activities may continue during this review period, provided that all protective measures proposed by the FHWA and Caltrans and the terms and conditions of this biological opinion have been and continue to be implemented.

2. The following term and condition implements reasonable and prudent measure 2:

    To avoid transferring disease or pathogens between aquatic habitats during the course of California red-legged frog surveys, the Service-approved biologist(s) must follow the Declining Amphibian Population Task Force's Code of Practice. A copy of this Code of Practice is enclosed. You may substitute a bleach solution (0.5 to 1.0 cup of bleach to 1.0 gallon of water) for the ethanol solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

REPORTING REQUIREMENTS

FHWA or Caltrans must provide a written report to the Service within 90 days following completion of the proposed project. The report must document the number and size of California red-legged frogs relocated from the action area, the date and time of relocation, and a description of the relocation site. The report must also state the number of California red-legged frogs killed or injured and describe the circumstances of the mortalities or injuries if possible. The report must contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys and sighting records, and any other pertinent information. We encourage you to submit recommendations regarding modification of or additional measures that would improve or maintain protection of the California red-legged frogs while simplifying compliance with the Act.

DISPOSITION OF DEAD OR INJURED SPECIMENS

Upon locating a dead or injured California red-legged frog, initial notification must be made by telephone and writing to the Ventura Fish and Wildlife Office in Ventura, California, (2493 Portola Road, Suite B, Ventura, California 93003, (805) 644-1766) within 3 working days of the finding. The report must include the date, time, location of the carcass, a photograph, cause of death if known, and any other pertinent information.

Care must be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Should any injured California red-legged frogs survive, the Service must be contacted regarding their final disposition. The remains of California red-legged frogs must be placed with the Santa Barbara Natural History Museum (Contact: Paul Collins, Santa Barbara Natural History Museum, Vertebrate Zoology Department, 2559 Puesta Del Sol, Santa Barbara, California 93460, (805) 682-4711, extension 321.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that Caltrans conduct tests for Chytrid fungus from any captured California red-legged frog. Caltrans should coordinate this effort with Dr. Robert Fisher's lab at the U.S. Geological Survey in San Diego, California. This will help the Service understand the extent of chytrid fungus in the Guadalupe area. Dr. Fisher can be reached at (619) 225-6422.

2. We recommend that Caltrans participate in any regional planning efforts for the California red-legged frog to attempt to recognize, at an early stage of planning, where conflicts between conservation of the species and future projects may arise.

3. Caltrans should work with local agencies and governments towards the implementation of recovery actions identified in the California red-legged frog recovery plan.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions that minimize or avoid adverse effects or that benefit listed species and their habitats.

REINITIATION NOTICE

This concludes formal consultation on the Guadalupe Ditches Project in San Luis Obispo County, California. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this biological opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this biological opinion; or 4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this consultation, please contact Colleen Mehlberg of my staff at (805) 644-1766, extension 221.

Sincerely,

/s/: Diane K. Noda

Diane K. Noda
Field Supervisor

Enclosure

cc:
Dominic Hoang, Federal Highway Administration
Joseph Vaughn, Federal Highway Administration
Lisa Schicker, California Department of Transportation
Deb Hillyard, California Department of Fish and Game

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PERSONAL COMMUNICATIONS

Robertson, Morgan. 2010. Associate Environmental Planner (Natural Sciences). California Department of Transportation, San Luis Obispo, California. Telephone conversation with Colleen Mehlberg, U.S. Fish and Wildlife Service, Ventura Field Office, April 1, 2010.

Appendix F Summary of Relocation Assistance Program

California Department of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

The California Department of Transportation (Caltrans) will provide relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of the Department's acquisition of real property for public use. Caltrans will assist residential displacees in obtaining comparable decent, safe and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displaces will be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include supplying information concerning federal and state assisted housing programs, and any other known services being offered by public and private agencies in the area.

Residential Relocation Payments Program

For more information or a brochure on the residential relocation program, please contact Kelso Vidal at (805) 542-4671 or 50 Higuera Street, San Luis Obispo, CA 92401.

The brochure on the residential relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/residential english.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/residential spanish.pdf.

If you own or rent a mobile home that may be moved or acquired by Caltrans a relocation brochure is available in English at http://www.dot.ca.gov/hq/row/pubs/mobile_eng.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/mobile_sp.pdf.

Business and Farm Relocation Assistance Program

For more information or a brochure on the relocation of a business or farm, please contact Kelso Vidal at (805) 542-4671, or the Caltrans office at 50 Higuera Street, San Luis Obispo, CA 92401.

The brochure on the business relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/business_farm.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/business_sp.pdf.

Additional Information

No relocation payment received will be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

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 being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable "decent, safe and sanitary" replacement residence, open to all persons regardless of race, color, religion, sex or national origin, is available or has been made available to them by the state.

Any person, business, farm, or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or Caltrans' Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal counsel at his/her expense. Information about the appeal procedure is available from Caltrans' Relocation Advisors.

The information above is not intended to be a complete statement of all of Caltrans' laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of Caltrans' relocation programs.

Important Notice

To avoid loss of possible benefits, no individual, family, business, farm, or non-profit 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 5
50 Higuera Street
San Luis Obispo, CA 93401

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Appendix G Comments and Responses

This appendix will contain the comments received during the public circulation and comment period that will occur from November 23, 2010 to December 24, 2010. A Caltrans response will follow each comment presented.

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Appendix H List of Technical Studies that are Bound Separately

Air Quality, Noise, and Paleontology Reports

Cultural Resources Review

Farmland Report

Hazardous Waste Report:

- Initial Site Assessment

Hydraulic Memorandum

Initial Paleontology Review Memorandum

Natural Environment Study

- Biological Assessment

Scenic Resource Evaluation and Visual Assessment

Water Quality Assessment Memorandum

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Appendix I Title Sheet, Layouts, Cross sections

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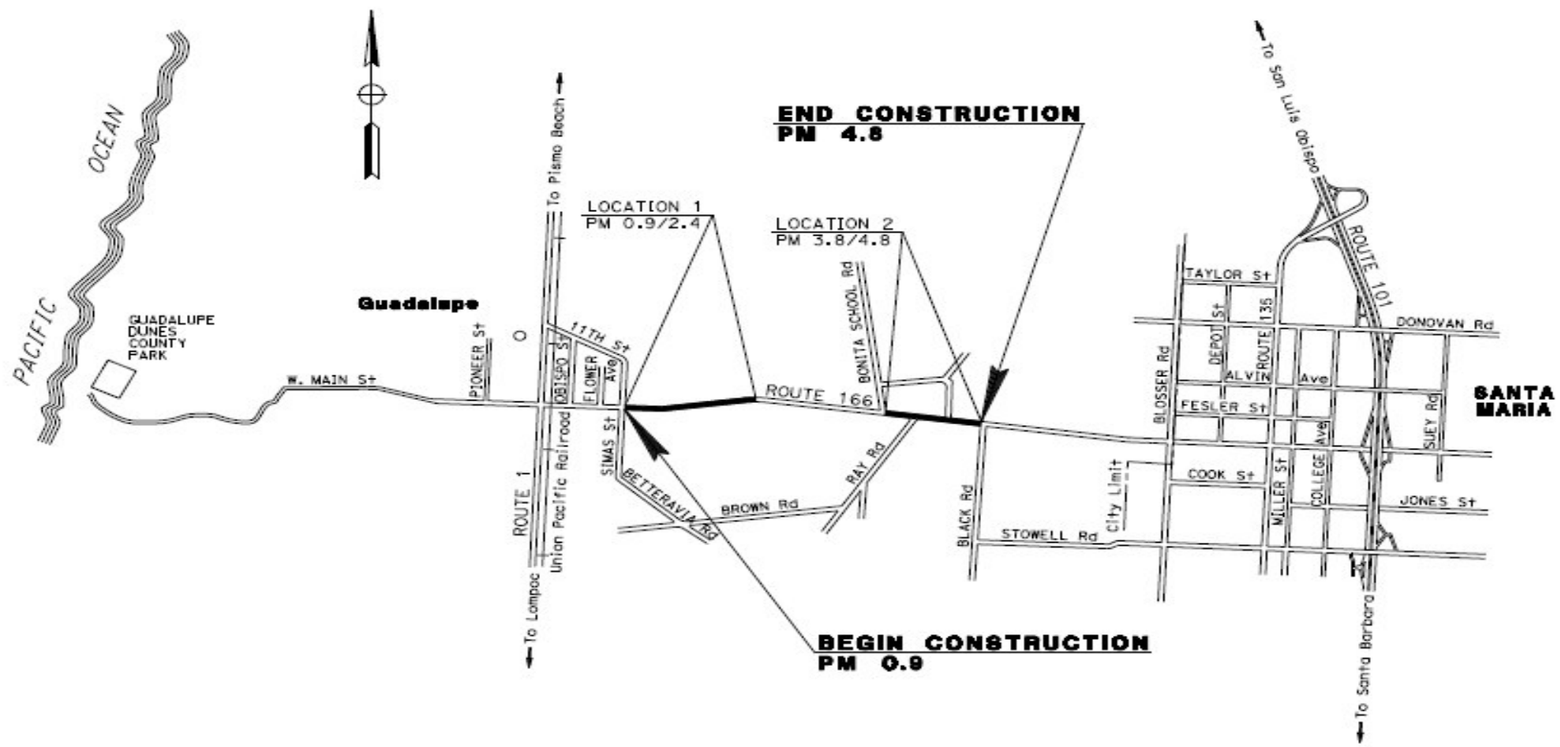
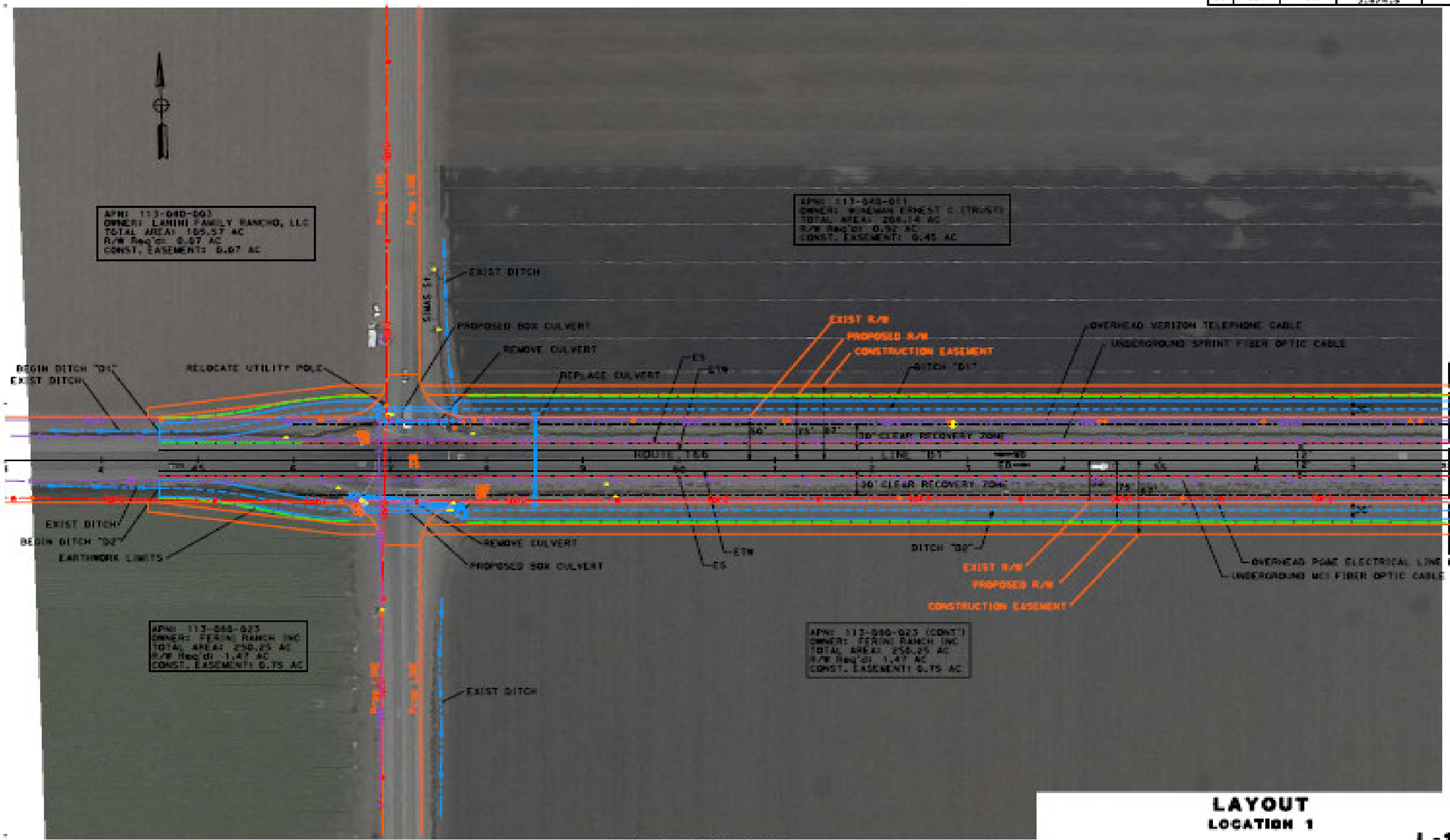

PACIFIC
OCEAN
GUADALUPE DUNES COUNTY PARK
Guadalupe
W. MAIN St
PIONEER St
OBISPO St
11TH St
FLOWER Ave
SIMAS St
ROUTE 1
Union Pacific Railroad
To Lompoc
To Pismo Beach
LOCATION 1
PM 0.9/2.4
LOCATION 2
PM 3.8/4.8
END CONSTRUCTION
PM 4.8
BEGIN CONSTRUCTION
PM 0.9
ROUTE 166
BETTERAVIA Rd
BROWN Rd
RAY Rd
BONITA SCHOOL Rd
BLACK Rd
STOWELL Rd
City Limit
BLOSSER Rd
TAYLOR St
DEPOT St
ALVIN Ave
ROUTE 135
FESLER St
COOK St
MILLER St
COLLEGE Ave
To San Luis Obispo
ROUTE 101
DONOVAN Rd
SUEY Rd
JONES St
SANTA MARIA
To Santa Barbara

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	
05	SB	166	9.3/21.7 13.2/4.3	



NOT FOR CONSTRUCTION

ATTACHMENT C

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

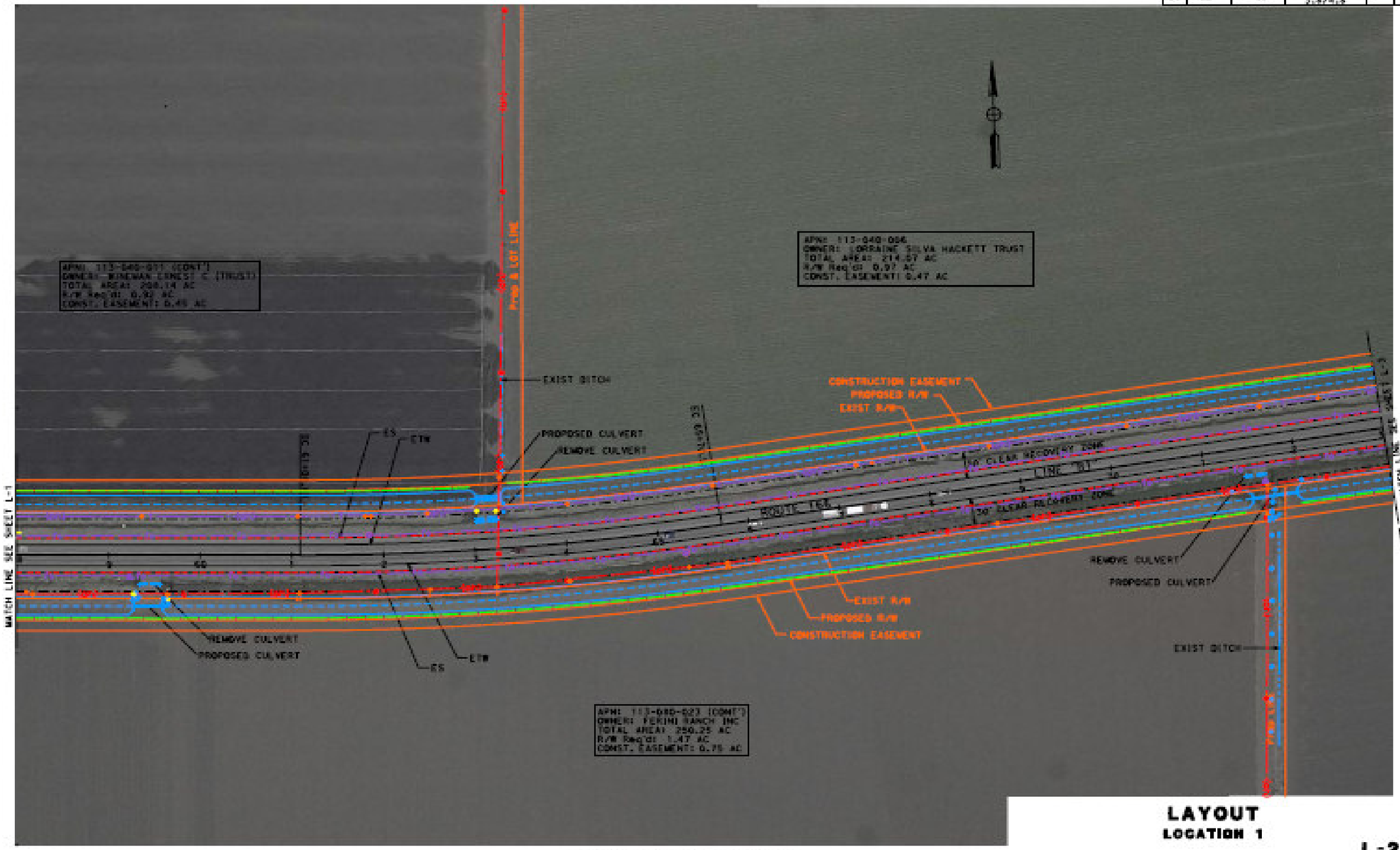
PROJECT MANAGER: DAVID BEARD

PROJECT ENGINEER: MARK S. LEICHTFUSS

EA 0G1500

Attachment C-L01.dgn 11/12/2010 11:24:36 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	9.3/21.1 3.8/4.3



LAYOUT
LOCATION 1

L-2

HOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

PROJECT ENGINEER: MARK S. LEICHTPRIS

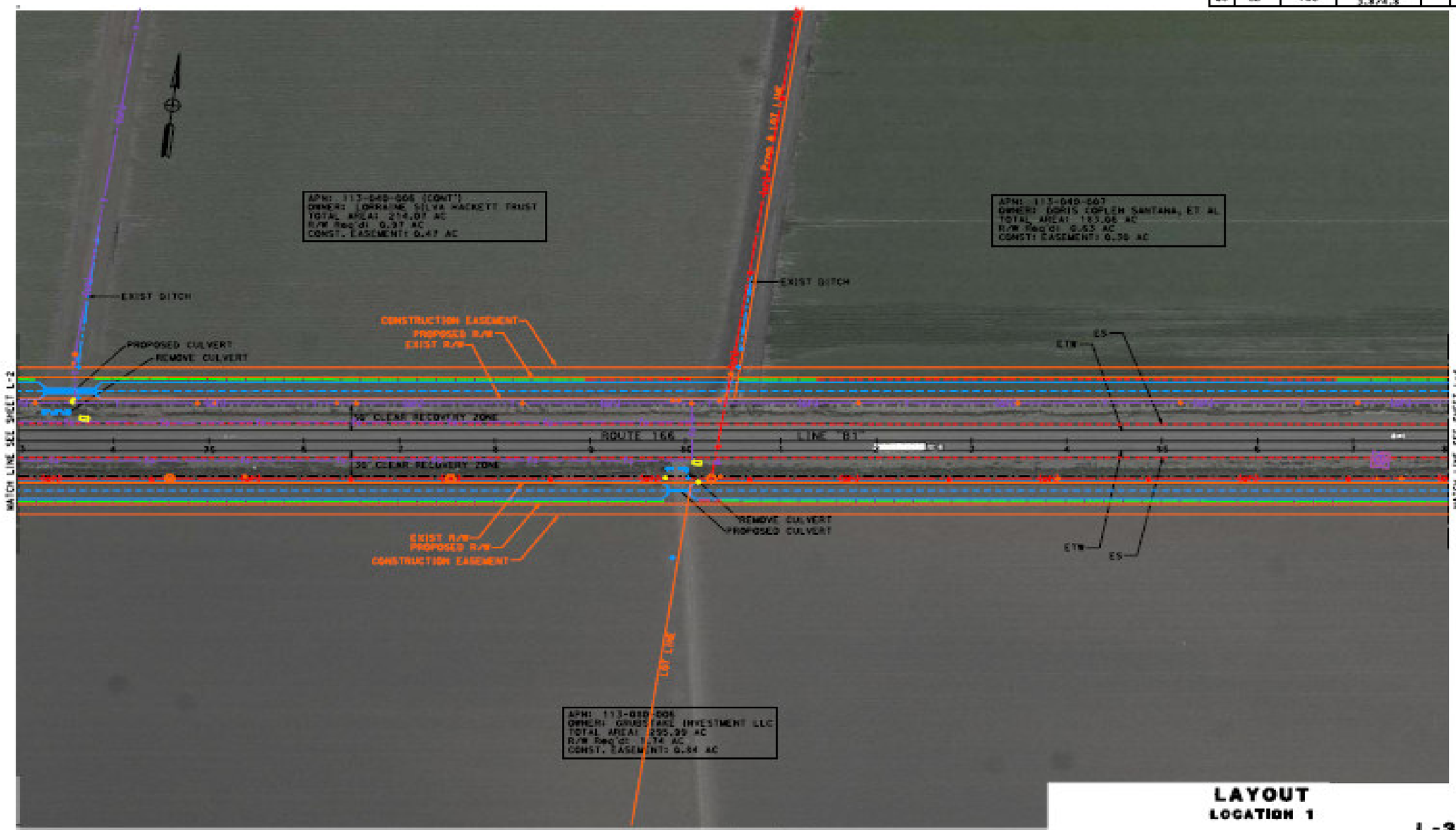
PROJECT MANAGER: DAVID BEARD

REVISIONS 3-25-10

EA 0C1500

Attachment C L02.dgn 11/12/2010 11:27:02 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	0.9/2.1, 3.8/4.5



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

PROJECT MANAGER DAVID BEARD

PROJECT ENGINEER MARK S. LEICHTY-RS

EA 0G1G60

Attachment C L03.dgn 11/12/2010 11:28:22 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	
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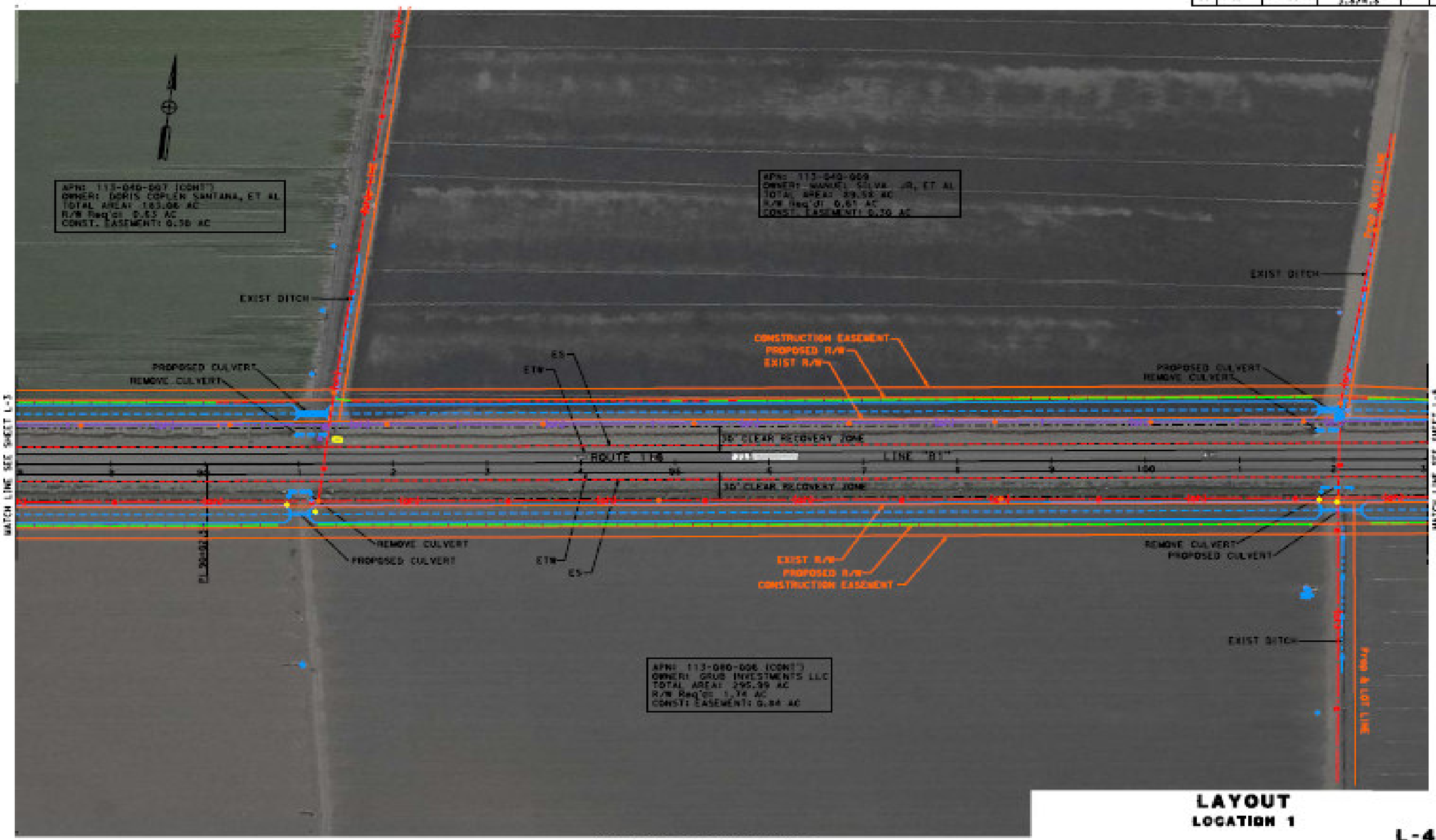


LAYOUT
LOCATION 1

L-4

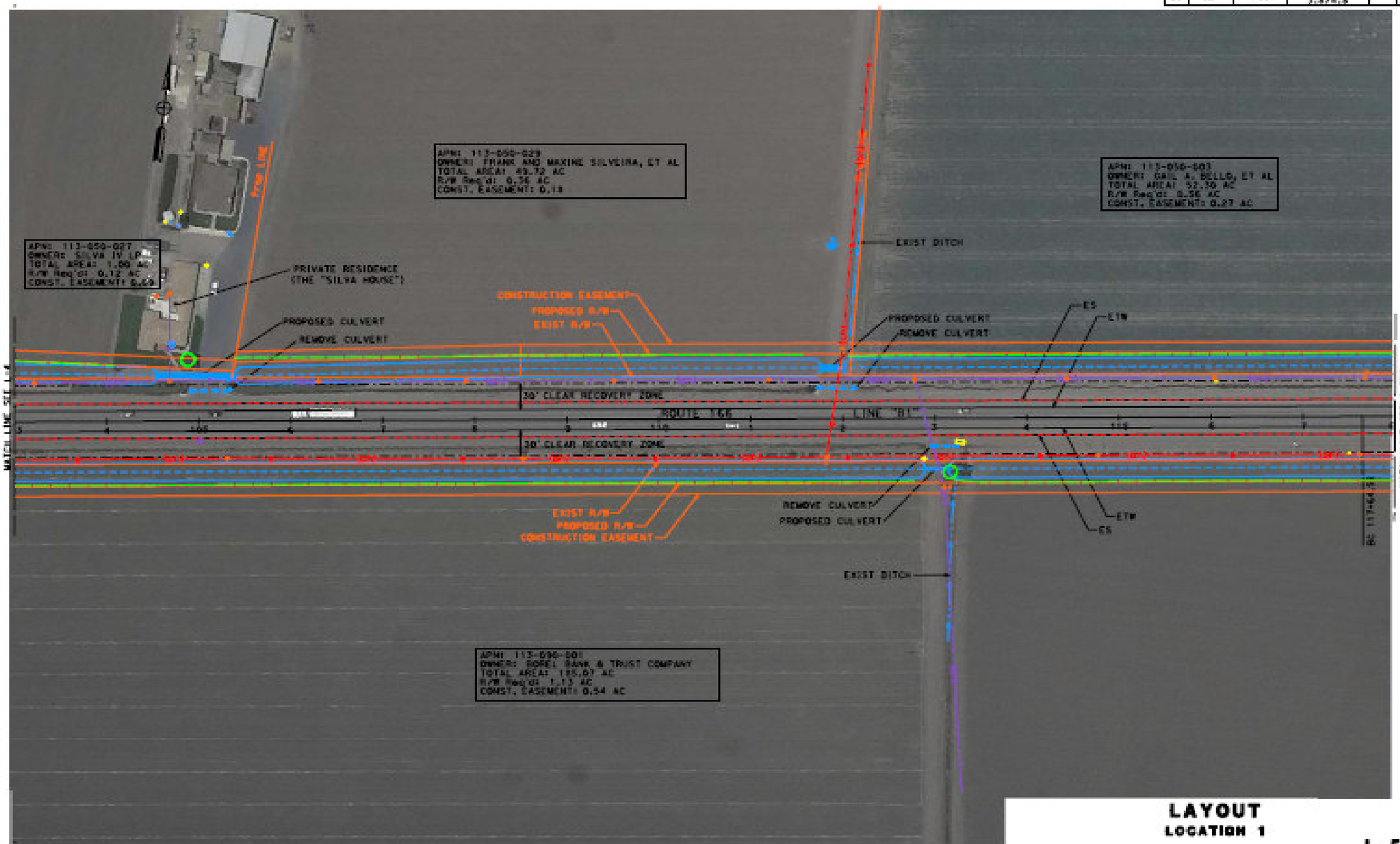
NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
PROJECT MANAGER DAVID BEARD
PROJECT ENGINEER MARK S. LEICHTY/SS

EA 0G1E60

Attachment C L04.dgn 11/12/2010 11:29:18 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	
05	SB	166	0.9/2.1 1.2/2.2	



LAYOUT
LOCATION 1

L-5

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

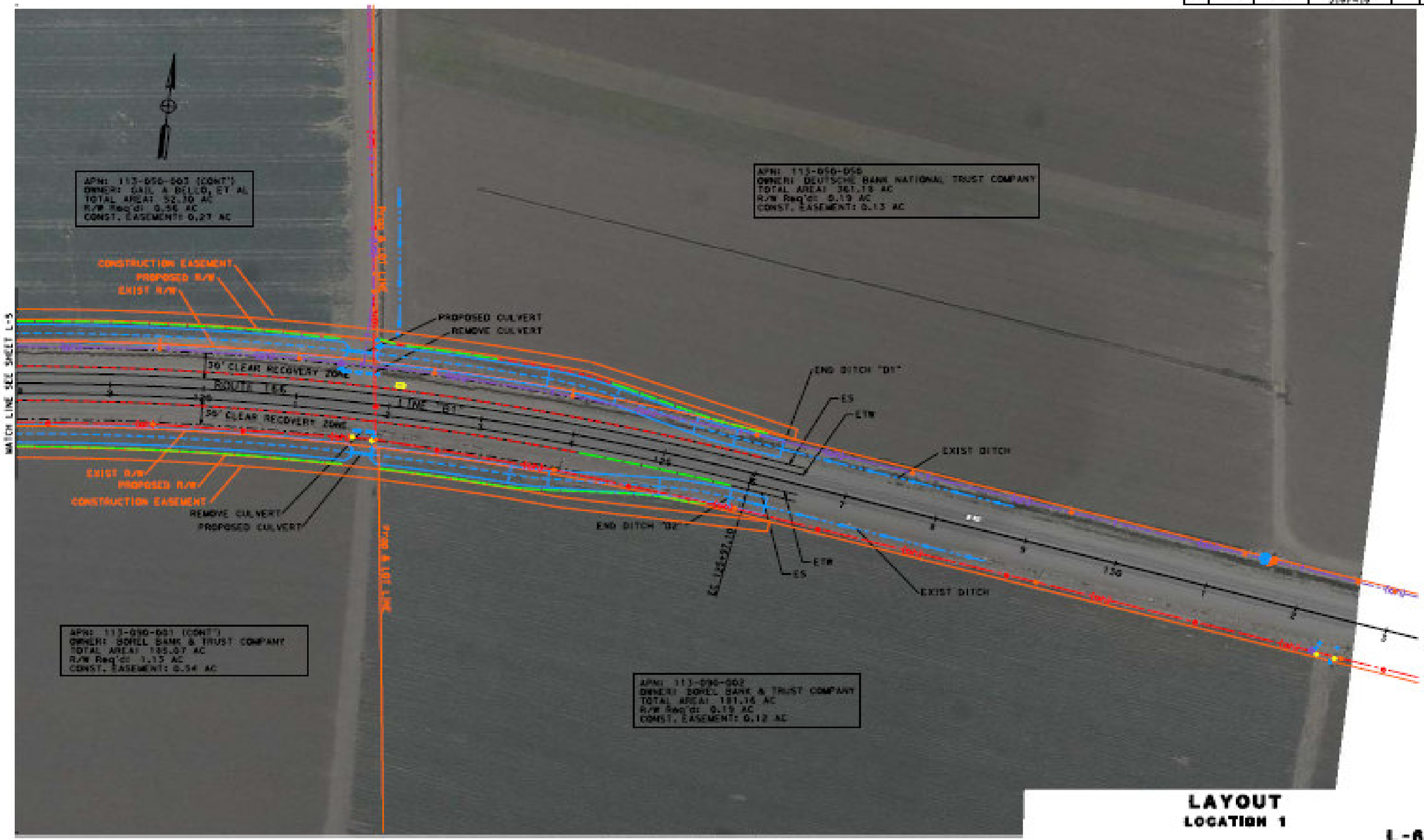
DESIGN

PROJECT MANAGER: DAVID BEARD

PROJECT ENGINEER: MARK S. LEICHTFUSS

EA 0G1G00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	0.9/2.1 1.8/4.3



LAYOUT
LOCATION 1

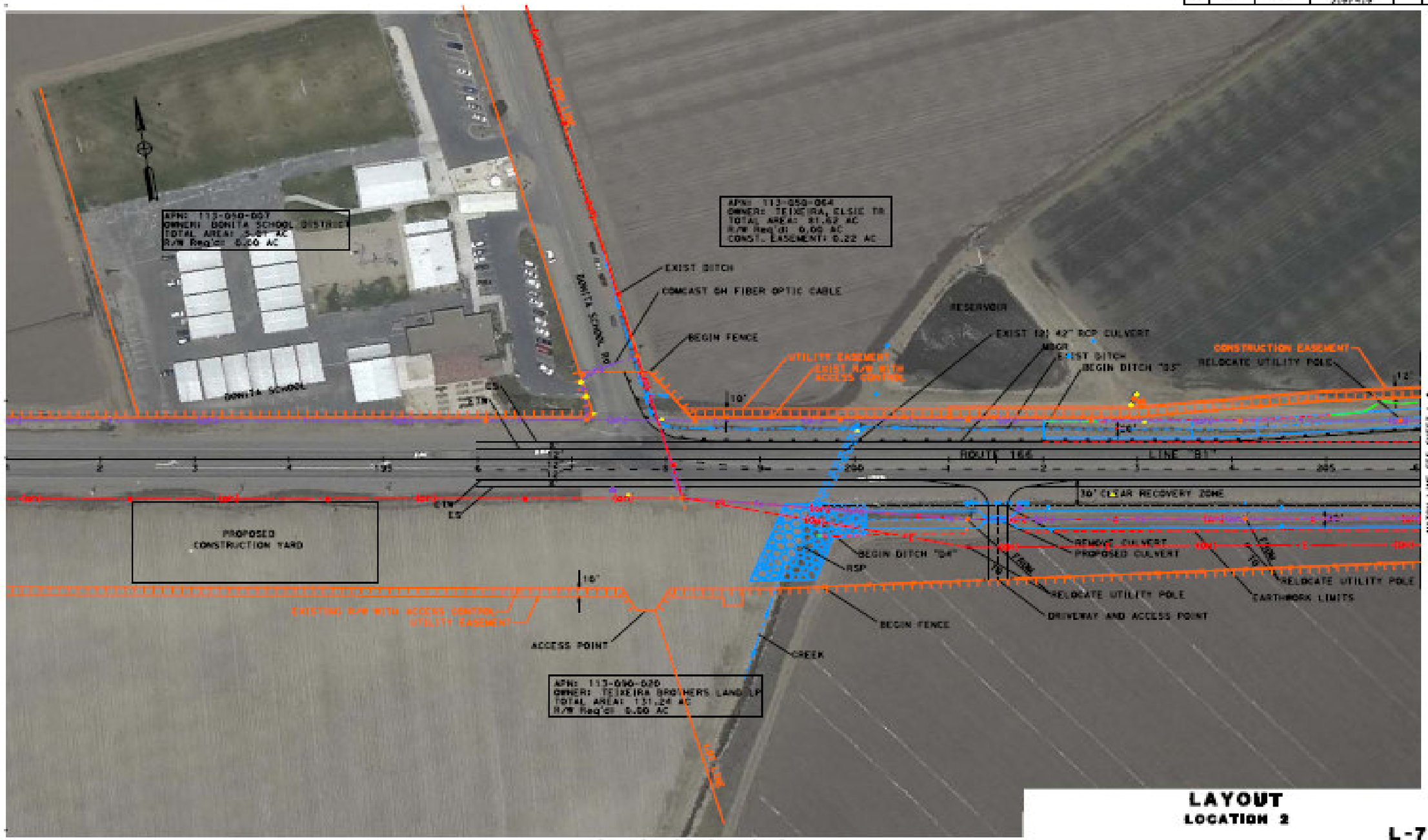
L-6

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
PROJECT MANAGER DAVID DEANO
PROJECT ENGINEER MARK S. LEICHTIZIG

EA 0G1550

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	9.9/21.1 1.8/4.3



LAYOUT
LOCATION 2

L-7

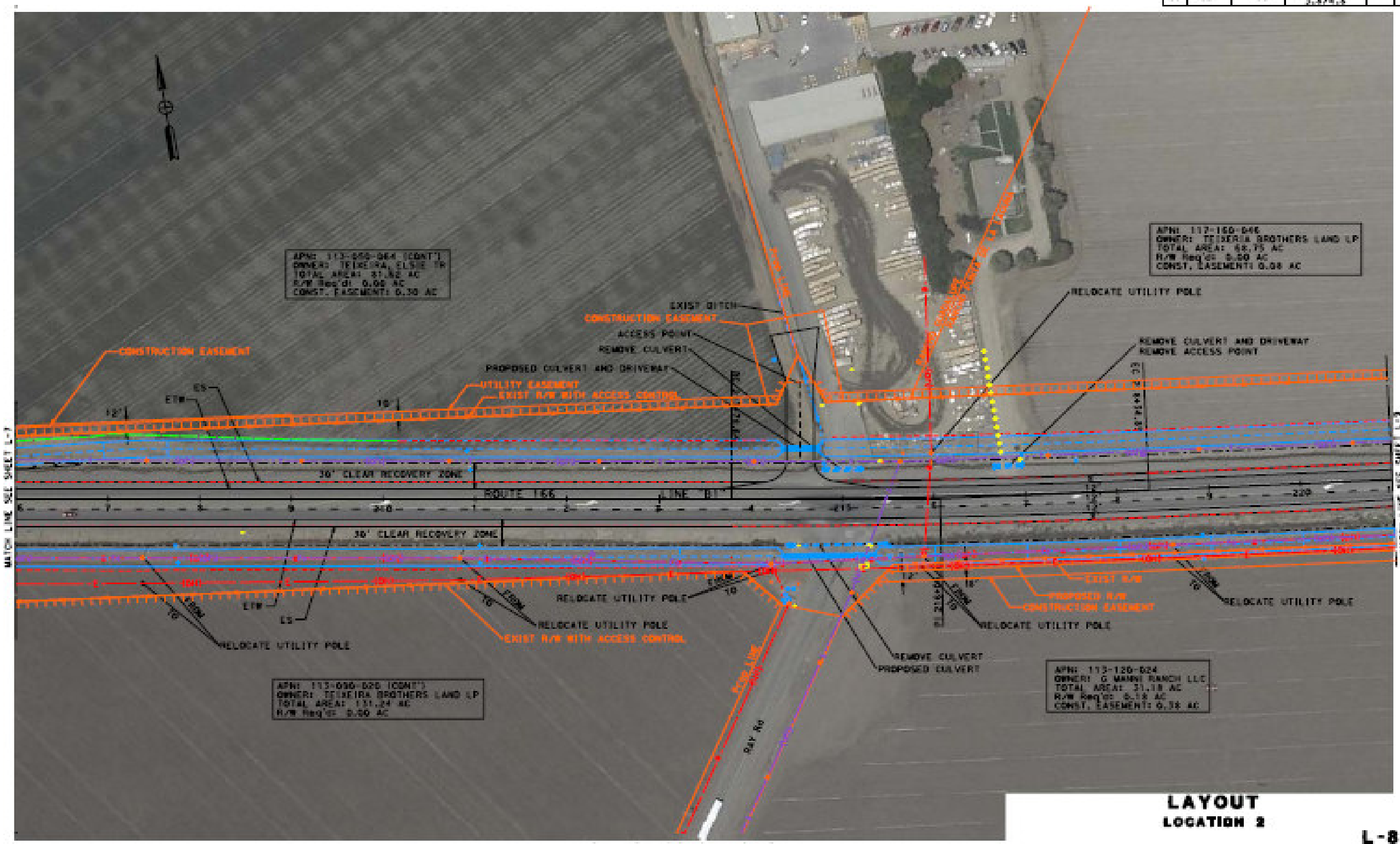
HOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
PROJECT MANAGER: DAVID BEARD
PROJECT ENGINEER: MARK S. LEICHTFRIES

EA 0G1600

Attachment C1.07.dgn 11/13/2010 11:33:33 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	9.9/22.1; 3.8/4.8



LAYOUT
LOCATION 2

L-8

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

PROJECT ENGINEER: MARK S. LEICHTNER

PROJECT MANAGER: DAVID BEARD

EA 0G1600

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	0.9/2.1 3.8/6.3

LAYOUT
LOCATION 2

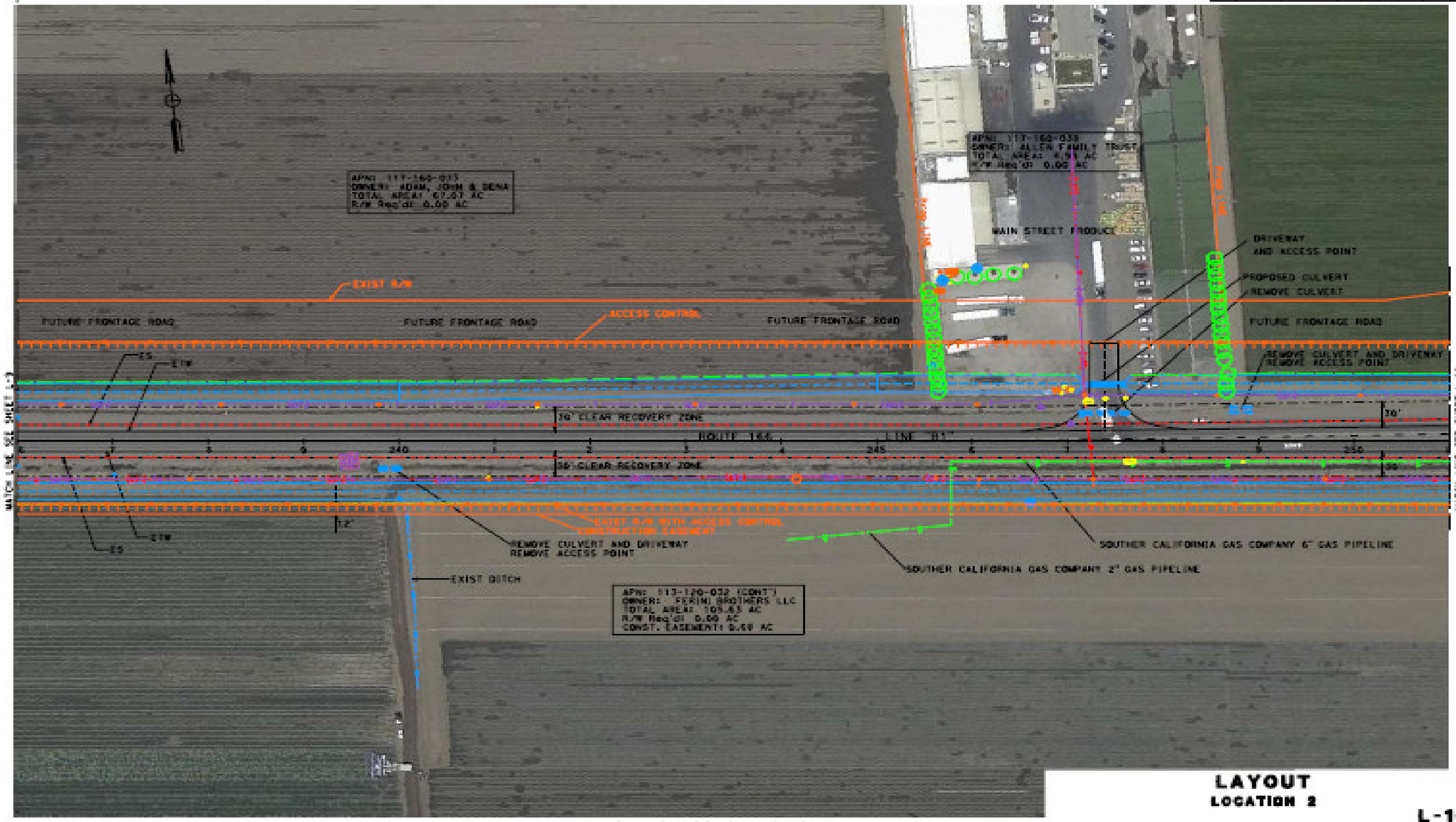
L-9

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
PROJECT MANAGER DAVID BLAND
PROJECT ENGINEER MARK S. LEICHTY-95

EA 0G1600

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
05	SB	166	9.9/22.1 1.3/6.5



LAYOUT
LOCATION 2

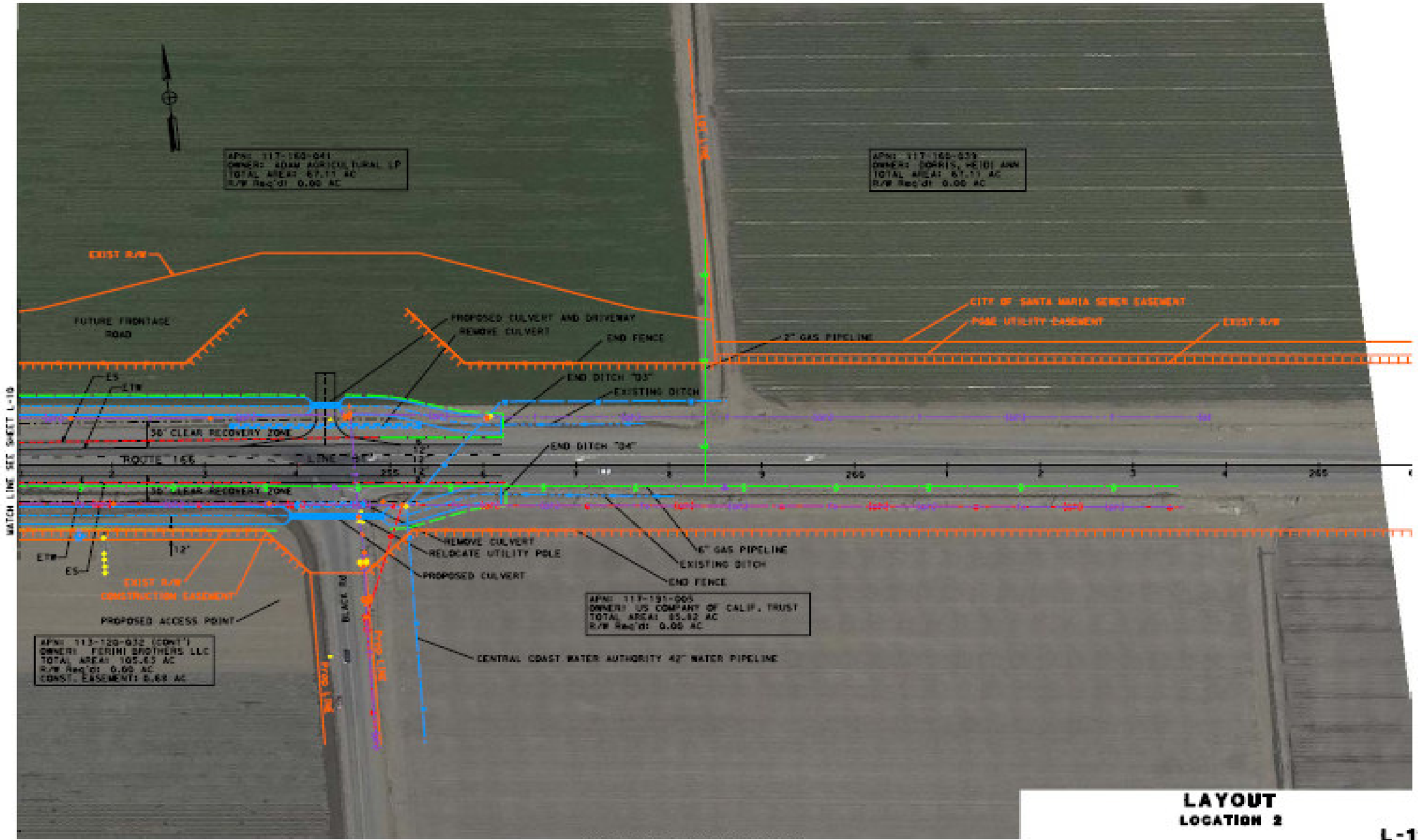
L-10

NOT FOR CONSTRUCTION

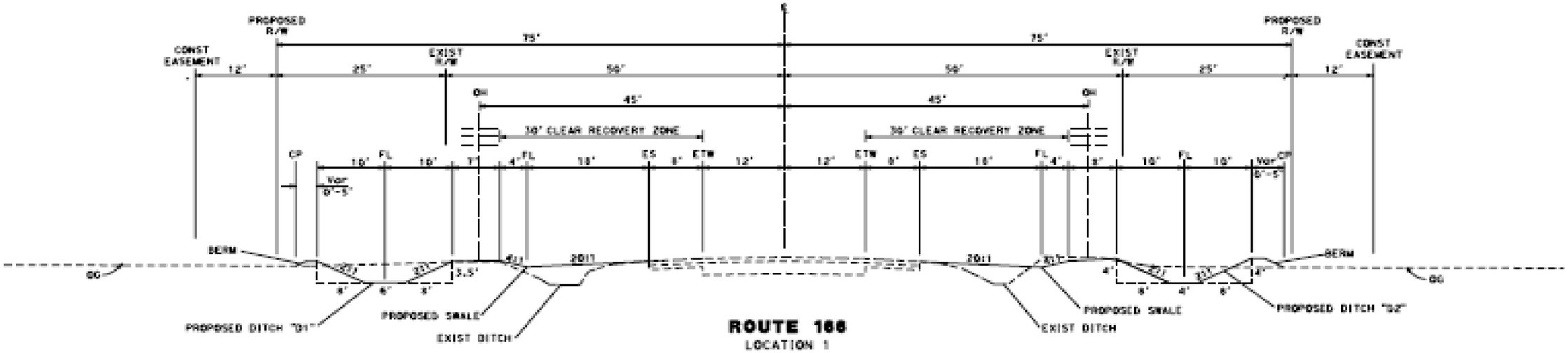
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
PROJECT MANAGER: DAVID BEARD
PROJECT ENGINEER: MARK S. LEICHTFRIED

EA 0C1E60

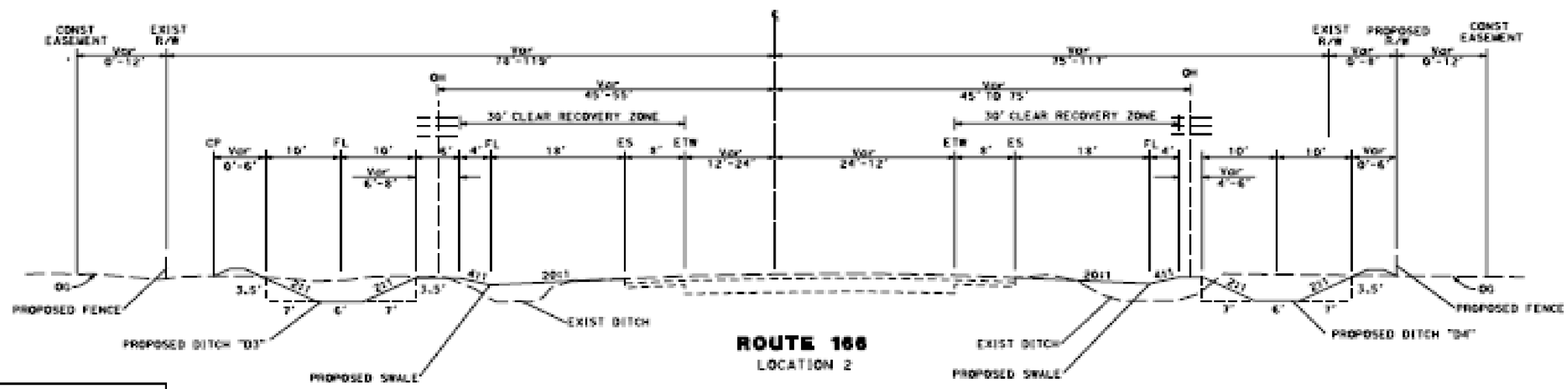
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	
05	SB	166	0.9/2.1, 3.8/4.8	



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	
05	SB	166	0.9/2.1 3.8/4.3	



ROUTE 166
LOCATION 1



ROUTE 166
LOCATION 2

DESIGN DESIGNATIONS
DESIGN SPEED = 55 MPH AADT (2006) = 5,600 TI_{30} = 16.5 T = 7%

TYPICAL CROSS SECTIONS

NO SCALE

X-1

ATTACHMENT D

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
PROJECT MANAGER DAVID BOARD
PROJECT ENGINEER MARK S. LEICHTFUSS

EA 0G1600