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 the proposed build alternative, 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 conducted 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 proposed project will be constructed within land owned and operated by the United States Forest Service under a Special Use Permit Issued to the California Department of Transportation for use and maintenance of the roadway features. Either an amended Special Use Permit will be requested from LTBMU or a DOT Easement will be pursued. Either method will not change the existing land ownership or use and therefore will be consistent with land use goals and policies applicable to the project area.
- Growth: The proposed project will repair an existing facility and will not promote additional growth to the region or local communities.
- Farmlands/Timberlands: The proposed project site is not within a designated farmland or timberland area.
- Utilities: No utility relocations or conflicts are expected to occur as a result of the construction of this project.
- Environmental Justice: This project will not cause disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations. All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI

Policy Statement, signed by the Director, which can be found in Appendix C of this document.

- Hydrology and Floodplain: a Caltrans Hydraulics Engineer prepared a Preliminary Drainage Report in August 2005. The project location on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps is included on Panel 0600400609B (effective date 10/18/83) for El Dorado County. The entire project segment on US 50 is in Zone C that is defined as "Areas of minimal flooding" (no shading).
- Geology/Soils/Seismic/Topography: The proposed project does not involve the construction of habitable structures or other structures or other facilities that would result in substantial adverse impacts on people, property or the environment if damaged by ground shaking. The proposed project also does not involve any construction activities that would destabilize existing geologic units or increase existing landslide hazards.
- Paleontology: Due to the nature of this project, paleontology resources are not expected to be encountered or affected.
- Plant Species: A Natural Environment Study (NES) was completed in December 2007. After field reviews and pertinent data resource reviews it was determined that the proposed project would have "no effect" on plants protected by the Native Plant Protection Act that exist within the project area.
- Animal Species: Due to the location of the project and lack of habitat for various animal species, no impacts to non-status wildlife is expected to occur. Should the project scope change to require tree or woody vegetation removal, contract specifications shall be included for compliance with the Migratory Bird Treaty Act (MBTA)
- Special Status Species: Caltrans biologists compared specific habitat requirements, life history notes, elevation, species distribution, and species lists from USFWS, TRPA, LTBMU and CNDDB to determine if any special-status species may be present in the project area. Special-status species (including Threatened and Endangered Species) that have been recorded in or adjacent to the Lake Tahoe Region were identified in the Natural Environment Study (NES). No special-status wildlife species were found or identified on any of the project sites and none are expected to occur within the project area and this project is expected to have "no effect" to Endangered or Threatened Species.

2.1.1 Community Impacts

A Community Impact Assessment was completed October 30, 2007, by Caltrans staff and was later updated in December 2008, to include an analysis of potential impacts related to construction detour options.

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. The Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is causally related to a physical change, then social or economic change may be considered in determining whether the physical change is significant.

Affected Environment

The project limits cover a stretch of approximately 1.1 miles along US 50 at the Echo Summit area of the Tahoe Basin. US 50 is the main corridor connecting the Sacramento Valley and the San Francisco Bay Area to the mountain, lake, and entertainment/gaming resort locations of the Lake Tahoe Basin. It is a heavily traveled route by seasonal visitors, local commuters, and commercial trucking operators. Caltrans 2007 traffic census data indicates an average annual daily traffic count (AADT) of 13,200 vehicles with a peak hour vehicle count of 1,900 for the Echo Summit area of US 50. During the month of heaviest traffic flow, average daily traffic volumes on US 50 at this location increase to 15,200 vehicles.

State Route (SR) 89 (Luther Pass Road) intersects with US 50 at PM 70.5 (2.7 miles east of the project area). At that point US 50 and SR 89 join together and become Emerald Bay Road for about 4.5 miles east to the US 50/SR 89 junction at Lake Tahoe Boulevard (where US 50 becomes the main street through South Lake Tahoe).

According to Caltrans traffic studies and Systems Planning, peak hour recreational traffic periods at the busier portions of the Lake Tahoe Basin generally are classified with a Level of Service (LOS) of "E" (operations at or near capacity and unstable), or a LOS of "F" (forced or breakdown flow, demand exceeds capacity, considerable delays).

Curves and steep slopes characterize the road terrain within the project limits. According to the Caltrans Transportation Concept Report (TCR) dated April 1998, in contrast to the greater Lake Tahoe Basin area, this segment has a current Level of Service (LOS) of "B" with a forecasted 20-year LOS of "F."

The most pronounced areas of congestion within the greater project area are at the US 50/SR 89 "Y" and on US 50 near Stateline. Construction activity that slows or diverts traffic at these locales tends to exacerbate the already degrading levels of service. Caltrans records indicate complaints have been made by the hotel/gaming industry concerning a reduced number of patrons during past roadway construction periods.

Land uses within the greater project area consist of the Department of Agriculture lands, National Forest Wilderness Areas, California State Parks, resort areas, Lake Tahoe Airport and the Tahoe Paradise Golf Course.

According to the South Lake Tahoe (SLT) Chamber of Commerce, tourism is a large part of the local economies of the area and accounts for as much as 80% of the total revenue of the area. During the winter months the major employers are the hotels, motels, vacation properties, and restaurants that benefit from ski season related activities. In the summer months, employment shifts to those businesses that support tourism, such as restaurants, bars, motels, and small specialty shops. Beyond the project area on US 50, the state of Nevada's gaming and hotel industry provides a substantial steady year round source of business revenue and is a major local and regional employment center.

According to research done by the City of South Lake Tahoe and the Strategic Marketing Group it is estimated that that the Lake Tahoe Basin generates approximately two billion dollars in annual revenue. In 1997 US 50 was closed for a period of about three months due to fire and mudslide activity. It has been estimated that the loss to local revenues during that period was substantial.

Research on Lake Tahoe's economy has shown that most of the travel related tax revenues remain in the area because nine out of ten tax dollars generated by visitor

spending are attributable to point of sale taxes. Almost one-half (47%) of all tax impacts generated by travel spending accrues to local government in the form of transient occupancy taxes and local sales taxes according to a study produced by Dean Runyan Associates (2002).

There are a number of representative business and homeowner groups that are active stakeholders in the Lake Tahoe EIP process. These groups include the Lake Tahoe Visitors Authority, South Lake Tahoe Lodging Association, South Shore Transit Management Association, South Lake Tahoe Chamber of Commerce, Tahoe-Douglas Visitors Authority, Tahoe Meadows Homeowner Association, the South Lake Tahoe Transportation Management Association and Tahoe Lakefront Association.

Environmental Consequences

Construction of the Echo Summit Project under all lane closure options (as discussed in Section 1.4.1 Build Alternative section of this document) could temporarily impede access to the southern part of the Lake Tahoe Basin. The stability and sustainability of the Lake Tahoe economy is extremely dependent on revenue from tourism, and it is important to recognize that the effects of actions that substantially delay visitor access to the hubs of commerce in the Lake Tahoe Basin over extended periods of time are likely to impact local business revenues, employment, and tax revenues.

All proposed traffic-handling options have a potential to affect the sales and local tax revenue to businesses operating in and around the Lake Tahoe Basin. Caltrans has assumed, based on past projects that the traffic handling option that would cause the least amount of closures or delays would result in the least effect on local businesses.

CEQA considerations

No significant impacts to the community are expected as a result of this project,

Avoidance/Minimization Measures

Congestion and delays will likely cause inconvenience to the traveling public and Tahoe region business owners. In addition to the Traffic Management Strategies included in the Traffic section of this document, the following public outreach measures are recommended in order to minimize the inconvenience that may occur:

- Informational brochures included in utility bill mailings to homeowners, renters, and business operators with updates regarding construction related details that are located in the greater project area.

- Use of public service announcements through local media outlets. Purchase and use of radio air time to publicize the projects and update information.
- Use of newspaper ads that use detailed mapping of Lake Tahoe Basin (including US 50) and I-80 construction projects that is produced annually by the Caltrans Transportation Management Unit in association with the TRPA, the Tahoe Basin counties, other lead agencies, and Nevada Department of Transportation (NDOT).
- Updates should be provided prior to actual construction dates on local radio and in newspaper ads. The Caltrans District 3 Public Information Officer (PIO) is usually delegated responsibility by project management in this area.
- Distribution of informational brochures at frequented local outlets such as busy local resorts and retail commercial locations along the impacted corridor, the South Lake Tahoe Chamber of Commerce, the local chapters of the American Automobile Association, and the California Highway Patrol office.
- Extensive utilization of the Caltrans Tahoe Basin web site. The web site should be updated and expanded to include links to the PIO's project information hotline and/or roadway condition list. Informational mailers and brochures should consistently refer readers to the web site for the most current project related information.
- Focused mailers to representative organizations and stakeholders including, but not limited to; the California and Nevada Trucking Associations, the Owner Operated Independent Drivers Association, the Teamsters local chapters, the Lake Tahoe Visitors Authority, the South Lake Tahoe Lodging Association, the South Shore Transit Management Association, Tahoe-Douglas Visitors Authority, the Nevada Hotel and Lodging Association, Greyhound, and the major charter bus operators in the San Francisco Bay area and Sacramento area.
- Implementation of an 800 number for the traveling public and other impacted parties to call to voice concerns and point out trouble spots during construction.

2.1.2 Emergency Services

Affected Environment

Lake Valley Fire Department provides fire and emergency services in the project area. The USFS provides fire protection for the El Dorado National Forest and wilderness areas within and surrounding the project limits. The El Dorado County Sheriff's Department and the California Highway Patrol provide police protection. Emergency medical services are provided at Barton Memorial Hospital, which is located behind the northeast quadrant of the US 50/SR 89 "Y" in the city of South Lake Tahoe.

Environmental Consequences

Once completed, the proposed project will have no effect on police and fire protection or on emergency response or evacuation plans. During construction, there is a potential for temporary traffic congestion and delays to result where active construction work is underway. However, emergency vehicles are exempt from roadway lane closures, and every effort will be made to allow police and fire vehicles to pass through construction zones without delay. If implementation of an emergency response plan or emergency evacuation plan is necessary during project construction, response or evacuation delays could also occur. Emergency vehicle access would not be restricted, and any necessary action to support safe movement of vehicles along evacuation routes would be taken. Implementation of a Traffic Management Plan (TMP) for each of the detour options will address the issues of safe and efficient movement of emergency vehicles through the construction zone as well as provide a provide planning for handling of evacuation during an emergency event such as a forest fire.

CEQA considerations

The proposed project will not cause a significant impact to emergency services or public safety.

Minimization, Measures

The following measures will be implemented to ensure public safety during construction.

These measures include the following:

- The contract Standard Special Provisions (SSPs) will require the contractor to coordinate with local emergency agencies/workers prior to construction and

through construction. As part of this coordination, a plan for emergencies, to include any agreed upon detour plan, will be developed.

- The Caltrans Construction Resident Engineer (RE) shall ensure the required emergency plan includes provisions to cease operations to allow the roadway to be used as an escape route in case of an emergency event such as forest fire.
- When an emergency occurs, the RE and California Highway Patrol (CHP) have the authority and responsibility to suspend and modify work for the safety of the public. This is provided by the Public Safety Specifications in the Caltrans standard plans.

2.1.3 Traffic and Transportation

Affected Environment

US 50, within the project limits, is a two-lane conventional highway with 12-foot lanes in each direction of travel, with minimal shoulders and very steep slopes on either side of the highway. This route is the main corridor connecting the Sacramento Valley and the San Francisco Bay area to the mountain, lake, and entertainment gaming resort locations of the Lake Tahoe basin. Seasonal visitors, local commuters and commercial trucking heavily use US 50. Caltrans 2007 traffic census data indicates an average annual daily traffic count (AADT) of 13,200 vehicles with a peak hour vehicle count of 1,900 for the Echo Summit area of US 50. During the month of heaviest traffic flow, average daily traffic volumes on US 50 at this location increase to 15,200 vehicles.

In contrast to the greater Lake Tahoe Basin area, this segment has a current Level of Service (LOS) of “B” with a forecasted 20-year LOS of “F.”

Environmental Consequences

Traffic Impacts Related to the Completed Project

Because the purpose of the proposed project is to repair existing facilities, the completed project will have no impact on current traffic and transportation patterns. However, due to the topography of and access to the proposed project area, lane closures during construction will have a temporary impact on the traffic.

Construction Related Traffic Impacts

Currently there are five traffic-handling scenarios under consideration for this proposed project; these alternatives are discussed in detail in Section 1.4.1 Build Alternatives.

With the exception of temporary traffic delays during the construction of the new rock wall parapets and culvert replacement, this project will neither exacerbate nor improve the current level of service for this segment of the highway, thus there will be a minimal impact pursuant to NEPA and a less than significant impact pursuant to CEQA to the current level of traffic on US 50.

Cumulative Impacts to Traffic and Transportation

Several projects are planned for construction in the Lake Tahoe Basin and immediate surrounding areas (see appendix J for maps of proposed Caltrans projects in the Lake Tahoe Basin and on the Interstate 80 corridor).

Other agencies such as Nevada Department of Transportation and other Caltrans Districts (such as District 10) are likely to have projects planned for construction at the same as planned construction activities for the proposed project at Echo Summit. Caltrans District 3 will ensure coordination occurs with other transportation entities so that multiple routes, especially those planned for detour routes, will not be closed at the same time as US 50 at Echo Summit. This coordination effort should ensure that temporary traffic congestion would not be exacerbated due to multiple road closures occurring at the same time. With this coordination effort, the proposed project is not expected to contribute to cumulatively considerable traffic and transportation impacts.

CEQA considerations

The proposed project will not create a significant impact on the long-term traffic and transportation circulation patterns of US 50.

Minimization Measures

The traveling public as well as local businesses will experience delays and inconvenience during construction of this project under all proposed traffic handling options and the following measures are proposed to minimize and potentially alleviate some of the inconvenience.

Based on past projects that required extensive freeway closures, it is anticipated that if the public is made aware of the upcoming road closures, they will likely adjust their travel plans and/or driving patterns to avoid major delays if possible.

The Community Impact Assessment prepared for this project recommends a Traffic Management Plan (TMP)* as well as a public outreach program to reduce the impact of this project. In addition to these measures, the following measures are recommended for implementation for all lane closure/construction options.

General recommendations that should be applied to all options:

- Construction bidding measures and incentive/disincentive provisions should be used to expedite construction of the Echo Summit Rock Wall replacement project.
- Coordination with projects within and nearby the project limits should be required to avoid conflicts with other projects. This coordination needs to extend to projects in both Caltrans Districts 3 and 10.
- Coordination with El Dorado County should be required to address traffic-impact concerns within the vicinity of the Echo Summit Project or along the detour route.
- Adequate public outreach funding should be identified and required for the projects public outreach program.
- The project construction contractor should be required to leave access to Johnson Pass Road open during the duration of project construction activities. Caltrans Maintenance may be required to plow and maintain Johnson Pass Road during project construction. Although Johnson Pass Road will not be advertised or recommended as a detour route for US 50 traffic, it is an important and viable detour for local traffic.

The following specific measures are recommended for the construction options and for the cumulative impacts of the project.

Option 1: Reversing Control; two lanes available on weekends

The TMP for Option 1 should include the following measures:

- On the two-lane, two-way section of US 50, one lane should be open at all times.

* A Traffic Management Plan will outline construction requirements and restrictions to minimize

- Truck traffic will be guided by a pilot vehicle through the traffic control zone during reverse control procedures.
- Trucks shall be held prior to the work area. The holding locations for trucks will be developed at the Plans and Estimates (P&E) stage of project planning.
- Provide an alternative route plan for this project. From Sacramento use US50 to SR49, then to SR88, to SR89 and back to US50 at South Lake Tahoe.
- Place additional changeable message signs at US 50/SR 89 and US 50/Sly Park Road.
- When implementing one-way (reversible) traffic control, advance flaggers are recommended in areas where there is inadequate approaching sight distance.
- If closures occur within 200 feet of an intersection, flaggers will need to be used to control all legs of the intersection.
- Due to safety consideration in relation to the vertical and horizontal alignment of this section of US 50, work at this location should use a Construction Zone Enhanced Enforcement Program (COZEEP) for both daytime and nighttime construction lane closures.
- No lane closures will be allowed after Friday noon, Saturday, Sunday, legal holidays, the day before and after most legal holidays, and on Special Days.
- The two lanes of US 50 will remain open at all times when construction operations are not actively in progress.
- Portable changeable message signs will be required in the direction of traffic during construction for each lane or shoulder closure.
- Lane closure charts will be developed during the engineering design phase of project planning.

Option 2: One Way Directional Closure; close eastbound lane behind k-rail, shift eastbound traffic to westbound lane, and direct westbound traffic to detour route

The TMP for Option 2 should include the following:

- On the two-lane, two-way section of US 50, one lane should be open at all times.

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traffic delays and maximize safety within the construction areas.

- A detour plan for westbound traffic shall be developed: use US50 to SR 89, then to SR 88, to SR 49 and back to US 50.
- Place additional changeable message signs at US 50/SR 89 and US 50/Sly Park Road.
- Due to safety consideration in relation to the vertical and horizontal alignment of this section of US 50, work at this location should use a Construction Zone Enhanced Enforcement Program (COZEEP) for both daytime and nighttime construction lane closures.
- This option will need extensive public outreach efforts, with paid advertising and the use of multiple changeable message signs. The public outreach plan will advise drivers of the construction activities, anticipated delays, and provide alternate routes.
- Coordination with projects within or nearby the project limits will be required to avoid conflicts.
- Portable changeable message signs will be required in the direction of traffic during construction for each lane or shoulder closure.
- This directional closure option will require the use of reversing control. For the days that reversing control is used, follow recommendations listed for Option 1.
- Lane closure charts will be developed during the engineering design phase of the project planning.

Option 3: Reversing Control 24/7; close eastbound lane behind k-rail, provide one-way reversing control.

The TMP for Option 3 should include the following:

- On the two-lane, two-way section of US 50, one lane should be open at all times.
- Truck traffic will be guided by a pilot vehicle through the traffic control zone during reverse control procedures.
- Trucks shall be held prior to the work area. The holding locations for trucks will be developed at the Plans and Estimates (P&E) stage of project planning.

- Provide an alternative route plan for this project. From Sacramento use US50 to SR49, then to SR88, to SR89 and back to US50 at South Lake Tahoe.
- Place additional changeable message signs at US 50/SR 89 and US 50/Sly Park Road.
- When implementing one-way (reversible) traffic control, advance flaggers are recommended in areas where there is inadequate approaching sight distance.
- If closures occur within 200 feet of an intersection, flaggers will need to be used to control all legs of the intersection.
- Due to safety consideration in relation to the vertical and horizontal alignment of this section of US 50, work at this location should use a Construction Zone Enhanced Enforcement Program (COZEEP) for both daytime and nighttime construction lane closures.
- COZEEP shall be required during weekend closures and for closures after Friday noon.
- Portable changeable message signs will be required in the direction of traffic during construction for each lane or shoulder closure.
- Lane closure charts will be developed during the engineering design phase of project planning.

Option 4:One Way Reversing Control with Movable Barrier; two lanes available on weekends

The TMP for Option 4 will be similar to those in Option 1

Option 5: Full Closure of U.S. 50; direct all traffic to detour route.

The TMP for Option 5 should include the following:

- Full closure will not be allowed from the Fourth of July weekend through Labor Day.
- A detour plan shall be developed for this project, using US 50 to SR 49, then to SR 88 and back to US 50.

- This option will need extensive public outreach efforts, with paid advertising and the use of multiple changeable message signs. The public outreach plan will advise drivers of the construction activities, anticipated delays, and provide alternate routes.
- Coordination with projects within or nearby the project limits will be required to avoid conflicts.

2.1.4 Visual/Aesthetics

A Visual Impact Assessment was completed by Caltrans in October 2007, and includes discussion and photographic depictions of the existing rock wall parapets and potential impacts to the scenic quality of the surrounding area as a result of the proposed replacement.

Regulatory Setting

Federal

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

State

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities." [California Public Resources Code Section 21001(b)]

State Scenic Highway Program

The California Scenic Highway Program, created by the California Legislature in 1963, was established to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. A highway is officially designated under this program when a local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and

receives notification from Caltrans that the highway has been designated a scenic highway.

Tahoe Regional Planning Agency

TRPA is charged with protecting Lake Tahoe and the basin for the benefit of current and future generations. The 1980 revised Compact, between state and federal agencies, gives TRPA the authority to adopt and enforce environmental quality standards. These standards were designed to achieve desired thresholds and were adopted in 1982.

One of the primary objectives embodied in the TRPA revised Compact is the preservation of the scenic values of the Lake Tahoe Basin, which are closely linked to the social and economic health of the region (TRPA Compact: Public Law 96-551, December 19, 1980: Article I). TRPA has inventoried and rated roadway segments and travel routes in the region, including segments within the proposed project area, to determine scenic resource values from roadway vantage points. Based on TRPA's 1982 inventory of resources in the Lake Tahoe Basin, TRPA established threshold standards for the protection and enhancement of scenic quality, and evaluated performance in achieving those levels on a regional basis. TRPA requires that the numerical threshold assigned to each rated roadway segment or travel route, be maintained or improved.

From the final 2006 Threshold Evaluation Report (Tahoe Regional Planning Agency 2007), the following TRPA thresholds apply to scenic resources:

- SR-1 Travel Route Rating
- SR-2 Scenic Quality Rating
- SR-3 Public Recreation Areas and Bike Trails
- SR-4 Community Design

Affected Environment

The proposed project located within the scenic region of the Lake Tahoe recreational areas of northern California. The region is recognized for its picturesque natural setting and beauty, as well as its recreational attractions, which draw millions of visitors to the basin annually. The rugged granite mountainous terrain combined with heavily forested slopes includes a backdrop of a vast blue serene lake. The combination of these elements truly makes the region extraordinary. These features

and elements enhance the driver's experience, as one travels through this unique landscape it creates a memorable and vivid encounter.

Land use within the proposed project area is predominately recreational. During the summer months this route is heavily used at times by recreational and local traffic. This section of US 50 is officially designated as a State Scenic Highway. This designation warrants special attention and every effort should be made to maintain and/or enhance the driver's experience.

The views along this section of highway are spectacular. There are steep drop-offs on the eastbound side of the highway with steep-sided granite rock outcroppings rising up on the other side. The view is open and expansive of the valley below and to Lake Tahoe in the distance.

US 50 within the proposed project area can be viewed from the Christmas Valley Area, which is located south of the highway and at a lower elevation. Because the highway is so distant, the proposed project will have little to no impact on the visual quality of the Christmas Valley community.

According to the 2001 TRPA Scenic Threshold Evaluation, the proposed project area at Echo Summit is considered to be in attainment and has a high scenic threshold, so it is necessary to construct the project in a manner that will protect the scenic resources of the area.

Figure 2.1.4a Views from the road

These two views are of Christmas Valley and a slight glimpse of Lake Tahoe looking north from US 50

Figure 2.1.4b Views of the road from below

View of the road from the Christmas Valley community south of the proposed project

Environmental Consequences

The existing rock wall parapets have portions that are deteriorating to the point that sections of the parapets are missing. The replacement of the parapets will improve the safety and improve the visual quality of the area by providing a more uniform appearance to the existing parapets. The finished product will mimic the existing parapet by using form liner with a 5/8-inch relief on the face of the rock. The replaced barrier will replicate the undamaged portions of the rock wall in order to keep the original design. The replacement parapets will be approximately three feet high; currently they are 18 inches high. The replacement barrier will have no visual impact on the area because the proposed work for the barrier is in keeping with the original design of the rock wall.

The rehabilitation of the existing drainage system (replace and/or retrofit culverts and drainage inlets) will not have a visual impact on the area.

Avoidance/Minimization Measures

Although the replacement of the rock wall parapets will not cause a negative impact on the visual quality/aesthetics of the project area, the following measures, many of which are project design features, will be implemented to ensure the rock wall parapet replacement will be consistent with the visual setting.

- Rock wall parapet shall be replaced in such a way that it will visually replicate the existing wall (as seen in the photo simulations in Appendix H).
- Form–liner shall be used to reproduce the natural rock for the replacement barrier. The form liner shall be of a design pattern that depicts the original design of the historical cut rock (ashlar) wall that is to be replaced and the staining of the parapets shall reflect the texture and color of the historical rock retaining wall as well.
- The maximum relief on the face of the parapets shall be 5/8-inch. Color and design shall also be in keeping with the original rock wall parapets.
- All culvert work shall be completed in a manner that minimizes disturbance to the surrounding area. Rock slope protection shall utilize indigenous rock when possible. Headwalls shall imitate the look of cut stone when possible (same form-liner used for barrier should be used on headwalls with the same type of staining)
- Minimize the disturbance of soil, and established vegetation and trees.
- During construction, any trees that need to be removed shall be identified and approved by the Resident Engineer, prior to removal.

- At the completion of construction, all areas used for staging, access or other construction activities will be evaluated for compaction, and if necessary, re-established by ripping and/or incorporating mulch to minimum depth of 12 inches.
- All disturbed soil areas will receive organic fertilizer, native grass/forb seed, and mulch (pine needles or a mixture of needles and wood chips) to a depth of 1½ inch to provide passive erosion control.

2.1.5 Cultural Resources

In order to assess the impacts of the proposed project on cultural resources, several reports, field reviews, and coordination efforts have occurred. In 1997, Dorene Clement, Caltrans architectural historian, conducted a field survey for a guardrail replacement project, which occurred within the same Area of Potential Effects (APE) as the current proposed project. This 1997 field review was followed by completion of a Historic Resource Evaluation Report (HRER) in July 1997. Gail St John, Caltrans architectural historian, conducted a field survey for the current proposed project on October 16, 2006, to verify the 1997 findings and document any changes to the resource.

Regulatory Setting

"Cultural resources" as used in this document refers to historic and archaeological resources, regardless of significance. Laws and regulations dealing with historic and archaeological resources are discussed below:

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2004, a Section 106 Programmatic Agreement among the Advisory Council, the Federal Highway Administration, the State Historic Preservation Officer, and Caltrans (Section 106 PA) went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council's regulations, 36 Code of Federal Regulations 800,

streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The Federal Highway Administration's responsibilities under the agreement have been assigned to Caltrans as part of the Surface Transportation Delivery Pilot Program (23 Code of Federal Regulations 773) (July 1, 2007).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix C for specific information regarding Section 4(f).

Historical resources are considered under the California Environmental Quality Act, as well as California Public Resources Code Section 5024.1, which established the California Register of Historical Resources. Section 5024 of the Public Resources Code requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

Affected Environment

Upper Meyers Grade is the only identified historic property within the APE for the proposed project.

Upper Meyers Grade is a one-mile segment of US 50 from post mile (PM) 66.8 to 67.8. The contributing elements of this property include the roadway, the Echo Sidehill Viaduct (Bridge #25 0044), the granite rock parapets, and masonry retaining walls.

Upper Meyers Grade winds along between a sheer cliff on the west and a sheer drop into Christmas Valley viewed over mortared ashlar rock parapets. The highway at this location is a two-lane road that occupies the original roadbed. The road has very narrow shoulders, with turnouts on the eastbound side only.

At post mile 67.3, the road is carried on the Echo Summit Sidehill Viaduct, a three-span concrete girder sidehill viaduct constructed in 1939. The viaduct is 113 feet long and 24 feet wide, with masonry parapets, abutments, and retaining wall. Due to

the difficult nature of the terrain, the road has not been widened or modified in any substantive way since it was built.

At eight locations along the one-mile section of highway, rubble masonry retaining walls topped with low masonry parapets support the highway on the downhill side. The wall is constructed of roughly shaped blocks of granite rock of varying size, some showing drill marks from the splitting process, laid in random coursing. In places the walls incorporate boulders or protruding bedrock.

The parapets are laid in level coursing and vary slightly in appearance from the walls below, presenting a more rustic surface, and are lighter colored granite. The parapet blocks vary in length and every fourth or fifth block is a deeper "through stone" connecting the top two rows. Metal beam guardrails mounted on steel posts fill the space between masonry sections to provide a continuous barrier on the downhill side of the highway. The guardrails originally installed in the 1950s have been replaced as needed.

Upper Meyers Grade was determined eligible for listing in the National Register of Historic Places under Criterion C at the state level of significance (pursuant to NHRP) for its engineering and aesthetic qualities (period of significance: 1939). The property is an outstanding example of the Department of Highway's careful design and engineering in an effort to meld a roadway into the natural beauty of the terrain and in mind of the spectacular views that would be afforded to the driving public. The effort resulted in the construction of numerous retaining walls and a viaduct made of local granite, which allows full function of the facility while minimizing construction impacts to a recreational/scenic route. This was a challenging engineering feat with impressive results.

No archaeological resources were identified within the APE during field surveys. No known ethnographic settlements are located in the vicinity of the project, and no known archaeological resources are documented to exist within the project area. The area is considered to have low to moderate sensitivity level for archaeological resources.

Environmental Consequences

Caltrans has applied the Criteria of Adverse Effect in accordance with Stipulation X.A of the Section 106 PA and 36 CFR Part 800.5(a)(1) and has determined that the proposed project will have an Adverse Effect on Upper Meyers Grade, a National

Register eligible property, and has received concurrence from the SHPO (see Appendix H) with this finding, pursuant to stipulation X.C.1. of the Section 106 PA.

In order to bring the facility into conformance with current safety standards, Caltrans proposes to replace the ashlar rock wall parapets, which are important aesthetic features of the property, with modified Type 736 concrete barriers. This replacement would result in the " physical destruction of …part of the property," "rehabilitation…that is not consistent with Secretary's Standards for the Treatment of Historic Properties," and "change of…physical features within the property's setting that contribute to its historic significance." Removing the original rock wall parapets will diminish the property's integrity of design, materials, workmanship, and feeling and would have an adverse effect on the character- defining features of the property.

Section 4(f) of the Transportation Act of 1966

The replacement of the rock parapet walls will constitute a "use" of a Section 4(f) property and as such a Section 4(f) analysis has been completed and can be found in Appendix C of this document.

CEQA considerations

This adverse effect finding will cause a significant impact pursuant to CEQA, but with mitigation measures discussed below shall reduce the impact to a less than significant level.

Cumulative Impacts to Upper Meyers Grade

Although not part of this project, preliminary studies have been conducted by Caltrans (Project Scope Summary Report completed 11/2/01) on the feasibility and necessity of replacing the Echo Sidehill Viaduct (Bridge #25 0044), which is also a contributing element to Upper Meyers Grade, a property determined eligible for the National Register of Historic Places. The replacement of Echo Summit Sidehill Viaduct is not currently programmed nor funded; however, its aging condition may necessitate replacement in the future. The replacement of this structure could have an adverse impact on Upper Meyers Grade, which in combination with the replacement of the rock parapet walls may have a potentially cumulatively considerable impact on a historic resource. Any potentially significant impacts would require mitigation and coordination with the appropriate resource agencies. Such mitigation would also reduce the cumulative impacts to less than significant pursuant to CEQA.

Mitigation Measures

Historic Resources

A Memorandum of Agreement Between the California Department of Transportation, The California State Historic Preservation Officer, and The United States Forest Service (which shall be hereto referred to as the MOA), regarding the proposed project was executed on July 15, 2008. The MOA includes stipulations on the treatment of historic properties that shall be carried out by Caltrans in order to reduce the project's effect on the property.

Caltrans proposes to install modified Type 736 barriers that simulate the appearance of the original rock parapets. A photo simulation is included in Appendix H. The construction contractor shall create a form liner taken from a cast mold of the intact portions of the existing rock wall parapets for use in replicating the existing parapet features onto the new parapets. The concrete barrier will mimic the existing rock parapets in color as well as texture by using concrete dyes and stains. In keeping with the standard plan for Type 736 barriers, the inboard side will be battered to narrow slightly at the top. The outboard side will be vertical and flush with the existing surface of the rock retaining wall. In order to achieve safety standards, the relief of the textured concrete surface will be limited to 5/8-inch and the height of the wall will be approximately three feet. As agreed upon in the MOA, signatory parties shall have the opportunity to review and approve the sample/prototype wall prior to final placement.

Currently, the proposed project calls for lining the existing culverts; however, should culvert replacement be deemed necessary, Caltrans will avoid additional impacts to the property by conducting the work in a manner consistent with the Secretary of Interior Standards. The culverts protrude through the rock retaining wall, which are character-defining features of Upper Meyers Grade. Replacing the culverts would not alter the original purpose, historic character, or distinctive features of the property. The metal culverts would be replaced (if needed) in kind with 24-inch corrugated metal pipe and the contractor would be required to rebuild the retaining wall using the original granite blocks to restore its original appearance.

Archaeological Resources

Although Caltrans does not anticipate encountering archaeological resources during the construction of this project, language will be included in the project specifications outlining procedural requirements in the unlikely event that cultural materials are discovered:

If cultural materials are discovered during construction, all earth-moving activity within a 60-foot perimeter around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission, who would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact Caltrans District 3 Office of Environmental Management so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.

2.2 Physical Environment

2.2.1 Water Quality and Storm Water Runoff

A Water Quality Assessment was prepared by Caltrans staff in October 2007 to identify potential impacts to water quality of the surrounding watersheds, surface and ground water resource that may be affected by this project.

Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of

waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Department activities on its highways and facilities. Department construction projects are regulated under the statewide permit, and projects performed by other entities on Department right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 acre require a Water Pollution Control Program (WPCP).

The project area is within the jurisdiction of the (Lahontan Regional Water Quality Control Board (LRWQCB). The LRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharge to waters at locations within its jurisdiction. In addition, the governments of Nevada and California, as well as the United States, have designated Lake Tahoe as an Outstanding National Resource Water, which provides that no further degradation of Lake Tahoe can be allowed. Accordingly, projects and facilities in the hydrologic unit that drains to Lake Tahoe, identified as the Lake Tahoe Hydrologic Unit (LTHU), must satisfy more stringent requirements than in most other parts of the United States. In addition to LRWQCB requirements, TRPA, whose jurisdiction covers the entire LTHU, regulates environmental conditions through the TRPA Code of Ordinances. The LRWQCB regulates activities within wetlands and waters of the U.S. and TRPA Stream Environment Zones (SEZs).

Water quality objectives for the Lake Tahoe drainage basin apply to the Upper Truckee River and its tributaries and are specified in Basin Plan prepared by the LRWQCB. The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the LTHU.

Tahoe Regional Planning Agency

TRPA is designated by California and the USEPA as the area wide water quality-planning agency under Section 208 of the federal Clean Water Act. It adopted a bi-state plan entitled the *Water Quality Management Plan for the Lake Tahoe Region* (208 Plan; TRPA 1988). Most appropriate provisions of the 208 Plan, however, are incorporated into the Basin Plan.

TRPA water quality thresholds are as follows:

- WQ1: Decrease sediment load as required to attain turbidity values not to exceed 3 Nephlometric Turbidity Units (NTU) in littoral Lake Tahoe. In addition, turbidity shall not exceed 1 NTU in shallow waters of Lake Tahoe not directly influenced by stream discharges.
- WQ2: Average Secchi depth, December–March, shall not be less than 33.4 meters.
- WQ3: Annual mean phytoplankton primary productivity shall not exceed 52 gC/m2/yr. California: algal productivity shall not be increased beyond levels recorded in 1967–1971, based on a statistical comparison of seasonal and annual mean values.
- WQ4: Attain a 90th percentile value for suspended sediment of 60 milligrams per liter (mg/L).
- WQ5: Dissolved inorganic nitrogen, 0.5 mg/L; dissolved phosphorous, 0.1 mg/L; dissolved iron, 0.5 mg/L; suspended sediment, 250 mg/L.
- WQ6: Surface water infiltration into the groundwater shall comply with the Uniform Regional Runoff guidelines. For total nitrogen, 5 mg/L; total phosphorous, 1 mg/L; total iron, 4 mg/L; turbidity, 200 NTU; and grease and oil, 40 mg/L.
- WQ7: For other lakes in California/Nevada, the standards are the same as the tributary standards.

For Caltrans projects, a Memorandum of Understanding (MOU) between TRPA and the LRWQCB acknowledges that LRWQCB is the lead regulator for water quality. LRWQCB water quality thresholds can be found in the Lahontan Basin Plan. The LRWQCB numeric effluent limits for runoff discharged to infiltration systems mirrors TRPA Threshold WQ-6. The Lahontan numeric effluent limits for surface discharges are similar to TRPA Threshold WQ-5 but also place limits of 20 NTU for turbidity and 2.0 mg/L for grease and oil.

If the project requires permits from the LRWQCB for 401 Water Quality Certification to comply with any necessary USACE or RWQCB permit, or for a discharge related to pavement cutting/grinding operations, any requirements defined in those permits will be implemented as part of the project.

Affected Environment

The project falls within the South Tahoe Hydrologic Area, undefined (634.10) Hydrologic Sub Area (HSA). The HSA includes the following 303(d) listed water bodies; Big Meadow Creek, Heavenly Valley Creek, Lake Tahoe, Tallac Creek, Trout Creek, and Upper Truckee River. The Upper Truckee River is impaired for Iron, Pathogens and Phosphorous. The Upper Truckee River, below Christmas Valley, is only impaired for iron and phosphorous. The project is at an elevation of approximately 7000 ft and has average annual rainfall of 45.5 inches for the HSA.

The project falls within Lahontan Regional Water Quality Control Board (Lahontan) jurisdiction. The rainy season is identified as August 1 to October 1 and November 1 to May 1. Lahontan prohibits soil disturbance from Oct 15 to May 1 in the project area, unless a variance is obtained.

The anticipated approximate Disturbed Soil Area (DSA) for total project is 0.5 acres. Construction site BMPs shall be deployed to protect water bodies within or near to the project limits during construction, specifically sediment control BMPs are recommended to control sediment transportation. The project shall follow Lake Tahoe Erosion Control guidelines. The project shall be coordinated with LRWQCB through the Caltrans NPDES coordinator as required by NPDES general permit section L.8.a.

Beneficial uses are the basis of the water quality protection under the Lahontan Region Water Quality Control Plan (Basin Plan). Every surface water body within the jurisdiction of (LRWQCB) is designated with a set of beneficial uses that are protected by appropriate water quality objectives. These beneficial uses include MUN, AGR, GWR, NAV, REC-1, REC-2, COMM, COLD, WILD, MIGR, and SPWN. Definitions of these beneficial uses are presented in Appendix A of the Water Quality Assessment prepared for this project. The proposed Project would not impact the beneficial uses of the water bodies that are identified in the Basin Plan.

Environmental Consequences

The project will not impact Big Meadow Creek, Heavenly Valley Creek, Tallac Creek or Trout Creek. The project may have minimal impacts during construction to Upper Truckee River (below Christmas Valley), which eventually flows into Lake Tahoe after flowing approximately ten miles north.

CEQA considerations

There are no significant impacts expected to water quality as a result of this project.

Avoidance/Minimization Measures

Adherence to the following is recommended to prevent receiving water pollution as a result of construction activities and/or operation of the Echo Summit Rockwall project.

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS # 000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board. Adherence to the compliance requirements of the WDR General Permit WDID NO. 6A0999999999, Order # 6-91-31, for small Construction Activities in Lake Tahoe is also required.
- The project has an estimated DSA of 0.5 acres and it is anticipated that a Water Pollution Control Program (WPCP) level of temporary pollution controls will be specified for the project; Standard Special Provision 07-340 or 07-345 will be included in the Plans, Specifications and Estimates (PS&E) to address these temporary construction water pollution control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management, and material pollution controls.
- As directed by Caltrans' Storm Water Management Plan (SWMP) and the Project Planning and Design Guide (PPDG) an evaluation of the project using the most recent approved evaluation guide is essential in determining if the incorporation of permanent storm water runoff treatment measures shall be considered for this project.
- If the project has a SWPPP, a Notification of Construction (NOC) shall be submitted to the Lahontan Regional Water Quality Control Board during PS&E phase through the Caltrans NPDES Coordinator.
- Special care is required when handling and storing contaminated soil, including soil contaminated with aerially deposited lead (ADL). The quantity of the contaminated soil, its level of contamination, where it will be stored, and when this activity will take place (winter / summer season) are all storm water pollution concerns and should be described in detail in the appropriate section of Special Provisions. These issues should also be addressed in the WPCP. Section H.9 of the Caltrans Statewide NPDES Permit requires notification of the appropriate Regional Water Quality Control Board (RWQCB) if the project involves reuse of

ADL contaminated soil, 30 days prior to advertisement for bids. This is to allow the RWQCB to determine any need for the development of Waste Discharge Requirements.

2.2.2 Hazardous Waste or Materials

Regulatory Setting

Many state and federal laws regulate hazardous materials and hazardous wastes. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the Hazardous Waste Control Act (California Health and Safety Code, 14CCR). Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are covered under CCR Title 8, Industrial Relations and are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

The U.S. EPA has declared asbestos to be a hazardous air pollutant under the Clean Air Act and has issued a National Emissions Standard for Hazardous Air Pollutants (NESHAP) that regulates the demolition and renovation of facilities containing asbestos (40 CFR Part 61).

Affected Environment

Caltrans staff conducted a hazardous waste Initial Site Assessment (ISA) in December 2006 and involved discussions with Caltrans design staff, a site field visit, and a review of project plans and aerial photographs. In June 2007, the seven existing rock wall parapets were tested for the presence of asbestos. The conclusions of this study were that no asbestos was found to exist. An updated ISA was prepared in July 2008.

Environmental Consequences

Based on the above review, the potential for hazardous waste does not exist for this project.

Geocon consultants conducted the asbestos site investigation, under Caltrans direction, on June 5th, 2007 to determine whether asbestos exists in the seven retaining walls and bridge at the above post mile limits. The conclusion of this study was that no asbestos is present in the rock parapet walls or bridge.

Avoidance/Minimization Measures

Although no asbestos has been identified in the rock wall parapets to be removed as a result of this proposed project, NESHAP rules pursuant to 40 CFR 61 and California Health and Safety Code Section 39658(b)(1) require the contractor to notify the US EPA and El Dorado County at least ten working days prior to demolition of the seven rock wall parapets.

Contract specifications have been prepared and shall be included in the bid package to address the specific notification and construction method requirements.

2.2.3 Air Quality

Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air.

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and particulate matter (PM). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as TRPA for the Lake Tahoe Region and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Affected Environment

The proposed project is included in the 2007 Federal Transportation Improvement Plan (FTIP) for the Lake Tahoe Region adopted by the Tahoe Regional Planning Agency. El Dorado County is listed as an area of maintenance for carbon monoxide.

This project is exempt from all air quality conformity requirements per Table 2 of 40 Code of Federal Regulations (CFR) §93.126, subsection “Safety”(“Shoulder

improvement; Pavement resurfacing and/or rehabilitation") and "Guardrails, median barriers, crash cushions." No further analysis is required.

Environmental Consequences

Mobile Source Air Toxics (MSAT's)

The purpose of this project is to improve safety and improve drainage features within the proposed project limits by replacing a series of rock parapet walls and lining damaged culverts. This project will not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. As such, Caltrans has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this effort is exempt from analysis for MSATs.

Construction Related Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities. Emissions from construction equipment also are anticipated and would include CO, nitrogen oxides (NOx), volatile organic compounds (VOCs), directly emitted particulate matter (PM10 and PM2.5), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve grading, removing or improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. If not properly controlled, these activities would temporarily generate PM10, PM2.5, and small amounts of CO, SO2, NOx, and VOCs. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM10 emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM10 emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Caltrans' Standard Specifications (Section 10) pertaining to dust minimization requirements requires use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust-related PM10 emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO2, NOx, VOCs and some soot particulate (PM10 and PM2.5) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal Standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO2-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as distance from the site(s) increases.

Avoidance/Minimization Measures

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in adverse or long-term conditions. Implementation of the following measures will reduce any air quality impacts resulting from construction activities:

- The construction contractor shall comply with Caltrans' Standard Specifications Section 7-1.01F and Section 10 of Caltrans' Standard Specifications (1999).
    - Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as: air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; and convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations

related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

  - Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.

- Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.
- Soil binder will be spread on any unpaved roads used for construction purposes, and all project construction related parking areas.
- Trucks will be washed off as they leave the right of way as necessary to control fugitive dust emissions.
- Construction equipment and vehicles shall be properly tuned and maintained. Low-sulfur fuel shall be used in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.
- Develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
- Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate during transportation.
- Remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.
- To the extent feasible, route and schedule construction traffic to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.

2.2.4 Noise and Vibration

Regulatory Setting

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise

abatement and/or mitigation, however, differ between the National Environmental Policy Act and the California Environmental Quality Act.

California Environmental Quality Act

The California Environmental Quality Act requires a strictly no-build versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under the California Environmental Quality Act, then the act dictates that mitigation measures must be incorporated into the project unless such measures are not feasible

National Environmental Policy Act and 23 Code of Federal Regulations 772

For highway transportation projects with Federal Highway Administration involvement, (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. Table 2.2.3a shows the noise levels of typical activities.

Tahoe Regional Planning Agency

TRPA establishes noise limitations in the TRPA Code of Ordinances, Chapter 23. These limitations apply to single-event noises from aircraft, marine crafts, motor vehicles, motorcycles, off-road vehicles, and snowmobiles, as well as community noise levels in the Lake Tahoe region. TRPA-approved construction is exempt from these provisions, provided that construction activities are limited to the hours of 8:00 a.m. to 6:30 p.m.

TRPA's thresholds for noise include numerical community noise equivalent level (CNEL) values for various land use categories and transportation corridors, as well as single-event (maximum sound level standards for specific sources, including motor vehicles, off-road vehicles, boats, snowmobiles, and aircraft. CNEL is also used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels.

Applicable TRPA noise threshold indicators are listed below:

N-2—Single-Event Noise Standards for Other Than Aircraft: This indicator is any single-event noise measurement made with a Type I sound level meter using the A-weighting and "slow" response pursuant to applicable manufacturer's instructions (except for sounds lasting 2 seconds or less, for which the "fast" response will be used). (A-weighted decibels are weighted to approximate the sensitivity of the human ear to various frequencies.) Chapter 23 of the TRPA Code of Ordinances contains additional information.

N-3—Community Noise Equivalent Levels: This indicator is the CNEL calculated pursuant to Section 23.4 of the TRPA Code of Ordinances. TRPA will review proposed activities in the region and account for site-specific analyses, estimated impacts on affected land uses, consistency with other provisions of the TRPA Regional Plan, and reasonable tests of significance of change in noise levels.

Affected Environment

Currently there are homes within approximately 150 feet of the proposed project location that may be affected by temporary construction noise.

Environmental Consequences

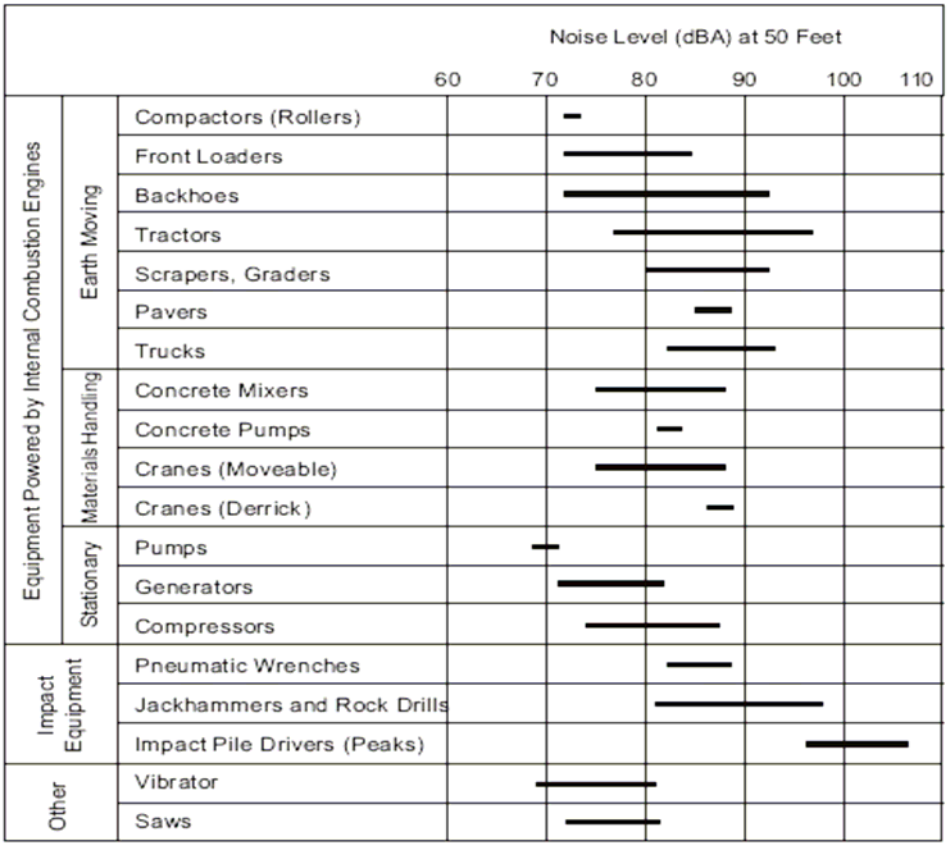
This project does not qualify as a Federal Type 1 Project. A Type 1 project is defined by 23 CFR 772 as follows: "*…A proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through traffic lanes…*" Because this project proposes to replace existing facilities and the horizontal or vertical alignment will not change, no further noise analysis for the completed project is required.

During construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Depending on the lane closure strategy that is ultimately chosen for construction of this project, construction activities may occur in the nighttime hours as well as during the day. Daytime construction activities would be maximized and nighttime construction activities would be minimized to the extent possible. This approach would be used in order to minimize traffic interruptions and delays while maximizing worker and public safety. The Department or its contractor would conduct noise monitoring of construction activities as needed to verify compliance with specified noise limits (Per Caltrans Standard Specifications Section 7-1.01I, instantaneous noise from construction equipment is not to exceed 86

decibels at a distance of 50 feet). Public awareness measures would be taken as needed to inform the public of potential noise disturbances. Based on a review of the proposed construction activities and schedule, it is not anticipated that construction activities for the proposed project would violate TRPA's CNELs or Caltrans' instantaneous noise limits, nor would this change the impact determination made pursuant to CEQA.

The following table shows the noise levels of typical construction equipment used on projects. Maximum noise levels from this equipment are in the range of 74 to 89 dBA. Construction activity is a point source from which noise attenuates (i.e., becomes quieter) at a rate of about 6 dB per doubling of distance. Additional attenuation of 1 to 2 dB per doubling of distance occurs as a result of ground absorption (Federal Highway Administration 2006) The closest home is approximately 150 feet from the proposed project location and noise levels at these locations are not expected to exceed 86 decibels.

Table 2.2.3a TypicalConstruction Noise Levels



REFERENCE: "Traffic Noise Analysis and Mitigation Manual," Environmental Section, Oregon State Highway Division, January 1990.

Exposure to Groundborne Vibration from Construction

Construction activities associated with the proposed project may result in a minor amount of ground vibration. Vibration from construction typically falls below the threshold of perception when the activity is more than about 50 feet from the receiver. In addition, vibration from these activities would be short-term and would end when construction was completed. Construction for the proposed project is not expected to involve high-impact activities (i.e., pile driving).

CEQA considerations

Because of the short-term and minor nature of the activities from which vibrations could be generated, this impact is considered less than significant. No mitigation is necessary.

Avoidance/Minimization Measures

The following measures shall be implemented to ensure that that construction noise impacts remain minimal.

- All internal combustion engine–driven equipment would be equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines would be strictly prohibited. This includes idling of unattended vehicles and idling of more than 2 minutes for waiting trucks.
- Property owners would be notified if the staging of construction equipment would need to occur within 200 feet of residences. Additionally, all stationary noise-generating construction equipment, such as air compressors and portable power generators, would be located as far as practical from existing noise-sensitive receptors.
- Temporary barriers would be constructed to screen stationary noise-generating equipment when located immediately adjacent to noise-sensitive land uses. The barriers would be sufficient to reduce the noise level by a minimum 5 dBA.
- “Quiet” air compressors and other stationary noise sources would be used where such technology exists and is feasible. Quiet technology may include the use of rotary screw air compressors (as opposed to noisier air-cooled

reciprocating compressors) and equipment provided with factory-installed sound-attenuating enclosures.

- Before construction begins, residences adjacent to construction areas would be notified of the construction schedule in writing. Caltrans or its contractor would designate a noise disturbance coordinator, who would be responsible for responding to any local complaints about construction noise. The coordinator would determine the cause of any noise complaint and ensure that reasonable measures to correct the problem were implemented. A telephone number for the coordinator would be posted conspicuously at the construction site and included in the notice sent to neighbors about the construction schedule.

2.3 Biological Environment

2.3.1 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, and Caltrans as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The California Department of Fish and Game's jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

Affected Environment

A positive determination for jurisdictional wetlands in the project area as defined in Section 404 of the Clean Water Act was made based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Areas meeting the three-parameter definition of wetlands were observed at the Echo Summit Maintenance Station, an area within the proposed project study area, but outside of the area proposed for active construction.

Environmental Consequences

Due to the fact that there is no direct construction activities occurring near the identified wetlands, direct fill/impacts are not anticipated to occur. Since there is a potential for the maintenance station to be used as a staging/storage area, there is a very slight potential for indirect impacts to identified wetlands.

Avoidance/Minimization Measures

Although direct impacts to wetlands are not expected to occur as a result of this project, the following avoidance measures shall be implemented to prevent potential indirect impacts.

Establish Environmentally Sensitive Areas: Indirect impacts to wetland resources within the Echo Summit Maintenance station will be avoided by designating these features outside of the construction impact area as "environmentally sensitive areas" (ESAs) on project plans and in project specifications. ESA information will be shown on contract plans and discussed in the Special Provisions. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts. Contractor encroachment into ESAs will be restricted (including the staging/operation of heavy equipment or casting of excavation materials). ESA provisions shall be implemented as a first order of work, and remain in place until all construction activities are complete.

Containment Measures/Construction Site Best Management Practices: Measures will be employed to prevent any construction material or debris from entering surface waters or their channels. BMPs for erosion control will be implemented and in place prior to during, and after construction in order to ensure that no silt or sediment enters surface waters. Caltrans' Standard Specifications require the contractor to submit a Water Pollution Control Plan. This plan must meet the standards and objectives to minimize water pollution impacts set forth in section 7-1.01G of Caltrans' Standard Specifications. The Water Pollution Control Plan must also be in compliance with the goals and restrictions identified in the Lahontan Water Quality Control Board's Basin Plan. Any additional measures included in the TRPA permit will be complied with. These standards/objectives are referred to as "Best Management Practices" (BMPs), and include but are not limited to:

Where working areas encroach on live or dry streams, lakes, or wetlands, TRPA and Lahontan RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems shall be constructed and maintained between working areas and streams, lakes, and wetlands. During construction of the barriers, discharge of sediment into streams shall be held to a minimum. Discharge will be contained through the use TRPA and Lahontan RWQCB-approved measures that will keep sediment from entering protected waters.

Oily or greasy substances originating from the contractor's operations shall not be allowed to enter or be placed where they will later enter a live or dry stream, pond, or wetland.

Asphalt concrete shall not be allowed to enter a live or dry stream, pond, or wetland.

2.3.2 Invasive Species

Regulatory Setting

On February 3, 1999, President Bill Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

Currently there are no infestations of noxious weeds or invasive species within the project limits

Environmental Consequences

A minimal risk exists for construction equipment to spread noxious weeds into the project area from areas outside the project work areas.

Avoidance/Minimization Measures

Although there is currently no identified population or infestation of noxious weeds within the project area, the following measures shall be implemented to prevent the spread of invasive plants.

In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

2.4 Climate Change under the California Environmental Quality Act

Regulatory Setting

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[1] (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations will apply to automobiles and light trucks beginning with the 2009 model year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% 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 GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms, and implement rules to achieve

[1] Greenhouse gases related to human activity, as identified in AB 32, include: Carbon dioxide, Methane, Nitrous oxide, Tetrafluoromethane, Hexafluoroethane, Sulfur hexafluoride, HFC-23, HFC-134a*, and HFC-152a*.

"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 executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. However, California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate GHGs as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.,* U.S. Supreme Court No. 05–1120. 549 U.S.

Argued November 29, 2006—Decided April 2, 2007). The court ruled that GHGs do fit within the Clean Air Act's definition of a pollutant, and that EPA does have the authority to regulate GHGS. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

Affected Environment

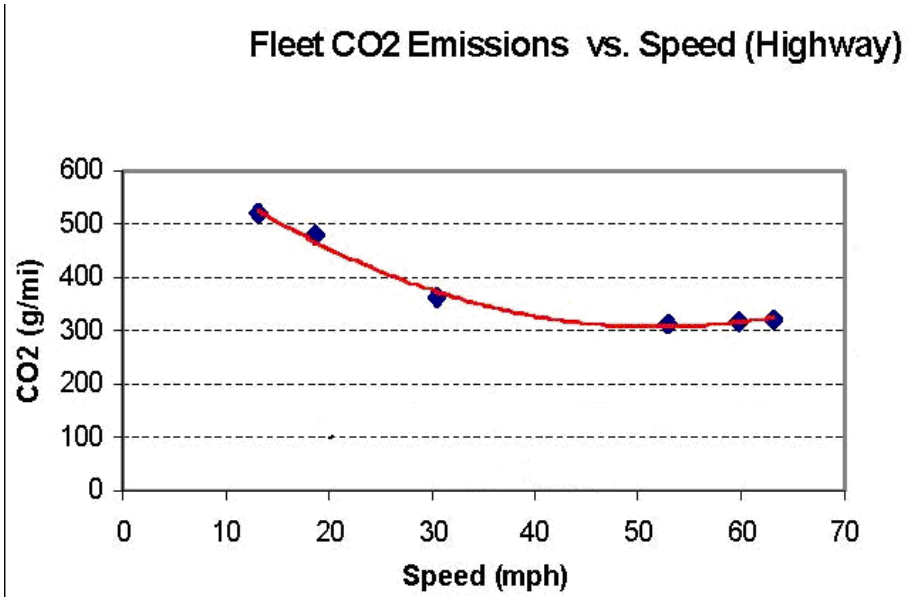
According to a recent white paper by the Association of Environmental Professionals[2], an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.

The Department and its parent agency, the Business, Transportation, and Housing Agency, 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 percent of all human made GHG emissions are from transportation, the Department has created and is implementing the *Climate Action Program at Caltrans* (December 2006). Transportation's contribution to GHG

[2] Hendrix, Micheal and Wilson, Cori. *Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), p. 2.

emissions is dependent on 3 factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel.

One of the main strategies in the Department's Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure below). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in GHG emissions.



Environmental Consequences

The Department recognizes the concern that carbon dioxide emissions raise for climate change. However, accurate modeling of GHG emissions levels, including carbon dioxide at the project level, at the project level is not currently possible. No federal, state or regional regulatory agency has provided methodology or criteria for GHG emission and climate change impact analysis. Therefore, the Department is unable to provide a scientific or regulatory based conclusion regarding whether the project's contribution to climate change is cumulatively considerable."

The Department continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the *Climate Action Program at Caltrans* (December 2006), the Department 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. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department 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. However it is important to note that the control of the fuel economy standards is held by the United States Environmental Protection Agency and ARB. 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 Davis.