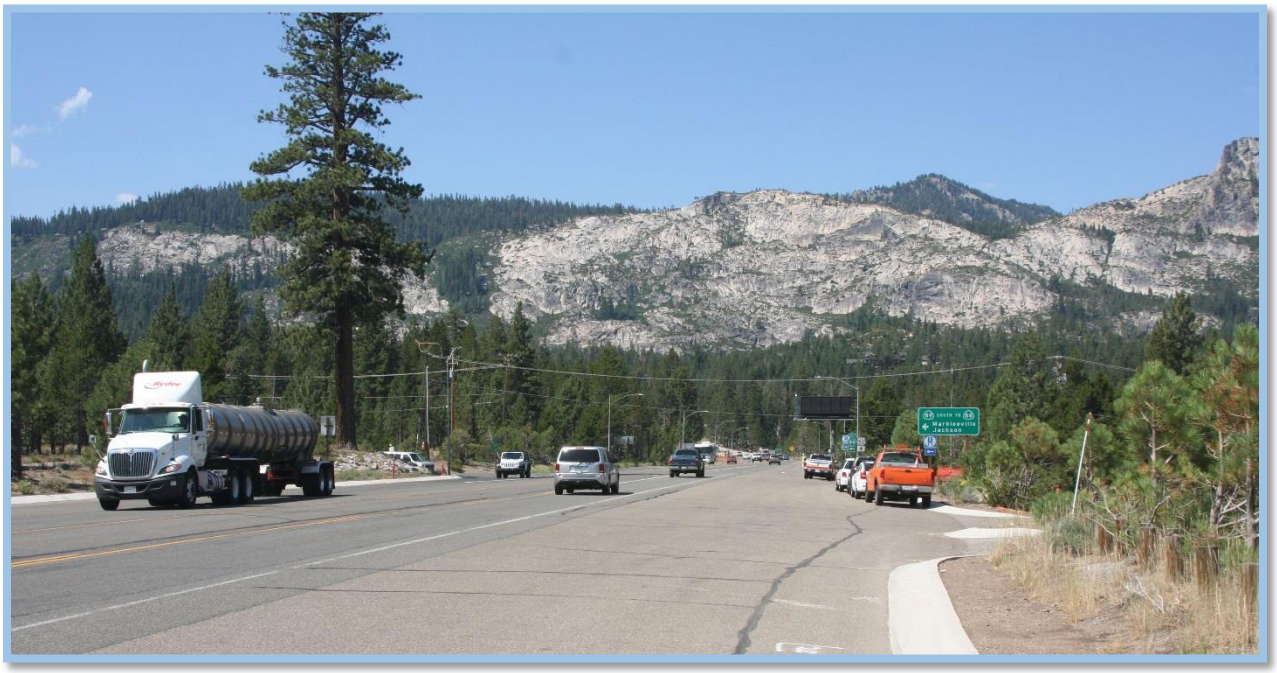
Meyers Intersection Improvements at United States Highway (US) 50 and State Route (SR) 89

EL DORADO COUNTY, CALIFORNIA
DISTRICT 3 – ED – 50/89 (PM 70.62)
4F840/0314000305

Initial Study with Proposed Negative Declaration



Prepared by the
State of California Department of Transportation

October 2016

General Information about This Document

What's in this document:
The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study/Negative Declaration (IS/ND), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in El Dorado County, California. The Department is the lead agency under the California Environmental Quality Act (CEQA) as well. The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document are available for review at:
    1. *ED County Library – South Lake Tahoe Branch*
       1000 Rufus Allen Blvd.
       South Lake Tahoe, CA 96150
    2. *El Dorado County Office*
       924 B Emerald Bay Road
       South Lake Tahoe, CA 96150
- This document may be downloaded at the following website:
  http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm
- Please read the environmental document! We'd like to hear your thoughts and ideas.
- If you have any comments about the proposed project, please send your written comments to the Department by the deadline listed below.
- Send comments via postal mail to:
  Laura Loeffler, Environmental Branch Chief, Attention: Maggie Ritter
  Department of Transportation, Environmental Planning
  703 B Street Marysville, CA 95901
- Send comments via email to: maggie.ritter@dot.ca.gov.

- Be sure to send comments by the deadline: November 5, 2016

What happens next:
After comments are received from the public and reviewing agencies, the Department, as assigned by the Federal Highway Administration (FHWA), 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 obtained, the Department could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made 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 Department of Transportation, Attn: Maggie Ritter, Environmental Planning, 703B Street, Marysville, CA 95901; (530) 741-4535 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

SCH#
03-ED-50/89-PM 70.62
4F840
0314000305

Intersection Improvements at US 50 and SR 89, El Dorado County, in the Town of Meyers (Post Mile 70.6)

INITIAL STUDY with Proposed Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

10/1/16
Date of Approval

Suzanne Melim
Suzanne Melim
Environmental Services Office, South
California Department of Transportation

SCH:

PROPOSED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (the Department) proposes to install a three-leg roundabout at the intersection of US 50 and SR 89 in El Dorado County, at post mile 70.6, within the Town of Meyers, California.

Determination

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

The Department has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on agriculture forest resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, recreation, utilities and service systems, aesthetics, and bicycles and pedestrians.

In addition, the proposed project would have less than significant effects to traffic and transportation during construction of the project with the following minimization measures:

- On US 50 and SR 89, no lane and shoulder closures will be allowed during daytime and peak commute hours on weekdays and weekends.
- Whenever one-way traffic control is maintained, traffic should be stopped for periods not to exceed 10 minutes, after which accumulated traffic shall pass through before another closure is made.
- On two-lane, two-way roadway, a minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic.
- No lane closures, shoulder closures, or other restrictions will be allowed on designated holidays, special days, and the day preceding designated holidays, and when construction operations are not actively in progress.
- Lane closures on the two-lane, two-way roadway will be performed with reversible traffic control using flaggers.
- When implementing one-way (reversible) traffic control, advance flaggers are recommended in areas where there is inadequate approaching sight distance.
- When closures occur within 200 feet of an intersection, flaggers shall be deployed to control all legs of the intersection.

- Pedestrian and bicycle access must be maintained during construction. Additional signs will be required to detour pedestrians and bicycle traffic
- Access to driveways and cross streets should be allowed during construction activities.
- The maximum length of any lane closure shall be limited to 0.1 mile
- Portable changeable message signs (PCMS) will be required in direction of traffic during construction for each lane or shoulder closure.
- Work at these locations may require the assistance of Construction Zone Enhanced Enforcement Program (COZEEP), but a full time COZEEP presence is not anticipated.
- Coordination with projects within, or nearby the project limits will be required to avoid conflicts.
- Lane closure charts, specifications and final TMP estimate will be developed prior to Plans and Estimate (P&E).

_____ _____

Suzanne Melim
Environmental Services Office, South
California Department of Transportation (Caltrans)

Date

Leave unsigned for proposed ND

Project Title

Meyers Intersection Improvements on US 50 and SR 89

Lead Agency Name and Address

California Department of Transportation (Caltrans)
District 03
703 B Street
Marysville, CA 95901

Project Location

This project is located in El Dorado County at the intersection of US 50 and SR 89 at approximately post mile 70.62, within the unincorporated town of Meyers; the town of Meyers is located west of and adjacent to the City of South Lake Tahoe. The project is located within the Lake Tahoe Basin.

Project Sponsor's Name and Address

California Department of Transportation (Caltrans)
District 03
703 B Street
Marysville, CA 95901

Purpose and Need

The purpose of this project is to improve safety at the US 50 and SR 89 intersection in El Dorado County, by reducing the number and/or severity of collisions and influence traffic calming with the implementation of a roundabout. The project is needed because the intersection is experiencing a number of collisions related to the intersection type. Data tables are shown below followed by an explanation.

ED 50 5-Year Accident Data (From July 1, 2008 to June 30, 2013)

No. of Accidents/Significance				Accident Rates					
				Actual			Average		
TOTAL	FAT	INJ	F+I	FAT	F+I	TOTAL	FAT	F+I	TOTAL
16	0	7	7	0.0	3.45	7.88	0.014	0.90	2.39

ED 89S 5-Year Accident Data (From July 1, 2008 to June 30, 2013)

No. of Accidents/Significance				Accident Rates					
				Actual			Average		
TOTAL	FAT	INJ	F+I	FAT	F+I	TOTAL	FAT	F+I	TOTAL
4	0	1	1	0.0	0.20	0.33	0.003	0.07	0.16

A collision analysis was performed for this project location. The type of collisions that occurred in this area were mainly rear end collisions, a few broadside collisions, and one head on collision. The analysis showed that this intersection has experienced a total of 20 collisions (8 with injuries) from July 1, 2008 to June 30, 2013, which is a higher rate of collisions than average for similar facilities within a 5-year period. Of the 20 collisions, 14 were rear end collisions, and four of them were broadside collisions. Seven out of the fourteen rear end collisions occurred with vehicles on SR 89, which is under stop control, trying to make a right turn movement on to US 50. Two of the four broadside collisions occurred with vehicles on SR 89 making a left turn on to US 50, which is uncontrolled.

Project Description

The project proposes to convert the existing T-intersection into a three-leg roundabout. Currently, the existing intersection of US 50 and SR 89 is a T-intersection with SR 89 under stop control and US 50 as uncontrolled. The proposed roundabout will have single lane approaches on all three legs. The layout and location of the proposed roundabout will utilize most of the existing pavement. Widening of the roadway will be required for parts of the circulatory roadway and the approach leg for SR 89. The current intersection has single through lanes, with separate left and right turn lanes.

Some of the major elements of the three-legged roundabout include:

- An Inscribed Circle Diameter of 135 feet
- A single lane for all three legs, plus a bypass lane for the westbound US 50 traffic
- The three legs will have Chicanes; the purpose of a Chicane is to narrow and curve the roadway slightly to slow traffic speeds
- A 15 foot wide truck apron and a 19 foot wide travel lane.
- The barrier between the roundabout and the bypass lane will be a maximum of 15 feet; just north of the bypass lane the shoulder will be approximately eight feet
- A Pedestrian/bicycle path connecting to the existing Class 1 shared-use trail (Pat Lowe Memorial Bike Trail) and a proposed Class 1 shared-use trail in the east bound direction of US 50

Aesthetic elements will be included in the project design. The areas within the splitter islands and separation between the circulatory roadway and the bypass lane will be hardscape with a colored and stamped asphalt concrete or a similar material. The truck apron will consist of colored and stamped concrete or similar material which will be

different from, but complementary to, the textured pavement in the splitter islands and bypass lane. The central island will be contour graded with an ultimate height of approximately six feet above the circularity roadway. The island will be landscaped with a mixture of native trees, shrubs, and grasses found within the immediate project vicinity. Additionally, inert materials and groundcovers within the roundabout will include a mixture of boulders, river cobbles, and wood mulch. The project will not impact the existing large pine tree southwest of the existing intersection and is to remain.

Additional overhead lighting will be added to the existing lighting at the intersection. Also, the existing changeable message sign and accompanying equipment in the westbound direction of US 50 will be relocated due to the construction of the proposed roundabout bypass lane. In addition, the existing wood fencing will be relocated and reconstructed to provide room for the roundabout.

Alternatives Considered but Rejected

Alternative 1: No build. This alternative does not meet the need and purpose of the project.

Alternative 2: All-Way stop control. This alternative would require changing the current lane configuration to four lanes on US 50; three lanes on SR 89, and separated right turn lanes under yield control. This alternative would create the highest delay for US 50 approaches. Also some types of crashes, like rear end crashes and broadsides, may increase due to stopping on US 50 and the confusion caused by dual through lanes. Because of the issues stated, this alternative was rejected.

Alternative 3: Signalized Intersection. This alternative would require four lanes plus a turn lane on US 50 and three lanes on SR 89. In addition, this alternative would create significant delays during peak times. Speeds in this intersection have the potential to increase on US 50 due to drivers trying to cross the intersection before the light turns red. Because of the possibility of red-light running, severe collision and rear end collision may increase. During winter operations, the signal may conflict with chain control operations and the reduction in chain-on area. For these reasons, this alternative was rejected.

Surrounding Land Use and Setting

This project is located within the unincorporated town of Meyers, in El Dorado County. The project area is at a T-intersection where SR 89 meets US 50. Land Use in the surrounding area consists of the following: mixed use on the northeast and southeast corner, recreation on the southwest corner and conservation on the northwest corner.

The US 50 and SR 89 intersection is located approximately four miles east of Echo Summit leading in the Tahoe Basin and is near the entrance of the town of Meyers. A few miles further east on US 50 is the City of South Lake Tahoe. The Lake Tahoe Basin and the surrounding area is a popular tourist destination and is known for its forests, parks, lakes, golf courses, ski resorts, casinos, recreational activities, and vacation cabins.

Permits and Approvals Needed

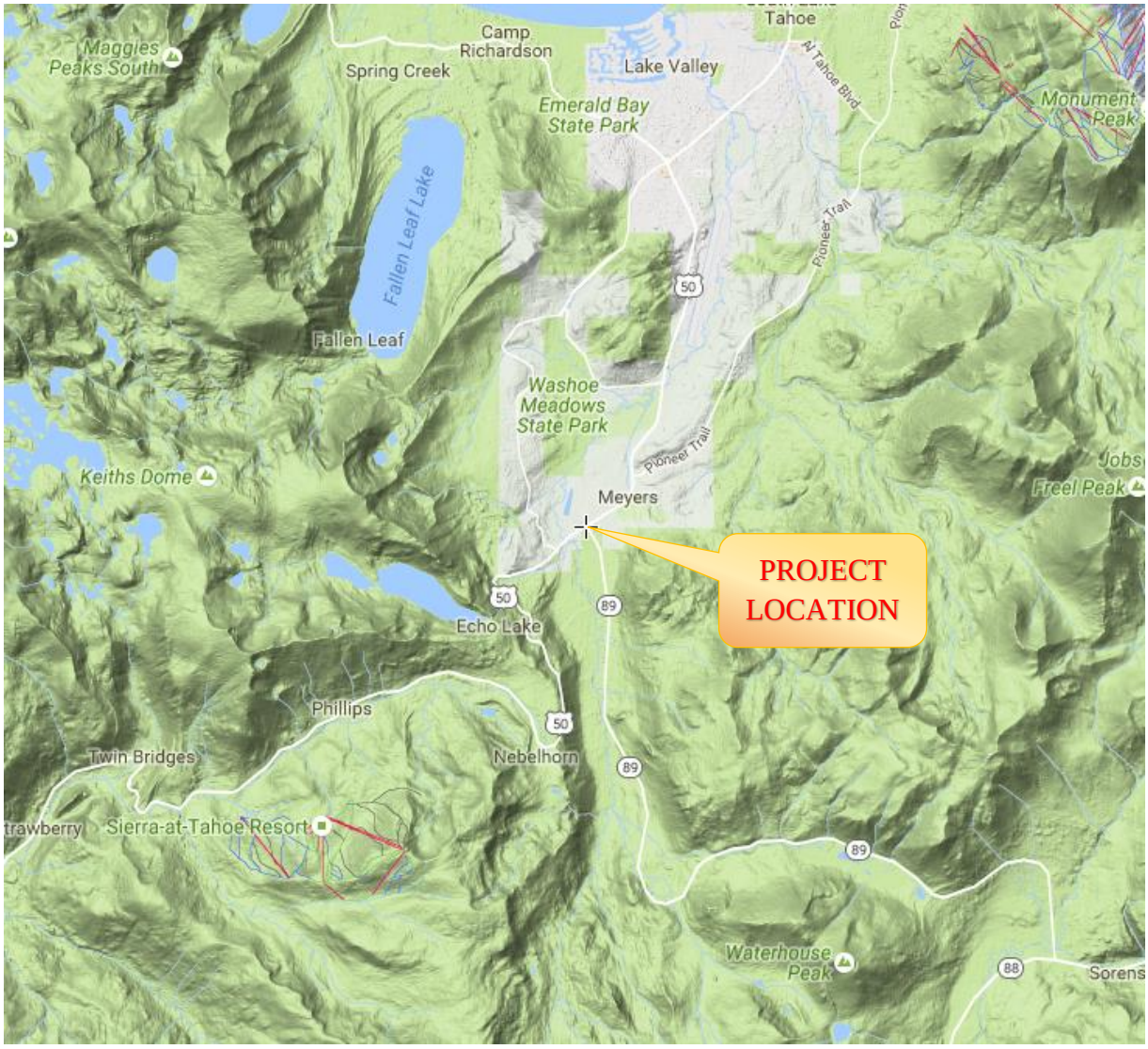
A Tahoe Regional Planning Agency (TRPA) Permit will be needed for this project as the project is located within the Tahoe Basin and TRPA jurisdiction. The Lahontan Regional Water Quality Control Board (LRWQCB) will have water quality requirements as well.

No other permits or approvals are required for this project.

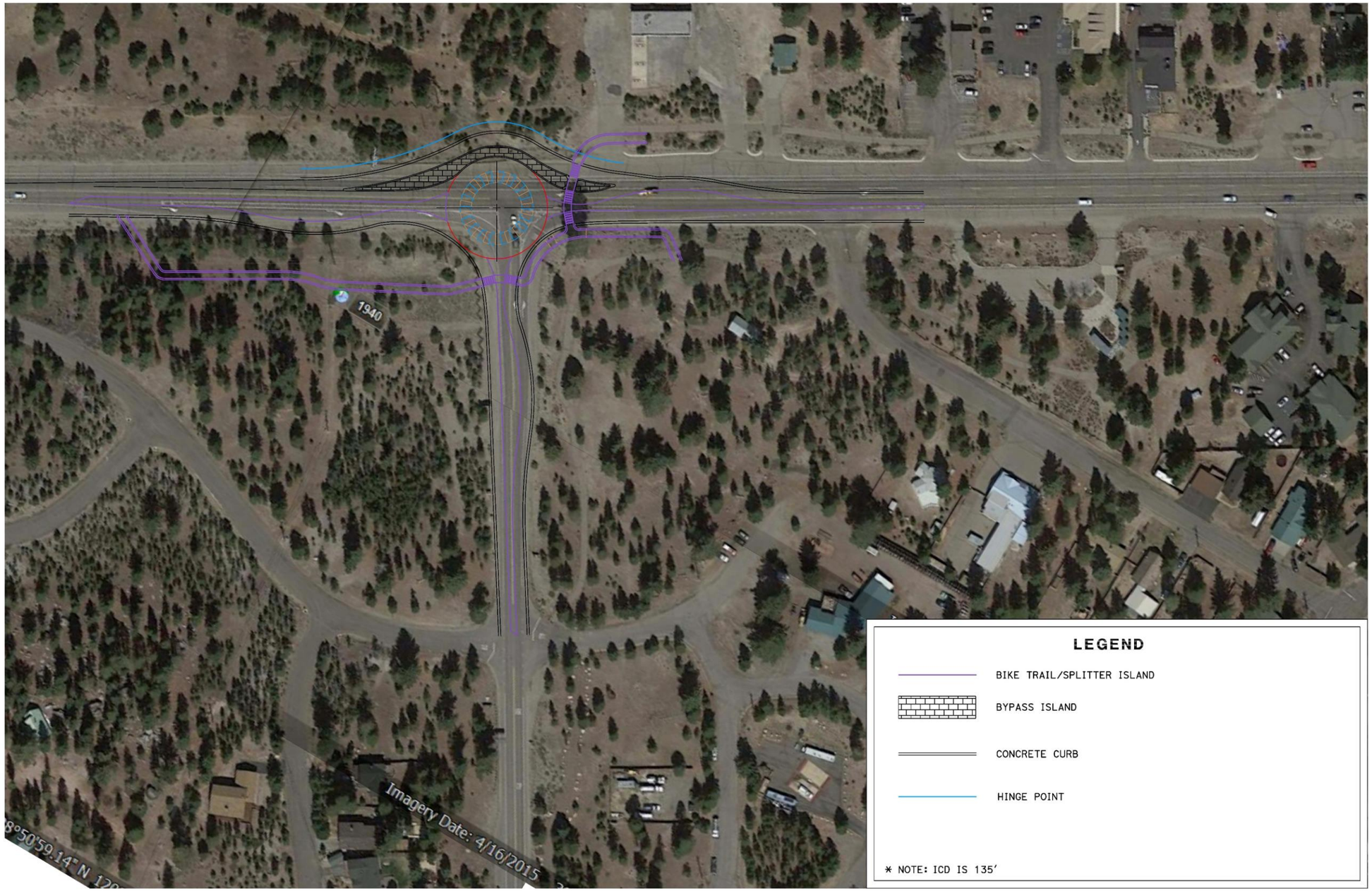
Community Coordination

Caltrans is in coordination with the local community and community officials. A representative from Tahoe Regional Planning Association (TRPA) and a representative from El Dorado County are and have been part of the Caltrans Project Development Team (PDT) for the Meyers Roundabout Project since early 2016 during development of the Project Approval and Environmental Document (PAED) process. In addition, there were approximately two community workshops which took place in 2016 that addressed the US 50 and SR 89 Intersection Improvements in Meyers. First, an event took place on April 22, 2016 at an El Dorado County information-sharing event. At that meeting, Caltrans had a dedicated tent set up at three locations; the Real Estate Office adjacent to US 50, the charter school, and Lira's Market. Comment cards and fact sheets were distributed and available for public comment; Caltrans received two comments cards, one was opposed to the project but provided suggestions and second was in agreement to the roundabout proposal. Both comments were responded to. Second, a Meyers Corridor Plan workshop, sponsored by El Dorado County, took place on July 21, 2016 at the Conservation Corps Multi-Purpose Room in Meyers. A Caltrans Traffic Operations Engineer, who is a part of the Caltrans PDT for the Meyers Roundabout, was there to answer questions and concerns regarding the project. Project specific fact sheets for the public were available for distribution as well as comments cards for public input. There were approximately 30 people in attendance at this workshop.

Project Vicinity Map



Project Location Map



CEQA Environmental Checklist

03-ED-50	70.62	03-4F840
Dist.-Co.-Rte.	P.M/P.M.	E.A.

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
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?	☐	☐	☐	☒

"No Impact" findings are based on incorporating aesthetic elements into the project scope and keeping existing elements, which are deemed scenic resources, such as the large pine tree on the southeast corner of the intersection. Aesthetic elements incorporated into the project scope include:

- **Central Island contour grading and native plant installation.**
- **Installation of stamped and/or colored concrete within splitter island and bypass land separation areas.**
- **Any fencing removed (such as the zigzag split rail) will be replaced or rebuilt like in kind.**
- **The central island and areas disturbed by construction activities will be graded and seeded with plant species native to the immediate area to blend the newly constructed roundabout into the surrounding landscape roadside.**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
"No impact" findings are based on project scope and location; only a small amount of trees would be removed.				
	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

"No impact" findings are based on project scope and the March 2016 Air Quality and Noise Study. The following Caltrans Standard Specifications will be incorporated into the project during construction:

- **Section 14-9.02 Air Pollution Control**
- **Section 14-9.03 Dust Control**

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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact

"No impact" findings are based on project scope, location, and the May 2016 Natural Environment Study. No Federal or State listed species will be impacted by the project. No adverse effects to special status species or habitats are expected to occur as a result of the proposed project. The following environmental commitments are required for inclusion into the project:

- **The removal/trimming of any woody vegetation (trees and shrubs) required for the project is completed between September 1st and February 28th (dates outside the nesting season for raptors and migratory birds in the area) prior to project construction. Vegetation outside that time period may not proceed until a survey completed by a qualified biologist, determines no nests are present or in use.**
- **If woody vegetation removal/trimming is scheduled during the nesting season of protected raptors and migratory birds (March 1st to August 30th), a focused survey for active nests of such birds shall be conducted by a qualified biologist within 15 days prior to the beginning to project related activities. If active nests are found, Caltrans shall consult with USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and with CDFW to comply with provisions of the Fish and Game Code of California. If a lapse in project related work of fifteen days or longer occurs, another survey and, if required, consultation with USFWS and CDFW will be required before the work can be reinitiated.**

V. CULTURAL RESOURCES: Would the project:

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

"No impact" findings are based on project scope and location, and the June 2016 Cultural Resource study.

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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location.

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

"No impact" findings are based on project scope, location, and the June 2016 Water Quality Assessment. The statewide National Pollutant Discharge Elimination System permit compliance, will incorporate the provisions of the Water Quality Control Plan for the Lahontan Region. No temporary or permanent water quality impacts are anticipated.

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?	☐	☐	☐	☒

"No impact" findings are based on project scope and compatibility with local community plans.

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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location.

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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

"No impact" findings are based on project scope and the March 2016 Air Quality and Noise Study. The following Caltrans Standard Specifications will be incorporated into the project during construction:

- **Section 14-8.02A Noise Control**

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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location.

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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location, temporary construction impacts conversations with traffic operations engineers, and the Traffic Management Plan (TMP) dated August 30, 2016.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location. The existing bicycle trail, also known as the Pat Lowe Memorial Trail, would not be adversely affected by the project.

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?	☐	☐	☐	☒

"Less than significant impact" findings are based on temporary construction impacts. One-way traffic control would only occur at night and emergency personnel would be able to get to their destination as construction would allow them to do so, and would not adversely affect response times. Day time traffic would commence as usual. "No impact" findings are based on project scope, location, and conversations with the project engineer and traffic operations engineers.

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

"No impact" findings are based on project scope and location.

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?	☐	☐	☐	☒

CHAPTER 1

TRAFFIC AND TRANSPORTATION / PEDESTRIAN AND BICYCLE FACILITIES

Regulatory Setting

The three-legged roundabout, proposed for the US 50 and SR 89 intersection in El Dorado County, is located within the town of Meyers. Meyers is in the Tahoe Basin just a few miles west of the City of South Lake Tahoe and four miles east of Echo Summit. Traffic circulation in the project area is unique as it is located within the Tahoe Basin. US 50 connects Sacramento and the Bay Area to Tahoe through the City of Placerville. From Placerville and up through the mountains, US 50 descends from Echo Summit and flows through the El Dorado National Forest, through the City of Meyers, and continues on through the City of South Lake Tahoe, and into the State of Nevada. Immediately west of the US 50 and SR 89 intersection project area, the road changes from a two-lane conventional highway to two lanes with a middle turn pocket through Meyers and into South Lake Tahoe.

The project is consistent with the June 2015 Meyers Area Plan, including the circulation element, as the plan mentions the US 50 and SR 89 intersection project will improve that particular intersection by installing a roundabout. The Meyers Area Plan is a part of the Tahoe Regional Planning Association (TRPA), and therefore is consistent with TRPA plans as well.

Roundabouts – General Information

The use of roundabouts is a proven strategy for improving intersection safety by eliminating or altering conflict points, reducing crash severity, and causing drivers to reduce speeds as they proceed into and through intersections. Conflict points occur where one vehicle path crosses, merges or diverges with, or queues behind the path of another vehicle, pedestrian, or bicycle. Decreased vehicle speeds will also decrease the speed differentials with other road users. Some of the reasons for increased safety level at roundabouts are the following:

- Roundabouts have fewer vehicular conflict points in comparison to conventional intersections. The potential for high-severity conflicts, such as right angle and left-turn head-on crashes, is greatly reduced with a roundabout.
- Low absolute speeds generally associated with roundabouts allow drivers more time to react to potential conflicts, also helping to improve the safety performance of roundabouts. Low vehicle speeds help reduce crash severity, making fatalities and serious injuries uncommon at roundabouts.
- Since most road users travel at similar speeds through roundabouts (i.e., have low relative speeds), crash severity can be reduced compared to some traditionally controlled intersections.
- Pedestrians need only cross one direction of traffic at a time at each approach as they traverse roundabouts (i.e., crossing in two stages), as compared with many traditional

intersections. Pedestrian–vehicle conflict points are reduced at roundabouts; from the pedestrian's perspective, vehicles come from fewer directions. In addition, the speeds of motorists entering and exiting a roundabout are reduced, increasing the time available for motorists to react and reducing potential crash severity.

Affected Environment

A Traffic Management Plan (TMP) was prepared for this project in August 2016. A Project Study Report (PSR) was developed and approved in June of 2015. In addition, a Roundabout Operations Analysis Report, dated February 2016, a Supplemental Operations Analysis Report, dated May 2016, and a Revised Supplemental Analysis, dated September 2016, was prepared for the US 50 and SR 89 El Dorado county intersection by District 03 Rural Highway Operations Project Engineers.

Since the approval of the PSR, there have been several discussions with Traffic Operations, Traffic Safety, and the ICE TAP (Intersection Control Evaluator Technical Advisory Program) team. Members of this team [Caltrans HQ Design, Caltrans HQ Traffic Safety, Tahoe Regional Planning Agency (TRPA), and the Federal Highway Administration (FHWA)] had multiple discussions regarding the size and number of lanes entering the roundabout. The initial suggested size and number of lanes entering the roundabout was determined to be the ultimate design for the intersection. After completing an Operational Analysis, reviewing current traffic volumes, going through several design iterations in trying to place the roundabout while avoiding a landmark tree, and at the same time adjusting the lane configurations based on additional talks with the ICE TAP team, the roundabout ICD was reduced to 135 feet with single lanes entries in all direction. The center of the roundabout was located using the ultimate ICD of 180 feet. This ensures that there will be room to accommodate future expansion of the roundabout when needed. A bypass lane was also added for the high traffic flow leaving the basin in the westbound direction.

Traffic

Based on project scope and project location, there would be temporary impacts to traffic and transportation, during construction. A description of current traffic and forecasted traffic in the general area is explained below.

Currently there are two distinct sets of traffic conditions in Meyers: free flowing and congested. Most of the time traffic on US 50, SR 89, and intersecting side streets flows freely. The free flowing traffic generally occurs during weekday periods throughout most of the year.

Congested traffic conditions generally occur during weekends, holidays, and chain control activities. The normal pattern includes visitors entering the basin on Fridays and Saturdays and leaving the basin on Sundays or on a weekday holiday. This traffic movement causes backups and queues on US 50 for motorists travelling back and forth over Echo Summit. Congestion caused by US 50 traffic exiting the basin produces backups at intersections within Meyers including SR 89 and most side streets. This is especially true for vehicles attempting to make

left turn movements. During periods of particularly bad congestion, the backup of traffic on US 50 leaving the basin can extend into the City of South Lake Tahoe. When this occurs, traffic in Meyers can become gridlocked.

Another existing facility in the area that relates to traffic, is the chain-on operations area; this is located on the north side of US 50 directly across from the SR 89 and US 50 intersection flowing to the east and the west. The chain-on area consists of a large shoulder marked with diagonal lines and signage to indicate chain-on area only. During winter snowstorms the traffic situation can be easily compounded by chain-up and snow removal procedures.

Pedestrian and Bicycle Facilities

A Class I shared-use trail, known as the Pat Lowe Memorial Bike Trail, runs along both sides of US 50 from Pioneer Trail to SR 89. On the north side of US 50, the Class I shared-use trail continues along US 50 and continues towards the City of South Lake Tahoe. Many other recreational trails/paths are in the local vicinity of Meyers as well as the surrounding area. Bicycling and pedestrian activity is a common and popular activity in Meyers and the Tahoe Basin in general.

Environmental Consequences

Project Impacts

The proposed roundabout project should reduce the severity of collisions by reducing vehicle speeds and achieving consistency in the relative speeds between conflicting traffic streams. This will also make the intersection safer for pedestrians and bicyclists. The bypass lane will provide a more direct route outside the circulatory road for traffic traveling westbound on US 50; while cars that wish to get onto southbound SR 89 from US 50 will use an exclusive left turn lane within the roundabout.

The roundabout would improve the aesthetics of the intersection by installing landscaping suited to the area, generally making the intersection a more enjoyable and functional space, and improving community connectivity as well. It would also serve as an unofficial gateway into the town of Meyers on both SR 89 and people traveling eastbound on US 50.

Pedestrian and Bicycle Facilities

The roundabout project will comply with Americans with Disabilities Act (ADA) laws and will be a facility for all modes of travel, following complete streets guidance. The roundabout will add crosswalks to the intersection in order to provide connectivity for pedestrians, as discussed in the Meyers Community Plan. Roundabouts are generally proven to create traffic calming, causing lower traffic speeds which decreases the severity of possible accidents. The project will add a Class 1 bike and pedestrian path which generally removes pedestrians and bikes away from the roadway, unless they want to cross the roundabout on any of the designated cross walks. The proposed bicycle and pedestrian movement should provide a smoother connectivity

in and around the intersection and connect with the existing and future local bicycle and pedestrian plan.

Bicycle paths and bike lanes were added and/or modified to provide connectivity within the intersection and project area boundaries. On the southwest corner a bike path branches off the western leg of US 50 and continues east. Then it crosses SR 89 through two small crosswalks with a pedestrian island in between. Once on the south east corner, it then curves to the north in front of the large juniper tree and then crosses north on US 50 through three crosswalks with two pedestrian islands in between. The bike path also connects to existing bike/pedestrian path, also known as the Pat Lowe Memorial Bike Trail. Please see the project map to view the details.

Temporary Construction Impacts

During construction, there will be one-way traffic control for eastbound, westbound, and traffic traveling southbound on SR 89. Traffic impacts will be temporary as they will only be during construction. Local streets might be used as an alternate route during construction, however this would be temporary in nature.

Public services such as fire and police protection, should not have a delay in getting to their destination as one-way reversible traffic control is only proposed for night work. Emergency personnel and equipment will be able to get through the construction area as usual. During one-way reversible traffic control at night, the shoulder and/or roadway will be available for emergency personnel to use. Construction will accommodate emergency personnel as needed.

Avoidance, Minimization, and/or Mitigation Measures

The following measures will be adhered to in order to minimize temporary construction impacts:

- On US 50 and SR 89, no lane and shoulder closures will be allowed during daytime and peak commute hours on weekdays and weekends.
- Whenever one-way traffic control is maintained, traffic should be stopped for periods not to exceed 10 minutes, after which accumulated traffic shall pass through before another closure is made.
- On two-lane, two-way roadway, a minimum of one paved traffic lane, not less than 11 feet wide, shall be open for use by public traffic.
- No lane closures, shoulder closures, or other restrictions will be allowed on designated holidays, special days, and the day preceding designated holidays, and when construction operations are not actively in progress.
- Lane closures on the two-lane, two-way roadway will be performed with reversible traffic control using flaggers.
- When implementing one-way (reversible) traffic control, advance flaggers are recommended in areas where there is inadequate approaching sight distance.

- When closures occur within 200 feet of an intersection, flaggers shall be deployed to control all legs of the intersection.
- Pedestrian and bicycle access must be maintained during construction. Additional signs will be required to detour pedestrians and bicycle traffic
- Access to driveways and cross streets should be allowed during construction activities.
- The maximum length of any lane closure shall be limited to 0.1 mile
- Portable changeable message signs (PCMS) will be required in direction of traffic during construction for each lane or shoulder closure.
- Work at these locations may require the assistance of COZEEP, but a full time COZEEP presence is not anticipated.
- Coordination with projects within, or nearby the project limits will be required to avoid conflicts.
- Lane closure charts, specifications and final TMP delay estimate will be developed prior to final design.

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels. Research from such establishments as the Intergovernmental Panel on Climate Change (IPCC) are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of GHG emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change. Relevant legislation include the following policies:

- Assembly Bill 1493 (AB 1493), Pavley.
- Executive Order (EO) S-3-05: (signed on June 1, 2005, by former Governor Arnold Schwarzenegger)
- AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley
- Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger)
- Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger)
- Senate Bill 97 (SB 97) Chapter 185, 2007
- Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to the Department's stewardship goal to preserve and enhance California's resources and assets.
- Senate Bill 375 (SB 375) Chapter 728, 2008
- Senate Bill 391 (SB 319) Chapter 585, 2009

Federal

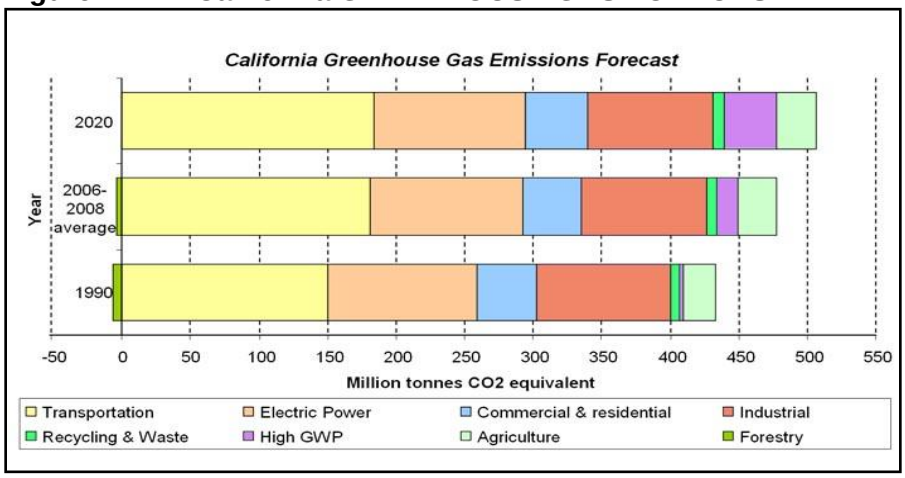
Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Despite the lack of Federal GHG regulations and legislation, FHWA as well as the National Highway Traffic Safety Administration (NHTSA) and U.S. EPA are taking steps to lessen climate change impacts by improving transportation system efficiency, creating cleaner fuels, reducing the growth of vehicle hours travelled, and enabling the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines.

Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.[1] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines sections 15064(h)(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.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 1 California GREENHOUSE GAS FORECAST



Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Caltrans and its parent agency, the California State Transportation Agency (CalSTA), have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40

[1] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[2]

The purpose of this project is to improve safety by reducing the number and/or severity of collisions at this intersection and is not expected to result in an increase of operational GHG emissions.

The construction and implementation of this project would not increase capacity. The features of this project are designed to make the traffic flow smoother in the project area. Implementation of the proposed project is likely to reduce emissions when the future build conditions are compared to future no-build conditions. For the build alternative (single-lane roundabout), vehicles are not required to idle as long because drivers are not required to stop while passing through a roundabout. This helps reduce fuel consumption and vehicle emissions. A literature review by the Insurance Institute for Highway Safety found that roundabouts can reduce fuel consumption by 23 to 34% and CO_2 emissions by approximately 23 to 37%[3]. Although, there will likely be long-term GHG benefits associated with improved operation through smoother pavement surfaces and reduced queuing, construction emissions will be unavoidable.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite 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 GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

Although construction emissions are unavoidable and are expected to be minimal, the proposed project will not increase capacity and is not expected to result in additional operational CO_2 emissions. However, it is Caltrans determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

[3] http://www.iihs.org/iihs/topics/t/roundabouts/qanda#cite-text-0-19

Greenhouse Gas Reduction Strategies

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. “Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)[4].

Greenhouse Gas Mitigation

The Department continues to be actively involved on the Governor’s Climate Action Team as ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year.

The following measures would also be included in the proposed project to reduce the GHG emissions and potential climate change impacts from the project:

1. According to Caltrans’ Standard Specifications, the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district, Section 14-9.02, “Air Pollution Control.”
2. Caltrans’ Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C “Emission Reduction” and Section 14-9.03 “Dust Control”.
3. The project will also be installing LED lighting in and around the roundabout intersection to improve the users’ understanding of the roundabout’s operations.
4. Native landscaping will be included in the roundabout design which will enhance the intersection’s aesthetics. Plants will be limited to native species and will require one-year plant extablishment with temporary irrigation. However a maintenance agreement would need to be acquired with the community for maintaining the landscaping after establishment.

Adaptation Strategies

“Adaptation strategies” refer to how the Department 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, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by

[4] http://climatechange.transportation.org/ghg_mitigation/

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.

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as the Department as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also 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

Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

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NON-DISCRIMINATION
POLICY STATEMENT

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For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"

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Transportation Concept Report and Corridor System Management Plan June 2014, United States Route 50; Caltrans District 03

Transportation Corridor Concept Report, State Route 89 April 2012; Caltrans District 03

Lake Tahoe Region Bicycle and Pedestrian Plan, Technical Amendment December 2014; Tahoe Regional Planning Agency and Tahoe Metropolitan Planning Organization