Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
3.2 Land Use			
Impact 3.2-1 Community Cohesion. The goals of the RTP are to improve mobility for all users; improve vehicle, pedestrian, and bicycle safety and connectivity; advance multi-modal transportation opportunities; improve the environmental quality of the area; enhance visitor and community experience; and promote the economic vitality of the area. These actions would enhance community cohesion. Some RTP projects, such as realignment of roadways, could relocate businesses and residents because of the need for right-of-way; however, they would not divide existing communities, reduce access, or change nearby land use patterns. Although relocation of some residences and business would be needed and temporary construction disruptions to businesses and landowners would occur, the overall character, quality, and identity of the Region's communities would not be adversely affected. Alternatives 2, 3, and 4 would result in a long-term **beneficial** impact to community cohesion because of substantial enhancement of mobility, connectivity, character, and identity. Alternatives 1 and 5 would be **less than significant**, because they involve a continuation of existing land use patterns and transportation improvement plans.	***Long Term:*** Alternatives 2, 3, and 4 – **Beneficial** ***Long Term:*** Alternatives 1 and 5 – **LTS**	No mitigation is required for any of the alternatives.	***Long Term:*** Alternatives 2, 3, and 4 – **Beneficial** ***Long Term:*** Alternatives 1 and 5 – **LTS**
Impact 3.2-2 Conflict with or Impede the Implementation of Existing Land Use Plans and Policies. The RTP/SCS consists of three components: the transportation goals, policies, and implementation measures from the Transportation Element of the Regional Plan Update; a land use strategy from among the Regional Plan Update alternatives; and a Transportation Strategy Package. While TMPO is responsible for adoption of the RTP/SCS, it does not have the authority to adopt local land use plans or approve local land use development; however, the approval of any RTP/SCS alternative would assume the subsequent adoption of the companion, Regional Plan Update land use alternative by TRPA. If TRPA adopts a land use	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
alternative that differs from the assumed option in the selected RTP/SCS alternative, TMPO will necessarily adjust the transportation strategies to be consistent with land use designations. Therefore, the RTP/SCS alternatives would not be in conflict with the Region's land use plan. Because the RTP would be consistent with the Regional Plan Update, and would not conflict with or impede the implementation of existing land use plans and policies designed to improve environmental conditions, the impact of Alternatives 1, 2, 3, 4, and 5 would be **less than significant.**			
3.3 Traffic and Transportation			
Impact 3.3-1 Roadway Segment Operations. Because implementation of any of the RTP/SCS alternatives would cause at least one roadway segment to degrade from an acceptable to an unacceptable level, and/or substantially degrade the LOS of a roadway segment that is already operating at unacceptable levels, all Alternatives (1, 2, 3, 4, and 5), would result in a **significant** impact on roadway operations. Alternatives 1and 2 would each result in a **significant** impact to four study roadways. Alternative 3 would result in a **significant** impact to two study roadways. Alternative 4 would result in a **significant** impact to nine study roadways. Alternative 5 would result in **significant** impacts to ten study roadways.	Alternatives 1, 2, 3, 4, and 5 - **S**	**Mitigation Measure 3.3-1. Phased Release of Allocations/LOS Monitoring/Travel Demand Management.** The level of service standard under evaluation for Impact 3.3-1 is oriented toward alleviating congestion for vehicles during the peak hour of peak travel times in the Region. The Compact directs TRPA to focus transportation improvements on transit investments and enhancements to non-auto modes, rather than new roadway capacity. Therefore, the mitigations below seek to first provide additional travel capacity in the form of bicycle, pedestrian, and transit improvements, with an ongoing monitoring program. New roadway improvements beyond those already listed in the RTP are proposed if other measures are not able to meet community needs during peak travel times. TRPA will develop and implement a program for the phased release of land use allocations in four-year cycles in conjunction with future updates of the Regional Plan and RTP. Two years after each release, monitoring of existing and near-term LOS will occur at intersections and roadways to evaluate compliance with applicable LOS policies. Should LOS projections indicate that applicable LOS goals and policies will not be met, actions will be undertaken through TRPA approved plans, project-permitting, or projects/programs developed in coordination	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		with local or other governments to maintain compliance. Actions may include, but are not limited to the following: 1. TRPA will prioritize, and cause to be implemented, if feasible, enhanced non-motorized and public transportation projects and services to accommodate the additional travel demand. 2. TRPA will modify the land use allocation releases to reduce travel demand. 3. To the extent that roadway capacity expansions do not result in significant, unavoidable environmental impacts, TRPA will investigate and cause to be implemented, if feasible, additional multi-modal corridor improvements (beyond those listed in the RTP project list). The following is an example list of potential candidate improvements based on the identified significant impacts of the RTP/SCS alternatives: — US 50 between the South Y and South Stateline – modify US 50 to consist of enhanced access control (e.g., raised median with channelized turn lanes at selected locations, driveway consolidation to limit turning locations on the highway, etc.), to the extent that planned traffic signal coordination does not provide sufficient capacity increases. — US 50 between SR 89 and Pioneer Trail – modify US 50 to consist of enhanced access control (e.g., raised median with channelized turn lanes, driveway consolidation, etc.) to increase the capacity of the highway.	
Impact 3.3-2 Intersection Operations. Alternatives 1, 2, 3, 4, and 5 would cause some degradation of intersection operations, but not to unacceptable (i.e., LOS E in rural areas, and LOS E for more than four hours or LOS F in urban areas) levels. For all alternatives, impacts to intersection operations would be **less than significant.**	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.3-3 Vehicle Miles of Travel (VMT) per Capita. VMT per capita is a measure of the efficiency of the transportation system and the degree to which the land use pattern would reduce personal motor vehicle travel. For the Tahoe Region, VMT per capita may be influenced by a number of variables, including land use pattern, emphasis on personal motor vehicle travel compared to other travel modes, and implementation of vehicle trip reduction strategies. When VMT per capita increases, it results in indirect environmental impacts (such as air pollutant emissions). VMT per capita would increase for all alternatives, except Alternatives 2 and 3. For Alternatives 2 and 3, reduced VMT per capita would be **beneficial**. For Alternatives 1, 4, and 5, the increased VMT per capita would be a **significant** adverse impact.	Alternatives 2 and 3 – **Beneficial** Alternatives 1, 4, and 5 - **S**	No mitigation is required for Alternatives 2 and 3. **Mitigation Measure 3.3-2. Reduce VMT per capita.** For Alternatives 1, 4, and 5, reducing or eliminating the increase in VMT per capita would require adopting additional components of trip-reducing land use pattern and non-motor vehicle travel mode opportunities. A comprehensive review of potential VMT reducing strategies has been conducted in the formulation of the RTP alternatives, so other feasible mitigation approaches different from the strategies already incorporated into the RTP alternatives are not known. Consequently, avoidance of significant increases in VMT per capita for Alternatives 1, 4, and 5 would need to involve adoption of additional elements of the package of land use and transportation strategies in Alternatives 2 and 3. Otherwise, the VMT increases associated with Alternatives 1, 4, and 5 would be significant and unavoidable.	Alternatives 2 and 3 – **B** Alternatives 1, 4, and 5 - **SU**
Impact 3.3-4 Transit Service. Transit service enhancements are included in all five RTP alternatives. Alternatives 1 and 5 would implement transit improvements contained in Transportation Strategy Package A, including the Lake Tahoe Waterborne Transit Project and operation and maintenance of the existing transit system. Alternatives 2 through 4 would implement Transportation Strategy Packages B and C, which include substantial transit improvements (including transit projects, programs, and efficiency strategies) that are expected to not only meet new demand, but offer substantial service improvements beyond those that exist today. Therefore, transit service impacts under all alternatives would be **beneficial**.	Alternatives 1, 2, 3, 4, and 5 – **Beneficial**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **Beneficial**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
Impact 3.3-5 Bicycle and Pedestrian Safety. All RTP/SCS alternatives would enhance pedestrian and bicycle safety. Pedestrian and bicycle facility improvements are included in all five RTP alternatives. Alternatives 1 and 5 would implement several pedestrian and bicycle improvements contained in Transportation Strategy Package A. Alternatives 2 through 4 would implement Transportation Strategy Packages B and C, which include substantial pedestrian and bicycle facility improvements that are expected to not only meet new demand, but offer substantial improvements beyond those that exist today. Facility improvements offer opportunities to separate pedestrian and bicycle travel from roadway travel lanes (such as separated trails or striped, designated lanes), thus reducing the potential for conflicts. Therefore, pedestrian and bicycle safety impacts under all alternatives would be **beneficial**.	Alternatives 1, 2, 3, 4, and 5 – **Beneficial**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **Beneficial**
3.4 Air Quality			
Impact 3.4-1 Consistency with Air Quality Plans and Transportation Conformity. The proposed RTP/SCS would not conflict with or obstruct implementation of any applicable air quality-related plans. All of the alternatives would meet federal air quality conformity requirements. This impact would be **less than significant** for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.4-2 Short-Term Construction Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. Implementation of the transportation projects would involve construction that would result in the temporary generation of ROG, NO_X, PM_{10} and $PM_{2.5}$ emissions from site preparation (e.g., excavation, grading, and clearing); off-road equipment, material import/export, worker commute exhaust emissions, paving, and other miscellaneous activities. Typical construction equipment associated with development and redevelopment projects includes dozers, graders, excavators, loaders, and trucks. Construction emissions of these pollutants have the potential to be substantial, and	Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.4-2: Reduce Temporary Construction Emissions of ROG, NO_X, PM_{10} and $PM_{2.5}$.** Within 12 months of adoption of an updated Regional Plan, TRPA will coordinate with local governments to develop and effectuate the implementation of Best Construction Practices for Construction Emissions that require, as a condition of project approval, implementation of feasible measures and Best Management Practices to reduce construction-generated emissions to the extent feasible. Until that time, TRPA will continue existing practice to require measures developed on a project-specific basis. Such measures shall include those listed below to the	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
would result in a **potentially significant** impact to air quality for Alternatives 1, 2, 3, 4, and 5.		extent they are not already addressed in local requirements. In addition to the mitigation measures identified below, construction of the projects located in California will be required to comply with all applicable PCAPCD or EDCAQMD rules, as appropriate, including Rule 202 (PCAPCD and EDCAQMD) regarding visible emissions, Rule 228 (PCAPCD) and 223 (EDCAQMD) regarding fugitive dust, Rule 218 (PCAPCD) and 215 (EDCAQMD) regarding the application of architectural coatings, and Rule 217(PCAPCD) and 224 (EDCAQMD) regarding cutback and emulsified asphalt paving materials. For projects located in Washoe County, projects will comply with Washoe County Health District Rules Governing Air Quality, including 040.005 Visible Emissions, 040.030 Dust Control, 040.090 Cutback Asphalts, and 040.200 Diesel Engine Idling. Where local rules and regulations pertaining to construction emissions exist, projects developed pursuant to the Regional Plan shall comply with local requirements. For projects located in California, specifically, TRPA will require the following: 〉 Project proponents shall submit to the PCAPCD or EDCAQMD, as applicable, and receive approval of, a Construction Emission/Dust Control Plan prior to any groundbreaking or tree removal activities. 〉 Prime contractors shall submit to the PCAPCD or EDCAPCD, as applicable, a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The project representative shall provide the PCAPCD or EDCAQMD, as applicable, with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		The project representative shall provide a plan for approval by the PCAPCD or EDCAQMD, as applicable, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average of 20 percent NOX reduction and 45 percent particulate reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. 〉 As a condition of approval of California transportation projects, TRPA will require individual project environmental review to confirm and demonstrate that project-generated emissions associated with construction will be within the regulatory limits of PCAPCD or EDCAQMD, as applicable, following implementation of mitigation measures. For all projects implementing the RTP/SCS, TRPA will require the following: 〉 Fugitive dust shall not exceed 40 percent opacity and not go beyond the property boundary at any time during project construction. 〉 No open burning of removed vegetation shall occur during infrastructure improvements. 〉 Minimize idling time to 5 minutes for all diesel-power equipment. 〉 Apply water to control dust as needed to prevent dust impacts offsite. Operational water truck(s) shall be onsite, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		or tracked off-site. 〉 Apply approved chemical soil stabilizers, vegetative mats, or other appropriate Best Management Practices to manufacturer's specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours). Spread soil binders on unpaved roads and employee/equipment parking areas and wet broom or wash streets if silt is carried over to adjacent public thoroughfares. 〉 Use existing power sources (e.g., power poles) or clean-fuel generators rather than temporary diesel power generators, wherever feasible.	
Impact 3.4-3 Long-Term Operational Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. Long-Term Operational Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. Mobile-source operational emissions of criteria air pollutants would be reduced over the plan implementation period under Alternatives 1 through 5. Implementation of the RTP/SCS would contribute to attainment and maintenance of air quality standards in the LTAB for ozone and PM_{10}, two pollutants for which the LTAB is currently in nonattainment. This would be a **less-than-significant** impact.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.4-4 Long-Term Operational Localized Exposure to Mobile-Source Carbon Monoxide Emissions. Long-term operational (local) mobile-source CO emissions under Alternatives 1 through 5 would not violate an air quality standard (i.e., 1-hour CAAQS of 20 ppm, 8-hour TRPA standard of 6 ppm), contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. This would be a **less-than-significant** impact for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
Impact 3.4-5 Exposure to Toxic Air Contaminant (TAC) Emissions. Because the proposed RTP/SCS does not involve siting of sensitive receptors or siting of any new stationary sources of TAC emissions, it would not result in exposure of sensitive receptors to substantial TAC concentrations. In addition, long-term, mobile-source diesel PM would decline over the plan implementation period compared to existing conditions, because of more stringent motor vehicle emissions standards. However, construction emissions may occur in proximity to sensitive receptors and may result in temporary exposure of receptors to substantial TAC concentrations in Alternatives 1 through 5. Long-term exposure of sensitive receptors in the Region to TACs would be **less than significant** for all alternatives. Short-term TAC exposure would be **potentially significant** for construction related to projects listed in all alternatives.	***Long Term:*** Alternatives 1, 2, 3, 4, and 5 – **LTS** ***Short Term:*** Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.4-5: Minimize Exposure of Sensitive Receptors to TAC Emissions during Construction.** To reduce exposure of sensitive receptors to construction-related TAC emissions, TRPA will implement Mitigation Measure 3.4-2 for all alternatives, "Reduce Temporary Construction Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$." This measure includes emissions control strategies for construction equipment that would also reduce diesel PM emissions, including limiting idling time to five minutes maximum and submitting an inventory of construction equipment to PCAPCD or EDCAQMD to demonstrate that emissions from the construction fleet would be better than statewide averages. In addition, for all alternatives, TRPA will require contractors to implement the following measures for all projects constructed pursuant to the RTP/SCS: 〉 Equip heavy-duty construction equipment with diesel particulate traps. 〉 Locate construction staging areas as far away as possible on the project site from off-site receptors. 〉 As a condition of approval, individual project environmental review shall demonstrate that current district-recommended BMPs are implemented to ensure sensitive receptors are not exposed to substantial TAC concentrations. Mitigation Measure 3.4-2 includes the opportunity to implement measures developed as part of the Best Construction Practices Policy for Construction Emissions. For projects that are permitted prior to the completion of the Best Construction Practices, TRPA will require the specific strategies listed in Mitigation Measure 3.4-2 for project approval to the extent they are not already addressed in applicable local requirements.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.4-6 Exposure to Excessive Odorous Emissions. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Neither project construction nor operation would create objectionable odors affecting a substantial number of people. This impact would be **less than significant** for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.4-7 Atmospheric Deposition. Results of NO_X emissions modeling, in the case of all alternatives, demonstrate that mobile-source NO_X emissions would decline substantially between 2010 and 2035. The Proposed Plan would be consistent with performance standards for atmospheric nitrogen deposition and would promote attainment of threshold standards for atmospheric deposition. This impact would be **less than significant** for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
3.5 Greenhouse Gas Emissions and Climate Change			
Impact 3.5-1 Increase in GHG Emissions. Implementation of any of the RTP alternatives would occur in conjunction with land use development and population growth anticipated during the plan horizon. Although the RTP strategies would improve the efficiency of transportation-related GHG emissions by increasing transit and non-motor vehicle travel, the combined influence of transportation projects, land use development, and population growth occurring during the RTP plan horizon would result in a substantial increase in overall GHG emissions (in contrast to GHG per capita) that would make a **cumulatively considerable** contribution to the significant cumulative impact of global climate change. Among the RTP alternatives, Alternative 5 would result in the largest increase	Alternatives 1, 2, 3, 4, and 5 – **S**	**Mitigation Measure 3.5-1: Minimize Construction-Related GHG Emissions.** For all the alternatives, GHG emissions from construction will be reduced to the maximum extent feasible. During construction of transportation infrastructure projects, TRPA will require the following mitigation measures to reduce GHG emissions. Other measures that are as effective may be substituted depending on the emissions control technology available at the time of project construction. 〉 Limit equipment idling time to a maximum of five (5) minutes. 〉 Recycle or reuse construction waste and demolition material to the maximum extent feasible.	Alternatives 1, 2, 3, 4, and 5 – **SU**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
in GHG emissions, followed by Alternatives 4, 2, 3, and 1. Alternative 3 would result in the most GHG-efficient transportation system; however, increased GHG emissions would be a **significant** impact for Alternatives 1, 2, 3, 4, and 5.		〉 Use electrified or alternative-fueled construction equipment to the maximum extent feasible. Use local and sustainable building materials to the extent possible. TRPA is considering the implementation of a Best Construction Practices Policy to maintain a range of potential construction-period environmental impacts at less-than-significant levels, including GHG emission impacts. When the Best Construction Practices Policy is completed and adopted, the applicable requirements listed in the adopted policy may be implemented in lieu of the actions listed above.	
Impact 3.5-2 Consistency with SB 375 targets and AB 32 goals for the California portion of the Region. RTP Alternatives 1, 4, and 5 would meet TMPO's ARB-issued SB 375 GHG-reduction target for 2020, but not for 2035. Alternatives 2 and 3 would meet both the 2020 and 2035 SB 375 GHG-reduction targets and would be the only RTP alternatives that would meet the requirements of an SCS and comply with SB 375 requirements. Consequently, Alternatives 1, 4, and 5 would not meet the criteria of an SCS and would not comply with SB 375 requirements and would not be consistent with California legislation adopted for the purposes of reducing GHG emissions. Therefore, implementation of Alternatives 1, 4, and 5 would result in a **significant** impact, because they would not help achieve GHG-reduction goals established by California intended to help address future climate change. Implementation of Alternatives 2 or 3 would be consistent with both AB 32 and SB 375 goals for GHG reduction, so impacts of Alternatives 2 and 3 would be **less than significant**.	Alternatives 1, 4, and 5 – **S** Alternatives 2 and 3 – **LTS**	**Mitigation Measure 3.5-2: Prepare an Alternative Planning Strategy in Accordance with SB 375.** If Alternative 1, 4, or 5 is selected for implementation, TMPO will prepare an Alternative Planning Strategy (APS) that demonstrates how the regional SB 375 GHG-reduction targets for the California portion of the Region would be achieved, in accordance with California SB 375. The APS will include strategies for bringing the alternative into compliance, such as additional transportation projects, development right transfer incentives, a compact land use pattern, reduced allocations, and energy efficiency measures that would result in achievement of SB 375 targets.	Alternatives 1, 2, 3, 4, and 5 – **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
3.6 Noise			
Impact 3.6-1 Short-Term Construction Noise Levels. Development under each of the five alternatives of the RTP/SCS would involve construction activity that could potentially expose nearby noise-sensitive receptors to noise levels that exceed TRPA's applicable CNEL standards for affected land uses; expose noise-sensitive receptors to noise levels that exceed applicable noise standards established by the general plan or noise ordinance of the local city or county; and/or result in a noticeable increase (i.e., 3 dBA or greater) in ambient noise levels at noise-sensitive land uses during the more noise-sensitive early morning, evening, and nighttime periods of the day that are not exempt by TRPA (i.e., 8:00 a.m. to 6:30 p.m., daily [TRPA Code Section 68.9]) or the local city or county noise ordinance. This would be a **significant** impact for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **S**	**Mitigation Measure 3.6-1: Reduce Exposure to Construction Noise.** Where local rules and regulations exist, project-related construction activity will comply with local requirements. In addition to local requirements, TRPA will develop and implement a Best Construction Practices Policy for the Minimization of Exposure to Construction-Generated Noise and Ground Vibration. The policy will require implementation of measures for the reduction of noise generated by demolition and construction activity in the Region. TRPA will require, as conditions of project approval, all applicable control measures identified by the policy. Measures for reducing exposure to construction-related noise may include, but are not limited to, the following: 〉 All construction equipment shall be equipped with properly operating mufflers and engine shrouds, in accordance with manufacturers' specifications. 〉 Equipment engine doors shall be kept closed during equipment operation. 〉 Inactive construction equipment shall not be left idling for prolonged periods of time (i.e., more than 5 minutes). 〉 Stationary equipment (e.g., power generators) and staging area for other equipment shall be located at the maximum distance feasible from nearby noise-sensitive receptors. 〉 Temporary sound walls shall be installed along the boundaries of the construction site to protect nearby noise-sensitive receptors, where feasible and applicable. 〉 Trucks hauling materials and goods to and from the construction site shall only do so during active construction periods.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		〉 All construction and demolition activity using heavy-duty, off-road equipment shall be performed during the daytime hours between 8:00 a.m. and 6:30 p.m., which is the time period exempt from TRPA noise standards by TRPA Code Section 68.9, and during any daytime hours that are exempt from the noise standards of the local jurisdiction (e.g., Placer County, El Dorado County, Douglas County, City of South Lake Tahoe). Noise-generating construction activity may occur during other times of the day if a site-specific, project-specific, technically adequate noise analysis determines that the resultant noise levels would not exceed TRPA noise standards or any applicable standards established by the local jurisdiction. For projects that are permitted prior to the completion of the Best Construction Practices Policy for the Minimization of Exposure Construction-Generated Noise and Ground Vibration, TRPA will require the mitigation measures listed above for project approval to the extent they are not already addressed in applicable local requirements.	
Impact 3.6-2 Ground Vibration. Implementation of the proposed RTP/SCS alternatives would include construction activities that could expose nearby buildings, structures, and people to excessive levels of ground vibration. This would be a **significant** impact for all alternatives	Alternatives 1, 2, 3, 4, and 5 – **S**	**Mitigation Measure 3.6-2: Reduce Exposure to Construction-Generated Ground Vibration.** The Best Construction Practices Policy for the Minimization of Exposure to Construction-Generated Noise and Ground Vibration, which is required by Mitigation Measure 3.6-2, will also include measures to address vibration generated during construction and demolition activity. TRPA's Best Construction Practices Policy may include required setback distances for various types of construction equipment that generate ground vibration, as well as criteria for conducting site-specific studies where these setback distances cannot be maintained. Measures required by the policy to minimize exposure to ground vibration may include, but are not limited to, the following:	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		Where local rules and regulations exist regarding ground vibration, projects will comply with local requirements. In addition to local requirements, TRPA will require proponents of transportation projects to implement the following mitigation measures during construction, to the extent they are not already addressed in applicable local requirements: 〉 Sonic pile driving shall be performed instead of impact pile driving, wherever feasible; 〉 To further reduce pile-driving ground vibration impacts, holes shall be predrilled to the maximum feasible depth to reduce the number of blows required to seat the pile; 〉 All construction equipment on construction sites shall be operated as far away from vibration-sensitive sites as reasonably possible; 〉 Earthmoving and ground-impacting operations shall be phased so as not to occur simultaneously in areas close to off-site sensitive receptors, to the extent feasible. The total vibration level produced could be significantly less when each vibration source is operated at separate times; 〉 No construction or demolition activity shall be performed that would expose an existing structure to levels of ground vibration that exceeds 0.20 in/sec PPV. The vibration control program shall include minimum setback requirements for different types of ground vibration-producing activities (e.g., pile driving, blasting) for the purpose of preventing damage to nearby structures. Established setback requirements can be breached if a project-specific, site specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures.	

able S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		〉 No construction or demolition activity shall be performed that would expose human activity in an existing building to levels of ground vibration that exceed FTA's 80 VdB standard. The vibration control program shall also include minimum setback requirements for different types of ground vibration-producing activities (e.g., pile driving, blasting) for the purpose of preventing negative human response. Established setback requirements can be breached only if a project-specific, site-specific, technically adequate ground vibration study indicates that the buildings would not be exposed to ground vibration levels in excess of 80 VdB, and ground vibration measurements performed during the construction activity confirm that the buildings are not being exposed to levels in excess of 80 VdB; or at least two weeks' advanced notice is provided to owners and renters of residential buildings that would be exposed to ground vibration levels within the applicable setback distance; and hotel accommodations are offered to inhabitants of residences within the applicable setback distance at the expense of the project applicant. TRPA will only approve projects that would comply with the requirements of the Best Construction Practices Policy for the Minimization of Exposure to Construction-Generated Noise and Ground Vibration. For projects that are permitted prior to the completion of the Best Construction Practices Policy, TRPA will require the mitigation measures listed above for project approval to the extent they are not already addressed in applicable local requirements.	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.6-3 Long-Term, Operational, Transit-Related Noise Levels. Implementation of the proposed RTP/SCS alternatives would include new bike trails and pedestrian improvements, expanded transit services, new waterborne transit infrastructure and service, and/or potentially new park-and-ride lots to support vanpools and inter-regional transit shuttles. However, it is not anticipated that noise associated with the operation of these activities would expose noise-sensitive receptors to excessive noise levels that would exceed applicable standards. This would be a **less-than-significant** impact.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.6-4 Long-Term Traffic Noise Levels along Existing Roadway Alignments. Each of the RTP/SCS alternatives would include a particular transportation strategy package and reflects different numbers and types of new allocations for development authorized by TRPA that could be constructed over the planning horizon of the RTP/SCS. Different policies and redevelopment incentives proposed under each of the alternatives would influence the rate and location of new development, the modes of transportation that would serve the Region, and ultimately the increase in new vehicle trips on highways. Traffic modeling was conducted for each alternative that projected ADTs for road segments in the Region, which were used as inputs to the traffic noise model. Long-term traffic noise levels under any of the five SCS/RTP alternatives could exceed threshold standards established by TRPA for different land use categories and highway corridors; and/or result in a long-term noise level increase in an area where the applicable TRPA threshold standard is already exceeded. This would be a **significant** impact.	Alternatives 1, 2, 3, 4, and 5 – **S**	**Mitigation Measure 3.6-4: Reduce Highway Traffic Noise Levels.** TRPA will develop and effectuate the implementation of a traffic noise reduction program in coordination with local governments to attain traffic noise levels along highways in the Region where they currently exceed applicable TRPA standards and to maintain traffic noise levels along highways in the Region where they currently do not exceed TRPA standards. Until that time, TRPA will continue its existing practice of requiring measures to be developed on a project-specific basis. Measures may include those required as conditions of approval for development projects and those to be implemented by TRPA to address cumulative, regional noise levels. Traffic noise mitigation measures will be implemented through local government and/or TRPA permitting activities. When the traffic noise reduction program is adopted and implemented, the applicable requirements listed in the adopted policy may be implemented in lieu of the actions listed below. Where local rules and regulations exist, projects will comply with local requirements regarding the exposure of pre-existing noise-sensitive receptors to traffic noise levels. Generally, standards established by local jurisdictions in the Region are less stringent (i.e., higher) than TRPA-established noise standards. In addition to local requirements, TRPA will require	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		proponents of land use development projects to implement the following mitigation measures, where feasible, and to the extent they are not already addressed in applicable local requirements, to protect both on- and off-site noise-sensitive receptors: 〉 Construction/use of barriers, berms, and/or acoustical shielding (reductions of 3 dB to 5 dB)—Any barriers shall blend into the overall landscape and have an aesthetically pleasing appearance that agrees with the color and rural character of the general area, and not become the dominant visual element of the community. Relocation of existing vegetation and/or landscaping may also be necessary to achieve an aesthetically pleasing appearance; 〉 Replacing driveways that provide access from highways to individual buildings with a common access way that routes ingress and egress traffic to nearby intersections in order to reduce the number of gaps in barriers and berms (reductions site-specific); 〉 Planting of dense vegetation in key locations where noise absorption is needed (reductions site-specific); 〉 Utilizing noise-reducing pavement, including repaving existing roadways with noise-reducing pavement (reductions of 2-5dB)—All pavement must be suitable for the Tahoe climate and snow removal needs; 〉 Reducing speed limits and/or implementing traffic-calming measures that slow travel speeds, if feasible and practical (reductions of 1-2 dB); 〉 Realigning segments of the highway to reduce noise-sensitive areas to exposure of traffic noise from that highway segment (reductions site-specific); 〉 Funding the acquisition of additional right-of-way adjacent to the particular roadway segments to	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		remove existing noise-sensitive receptors, including existing residences (reductions site-specific); 〉 Funding acoustical treatment of buildings (reductions of 3-5 dB); and/or 〉 Any measures that would, based on substantial evidence, reduce the number of vehicle trips associated with project operations, such as an employee carpool or vanpool program, shuttle bus service for residents or tourists, parking fees, and bicycle amenities. Prior to adoption of the traffic noise reduction program, TRPA will continue to evaluate individual projects at the project level and enforce its CNEL standards on a project-by–project basis pursuant to the noise limitations in Chapter 68 of the TRPA Code. For projects that do not require environmental documentation beyond a checklist, TRPA may apply general noise reduction measures in the twelve months preceeding adoption of the Region-wide traffic noise reduction plan.	
Impact 3.6-5 Long-Term Traffic Noise Levels along Realigned Roadways. Projects involving the realignment of existing roadways would relocate traffic and attendant noise to locations that were previously more quiet and to where future traffic noise levels could exceed the CNEL standards established by the applicable Community Plan and/or PASs and/or local jurisdictions. This would be a **significant** impact.	Alternatives 1, 2, 3, 4, and 5 – **S**	**Mitigation Measure 3.6-5: Reduce Traffic Noise Levels Along Realigned Roadways.** TRPA will require the project proponents of roadway realignment projects to perform detailed noise studies for their respective projects, including the State Route 89/Fanny Bridge Community Revitalization Project and/or the US 50 South Shore Community Revitalization Project, if the selected alternative results in the location of the highway alignment closer to noise sensitive land uses. Each study will account for site-specific and project-level details not available at this time (e.g., selection of preferred alternative, precise routing of the new or revised alignment, changes in grade, pavement type, travel speed, roadway dimensions [lane widths, median size], and surrounding land coverage). Each project-	Alternatives 1, 2, 3, 4, and 5 – **LTSP**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		specific study will determine whether applicable TRPA noise standards would be exceeded, including the applicable CNEL standards established by the local Community Plan or PASs, and whether noise-sensitive receptors would be exposed to noise levels that exceed local city or county noise standards. Project-level studies and all necessary mitigation for each roadway alignment will be funded by the agency or agencies responsible for the project implementation. Sufficient measures will be implemented to ensure that CNEL standards established by the applicable Community Plan and PASs would not be exceeded, including in those areas located outside the corridor in which TRPA's highway-specific CNEL standards apply (i.e., 55 CNEL for SR 89 and 65 CNEL for US 50 within 300 feet of the road edge), and also to ensure that traffic noise levels that would expose noise-sensitive receptors to levels that exceed applicable standards of local jurisdictions would be reduced to the extent necessary (levels below the applicable CNEL standard). TRPA will not approve any roadway realignment that would cause traffic noise levels to exceed a threshold standard designated by TRPA for any land use category, including the CNEL standards designated for different land use types by Community Plans and PASs. In addition, TRPA will not approve any roadway realignment that would result in a long-term noise level increase, of any magnitude, in an area where the applicable TRPA threshold standard is already exceeded. Similarly, the local city or county will not approve any roadway realignment project that would expose noise-sensitive receptors to noise levels that exceed its applicable standards after implementation of all feasible mitigation. Such mitigation may include, but will not necessarily be limited to the following: 〉 Refinement of the roadway realignment design to minimize the area affected by increased noise levels that exceed applicable Community Plan or PAS	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		standards and to minimize traffic noise levels where they expose noise-sensitive receptors to levels that exceed local noise standards; 〉 Revision to the Community Plan/PAS/community center boundaries to encompass realigned roadways and modify the TRPA-designated CNEL standards within community centers to allow for higher noise levels, consistent with the goal of creating compact, higher intensity land uses in the centers; 〉 Revision to the applicable Community Plans and PASs so that they specify that the CNEL standards for the realigned highways, which override the Community Plan- and PAS-established land-use based CNEL standards in areas within 300 feet from the roadway edge, also apply to the corridors of all realigned highways inside the respective planning areas; 〉 Expansion of the highway corridor that is exempt from TRPA-established CNEL standards for nearby land uses; 〉 Acquisition of additional right-of-way adjacent to the realigned roadways to remove existing noise-sensitive receptors, including existing residences. 〉 Construction of noise barriers, berms, walls, and/or acoustical shielding to reduce traffic noise levels along the new alignments. Any barriers shall blend into the overall landscape and have an aesthetically pleasing appearance that agrees with the color and rural character of the general area, and not become the dominant visual element of the community. Relocation of existing vegetation and/or landscaping may also be necessary to achieve an aesthetically pleasing appearance; 〉 Replacement of driveways that provide access from highways to individual buildings with a common access	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		way that routes ingress and egress traffic to nearby intersections in order to reduce the number of gaps in barriers and berms; 〉 Planting of dense vegetation in key locations where noise absorption is needed; 〉 Use of noise-reducing pavement, including repaving existing roadways with noise-reducing pavement—all pavement must be suitable for the Tahoe climate and snow removal needs; 〉 Reduction of speed limits and/or implementing traffic-calming measures that slow travel speeds, if feasible and practical; 〉 Implementation of programs to pay for noise mitigation such as low-cost loans to owners of noise-impacted property or establishment of developer fees; 〉 Acoustical treatment of buildings; and 〉 Additional measures that would, based on substantial evidence, reduce the number of vehicle trips associated with project operations, such as an employee carpool or vanpool program, shuttle bus service for residents or tourists, parking fees, and bicycle amenities.	
3.7 Geology, Soils, Land Capability, and Coverage			
Impact 3.7-1 Site Topography, Grading, and Soil Erosion. Implementation of the RTP/SCS could expose soils and SEZs to adverse effects from erosion during construction activities related to roadway, bikeway, and trail enhancements. However, grading and earthmoving activities within the Region would be required to obtain grading and excavation permits and approvals in accordance with TRPA Code Chapter 33 and local jurisdictions. Adherence to existing regulations and permit requirements would reduce the potential for substantial soil	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
erosion or loss of topsoil for all alternatives (Alternatives 1, 2, 3, 4, and 5). Therefore, this impact would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.			
Impact 3.7-2 Seismic hazards. Projects proposed under the RTP could increase risk of injury or property damage from strong ground shaking or seismic-related ground failure caused by unstable soils. Projects implemented as part of the RTP would be designed and constructed in accordance with the current design requirements of Uniform Building Code (UBC) Seismic Zone 3 and local jurisdiction seismic standards, if applicable. In addition, projects would be required to implement seismic design recommendations contained in project-specific geotechnical reports as identified in the TRPA Code of Ordinances. Therefore, there would be no substantial increased risk of injury or property damage from strong ground shaking or seismic-related ground failure. This would be a **less-than-significant** impact for all RTP alternatives (Alternatives 1, 2, 3, 4, and 5).	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.7-3 Other Geologic Hazards. Projects proposed under the RTP have the potential to be constructed on or through soils or geologic formations susceptible to lateral spreading, subsidence, or collapse, thereby increasing the risk to people and facilities. Projects implemented as part of the RTP would be assessed on a project specific basis and would be required to conform to existing regional and local regulations and standards of design, grading, and construction practices to avoid or reduce hazards associated with other geologic hazards. Therefore, for all RTP/SCS alternatives (Alternatives 1, 2, 3, 4, and 5) there would be no substantial increased risk to people and infrastructure from other geologic hazards. This would be a **less-than-significant** impact for all alternatives (1, 2, 3, 4, and 5).	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.7-4 Land Coverage. Implementation of the RTP/SCS would result in removing, relocating, and adding coverage within the Region, potentially resulting in increased coverage. All transportation projects included in the RTP/SCS that result in additional coverage would either be Linear Public Service Facilities; limited to the percent coverage allowed for each LCD set forth in TRPA Code of Ordinances Chapter 30; or required to compensate for added coverage in excess of the base allowable by identifying, purchasing, and transferring coverage from offsite parcels in accordance with TRPA Code of Ordinances Chapter 30. As a result, any increase in the total coverage in the Region would be avoided, compensated, or minimized (for Linear Public Services Facilities), and would be consistent with the Code. Therefore, for all RTP alternatives (Alternatives 1, 2, 3, 4, and 5), the impact to total coverage in the Region would be **less than significant**.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
3.8 Hydrology and Water Quality			
Impact 3.8-1 Water quality issues related to construction. All five alternatives would result in construction of new transportation projects. Soil disturbance associated with construction activities could cause accelerated soil erosion and sedimentation or the release of other pollutants to nearby water bodies. Potential short-term impacts from construction activities in the Tahoe Region are avoided or minimized through stringent existing state, federal, local, and TRPA regulations, which require the implementation and maintenance of temporary BMPs to protect water quality during construction. Any new transportation projects implemented with associated stormwater systems under the five alternatives would also be required to comply with their respective jurisdiction NPDES permit and integrate low-impact development techniques and onsite filtration of stormwater. Projects with the potential to release hydrocarbons would also be required to implement pre-treatment measures for their	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
removal prior to infiltration. Because construction of all projects included in the RTP/SCS alternatives would be required to conform to stringent applicable state, federal, local, and TRPA regulations pertaining to protection of water quality from construction, this impact would be **less than significant** for all alternatives.			
Impact 3.8-2 Stormwater runoff, drainage capacity, infiltration related to pollutants reaching the Lake. All five RTP/SCS alternatives would include development of many stormwater treatment and erosion/sediment control projects that would result in net decreases in sediment and nutrient transport to the Lake. Although some transportation projects (such as bicycle paths and realigned highways) would create new impervious surfaces and attendant runoff (including on erodible slopes and SEZ), drainage would be controlled and runoff would be treated, so that the capacity of receiving stormwater systems or natural drainages would not be exceeded and sediment transport to the Lake would not be increased. Any new transportation projects would be required to comply with the stringent stormwater and sediment control measures in the Lahontan Water Quality Control Plan, the Lake Tahoe TMDL Program, and existing NPDES permits. These controls would include permanent BMPs, low-impact development techniques, and onsite stormwater infiltration to accommodate at least a 20-year, one-hour storm, which would prevent an increase in volume or peak flows leaving the project sites. Over time, BMP maintenance is critical to proper functionality. Lack of maintenance could result in the transport of sediment and other pollutants to nearby water bodies; however, existing TRPA policy requires a maintenance program for BMPs. Because all five RTP/SCS alternatives would include new stormwater treatment and erosion control projects and transportation projects would be required to control, treat, and infiltrate runoff produced from any increases in impervious area, the net impact on long-term stormwater runoff and	Alternatives 1, 2, 3, 4, and 5 – **Beneficial**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **Beneficial**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
potential for pollutants to reach the Lake would be **beneficial** for Alternatives 1, 2, 3, 4, and 5.			
Impact 3.8-3 Lake Tahoe TMDL attainment and Lake clarity. All RTP/SCS alternatives would assist with attaining the Lake Tahoe TMDL program goals, because Transportation Strategy Packages A, B, and C include stormwater-control projects specifically designed to address TMDL requirements and help reach or maintain the threshold standard for water quality and Lake clarity. The benefits of reduced pollutant loads from stormwater-control projects would be substantial. All alternatives would result in a **beneficial** impact in helping support TMDL program attainment and Lake clarity.	Alternatives 1, 2, 3, 4, and 5 – **Beneficial**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **Beneficial**
Impact 3.8-4 Potential for Lake water quality effects of waterborne ferry operations. Alternatives 1, 3, 4, and 5 would include implementation of regular ferry service on the Lake between the North Shore and South Shore through the Lake Tahoe Waterborne Transit Project. The ferry service would involve operation of multiple vessels on regular schedules, fueling of vessels, and regular vessel maintenance, all of which involve the risk of discharge of pollutants to Lake Tahoe through accidental spills, vessel discharges, or runoff from shoreland ferry facilities. Ferry operations could potentially increase vessel wakes disturbing the Lake shore and require temporary construction disturbance for pier improvements and related facilities. Recognizing vessel discharge regulations, requirements for runoff control and treatment, best management practices for avoiding accidental spills, and normal vessel nearshore speed limits to retard wakes, the potential water quality impacts of ferry operation would be **less than significant** for Alternatives 1, 3, 4, and 5. **No impact** would occur for Alternative 2, which does not include the Lake Tahoe Waterborne Transit Project.	Alternatives 1, 3, 4, and 5 – **LTS** Alternative 2 – **NI**	No mitigation is required for any of the alternatives.	Alternatives 1, 3, 4, and 5 – **LTS** Alternative 2 – **NI**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.8-5 Changes in currents, related to changes in the natural littoral processes, or the course or direction of water movements in Lake Tahoe. RTP alternatives 1, 3, 4, and 5 that include the Lake Tahoe Waterborne Transit Project under Transportation Strategies A and C could potentially impact natural littoral processes that may exacerbate shoreline erosion through the expansion of existing piers or installation of new piers, docks or in-shoreline facilities to support expanded ferry operations. Because projects under Alternatives 1, 3, 4, and 5 would be required to comply with TRPA's policies and regulations for new construction and maintenance activities within the Lake Tahoe shoreline to avoid interference with littoral currents and natural shoreline processes, this would be a **less-than-significant** impact for Alternatives 1, 3, 4, and 5. Alternative 2 would have **no impact** on shoreline processes.	Alternatives 1, 3, 4, and 5 – **LTS** Alternative 2 – **NI**	No mitigation is required for any of the alternatives.	Alternatives 1, 3, 4, and 5 – **LTS** Alternative 2 – **NI**
Impact 3.8-6 Development and the 100-year flood hazard area. Flood risk is relatively low as a percent area basis within the Tahoe Region, because of the mountainous terrain and minimal occurrence of flood hazard as a whole; however, all RTP alternatives would potentially build roadway, trails, and multi-use bridges and walkways across rivers, creeks, and 100-year floodplains. Any project that would encroach upon, or cross a 100-year flood hazard area would be required to adhere to several federal, state, regional and TRPA requirements for protection of public safety, property and environment from any impacts that may occur due to construction or obstruction within a 100-year flood hazard area. Therefore, this potential impact would be **less than significant** for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
esource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.8-7 Direction and rate of flow of groundwater. Projects included under all the RTP alternatives would involve construction that has the potential to intercept and/or redirect groundwater flows from excavations and below ground surface installations of piers, abutments, parking structures, bike trails, transit facilities or other structures or drainage improvements. Any project under all RTP alternatives that would propose below ground installations that could potentially disrupt groundwater movement is required to follow the TRPA grading standards that require such projects to fully mitigate those impacts prior to approval to protect groundwater resources. Therefore, the potential to interfere with groundwater flow would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
3.9 Scenic Resources			
Impact 3.9-1 Effects on Existing Scenic Quality or Scenic Resources. Transportation projects included in the RTP would be designed consistently with TRPA scenic requirements. Many projects would provide the opportunity to enhance scenic quality and community design in urban areas through community revitalization, urban trail corridors, or implementation of complete streets. Nonetheless, new transportation facilities may alter or cause degradation to the existing scenic quality of Roadway or Shoreline Travel Units or damage scenic resources in rural areas as a result of construction activities and the introduction of new or expanded facilities or structures. TRPA scenic requirements in the Code of Ordinances would avoid and reduce adverse effects and many projects would improve existing scenic quality; however, the potential for development of transportation facilities to degrade scenic quality in rural areas and the shorezone/shoreland cannot be entirely dismissed. Although attaining and maintaining threshold standards, including those protecting scenic quality, is an inherent objective of the RTP/SCS, there would be a	Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.9-1a: Require Construction Screening.** As a condition of approval for all construction projects related to all five RTP/SCS alternatives, the project proponent (e.g., Tahoe Transportation District (TTD), local County, Caltrans, NDOT) will ensure that construction-related activity is screened and maintained by installing visual screen fencing, storing building materials and equipment within the proposed construction staging areas or in areas that are as far away or hidden from public view as feasible and removing construction debris promptly. **Mitigation Measure 3.9-1b: Implement Scenic Impact Avoidance and/or Mitigation Through TRPA Design Review.** Considerable discretion is involved in determining how new structures will either avoid adverse scenic impacts or if needed, apply compensatory scenic mitigation. Transportation facilities, including new buildings and structures, will be required to undergo detailed design review and determinations of consistency with TRPA scenic requirements during project planning and environmental review. For the Lake Tahoe Waterborne Transit Project, ferry berthing and maintenance	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternative			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
potential for a significant scenic impact related to implementation of new projects, because considerable discretion needs to be applied to projects to determine how scenic impacts would be avoided, or if needed, what compensatory scenic mitigation may be required. A **potentially significant** impact on scenic quality and scenic resources is recognized for all five RTP/SCS alternatives.		facilities will be limited to existing marina piers and buildings, if feasible. If not, the visible mass of new or expanded piers and buildings will be designed in accordance with TRPA Shorezone and Shoreland scenic requirements, including compensatory scenic mitigation, if needed. All projects will be required to help attain and maintain scenic threshold standards. If projects are found during the project review to be potentially inconsistent with scenic requirements or potentially may not help attain and maintain scenic threshold standards, project proponents will work with TRPA to modify project design or identify project-specific scenic mitigation measures to ensure that all required scenic requirements and threshold standards are met, specifically: Travel Route Ratings, Scenic Quality Ratings, Public Recreation Areas and Bike Trails Scenic threshold standards, and Community Design.	
Impact 3.9-2 Effects on Scenic Vistas from a Public Road or other Public Area. Proposed new pedestrian and bicycle trails would, in some locations, provide enhanced public access to vistas of the Lake. Waterborne transit offers a new type of high viewer-volume, public, on-lake access to Lake and Basin rim vistas. If new or expanded ferry piers are needed in the shorezone, or if parking, ferry terminal, or ferry maintenance structures and buildings are needed in the shoreland, the potential for blockage or interference with scenic Lake vistas is conceivable; however, shorezone and shoreland scenic requirements are designed to avoid such effects. Nonetheless, the potential for development of ferry facilities that may interfere with Lake vistas cannot be entirely dismissed. Transportation projects that would involve roadway, trail, stormwater, and other public works improvements would not block or interfere with scenic vistas, because they either consist of "horizontal" infrastructure (such as grading, drainageways, or paving) or involve smaller, "vertical" structures that would not be large enough to interfere with scenic vistas (such as	Alternatives 1, 3, 4, and 5 – **PS** Alternative 2 – **LTS**	In addition to implementing projects in a manner that is consistent with Design Review Guidelines, Shorezone Ordinance requirements, and scenic standards, the following mitigation applies for Alternatives 1, 2, 3, 4, and 5. Alternative 2 does not require mitigation. For Alternatives 1, 3, 4, and 5, TRPA will implement Mitigation Measure 3.9-1b. See above, for a description of the mitigation measure under Impact 3.9-1.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
transit shelters, low bridge railings, unobstructive trail alignments). Nearly all of the transportation projects in the RTP would enhance public access to scenic vistas, or would not be of a size or height that would create the potential for interference with scenic vistas. For alternatives that include the Lake Tahoe Waterborne Transit Project, the potential for shorezone and shoreland structures to adversely affect Lake vistas cannot be entirely dismissed, which would constitute a **potentially significant** impact for Alternatives 1, 3, 4 and 5. Effects on scenic vistas from public areas would be a **less-than-significant** impact for Alternative 2.			
Impact 3.9-3 New Sources of Light or Glare. The Transportation Strategy Packages in the RTP/SCS include several facilities and operations that would not include additional outdoor lighting, such as bicycle paths in rural areas, TMDL projects, or continued operation of existing transit. Other projects would add lighting in existing, illuminated community centers, such as road realignments, community revitalization projects, pedestrian and bicycle trails in urban settings, and a complete street project. Because of the existing urban setting and minimal additional light sources, no significant adverse night lighting or glare effects would occur. The Lake Tahoe Waterborne Transit Project would include new passenger terminals and a maintenance facility, which could include additional exterior lighting along the shorezone and shoreland. This additional lighting would be very localized, designed for low glare and night glow, and would not contribute substantial new sources of light or glare to the Region. Existing regulations and standard design practices would restrict light fixture locations, lighting visibility from other sites, the type and intensity of lights, and the direction of light projection. The localized nature of new light sources and use of standard low glare and night glow designs would avoid significant change in light and glare in the Region. This would be a **less-than-significant** scenic impact for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
3.10 Biological Resources (Vegetation, Wildlife, and Fisheries)			
Impact 3.10-1 Sensitive Habitats. Sensitive habitats in the Tahoe Basin include a variety of wetland/riparian communities such as wet meadows, riparian zones along streams, marshes, seasonal wetlands, drainages, springs, fens, bogs, and deep water plant communities of Lake Tahoe. Most of these communities are also designated by TRPA as SEZ and habitats of special significance. Implementation of projects under all alternatives (Alternatives 1, 2, 3, 4, and 5), depending on their specific locations, could result in removal or disturbance of habitats considered sensitive by USACE and TRPA, including riparian vegetation, SEZ, and potential jurisdictional wetlands. Construction-related disturbances could occasionally occur in or otherwise directly or indirectly affect areas that may support sensitive habitats, including SEZs, outside of existing disturbed areas. This potential habitat loss would be a **potentially significant** impact to SEZs and other sensitive habitats in the Basin for all alternatives. Depending on the specific locations, types, and objectives of water quality improvements under Alternatives 1, 2, 3, 4, and 5, long-term impacts to stream and lake habitats are **potentially beneficial**.	Alternatives 1, 2, 3, 4, and 5 – **PS** and **Potentially Beneficial**	**Mitigation Measure 3.10-1a: Implement Vegetation Protection Measures and Revegetate Disturbed Areas**. Vegetation will not be disturbed, injured or removed, except in accordance with the Code or conditions of Project approval. All trees, major roots, and other vegetation, not specifically designated and approved for removal in connection with a project will be protected according to methods approved by TRPA. All vegetation outside the construction site boundary, as well as other vegetation designated on the approved plans, will be protected by installing temporary fencing pursuant to subsections 33.6.9 and 33.6.10. Areas outside the construction site boundary that sustain vegetation damage during construction will be revegetated according to a revegetation plan in accordance with Section 61.4. **Mitigation Measure 3.10-1b: Conduct Delineation of Waters of the United States and Obtain Authorization for Fill and Required Permits**. Prior to the start of on-site construction activities, a qualified biologist will survey the project area for sensitive natural communities. Sensitive natural communities or habitats are those of special concern to resource agencies or those that are afforded specific consideration, based on Section 404 of the Clean Water Act (CWA) and other applicable regulations. If sensitive natural communities or habitats that are afforded specific consideration, based on Section 404 of the Clean Water Act (CWA) are determined to be present, a delineation of waters of the United States, including wetlands that would be affected by the project, will be prepared by a qualified biologist through the formal Section 404 wetland delineation process. The delineation will be submitted to and verified by USACE. If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of the project, authorization for such fill will be secured from USACE through the Section 404 permitting	Alternatives 1, 2, 3, 4, and 5 -**LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		process. The acreage of riparian habitat (deciduous riparian vegetation) that would be removed or disturbed during project implementation will be quantified and replaced or restored/enhanced in accordance with USACE and TRPA regulations. Habitat restoration, enhancement, and/or replacement will be at a location and by methods agreeable to USACE as determined during the permitting processes for CWA Section 404 and by TRPA during the permitting process for SEZ.	
Impact 3.10-2 Tree Removal. Under all alternatives (Alternatives 1, 2, 3, 4, and 5), construction of several RTP projects would likely require the removal of native trees. Provisions for tree removal are provided in the TRPA Code of Ordinances (Chapter 61, and Chapters 33 and 36), and tree removal requires the review and approval of TRPA. For specific projects under all alternatives (Alternatives 1, 2, 3, 4, and 5), project-level planning and environmental analysis would identify potential tree removal. Tree removal as a result of specific transportation projects would be a **potentially significant** impact for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.10-2: Minimize Tree Removal and Develop a Tree Removal and Management Plan.** Where feasible, the project will avoid and minimize the removal of trees, especially those 30 inches in DBH or larger. This avoidance and minimization will be achieved through project design to the greatest extent feasible. Tree removal that cannot be avoided will be mitigated with the following measures. In accordance with Chapter 61, Section 61.1.5.C of the TRPA Code of Ordinances, a tree removal and management plan will be prepared by a qualified forester and will be submitted to a TRPA Registered Professional Forester (RPF) or other qualified TRPA professional for review and approval. TRPA approval of the plan will be obtained before project approval. Alternatively, if a timber harvesting plan is required to be submitted to California Department of Forestry and Fire Protection and meets the requirements described in this mitigation measure, the timber harvesting plan may be submitted to TRPA for review and approval in lieu of a separate tree removal and management plan. The tree removal and management plan will adhere to the provisions in Chapter 61 of the TRPA Code of Ordinances, including the preservation of trees larger than 30 inches DBH (Section 61.1.4.A). The plan will include protection measures for snags and coarse woody debris. In accordance with the TRPA criteria Standards for Common Vegetation, the plan will maintain relative species richness, relative abundance, and	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		relative age class, as appropriate and feasible, to contribute to the attainment of the region-wide Threshold Standard. Permanent disturbance (i.e., disturbance after project construction caused by the proposed project) and temporary disturbance (i.e., disturbance from construction activities) of all trees to be preserved will be minimized. This will include minimizing cuts, fills, grade changes, paving or other coverage, soil compaction, and landscaping effects within the critical root zone of all trees, as determined by a qualified environmental professional. Creation of detailed site plans and construction documents will be coordinated with a qualified environmental professional to minimize permanent and temporary disturbance. The tree removal and management plan will demonstrate how site development design will minimize the permanent disturbance of all trees to be preserved, and how construction planning will minimize temporary disturbance of all trees to be preserved. To minimize temporary disturbance, the tree removal and management plan will provide for vegetation protection during construction in accordance with Chapters 33 and 36 of the TRPA Code of Ordinances. All tree protection obligations required in the tree removal and management plan will be incorporated into construction contracts. Tree protection measures will be installed, and will be inspected by staff from TRPA before issuance of a grading permit. As part of the tree removal and management plan, a tree replacement plan may be prepared by a qualified forester, in accordance with Chapters 36 and 61 of the TRPA Code of Ordinances. Tree replacement needs and specifications will be determined in cooperation with TRPA during development of	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		the tree removal and management plan. Determining whether tree replacement is appropriate, and the amount of project-related tree removal subject to mitigation by tree replacement, should be based on several considerations related to local and Basin-wide vegetation and fuels management goals and opportunities. These considerations include: (1) the condition, stocking level, and encroachment potential of stands where trees would be removed relative to vegetation/fuels management objectives, desired ecological conditions, and relevant TRPA threshold standards for those areas (e.g., stands proposed for removal that are presently overstocked, encroaching into other native vegetation types, or otherwise undesirable may not warrant full replacement); (2) whether on- or offsite tree replacement, which could increase tree density and cover at replanting sites, would either contribute to or conflict with fuels/vegetation and forest health goals for those locations or Basin-wide; and (3) how tree replacement may affect attainment of TRPA threshold standards for vegetation. If a tree replacement plan is required, it would be submitted to and approved by a TRPA RPF or other qualified TRPA professional before tree removal or the issuance of a grading permit. Tree replacement will only be implemented in a manner that is also consistent with fire fuel management objectives for the replanted properties.	
Impact 3.10-3 Effects on Fish and Aquatic Habitat. Under all alternatives (Alternatives 1, 2, 3, 4, and 5), aquatic habitats could be affected by project construction activities associated with new or improved stream crossings, transportation facilities adjacent to aquatic habitats, and stormwater control projects. Construction could temporarily result in increased turbidity and downstream sedimentation, small amounts of fill placed in aquatic habitats, and the release and exposure of construction-related contaminants. Construction-related disturbances to fish and aquatic habitat would be a potentially significant for all alternatives. Depending on the specific	Alternatives 1, 2, 3, 4, and 5 – **PS** and **Potentially Beneficial**	**Mitigation Measure 3.10-3: Conduct Preconstruction Surveys and Develop and Implement Native-Fish Capture and Translocation Plan.** The project proponent shall develop and implement measures to prevent the construction-related loss of native fish occupying habitat within the project-specific area. In accordance with existing regulations, before any construction activities that require dewatering commence, a qualified biologist shall conduct preconstruction surveys and implement native-fish relocation activities within the construction dewatering area. All captured native fish species shall be immediately released to a suitable habitat near the project	Alternatives 1, 2, 3, 4, and 5 – **Potentially Beneficial**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
locations, types, and objectives of water quality improvements under Alternatives 1, 2, 3, 4, and 5, long-term impacts to stream and lake habitats are potentially beneficial.		area. The qualified biologist shall place nets with 1/8-inch mesh at the upstream and downstream extents of the area to be dewatered to keep fish out of the area during fish removal activities. After completion of removal activities, the work area will be cleared for dewatering. Fish rescue and relocation will continue until the area is completely dewatered or until it is determined that no fish remain in the dewatering area. This fish translocation plan will apply only to native fish species. Nonnative species captured during the pre-dewatering effort will be humanely killed and disposed of. These activities shall take place in consultation with TRPA and the Nevada Department of Wildlife (NDOW) or California Department of Fish and Game.	
Impact 3.10-4 Special-Status Plant and Wildlife Species. Under all alternatives (Alternatives 1, 2, 3, 4, and 5), construction of some RTP projects could affect special-status plant or animal species, depending on the specific locations, presence of suitable habitat and the type, timing, and specific nature of the project actions. During project-level planning and evaluation, species with potential to be affected would be determined based on the species' distribution and known occurrences relative to the project area, the presence of suitable habitat for the species in or near the project area, and preconstruction surveys. If special-status plant or wildlife species are found where RTP project-specific ground disturbance is planned, then implementing Alternative 1, 2, 3, 4, or 5 could result in their removal or disturbance. This impact would be **potentially significant**.	Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.10-4a: Conduct Follow-up, Pre-construction Surveys and Avoid, Minimize, or Compensate for Impacts on Special-Status Plant Species**. To avoid, minimize, or compensate for possible adverse effects on special-status plant species resulting from a proposed RTP project, the following management requirements would be implemented in the following order, in accordance with existing regulations: 1. A qualified botanist familiar with the vegetation of the Tahoe Basin will conduct preconstruction surveys for special-status plants that could occur in the project area and be affected by the proposed project. Surveys will be conducted during appropriate blooming periods when target species are clearly identifiable and will follow CDFG's Guidelines for Assessing the Effects of Proposed Development on Rare, Threatened, and Endangered Plants and Plant Communities (CDFG 2000). 2. If no special-status plants are found during the survey, the results of the survey will be documented in a letter report to the lead agencies that would become part of the project environmental record, and no further actions will be required.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		3. If occurrences of special-status plants are documented during the survey, they will be clearly identified in the field and protected from impacts associated with construction activities. Protective measures will include flagging and fencing of known plant locations and avoidance where possible. No construction-related activities will be allowed within areas fenced for avoidance, and construction personnel will be briefed about the presence of the plants and need to avoid effects on the populations. 4. If avoidance is not possible, a mitigation plan to reduce impacts on special-status plants to a less-than-significant level will be developed in coordination with the lead agencies, CDFG (for CNPS List 2 species), and USFS (for forest sensitive species), depending on the species affected. The mitigation plan will include provisions for minimizing impacts on special-status plant populations during construction and for relocation and establishment of plants at new protected locations in the study area. The mitigation plan will also include provisions for follow-up monitoring to determine mitigation success, and remedial measures should the initial efforts to mitigate fail. The plan will be adopted and implemented by the project proponent. **Mitigation Measure 3.10-4b: Conduct Pre-construction Surveys for Nesting Special-Status Birds, and Implement a Limited Operating Period if Necessary**. In accordance with existing regulations, for construction activities that would occur in suitable habitat during the nesting season (generally April 1–August 31, depending on species and weather), a qualified wildlife biologist will conduct focused surveys for active nest sites of special-status birds. The biologist should be able to identify Sierra Nevada bird species audibly and visually. If an active special-status bird nest is located during the preconstruction surveys, the biologist will notify TRPA and CDFG. If necessary, modifications to the project design to avoid	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		removal of occupied habitat while still achieving project objectives will be evaluated, and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, appropriate limited operating periods will be established through consultation with TRPA and CDFG and will apply to avoid disturbances during the sensitive nesting season. **Mitigation Measure 3.10-4c: Conduct Pre-construction Surveys for Special-Status Bats, Avoid Removal of Important Roosts, and Implement a Limited Operating Period if Necessary**. In accordance with existing regulations, bat surveys will be conducted by a qualified wildlife biologist within 14 days before any tree removal or clearing each construction season. Locations of vegetation and tree removal or excavation will be examined for potential bat roosts. Potential roost sites identified will be monitored on two separate occasions for bat activity, using bat detectors to help identify species. Monitoring will begin 30 minutes before sunset and will last up to 2 hours at any potential roost identified. Removal of any significant roost locations discovered will be avoided to the extent feasible. If avoidance is not feasible, roost sites will not be disturbed by project activities until September 1 or later, when juveniles at maternity roosts would be volant (i.e., able to fly).	
Impact 3.10-5 Introduction and Spread of Invasive Weeds and Aquatic Invasive Species. Construction of some RTP projects under all alternatives would involve ground-disturbing activities in disturbed and native vegetation types. These activities would temporarily create areas of open ground that could be colonized by nonnative, invasive weed species from inside or outside of the project area. Invasive weeds and other species could inadvertently be introduced or spread in the project area during grading and construction activities, if nearby source populations passively colonize disturbed ground, or if construction and personnel equipment is transported to the site from an infested area. Under Alternatives 1, 3, 4, and 5,	Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.10-5a: Implement Weed Management Practices during Project Construction**. In consultation with TRPA, the project proponent will implement appropriate weed management practices during project construction. Recommended practices include the following: 〉 A qualified biologist with experience in the Tahoe Basin will conduct a preconstruction survey to determine whether any populations of invasive/noxious weeds are present within areas proposed for ground-disturbing activities. This could be conducted in coordination with the focused special-status plant survey recommended above under Mitigation Measure	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
construction and operation of the Lake Tahoe Waterborne Transit Project, including the initial deployment of transit boats on Lake Tahoe, could facilitate the spread of aquatic invasive species into Lake Tahoe. Boats or construction equipment could harbor aquatic invasive species that could invade Lake Tahoe, if boats or equipment were exposed to those species in another water body and are not sufficiently cleaned and sanitized. The potential introduction and spread of invasive species as a result of implementing any alternative would be **potentially significant** for all alternatives.		3.10-4a, —Conduct Follow-up, Pre-construction, Focused Surveys and Avoid, Minimize, or Compensate for Impacts on Special-Status Plants. If noxious weed species are documented, they will be removed or their spread otherwise prevented before the start of construction. Control measures may include herbicide application, hand removal, or other means of mechanical control. This would help eliminate the threat of spreading the species throughout the study area and adjacent areas. 〉 All equipment entering the study area from weed-infested areas or areas of unknown weed status will be cleaned of all attached soil or plant parts before being allowed into the study area. 〉 To ensure that fill material and seeds imported to the study area are free of invasive/noxious weeds, the project will use on-site sources of fill and seeds whenever available. Fill and seed materials that need to be imported to the study area will be certified weed-free. In addition, only certified weed-free imported materials (or rice straw in upland areas) will be used for erosion control. After project construction, the study area will be monitored on an annual basis for infestations of invasive weeds until the restored vegetation has become fully established. If new populations of invasive weeds are documented during monitoring, they will be treated and eradicated to prevent further spread. **Mitigation Measure 3.10-5b: Implement Aquatic Invasive Species Management Practices during Project Construction**. In consultation with TRPA, the project proponent will implement appropriate aquatic invasive species management practices during project construction. Recommended practices include	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		the following: 〉 All equipment, including individual equipment such as waders, wading boots, etc., entering the project area that will be used in or around Lake Tahoe will be decontaminated using recommended methods before being allowed into the project area.	
Impact 3.10-6 Common Plant and Wildlife Species. Common plant and wildlife species are relatively abundant locally and regionally, and not considered limited by the availability of habitat in the Region. Under all alternatives (Alternatives 1, 2, 3, 4, and 5), implementation of RTP/SCS projects is not expected to substantially affect breeding productivity or population viability of any common species, or cause a change in species diversity locally or regionally. Additionally, the overall land use pattern and types of new development would not create new barriers to wildlife movement locally or regionally. Therefore, impacts to common plant and animal species, and effects on wildlife movement, as a result of implementing all of the alternatives would be **less than significant**.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
3.11 Recreation			
Impact 3.11-1 Compatibility with Existing Recreation Resources. The proposed RTP/SCS would result in projects in the Region that could potentially conflict with existing recreation resources and areas. However, existing Recreation Element Goals and Policies address potential conflicts and incompatibility of recreational areas and facilities with surrounding land uses. In addition, implementation of the RTP/SCS would provide new recreation facilities (i.e., trails) and improved access to existing recreation facilities for pedestrians, bicyclists, transit riders, and drivers. This impact would be **less than signific**ant for all alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.11-2 Capacity of Recreation Facilities and Resources. All RTP/SCS alternatives would implement new bicycle and pedestrian trails that would enhance recreational trail facilities and opportunities for residents and visitors. The proposed RTP/SCS would not convert recreational facilities to a non-recreation use, nor designate lands currently used for recreation for another land use or purpose; therefore, implementation of the proposed RTP/SCS would not reduce capacity of existing recreational facilities. The proposed RTP/SCS transportation strategy packages would not include new residential or commercial land uses that could directly increase use of existing, or demand for, new recreation facilities. The 1987 Regional Plan Recreation Threshold Standard includes indicators related to recreation that ensure appropriate Region-wide capacity for public outdoor recreation by assessing USFS user survey information and responding appropriately. Because of the enhancement of recreational trail opportunities, the overall impact to the capacity of recreation facilities and resources would be beneficial. This impact would be **beneficial** for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **Beneficial**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **Beneficial**
Impact 3.11-3 Public Access to Lake Tahoe, Public Lands and Recreation Areas. All proposed RTP/SCS alternatives include transportation improvement projects that would increase public access throughout the Region, including enhancing access to the Lake, public lands, and recreation areas. Improvements involve primarily alternative transportation modes, such as transit, bicycle, and pedestrian projects. None of the RTP/SCS alternatives would obstruct public access to water or public land. Implementation of the RTP/SCS would result in a **beneficial** impact for all alternatives.	Alternatives 1, 2, 3, 4, and 5 – **Beneficial**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **Beneficial**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
3.12 Population, Employment, and Housing			
Impact 3.12-1 Location and Distribution of Population, Employment, and Housing in the Region. None of the alternatives would change the location and distribution of population, employment, and housing in a manner contrary to land use planning efforts, which are aimed at modest population growth and the promotion of environmental improvements. Thus, the RTP would not induce substantial growth, and impacts related to changes in the location and distribution of population, employment, and housing within the Region would not result in adverse environmental effects. This impact would be **less than significant** for Alternatives 1, 2, 3, 4, and 5**.**	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.12-2 Displacement of Residences and Businesses. Acquisition of land and buildings necessary for highway realignments and other transportation improvements could displace existing residences and businesses. The number of residences and businesses that would be displaced as a result of a project is undetermined at this time, because project design and right-of-way planning are needed to determin the extent of necessary displacement. This would be a **significant** impact for Alternatives 1, 2, 3, 4, and 5..	Alternatives 1, 2, 3, 4, and 5 - **S**	**Mitigation Measure 3.12-2: Prepare a Relocation Assistance Plan, or Equivalent Plan.** The project proponent will consider project alternatives that avoid displacement of homes or businesses. For projects that would result in the displacement of residences or business, the project proponent will comply with federal and state requirements for the preparation a relocation assistance plan (RAP), or equivalent document. For projects on the highway system or that receive federal transportation funds, preparation of a RAP will follow the requirements of the Federal Highway Administration Relocation Assistance Program in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. RAP-equivalent documents will comply with applicable regulations that may include the California Relocation Assistance Law (California Government Code Section 7260 et seq.), the California Relocation and Real Property Acquisition Guidelines (California Code of Regulations, Title 25 and Chapter 6, Section 6000 et seq.), and Caltrans' Right of Way Manual, Chapter 10. Relocation plan typically consider:	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		〉 Criteria for replacement housing, 〉 Reimbursement criteria for moving costs and/or different housing costs (including rents); and 〉 Reimbursement criteria for businesses, including costs associated with searching for a new space, and business lost.	
3.13 Public Services and Utilities			
Impact 3.13-1 Underground Utility Lines. Implementation of the RTP would require grading and other earthmoving activities. If an underground electric, gas, water, or wastewater line were to be encountered during project disruption, there is potential that this line could become severed or damaged and impede service to the surrounding areas. However, grading and earthmoving activities within the Region would require the identification of all known underground utility lines, which would allow contractors to avoid potential conflicts with existing utility services. Thus, this impact would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.13-2 Demand for Water Supply. Implementation of the RTP could require short- and long-term water supply during construction activities, such as dust reduction techniques and irrigation to establish vegetation. Some projects could include long-term water supply for project elements including toilets, sinks, spigots, and stormwater facilities and maintenance activities. Chapter 32.4 of the Code requires that basic water service requirements for projects proposing a new structure, reconstruction, or expansion of an existing structure, designed or intended for human occupancy must have adequate water rights and water supply systems. Thus, this impact would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.13-3 Solid Waste Disposal Capacity. Some of the projects proposed under the RTP have the potential to generate a substantial amount of solid waste from activities such as grading, removal of vegetation, and reconstruction of existing facilities. Currently, sufficient capacity remains at nearby landfills, several of which are planning expansions in the near future. Because there is substantial capacity remaining at the nearby landfill, and expansion processes have begun to further increase this capacity, solid waste disposal needs would be met. This impact would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.13-4 Demand for Wastewater Collection and Treatment. RTP projects may include toilets, sinks, and drinking water fountains, which would require wastewater treatment. These facilities would increase demand for wastewater treatment. Based on Small and Decentralized Wastewater Management Systems, demand for domestic water for public restrooms is estimated at five gallons of domestic water per person per day (Crites 1998, 171). Because the level of use related to public restrooms constructed to support bicycle paths, recreation projects, and other projects is unknown, the levels could become substantial and this impact would be **potentially significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 - **PS**	**Mitigation Measure 3.13-4: Prepare and Submit PUD- or GID-Specific Requests for New Wastewater Collection and/or Treatment.** In accordance with applicable regulations, the project proponent will prepare and submit calculations for wastewater collection and treatment needs to the applicable PUD or GID. Calculations will include, but not be limited to: 〉 location of the proposed project; 〉 site design documents providing the location of existing and proposed wastewater facilities; 〉 the number of potential dwelling units, anticipated recreation users, or other applicable quantification of user type; 〉 the number of fixture units (e.g., sinks, showers, toilets, washer, etc.); and 〉 anticipated wastewater collection and treatment demand. The project proponent will obtain authorization for new wastewater collection and treatment from the applicable PUD or GID before the start of construction activities. Potential impacts resulting from construction of wastewater	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		infrastructure improvements or construction will be addressed. Mitigation measures will be proposed to reduce potentially significant impacts, as feasible, and in accordance with TRPA Code of Ordinances and other state and federal requirements (e.g., CEQA Statues and Guidelines).	
Impact 3.13-5 Access for Emergency Services. Construction projects associated with RTP implementation could affect police services, fire protection, and emergency medical services response time and delivery of emergency services. Depending on the timing, location, and duration of construction activities, several of the projects included in the RTP/SCS, including intersection improvements, roadway and bikeway enhancements, and maintenance activities, could delay emergency vehicle response time or otherwise disrupt delivery of emergency services. By closing off one or more lanes of a roadway, emergency routes could be impaired; causing traffic delays and ultimately preventing access to calls for service. Thus, this impact would be project-specific and would be a **potentially significant** impact for Alternatives 1, 2, 3, 4, and 5**.**	Alternatives 1, 2, 3, 4, and 5 - **PS**	**Mitigation Measure 3.13-5: Prepare and Implement a Traffic Control Plan in Coordination with Affected Agencies.** To minimize effects on emergency vehicle and existing public vehicular access, the project proponent for construction projects will, in accordance with applicable regulations, prepare a traffic control plan (TCP) that will address locations that will involve construction in existing roadways and rights-of-ways. The TCP will be prepared in accordance with professional traffic engineering standards and in compliance with the requirements of the affected agency's encroachment permit requirements (e.g., the affected county, Caltrans, NDOT) and will include measures that will provide notification to emergency service providers and adequate circulation around construction sites for emergency vehicle and existing public vehicular access. The TCP may include, but not be limited to, the following elements: 〉 The specific methods to maintain traffic flows on affected streets. 〉 The maximum amount of travel lane capacity during non-construction periods. 〉 Locations of flagger control for sensitive sites to manage traffic control and flows. 〉 Construction work zones width limits that, at a minimum, maintain alternate one-way traffic flow past the construction zones. 〉 Alternative routes to ensure that local residents, school buses, or emergency vehicles maintain access.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		〉 Coordinated construction activities (time of year and duration) to minimize traffic disturbances. 〉 Advanced warning posts of construction activities to allow motorists to select alternative routes in advance. 〉 Appropriate warning signage and lighting for construction zones. 〉 Appropriate and safe detour route identification if closure of a roadway is required, and signage that warns of road closures and detour routes. 〉 The TCP will be submitted to the affected agencies (county, city, NDOT, Caltrans) for review and comment.	
3.14 Hazards and Public Safety			
Impact 3.14-1 Expose the Public or Environment to Hazardous Materials. Construction activities related to each of the five alternatives could involve the storage, use, and transport of hazardous materials. However, use of hazardous materials would be typical of residential and commercial development projects in the Region and would occur in compliance with all local, state, and federal regulations. Therefore, impacts related to exposure of the public or environment to hazardous materials would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.14-2 Hazardous Materials Sites. Project sites could be located on sites that are included on a list of hazardous materials sites. Therefore, impacts related to exposure of the public or the environment to hazardous materials would be **potentially significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 – **PS**	**Mitigation Measure 3.14-1: Avoid Known Contaminated Sites.** In accordance with existing regulations, project proponents will require construction contractors to implement the following mitigation measures prior to any construction to prevent potential exposure to workers or the environment from contaminated sites: 〉 Prior to any construction activities, the project applicant will consult all known databases of contaminated sites. If it is determined that a project is located on or near a contaminated site, the implementing agency will consult with the appropriate	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		regulatory agencies (LRWQCB or DTSC in California or Nevada Division of Environmental Protection in Nevada) to either devise a remediation plan or avoid disturbance of contaminated areas. 〉 All projects should avoid, to the extent feasible, locating any construction staging areas or new transportation facilities in areas that could have been used previously for industrial/manufacturing uses, or other uses that could have involved use, handling, transport, or storage of hazardous materials (including but not limited to auto maintenance, gas station, equipment yard, dry cleaner, railroad, agriculture, mining, etc.). If such areas cannot be avoided, prior to any construction within such areas, the proponent will hire a qualified professional to conduct a Phase 1 Environmental Site Assessment (Phase I ESA), limited to the area of proposed ground disturbance that will identify the presence of any soil or groundwater contamination at concentrations that could pose health risk to construction workers. If such levels of soil or groundwater contamination are identified, the proponent will follow the recommendations in the Phase 1 ESA, which may include removal of contaminated soil, treatment and proper disposal of contaminated groundwater, or other remediation measures, all of which will be subject to applicable regulatory approvals.	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Impact 3.14-3 Exposure to Wildland Fire Hazard. Implementation of all of the five RTP/SCS alternatives would result in some level of construction activities associated with the transportation improvements that would take place in the Region. However, these activities would have no effect on fuel loading or defensible space and therefore would not result in an increased risk from wildland fire. Therefore, implementation of Alternatives 1, 2, 3, 4, and 5 would result in a **less-than-significant** impact from wildland fire hazards.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.14-4 Airport Safety Hazards. Implementation of all of the five alternatives would result in the construction of some projects in close proximity to the City of South Lake Tahoe Airport. All of the projects associated with the five RTP/SCS alternatives are transportation or water quality projects and would not result in the construction of tall buildings or structures in the vicinity of the airport that would violate the Comprehensive Land Use Plan (CLUP) airport height restriction policy. In addition, these projects would not introduce new residences in close proximity to the Airport or allow more intensive nearby development. Therefore, implementation of all five alternatives would not expose people to safety hazards from airports. This impact would be **less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.14-5 Vector-borne Disease Risks. Implementation of the 2035 RTP/SCS could include new treatment wetlands or detention basins for TMDL projects within the Region. These facilities could serve as potential breeding grounds for mosquito populations. However, these projects are easily accessible for vector control strategies and would not conflict with the ability of county and/or state agencies to conduct appropriate mosquito abatement programs. Therefore, implementation of the RTP/SCS would not result in an increased health risk from vector-borne diseases. This impact would **be less than significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 – **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
3.15 Cultural Resources			
Impact 3.15-1 Historical Resources. Demolition, alteration, or disturbance of existing features, buildings, and structures could result in changes to or destruction of historical resources. Roadway realignments, bicycle lanes, removal or replacement of bridges, and new or improved facilities (stormwater, parking, and restroom) could result in the disturbance or demolition of historic resources. Because future projects constructed under all of the alternatives could result in demolition or alteration of historical resources, this impact is **potentially significant** for Alternatives 1, 2, 3, 4, and 5.	Alternatives 1, 2, 3, 4, and 5 - **PS**	**Mitigation Measure 3.15-1a: Prepare a Site-Specific Historic Resources Inventory Report.** To adequately address the level of potential impacts for a specific project and thereby design appropriate mitigation measures, the project proponent (e.g., Tahoe Transportation District (TTD), local County, Caltrans, NDOT) will survey, inventory, and determine the significance of the historic resources within the defined area of potential effect (APE) of specific projects that include construction of facilities. The following are steps typically taken to assess and mitigate potential impacts to historic resources: 〉 Define the APE, based on relevant standards (i.e., California, Nevada, TRPA, and federal procedures, as applicable) 〉 Identify both previously recorded historic resources and those not previously recorded. 〉 Evaluate the significance of historic resources using California, Nevada, TRPA, and federal (Section 106) guidelines, as applicable. 〉 Identify the significance of impacts of the proposed project under California, Nevada, TRPA, and federal (Section 106) guidelines, as applicable. 〉 Develop and implement mitigation measures designed to avoid, minimize, rectify, reduce or eliminate the effects of the project on significant historic resources. Minimally, an historic resources inventory will consist of an historic resources records search to be conducted at the North Central Information Center of the California Historical Resources Information System located at California State University, Sacramento or at the Nevada State Historic Preservation Office (depending on the location of the project);	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		review of TRPA's cultural resources database and mapping of eligible sites; consultation with the Native American Heritage Commission (NAHC) and with interested Native Americans identified by the NAHC (i.e., Washoe Tribe in this Region); a field survey (if one has not previously been conducted); recordation of all identified historic buildings and structures on California Department of Parks and Recreation 523 Site Record forms (in California); and preparation of an historic resources inventory report describing the project setting, methods used in the investigation, results of the investigation, and recommendations for management of identified resources. Identified historic resources in California jurisdictions that may be impacted by a project will be evaluated for eligibility on the California Register of Historical Resources (CRHR). Historic resources that are eligible for the CRHR are considered to be significant historic resources. Historic resources that are identified within project areas subject to federal approval, permits, or funding will also be evaluated for eligibility for listing on the National Register of Historic Places (NRHP), in accordance with Section 106 of the National Historic Preservation Act (NHPA). Historic resources determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR and are considered to be significant historic resources. **Mitigation Measure 3.15-1b: Survey for Historic Resources.** In accordance with existing regulations, for any project that implements the RTP, the project proponent will survey and evaluate the area of potential effect of any development or other ground-disturbing activities that contain structures 50 years old or older for their historic significance prior to TRPA's approval of project plans. The survey will be carried out by a qualified historian or architectural historian who is acceptable to the lead agency and who meets the Secretary of the	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		Interior's Standards for Architectural History. If potentially significant historic resources are encountered during the survey, demolition, substantial alteration, and other adverse effects to such resources will be avoided. If avoidance of identified historic resources is deemed infeasible, with TRPA concurrence, the project proponent will prepare a treatment plan to minimize adverse effect, relocate resources, if appropriate, and photo-document and interpret any adversely affected resource. Any alterations, including relocation, to historic buildings or structures will conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. **Mitigation Measure 3.15-1c: Record Historic Buildings or Structures.** As noted in Mitigation Measure 3.15-1b, to the extent feasible, proponents of a project that implements the RTP will avoid adverse effects to historic resources. If adverse effects cannot be avoided, the proponent will prepare and implement a treatment plan in accordance with existing regulations. If avoidance or implementation of a treatment plan to protect an historic resource is not feasible, the project proponent will ensure that a qualified architectural historian will be retained to document the impacted historical architectural resource to Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) standards. HABS and HAER documentation packages will be entered into the Library of Congress as well as the North Central California Information Center of the California Historical Resources Information System. The project proponent will engage a qualified or architectural historian who is acceptable to the lead agency for the project. The historian, in cooperation with the appropriate federal, state, and local agencies, will develop and implement the	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
		approach for data recovery and building recordation that is consistent with agency requirements.	
Impact 3.15-2 Archaeological Resources. Archaeological artifacts and sites have been found throughout the Lake Tahoe Region, because people have inhabited it for approximately 10,000 years. Additional, unknown archaeological resources are likely to exist given that archaeological sites tend to be located in environments that were desirable for human settlement, such as Lake Tahoe. Construction and excavation activities associated with project activities could result in sediment disturbance and removal, which can adversely affect archaeological resources. Because RTP/SCS projects would allow excavation and other ground-disturbing activities, all of the alternatives could result in adverse physical effects to known and unknown archaeological resources. This impact is **potentially significant** for Alternatives 1, 2, 3, 4 and 5.	Alternatives 1, 2, 3, 4, and 5 - **PS**	**Mitigation Measure 3.15-2a: Prepare a Site-Specific Archaeological Resources Inventory Report.** To adequately address the level of potential impacts for a specific project and thereby design appropriate mitigation measures, in accordance with existing regulations, the project proponent will survey, inventory, and determine the significance of the archaeological resources within the defined area of potential effect (APE) of specific projects that include construction of facilities. The following are steps typically taken to assess and mitigate potential impacts to archaeological resources: 〉 Define the APE, based on relevant standards (i.e., California, Nevada, TRPA, and federal procedures, as applicable) 〉 Identify both previously recorded archaeological resources and those not previously recorded. 〉 Evaluate the significance of archaeological resources using California, Nevada, TRPA, and federal (Section 106) guidelines, as applicable. 〉 Identify the significance of impacts of the proposed project under California, Nevada, TRPA, and federal (Section 106) guidelines, as applicable. 〉 Develop and implement mitigation measures designed to avoid, minimize, rectify, or reduce or eliminate the effects of the project on significant archaeological resources. Minimally, an archaeological resources inventory will consist of an archaeological resources records search to be conducted at the North Central Information Center of the California Historical Resources Information System located at California State	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		University, Sacramento or at the Nevada State Historic Preservation Office (depending on the location of the project); review of TRPA's cultural resources database and mapping of eligible sites; consultation with the Native American Heritage Commission (NAHC) and with interested Native Americans identified by the NAHC (i.e., Washoe Tribe in this Region); a field survey (if one has not previously been conducted); recordation of all identified archaeological resources on California Department of Parks and Recreation 523 Site Record forms (in California); and preparation of an archaeological resources inventory report describing the project setting, methods used in the investigation, results of the investigation, and recommendations for management of identified resources. Identified archaeological resources in California jurisdictions that may be impacted by a project will be evaluated for eligibility on the California Register of Historical Resources (CRHR). Archaeological resources that are eligible for the CRHR are considered to be significant archaeological resources. Archaeological resources that are identified within project areas subject to federal approval, permits, or funding will also be evaluated for eligibility for listing on the NRHP, in accordance with Section 106 of the NHPA. Archaeological resources determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR and are considered to be significant. **Mitigation Measure 3.15-2b: Conduct Archaeological Testing and Data Recovery.** If it is infeasible to avoid impacts on significant archaeological sites that have been determined to be eligible for listing by the TRPA or on the CRHR or the NRHP, additional research will be conducted, in accordance with relevant procedures, based on the location of the project and the involved agencies. Archaeological excavation will be conducted (CCR Section 15126.4[b][3][C]). This work will be conducted by a qualified archaeologist and will include	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		preparation of a research design, additional archival and historical research, archaeological excavation, analysis of artifacts, features, and other attributes of the resource, and preparation of a technical report documenting the methods and results of the investigation in accordance with the California Office of Historic Preservation Guidelines for Archaeological Research Design. The purpose of this work is to recover a sufficient quantity of data to compensate for damage to or destruction of the resource. The procedures to be employed in this data recovery program will be determined in consultation with responsible agencies and interested parties, as appropriate, potentially including the development and implementation of an Archaeological Research Design and Testing Plan (ARDTP) or Historic Properties Treatment Plan (HPTP). Where necessary, future project proponents would seek Native American input and consultation. **Mitigation Measure 3.15-2c: Conduct Archaeological Monitoring.** In accordance with existing regulations, for ground-disturbing activities that have the potential to impact archaeological remains and that will occur in an area that has been determined by a qualified archaeologist to be an area that is sensitive for the presence of buried archaeological remains, the project proponent (e.g., TTD, local county, Caltrans, NDOT) will require the construction contractor to retain a qualified archaeologist to monitor those activities. Archaeological monitoring will be conducted in areas where there is likelihood that archaeological remains may be discovered but where those remains are not visible on the surface. Monitoring will not be considered a substitute for efforts to identify and evaluate cultural resources prior to the project initiation. Where necessary, the project proponent will seek Native American input and consultation.	

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
		Mitigation Measure 3.15-2d: Stop Work in the Event of an Archaeological Discovery. If potentially significant cultural resources are discovered during ground-disturbing activities associated with individual project preparation, construction, or completion, the project proponent will require the construction contractor to stop work in that area until a qualified archaeologist can access the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with TRPA and other appropriate agencies and interested parties. A qualified archaeologist will follow accepted professional standards in recording any find including submittal of the standard Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and location information to the California Historical Resources Information Center office (North Central Information Center) for California projects. The consulting archaeologist will also evaluate such resources for significance per California Register of Historical Resources eligibility criteria (PRC Section 5024.1; Title 14 CCR Section 4852). Consultation with the Nevada State Historic Preservation Officer will be undertaken for Nevada projects. If the archaeologist determines that the find does not meet the TRPA standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, the lead agency will be notified and a data recovery plan will be prepared.	
Impact 3.15-3 Accidental Discovery of Human Remains. The location of grave sites and Native American remains are potentially not known in advance, and can occur outside of identified cemeteries or burial sites. As with archaeological resources, disturbance of human remains are more likely to occur in previously undisturbed and undeveloped areas, where excavation and ground-disturbing activities have not already resulted in discovery. However, human remains may be discovered in developed and disturbed areas, as well, and may	Alternatives 1, 2, 3, 4, and 5 - **PS**	**Mitigation Measure 3.15-3: Stop Work if Human Remains are Discovered.** In accordance with existing regulations, if any human remains are discovered or recognized in any location on an individual project site, the project proponent will ensure that there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:	Alternatives 1, 2, 3, 4, and 5 - **LTS**

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Resource Topic/Impact	**Level of Significance Before Mitigation (by Alternative)**	**Mitigation Measures**	**Level of Significance After Mitigation (by Alternative)**
also be of recent origin. Construction and excavation activities associated with development activities result in sediment disturbance and removal, which can unearth human remains if they are present. Because RTP/SCS projects would allow excavation and other ground-disturbing activities, all of the alternatives could result in accidental discovery of human remains. This impact is **potentially significant** for Alternatives 1, 2, 3, 4 and 5.		a) The applicable County Coroner/Sheriff has been informed and has determined that no investigation of the cause of death is required; and b) If the remains are of Native American origin, 1. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or 2. The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.	
Impact 3.15-4 Undiscovered Paleontological Resources. There have been no recent discoveries of paleontological resources in the Tahoe Region. Basin surfaces were created by geologic uplift and have deep granitic bedrock and shallow surface soils. Because the Tahoe Region is not underlain with sedimentary rock formations (which are most likely to contain fossils), it is not likely to contain major paleontological resources. Although ground disturbing activities associated with RTP/SCS projects in all alternatives could affect subsurface resources, because the area has a low likelihood to contain paleontological resources, this impact would be **less than significant** for all alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**	No mitigation is required for any of the alternatives.	Alternatives 1, 2, 3, 4, and 5 - **LTS**
Impact 3.15-5 Ethnic and Cultural Values. Development in the Tahoe Region could result in physical changes to sites, structures, and areas that have religious or sacred significance or other cultural significance to the Washoe people. These could be permanent changes that alter, remove, or modernize features or temporary changes such as restriction of access from construction.	Alternatives 1, 2, 3, 4, and 5 - **PS**	**Mitigation Measure 3.15-5. Implement Other Cultural Resources Mitigation Measures** Implement Mitigation Measures 3.15-1a, 3.15-1b, 3.15-1c, 3.15-2a, 3.15-2b, 3.15-2c, 3.15-2d, and 3.15-3.	Alternatives 1, 2, 3, 4, and 5 - **LTS**

Table S-1. Summary of Environmental Impacts and Mitigation Measures for the RTP/SCS Alternatives			
Resource Topic/Impact	Level of Significance Before Mitigation (by Alternative)	Mitigation Measures	Level of Significance After Mitigation (by Alternative)
Because RTP/SCS projects could result in physical changes to historic and prehistoric sites, unique ethnic cultural values could be affected, and historic or prehistoric religious or sacred uses within the region could be restricted. Consultation with the Washoe tribe is required by federal, state and TRPA regulations, however, project activities could still uncover or destroy historic or archaeological resources as identified in Impacts 3.15-1 (historic) and 3.15-2 (archaeological). Additionally, as described in Impact 3.15-3 (human remains), project activities could result in accidental discovery of remains during grading and excavation. Accidentally discovered remains could be of Native American origin. Therefore, this impact is **potentially significant** for Alternatives 1, 2, 3, 4, and 5.			