EXECUTIVE SUMMARY

INTRODUCTION

Purpose of the Environmental Impact Report

In accordance with the California Environmental Quality Act (CEQA) the Southern California Association of Governments (SCAG) has prepared this Program Environmental Impact Report (PEIR) for the 2004 Regional Transportation Plan (RTP or the "Plan"). The Plan addresses the transportation needs for the SCAG region through 2030 (including both specific projects and strategies that address transportation and urban form); the purpose of the PEIR is to identify the potentially significant environmental effects of implementing the projects, programs, and policies included in the Plan. The PEIR serves as an informational document to inform decision-makers and the public of the potential environmental consequences of approving the proposed 2004 RTP, and it includes feasible mitigation measures and alternatives designed to help avoid or minimize significant environmental effects. The PEIR includes a description of the existing regional environmental setting, a description of the proposed action (the Plan), a reasonable range of alternatives to the proposed Plan, analysis and identification of significant impacts of the Plan and the alternatives, identification of the environmentally superior alternative, areas of known controversy, mitigation measures, and the expected level of significance after mitigation.

The 2004 RTP PEIR fulfills the requirements of CEQA and provides a useful, regional-scale environmental planning tool that will support subsequent, site-specific analysis, and identifies appropriate measures to minimize adverse environmental effects in the SCAG region.

Environmental Setting

The SCAG region is comprised of six counties: Imperial, Orange, Los Angeles, Riverside, San Bernardino, and Ventura and totals approximately 38,000 square miles in area. The region stretches from the state borders with Nevada and Arizona to the Pacific Ocean and from the southernmost edge of the Central Valley to the Mexican border. The region includes the county with the largest area in the nation, San Bernardino County, as well as the county with the highest population in the nation, Los Angeles County. This vast area includes millions of acres of open space and recreational land, a rich assemblage of natural resources, a wide variety of elevation, landform, soil and rock types, and climate zones, and a population of 17 million people. A detailed environmental setting is provided in each resource category in Chapter Three of this document.

Proposed Action

SCAG is the federally designated Metropolitan Planning Organization (MPO) under Title 23, United States Code (USC) 134(g)(1), for the six-county region. SCAG is required by state and federal mandates to prepare a RTP every three years.

The 2004 RTP is a long-range regional transportation plan that provides a blueprint to help achieve a coordinated and balanced regional transportation system. Transportation projects in the SCAG region must be consistent with the RTP in order to receive federal funds. The RTP includes: a policy element that includes goals, policies, and performance indicators; an action element that identifies projects, programs, and implementation. In addition the RTP includes a description of regional growth trends to help identify future needs for travel and goods movement.

Policy Element

The goals included in the 2004 RTP are to:

1. Maximize mobility and accessibility for all people and goods in the region;
2. Ensure travel safety and reliability for all people and goods in the region;
3. Preserve and ensure a sustainable regional transportation system;
4. Maximize the productivity of our transportation system;
5. Protect the environment, improve air quality, and promote energy efficiency; and
6. Encourage land use and growth patterns that complement our transportation investments.

The policies in the 2004 RTP include:

1. Transportation investments shall be based on SCAG's adopted Regional Performance indicators.
2. Ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will meet RTP priorities and will be balanced against the need for system expansion investments.
3. RTP land use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions.
4. High Occupancy Vehicle (HOV) gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy #1.

Performance indicators in the 2004 RTP include mobility, accessibility, reliability, safety, cost effectiveness, productivity, sustainability, preservation, environmental quality, and environmental justice.

Action Element

The programs, projects, and implementation actions of the proposed RTP focus on system management, transportation demand management, strategic system expansion, and the land use-transportation connection.

System Management

A key component of System Management is protecting the investment in the current transportation infrastructure. The 2004 RTP sets aside over $6 billion of additional funds for infrastructure preservation and a total budget for Operations and Maintenance of approximately $83 billion. System management includes operational strategies (getting the most out of the existing system) and the Congestion Management System (CMS).

Transportation Demand Management

Transportation Demand Management (TDM) is the all-inclusive term given to a variety of measures used to improve the efficiency of the existing transportation system by managing travel demand. TDM strategies encourage the use of alternatives to the single occupant vehicle such as carpools, vanpools, bus, rail, bikes, and walking. Alternative work-hour programs, such as compressed workweek programs, flextime and work-at-home (telework and home-based businesses) are also TDM strategies, as are parking management tactics, such as preferential parking for carpools and parking pricing.

Strategic System Expansion / Capital Investments

Highway and Arterial Investments

The 2004 RTP contains a total of approximately $39 billion in public funding for proposed, committed, and programmed highway and arterial projects. This figure includes all capital improvements for the highway and arterial network, including mixed-flow lanes, HOV lanes, interchanges, truck climbing lanes, and grade crossings, but it does not include maintenance.

Goods Movement

The focus of the goods movement improvements in the 2004 RTP is on truck traffic and freight rail. The regional transportation system will be challenged to accommodate the projected doubling of truck trips by 2030. The 2004 RTP acknowledges the need for strategies that will accommodate this future growth in truck traffic. While specific strategies and alignment determinations need further evaluation and consensus building, the Plan identifies corridor improvement needs for a number of corridors. The Plan also proposes adding a number of truck climbing lane improvements to the Region's highway system. The Regional Rail Capacity Improvement Program proposes rail capacity improvements that include a total investment of $3.4 billion in Southern California: $1.2 billion for railroad infrastructure projects and approximately $2.2 billion in grade separation projects.

Maglev System

The Maglev system is the name for an elevated monorail using advanced magnetic levitation technology to move people and goods at a very high speed (up to 310 miles per hour (mph)), with a high degree of safety, comfort, and reliability. For the past four years, SCAG has been studying the feasibility of developing four Maglev corridors in the region:

- Los Angeles Airport (LAX) to March Inland Port in Riverside
- LAX to Palmdale
- Los Angeles Union Passenger Terminal (LAUPT) to Orange County (Anaheim)
- LAX to Orange County (Irvine Transportation Center).

If implemented as scheduled, the proposed system would include approximately 275 miles of Maglev corridors in the SCAG Region by 2030 that could move up to 500,000 riders a day.

Marine Ports

The ports of Los Angeles, Long Beach and Port Hueneme are planning to invest $6 billion over the next 25 years in infrastructure development programs. These efforts will include widening arterial streets, upgrading freeway ramps, separating railroad grade crossings, expanding rail yards, and adding intelligent transportation systems (ITS) to improve ground access management.

Inland Port

The 2004 RTP identifies an inland port that would serve as a cargo facilitation center where a number of import, export, manufacture, packing, warehousing, forwarding, customs, and other activities (with possible Foreign Trade Zone and/or Enterprise Zone inclusion) could take place in close proximity or even at the same site.

Aviation

SCAG has developed a new aviation demand forecast and plan that maximizes airport efficiency on a regional scale. This new aviation plan, termed the “Preferred Aviation Plan,” is a decentralized airport demand strategy to serve a forecasted regional demand of 170 million passengers in 2030, which results in an estimated economic benefit of $18 billion and 131,000 jobs over a constrained system.

Public Transportation System

The 2004 RTP contains a total of approximately $25 billion in public funding for proposed, committed, and programmed transit projects, not including operation and maintenance. The goals of public transportation services are to ensure mobility for people without access to

automobiles and to provide attractive alternatives for drive-alone motorists or discretionary riders. Strategies include a significant increase in service availability, major expansion in the use of bus rapid transit, and some re-structuring of service to ensure efficient utilization of available capacity. New rapid bus lines will be implemented on heavily-traveled corridors and many bus lines will be added or restructured to feed into the existing and proposed urban and commuter rail system.

The 2004 RTP calls for increased and better coordination between transit and land-use planning to increase ridership, reduce congestion, and improve air quality. The regional transit program calls for the local and regional transit and planning agencies to promote transit-oriented development cooperatively along the major transit corridors. The 2004 RTP also supports development of a flexible transit system enabling a strong transit linkage to transit activity centers.

Land Use-Transportation Connection

The following tenets were developed through SCAG's Growth Visioning process to serve as the foundation for the land use strategies in the 2004 RTP:

- Using in-fill where appropriate to revitalize underutilized development sites
- Focusing growth along transit corridors and nodes to utilize available capacity
- Providing housing opportunities near job centers, and job opportunities, when appropriate, in housing-rich communities
- Providing housing opportunities to match changing demographics
- Ensuring adequate access to open space
- Changing land use to correspond to the implementation of a decentralized regional aviation strategy and its consequent short- and long-term job creation
- Changing land use to correspond to the implementation of regionally significant major transportation projects and their consequent short- and long-term job creation
- Incorporating the local input and feedback on future growth received from 90 percent of the jurisdictions in the SCAG Region.

Proposed Plan and RTP EIR Alternatives

As stated above, the PEIR for the 2004 RTP is required to evaluate a reasonable range of alternatives to the proposed 2004 RTP. The alternatives evaluated for the RTP EIR include:

The **Proposed Plan**, which includes all of the elements summarized above, contains transportation/urban-form strategies that encourage compact growth, increased jobs/housing balance, and centers-based development, where feasible, in all parts of the region.

The **No Project** Alternative includes only those programmed transportation projects that received federal environmental clearance by December 2002. These reasonably foreseeable projects fulfill the definition of the mandated CEQA No Project Alternative.

The **2001 RTP Modified** Alternative is an update of the adopted 2001 RTP to reflect the most recent growth estimates and transportation planning decisions and assumptions. This Alternative does not include urban-form strategies.

The **PILUT[1] 1 (Infill)** Alternative includes transportation investments and land use strategies that encourage a substantial portion of future growth to be concentrated in existing urban centers through infill and redevelopment. This alternative has been designed to reduce consumption of open space and habitat. Impacts of the PILUT 1 Alternative are less adverse than the Plan for each resource category, and, overall, the PILUT 1 alternative is the environmentally superior alternative.

The **PILUT 2 (Fifth Ring)** Alternative includes transportation investments and land use/transportation strategies that encourage growth toward a more decentralized urban form and an improvement in the jobs/housing balance in the outlying areas of the region. Specifically, PILUT 2 focuses on improving and expanding infrastructure to efficiently utilize undeveloped land on the outer edges of the urbanized area.

Table ES-1 below contains a summary of the environmental impacts associated with implementation of the 2004 RTP and alternatives, proposed mitigation measures, the level of impacts with implementation of the mitigation measures.

Each alternative maintains a constant population total in 2030. The year 2030 growth projection for each Alternative differs from one another in two ways: 1) numbers of households and jobs and/or 2) distribution of people, households and jobs. The alternatives differ in terms of numbers of households and jobs because different investments in the alternatives would be expected to stimulate different levels of job creation and household development. The alternatives differ in terms of the distribution because the different transportation investments and urban form strategies would be expected to support different regional distributions of population, households, and employment.

Analytical Approach

The focus of the environmental analysis in this PEIR is on the potential regional-scale and cumulative impacts of implementation of the Plan and the alternatives. The long-range planning horizon of more than 25 years necessitates that many of the highway, arterial, goods movement, and transit projects included in the Plan and the alternatives are identified at the conceptual level, and this document addresses environmental impacts to the level that they can be assessed without undue speculation. This PEIR acknowledges this uncertainty and incorporates these

[1] PILUT is Planning for Integrated Land Use and Transportation.

realities into the methodology to evaluate the environmental effects of the 2004 RTP, given its long-term planning horizon.

The proposed Plan and the alternatives were evaluated at an equal level of detail. Multiple methods, including spatial analysis, transportation, noise and air quality simulation modeling, and other quantitative, ordinal, and qualitative techniques, were employed to identify the potential environmental effects of implementing the Plan and the alternatives. Spatial analysis using Geographic Information Systems (GIS) was employed to evaluate the potential effects of the major roadway, rail, and transit projects on numerous resource categories, such as land use, biological, cultural and water resources. Sophisticated transportation, noise and air quality simulation models were used to estimate the transportation and air quality impacts. Project and policy elements of the Plan and alternatives were incorporated into the modeling analysis and into the socioeconomics projections. All of the techniques used to evaluate the potential environmental effects of the Plan and the alternatives are fully described in each resource section in Chapter Three of this document.

Baseline for Determining Significance

The PEIR must identify significant impacts that would be expected to result from implementation of the 2004 RTP. Significant impacts are defined as “a substantial or potentially substantial, adverse change in the environment” (Public Resource Code § 21068). Significant impacts must be determined by applying explicit significance criteria to compare the future Plan conditions to the existing environmental setting (CEQA Guidelines Section 15126.2(a)), and the effect is determined to be either beneficial, less than significant, significant or to have no impact compared to current conditions. The criteria for determining significance are included in each resource section in Chapter Three of this document.

Comparison with the No Project

It is important to emphasize that urbanization in the SCAG region will increase substantially by 2030, with or without implementation of the 2004 RTP, and the CEQA-required environmental baseline of current conditions means that the impact assessment for many of the resources categories is cumulative in nature. Therefore, the analysis for each resource category also includes a direct comparison between the expected future conditions with the proposed Plan and the expected future conditions if no Plan were adopted. This evaluation is not included in the determination of the significance of impacts; however, it provides a meaningful perspective on the effects of implementing the 2004 RTP. A direct comparison between the proposed Plan and the No Project Alternative is included in each resource section of Chapter Three of this document.

SIGNIFICANT IMPACTS, MITIGATION MEASURES, AND MONITORING

As stated above CEQA requires identification of significant impacts and mitigation measures to avoid or reduce significant impacts. Table ES-1 below contains a summary of the environmental impacts associated with implementation of the 2004 RTP and RTP EIR Alternatives, proposed mitigation measures, and the level of impacts with implementation of the mitigation measures.

The table illustrates that substantial or potentially substantial adverse effects, compared to current conditions, would be expected to occur to:

1) Land Use;
2) Population, Employment, and Housing;
3) Transportation;
4) Air Quality;
5) Noise;
6) Visual/Aesthetic Resources;
7) Biological Resources;
8) Cultural Resources;
9) Geology;
10) Hazardous Materials;
11) Energy;
12) Water Resources; and
13) Public Service and Utilities.

The proposed mitigation measures included in Table ES-1 can be incorporated as policies into the Final 2004 RTP and the updated Regional Comprehensive Plan, as appropriate and feasible. This integration of mitigation with regional plans would help ensure that feasible measures are implemented at the project-level (Public Resource Code § 21081.6). The project proponent or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction. SCAG shall be provided with documentation of compliance with mitigation measures through SCAG's monitoring efforts, including SCAG's Intergovernmental Review Process (in which all regionally significant projects, plans, and programs are reviewed for consistency with regional plans and policies).

Areas of Known Controversy

Areas of known controversy about the 2004 RTP include concerns raised about growth projections, implementation of urban form strategies and mitigation measures, water supply reliability, aviation elements, the transportation funding strategy, and the potential alignments for capacity enhancement projects for travel and goods movement projects. The PILUT 2 (Fifth Ring) Alternative has sparked conflict over growth patterns that facilitate growth in the High Desert and northern LA County.

Acronym List

CEQA	California Environmental Quality Act
CMS	Congestion Management System
GIS	Geographic Information Systems
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation Systems
LAUPT	Los Angeles Union Passenger Terminal
LAX	Los Angeles Airport
Maglev	Magnetic Levitation Train
MPH	Miles per Hour
MPO	Metropolitan Planning Organization
PEIR	Program Environmental Impact Report
PILUT	Planning for Integrated Land Use and Transportation
Plan	2004 Regional Transportation Plan
RTP	2004 Regional Transportation Plan
SCAG	Southern California Association of Governments
TDM	Transportation Demand Management
USC	United States Code

Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
As noted in Chapter 3.0, and the Mitigation, Monitoring and Reporting Program, all mitigation measures shall be included in project-level analysis as appropriate. The lead agency for each individual project in the Plan shall be responsible for ensuring adherence to the mitigation measures prior to construction. SCAG shall be provided with documentation of compliance with mitigation measures through the Intergovernmental Review Process.						
3.1 Land Use						
Impact 3.1-1: Implementation of the proposed 2004 RTP transportation projects would result in substantial disturbance and/or loss of prime farmlands or grazing lands throughout the six-county SCAG region.	**MM 3.1-1a:** Individual projects must be consistent with Federal, State, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible. **MM 3.1-1b:** For projects impacting agricultural land, project implementation agencies shall contact the California Department of Conservation and each county's Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy. Impacts to such lands shall be evaluated in project-specific environmental documents. The analysis shall use the land evaluation and site assessment (LESA) analysis method (CEQA Guidelines §21095), as appropriate. Mitigation measures may include conservation easements or the payment of in-lieu fees. **MM 3.1-1c:** Project implementation agencies shall consider corridor realignment, buffer zones and setbacks, and berms and fencing where feasible, to avoid agricultural lands and to reduce conflicts between transportation uses and agricultural lands. **MM 3.1-1d:** Prior to final approval of each project and when feasible and prudent, the implementing agency shall establish conservation easement programs to mitigate impacts to prime farmland. **MM 3.1-1e:** Prior to final approval of each project, the implementing agency shall to the extent practical and feasible, avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy. **MM 3.1-1f:** Prior to final approval of each project, the implementing agency shall encourage enrollments of agricultural lands for counties that have Williamson Act programs, where applicable.	This impact would remain **significant** because it is anticipated that substantial loss and disturbance of agricultural land would occur.	S (-)	S (=)	S (-)	S (+)
Impact 3.1-2: Implementation of the projects included in the 2004 RTP would result in a substantial loss or disturbance of existing open space and recreation lands.	**MM 3.1-2a:** Project implementation agencies shall ensure that projects are consistent with Federal, State, and local plans that preserve open space. **MM 3.1-2b:** Project implementation agencies shall consider corridor realignment, buffer zones and setbacks, and berms and fencing where feasible, to avoid open space and recreation land and to reduce conflicts between transportation uses and open space and recreation lands.	Implementation of the 2004 RTP would result in a potentially substantial loss and/or disturbance of open space and	S (-)	S (=)	S (-)	S (=)

Key:
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IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	MM 3.1-2c: Project implementation agencies shall identify open space areas that could be preserved and shall include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space. **MM 3.1-2d:** Prior to final approval of each project, the implementing agency shall conduct the appropriate project-specific environmental review, including consideration of loss of open space. Potential significant impacts to open space shall be mitigated, as feasible. The project implementation agencies or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction. **MM 3.1-2e:** For projects that require approval or funding by the USDOT, project implementation agencies shall comply with Section 4(f) of the USDOT Act. **MM 3.1-2f:** Future impacts to open space and recreation lands shall be avoided through cooperation, information sharing, and program development during the update of the Open Space and Conservation chapter of SCAG's RCPG and through SCAG's Energy and Environment Committee.	recreation lands. This impact would remain **significant**.				
Impact 3.1-3: The proposed 2004 RTP contains transportation projects and strategies to distribute the future growth in the region. These projects and strategies potentially would result in inconsistencies with currently applicable adopted local land use plans and policies.	**MM 3.1-3a:** SCAG shall encourage through regional policy comments that cities and counties in the region provide SCAG with electronic versions of their most recent general plan and any updates as they are produced. **MM 3.1-3b:** SCAG shall encourage through regional policy comments that cities and counties update their general plans at least every ten years, as recommended by the Governor's Office of Planning and Research. **MM 3.1-3c:** SCAG shall work with its member cities and counties to ensure that transportation projects and growth are consistent with the RTP and general plans. **MM 3.1-3d:** Planning is an iterative process and SCAG is a consensus building organization. SCAG shall work with cities and counties to ensure that general plans reflect RTP policies. SCAG will work to build consensus on how to address inconsistencies between general plans and RTP policies.	In some instances, currently adopted general plans will need to be updated, especially general plans that are known to be out of date. Thus, the impact would remain potentially **significant**.	LS	S (-)	S (+)	S (+)
Cumulative Impact 3.1-4: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to land use and would change the intensity of land	Mitigation Measures **3.1-1a through 3.1-1f, 3.1-2a through 3.1-2e, and 3.1-3a through 3.1-3d** would be applied to mitigate this cumulative impact in addition to the following measure. **MM 3.1-4a:** SCAG's Growth Visioning program and the forthcoming Regional Growth Vision will be used to build a consensus in the region to support changes in land use to accommodate future population growth while maintaining the quality of life in the region.	In order to accommodate six million more people as projected by 2030, the region will need to change land uses and increase the intensity of some	S (=)	S (+)	S (-)	S (-)

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use in some areas.		existing land use. The cumulative impact would remain **significant**.				
3.2 Population, Housing and Employment						
Impact 3.2-1: Implementation of the 2004 RTP would facilitate substantial population growth to certain vacant areas of the region.	**MM 3.2-1a:** SCAG shall work with its member agencies to implement growth strategies to create an urban form designed to utilize the existing transportation networks and the transportation improvements contained in the 2004 RTP, enhancing mobility and reducing land consumption.	The policies included in the Plan seek to direct growth in a way that is efficient for both mobility and land consumption. However, implementation of the Plan would help distribute growth to certain vacant areas of the region. Thus, the impact would remain **significant**.	LS	S (=)	S (-)	S (-)
Impact 3.2-2: Implementation of the 2004 RTP projects would require the acquisition of rights-of-way that displace a substantial number of existing homes and businesses.	Mitigation measures **MM 3.1-3a through MM 3.1-3d** would be applied to mitigate this impact in addition to the following measures. **MM 3.2-2a:** For projects with the potential to displace homes and/or businesses, project implementation agencies shall evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. An iterative design and impact analysis would help where impacts to homes or businesses are involved. Potential impacts shall be minimized to the extent feasible. If possible, existing rights-of-way should be used. **MM 3.2-2b:** Project implementation agencies shall identify businesses and residences to be displaced. As required by law, relocation assistance shall be provided to displaced residents and businesses, in accordance with the federal Uniform Relocation and Real Property Acquisition Policies Act of 1970 and the State of California Relocation Assistance Act, as well as any applicable City, County, and Port policies. **MM 3.2-2c:** Project implementation agencies shall develop a construction	Not all of the projects in the 2004 RTP will be able to be built in existing rights-of-way. A substantial number of businesses and residences likely would be displaced through the development of projects in the 2004 RTP. The impact would remain **significant**.	S (-)	S (=)	S (-)	S (+)

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	schedule that minimizes potential neighborhood deterioration from protracted waiting periods between right-of-way acquisition and construction.					
Impact 3.2-3: The 2004 RTP has the potential to disrupt or divide a community by separating community facilities, restricting community access, and eliminating community amenities.	Mitigation measures **MM 3.1-3a through MM 3.1-3d** would be applied to mitigate this impact in addition to the following measures. **MM 3.2-3a:** Project implementation agencies shall design new transportation facilities that consider access to existing community facilities, as feasible. During the design phase of the project, community amenities and facilities shall be identified and considered in the design of the project. **MM 3.2-3b:** Project implementation agencies shall design roadway improvements that minimize barriers to pedestrians and bicyclists, as feasible. During the design phase, pedestrian and bicycle routes shall be determined that permit connections to nearby community facilities.	The 2004 RTP proposes projects that have the potential to disrupt or divide communities and, considering the scale and number of these projects, impacts cannot be mitigated to a less than significant level. The impact would remain **significant**.	S (-)	S (=)	S (-)	S (+)
Cumulative Impact 3.2-4: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to currently vacant natural land.	Mitigation measure **MM 3.1-3a through MM 3.1-3d** and **3.2-1a** would be applied to mitigate this impact in addition to the following measure. **MM 3.2-4a:** SCAG's Growth Visioning program and the forthcoming Regional Growth Vision shall be used to work toward building a consensus in the region to support changes in land use to accommodate future population growth while maintaining the quality of life in the region.	The accessibility afforded by the 2004 RTP, and the expected shifts in population, households, and employment associated with the mobility benefits would change the growth patterns in the region. The impact would remain **significant**.	S (=)	S (+)	S (-)	S (-)
3.3 <u>Transportation</u>						
Impact 3.3-1: In 2030 there would be substantially more total daily Vehicle Miles of Travel (VMT) than the current daily VMT. Implementation of the 2004 RTP would contribute to this increase.	Measures intended to reduce vehicle miles traveled are part of the 2004 RTP. These include: increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation and maximizing the benefits of the land use-transportation connection and other Travel Demand Management measures (as described in the Project Description in Section 2.0). **MM 3.3-1a:** Beyond the currently financially and institutionally feasible	Implementation of measures beyond those institutionally and economically feasible measures identified in the 2004 RTP would be	S (+)	S (+)	S (-)	S (-)

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	measures included in the 2004 RTP, SCAG shall identify further reduction in VMT could be obtained through additional car-sharing programs, additional vanpools, additional bicycle programs, and implementation of a universal employee transit pass program.	expected to reduce VMT, however even with this mitigation, the 2030 VMT would be substantially greater than the existing VMT. Therefore, the increase in VMT would remain a **significant impact.**				
Impact 3.3-2: In 2030 there would be substantially higher average delay than the current condition. Implementation of the 2004 RTP would contribute to this increase.	Measures intended to reduce delay are part of the 2004 RTP. These include: system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce delay (as described in the Project Description in Section 2.0). Further reduction in delay would be obtained through the measures described for **Impact 3.3-1**.	Implementation of measures beyond those institutionally and economically feasible measures identified in the 2004 RTP would be expected to reduce delay for all vehicles, however even with this mitigation, the 2030 total delay would be substantially greater than the existing delay. Therefore, the increase in total delay would remain a **significant impact.**	S (+)	S (+)	S (-)	S (+)
Impact 3.3-3: In 2030 there would be substantially greater average delay for heavy-duty truck trips than the current condition. Implementation of the 2004 RTP would contribute to this increase.	Mitigation measures intended to reduce daily heavy-duty truck vehicle hours of delay are part of the 2004 RTP. These include: goods movement capacity enhancements, system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce heavy-duty truck delay (as described in the Project Description in Section 2.0). Further reduction in delay for *all* vehicles would be obtained through the implementation of the measures described for	Implementation of measures beyond those institutionally and economically feasible measures identified in the 2004 RTP would be expected to reduce delay for heavy	S (+)	S (+)	S (-)	S (-)

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	Impact 3.3-1. The following mitigation measure could decrease delay for heavy-duty trucks. **MM 3.3-3a:** The region's ports should extend operation hours in order to reduce heavy-duty truck traffic during peak periods, thereby reducing the VHT these trucks spend in delay.	trucks, however even with this mitigation, the 2030 heavy-duty truck delay would be substantially greater than the existing delay. Therefore, the increase in heavy-duty delay would remain a **significant impact.**				
Impact 3.3-4: Implementation of the 2004 RTP would contribute to an increase in the percent of work opportunities within 45 minutes travel time by personal vehicle or by transit in 2030, relative to the existing condition.	The impact would be beneficial. No mitigation measures are required.	The increase, between 2000 and 2030, in the percent of work trips accessible within 45 minutes travel time by auto or transit would be a **beneficial impact**.	S	LS	B	B
Impact 3.3-5: Implementation of the 2004 RTP would contribute to a lower system-wide fatality accident rate for all travel modes in 2030 compared to the existing condition.	The impact would be beneficial. No mitigation measures are required.	The decrease, between 2000 and 2030, of the system-wide fatality accident rate would be a **beneficial impact**.	LS	B	B	B
Impact 3.3-6: Implementation of the 2004 RTP would contribute to a lower system-wide injury accident rate for all travel modes in 2030 compared to the existing condition.	The impact is beneficial. No mitigation measures are required.	The decrease, between 2000 and 2030, of the system-wide injury rate is a **beneficial impact**.	LS	B	B	B
Cumulative Impact 3.3-7: Implementation of the 2004 RTP would contribute to a cumulatively considerable amount of transportation impacts, such as VMT and all-vehicle VHT in delay, to counties outside of the SCAG region.	The projects and measures designed to minimize VHT and VMT that are included in the 2004 RTP, and Mitigation Measure 3.3-1a would minimize this effect.	The regional contribution would remain **significant**.	S (+)	S (+)	S (-)	S (+)

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IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
3.4 Air Quality						
Impact 3.4-1: Long-term (Operational) Regional Impacts **Impact 3.4-1a:** Under the Plan, PM10 emissions from on-road mobile sources would increase when compared to current conditions.	Emissions of particulate matter are directly related to growth and VMT. Regardless of how clean a vehicle operates, the vast majority of PM10 emissions from on-road sources is generated from re-entrained dust on paved roads and is a function of the vehicle miles traveled. Mitigation measures that reduce VMT are proposed. Additional measures to control fugitive dust and transportation-related PM10 are outlined in the 2003 SCAQMP and include control methods such as watering, chemical stabilization, paving, revegetation, track-out control, construction project signage, sweeping and motor vehicle controls. **MM 3.4-1a:** Additional mitigation measures are hereby incorporated by reference from the following air quality management plans: • 2003 South Coast State Implementation Plan (SIP) • Ventura County Air Quality Management Plan (2004 AQMP – Limited SIP Update, Scheduled for adoption in March 2004) • Mojave Desert Air Quality Management Plan (1996) • Antelope Valley Air Quality Management Plan (1994/97) • Imperial County Air Quality Management Plan (1991 and 1993)	After implementation of all feasible mitigation measures and incorporation of measures as described above, the project would most likely have a **significant** and unavoidable impact on regional air quality.	S (+)	S (+)	S (-)	S (-)
Impact 3.4-1b: Under the Plan, emissions of ROG, NOX, CO, SOX and TACs would decrease when compared to current conditions.	**MM 3.4-1b:** The 2003 SCAQMP control measures consist of 1) SCAQMD's Stationary and Mobile Source Control Measures; 2) State and Federal Source Control Measures proposed by CARB; and 3) Transportation Strategy and Control measures provided by SCAG. These control measures are based on the implementation of short-term, defined measures as well as long-term measures which will rely on new technologies to further reduce emissions. The SCAQMP includes estimated emissions reductions based on these short-term and long-term programs. The transportation improvements proposed for the short-term emissions reductions are grouped in the SCAQMP under Transportation Control Measure (TCM) project categories and include the following measures: • High Occupancy Vehicle (HOV) Measures: New HOV lanes, HOV bypasses and connectors, interchanges, High Occupancy Toll (HOT) Lanes; • Transit and System Management Measures: Transit, Intermodal Transfer Facilities, Non-motorized Transportation Mode Facilities; and • Information-based Transportation Strategies: Marketing for Rideshare and other services, Intelligent Transportation Systems, Telecommuting Programs and Real-time rail, transit or freeway	Beneficial	B	B	B	B

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	information systems. The 2004 RTP has been prepared to facilitate implementation of the transportation control measures outlined in the 2003 SCAQMP. The 2004 RTP incorporates both the capital and non-capital improvements recommended by the SCAQMP. ARB's strategy, outlined in the South Coast SIP, includes the following elements: • Set technology forcing new engine standards; • Reduce emissions from the in-use fleet; • Require clean fuels, and reduce petroleum dependency; • Work with USEPA to reduce emissions from federal and state sources; and • Pursue long-term advanced technology measures.					
Impact 3.4-2: Long-term (Operational) Localized Impacts Freeway operations under the Plan would be likely to exceed the locally acceptable cancer risk of 1 in one million.	Same mitigation measures as Impact 3.4-1a and b.	After implementation of all feasible mitigation measures the project would most likely have a **significant** and unavoidable impact.	S(+)	S(+)	S(-)	S(-)
Impact 3.4-3: Short-term (Construction) Regional Impacts Under the Plan, construction activities would increase short-term air emissions.	Compliance with SCAQMD Rule 403 (Fugitive Dust) will reduce emissions of fugitive dust from construction activities. The following additional air quality mitigation measures set forth a program of air pollution control strategies designed to reduce the project's air quality impacts from construction activities. **Land Clearing/Earth-Moving:** **MM 3.4-3a:** Apply water or dust suppressants to exposed earth surfaces to control emissions. **MM 3.4-3b:** All excavating and grading activities shall cease during second stage smog alerts and periods of high winds. **MM 3.4-3c:** All trucks hauling dirt, sand, soil, or other loose materials off-site shall be covered or wetted or shall maintain at least two feet of freeboard (i.e., minimum vertical distance between the top of the load and the top of the trailer). **Paved Surfaces:** **MM 3.4-3d:** All construction roads that have high traffic volumes, shall be surfaced with base material or decomposed granite, or shall be paved or otherwise be stabilized.	After implementation of all feasible mitigation measures and incorporation of project features as described above, activities related to construction of the project would most likely exceed emission thresholds for regional NOX, CO, PM10, SO2, and ROG. Therefore, construction of the	S (-)	S (=)	S (-)	S (+)

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	MM 3.4-3e: Public streets shall be cleaned, swept or scraped at frequent intervals or at least three times a week if visible soil material has been carried onto adjacent public roads. **MM 3.4-3f:** Construction equipment shall be visually inspected prior to leaving the site and loose dirt shall be washed off with wheel washers as necessary. **Unpaved Surfaces:** **MM 3.4-3g:** Water or non-toxic soil stabilizers shall be applied as needed to reduce off-site transport of fugitive dust from all unpaved staging areas and other unpaved surfaces. **MM 3.4-3h:** Traffic speeds on all unpaved surfaces shall not exceed 25 mph. **Other Construction Mitigation Measures** **MM 3.4-3i:** Low sulfur or other alternative fuels shall be used in construction equipment where feasible. **MM 3.4-3j:** Deliveries related to construction activities that affect traffic flow shall be scheduled during off-peak hours (e.g. 10:00 A.M. and 3:00 P.M.) and coordinated to achieve consolidated truck trips. When the movement of construction materials and/or equipment impacts traffic flow, temporary traffic control shall be provided to improve traffic flow (e.g., flag person). **MM 3.4-3k:** To the extent possible, construction activity shall utilize electricity from power poles rather than temporary diesel power generators and/or gasoline power generators. **MM 3.4-3l:** Revegetate exposed earth surfaces following construction.	2004 RTP would have a **significant** and unavoidable impact on regional air quality.				
Impact 3.4-4: Short-term Localized Impacts The cancer risk associated with construction projects under the Plan would likely exceed the locally acceptable cancer risk of 1 in one million.	**MM 3.4-4:** Construction equipment shall be equipped with diesel particulate traps. Low sulfur or other alternative fuels shall be used in construction equipment where feasible.	After implementation of all feasible mitigation measures and incorporation of measures as described above, the project would most likely have a **significant** and unavoidable impact on regional air quality.	S (=)	S (=)	S (=)	S (=)

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Impact 3.4-5: Cumulative air quality impacts Under the Plan criteria pollutant emissions would be less than the applicable emission budgets.	The impact is **less than significant** and therefore mitigation measures are not required.	Not applicable.	S (+)	S (+)	LS (-)	LS (-)
Impact 3.4-6: Increased air traffic would increase emissions from aircraft and ground support equipment (GSE).	Management of operations at the regional airports is not within the scope of SCAG's authority. No mitigation measures proposed by SCAG would effectively minimize aircraft emissions. Nonetheless, SCAG shall support efforts to minimize emissions at airports. ARB has proposed concepts that the federal government should consider to achieve emission reductions such as more stringent engine standards, retrofit controls, cleaner fuel and applying standards to non-tactical military aircraft. Additional environmental evaluation under CEQA will be required for airport expansion projects as well as long-range airport planning efforts at the local level. These evaluations will identify mitigation measures to reduce impacts of airport emissions on local air quality.	After implementation of all feasible mitigation measures as described above, activities related to aviation sources in the 2004 RTP (Preferred Aviation Plan) would most likely exceed current conditions for regional ROG, NOX, CO, SOX and PM10. Therefore aviation related emissions from the 2004 RTP would have a **significant** and unavoidable impact on regional air quality.	S (-)	S (=)	S (-)	S (=)
3.5 <u>Noise</u>						
Impact 3.5-1: Grading and construction activities associated with the proposed freeway, arterial, transit and Maglev projects identified in the 2004 RTP would intermittently and temporarily generate noise levels above ambient background levels. Noise levels in the immediate vicinity of the construction sites would increase substantially sometimes for extended duration.	**MM 3.5-1a:** Project implementing agencies shall comply with all local sound control and noise level rules, regulations, and ordinances. **MM 3.5-1b:** Project implementing agencies shall limit the hours of construction to between 6:00 a.m. and 8:00 p.m. on Monday through Friday and between 7:00 a.m. and 8:00 p.m. on weekends. **MM 3.5-1c:** Equipment and trucks used for project construction shall utilize the best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.	The above mitigation measures would reduce noise impacts; however, construction noise would still be **significant in the short term**.	S (-)	S (=)	S (-)	S (+)

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	MM 3.5-1d: Impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction will be hydraulically or electrically powered wherever possible, to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust would be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used such as the use of drilling rather than impact equipment, whenever feasible. **MM 3.5-1e:** Project implementing agencies shall ensure that stationary noise sources will be located as far from sensitive receptors as possible. If they must be located near existing receptors, they will be adequately muffled. **MM 3.5-1f:** The project implementing agencies shall designate a complaint coordinator responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring, if necessary. **MM 3.5-1g:** Noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence shall be mitigated by the project proponent by strategic placement of material stockpiles between the operation and the affected dwelling or by other means approved by the local jurisdiction. **MM 3.5-1h:** Project implementing agencies shall direct contractors to implement appropriate additional noise mitigation measures including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources to comply with local noise control requirements. **MM 3.5-1i:** Project implementing agencies shall implement use of portable barriers during construction of subsurface barriers, debris basins, and storm water drainage facilities. **MM 3.5-1j:** In residential areas, pile driving will be limited to daytime working hours. No pile-driving or blasting operations shall be performed within 3,000 feet of an occupied residence on Sundays, legal holidays, or					

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	between the hours of 8:00 p.m. and 8:00 a.m. on other days. Any variance from this condition shall be obtained from the project proponent and must be approved by the local jurisdiction. **MM 3.5-1k:** Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile drivers (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to ensure that pile driving noise does not exceed speech interference criterion at the closest sensitive receptor. **MM 3.5-1l:** Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible. **MM 3.5-1m:** Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts.					
Impact 3.5-2: Noise-sensitive land uses could be exposed to noise in excess of normally acceptable noise levels or substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new use of new transit facilities as well as increased use of existing transit facilities, etc.). This is considered a potentially significant impact.	**MM 3.5-2a:** As part of the appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. **MM 3.5-2b:** Project implementation agencies shall employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities. **MM 3.5-2c:** Project implementation agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other new noise-generating facilities. **MM 3.5-2d:** Project implementation agencies shall construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. **MM 3.5-2e:** Project implementation agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. **MM 3.5-2f:** The project implementation agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. **MM 3.5-2g:** To reduce noise impacts, maximize distance of the Maglev	Although mitigation measures are implemented for the impact, it may not reduce noise levels to below regulatory levels, therefore, the impact would be **significant**.	S (-)	S (=)	S (-)	S (+)

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	route alignment from sensitive receptors. If the Maglev guideway is constructed along the center of a freeway, operation noise impacts would be reduced by the increase in distance to the noise sensitive sites and the masking effects of the freeway traffic noise. **MM 3.5-2h:** Reduce Maglev speed in the vicinity of sensitive receptors. **MM 3.5-2i:** As a last resort, eliminate the noise-sensitive receptor by acquiring rail and freeway right-of-way. This would ensure the effective operation of all transportation modes. **MM 3.5-2j:** Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.					
Impact 3.5-3: Sensitive receptors could be exposed to noise in excess of normally acceptable noise levels or substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new use of new transit facilities as well as increased use of existing transit facilities, etc.). This is considered a potentially significant impact.	Mitigation measures intended to reduce the noise impacts on sensitive receptors are part of the 2004 RTP. These include: site design, buffers, soundwalls, etc. Further reduction in noise impacts would be obtained through the implementation of the measures described in **MM 3.5-2a through MM 3.5-2j**.	Although mitigation measures are recommended for the impact, they may not reduce noise levels to below regulatory levels. Therefore, the impact would be **significant.**	S (-)	S (=)	S (=)	S (-)
Cumulative Impact 3.5-4: Regional cumulative ambient noise levels could increase to exceed normally acceptable noise levels or have substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new use of new transit facilities as well as increased use of existing transit facilities, etc.). This is considered a potentially significant impact.	Mitigation measures intended to reduce the noise impacts on sensitive receptors are part of the 2004 RTP. These include: site design, buffers, soundwalls, etc. Further reduction in noise impacts would be obtained through the implementation of the measures described in **MM 3.5-2a through MM 3.5-2j**.	Although mitigation measures are recommended for the impact, this may not reduce noise levels to below regulatory levels. Therefore, the impact would be **significant.**	S (-)	S (=)	S (-)	S (+)
3.6 <u>Aesthetics and Views</u>						
Impact 3.6-1: Construction and implementation of individual 2004 RTP projects potentially would obstruct views of scenic resources.	**MM 3.6-1a:** Project implementation agencies shall implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions. **MM 3.6-1b:** Project implementation agencies shall, to the extent feasible, construct noise barriers of materials whose color and texture complements	This impact would be considered **significant** because it is likely that there will be situations	S (-)	S (=)	S (-)	S (+)

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	the surrounding landscape and development. Noise barriers shall be graffiti resistant and landscaped with plants that screen the barrier, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas.	where visual impacts cannot be mitigated to a less than significant level.				
Impact 3.6-2: Construction and implementation of the proposed project potentially would alter the appearance of scenic resources along or near designated scenic highways and vista points.	**MM 3.6-2a:** Project implementation agencies shall, where practicable and feasible, avoid construction of transportation facilities in state and locally designated scenic highways and/or vista points. **MM 3.6-2b:** Project implementation agencies shall, complete design studies for projects in designated or eligible Scenic Highway corridors and develop site-specific mitigation measures to minimize impacts on the quality of the views or visual experience that originally qualified the highway for Scenic designation. **MM 3.6-2c:** If transportation facilities are constructed in state and locally designated scenic highways and/or vista points, design, construction, and operation of the transportation facility shall be consistent with applicable guidelines and regulations for the preservation of scenic resources along the designated scenic highway.	This impact would remain **significant** because it is likely that there will be situations where visual impacts cannot be mitigated to a less than significant level.	LS(-)	S (=)	S (=)	S (=)
Impact 3.6-3: Construction and implementation of the proposed project potentially would create significant contrasts with the overall visual character of the existing landscape setting.	**MM 3.6-3a:** Project implementation agencies shall develop design guidelines for each type of transportation facility that make elements of proposed facilities visually compatible with surrounding areas. Visual design guidelines shall, at a minimum, include setback buffers, landscaping, color, texture, signage, and lighting criteria. The following methods shall be employed whenever possible: • Transportation systems shall be developed to be compatible with the surrounding environment (i.e., colors and materials of construction material). • If exotic vegetation is used, it shall be used as screening and landscaping that blends in and complements the natural landscape. • Trees bordering highways shall remain or be replaced so that clear-cutting is not evident. • Grading shall blend with the adjacent landforms and topography.	This impact would remain **significant** because it is likely that there will be situations where visual impacts cannot be mitigated to a less than significant level.	S (-)	S (=)	S (-)	S (+)
Impact 3.6-4: The projects in the 2004 RTP potentially would add visual elements of urban character to an existing natural, rural, and open space area.	**MM 3.6-4a:** Project implementation agencies shall design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Project implementation agencies shall design projects to minimize their intrusion into important view sheds and use contour grading to better match surrounding terrain. **MM 3.6-4b:** Project implementation agencies shall use natural landscaping to minimize contrasts between the project and surrounding areas. Wherever possible, develop interchanges and transit lines at the grade of	This impact would remain **significant** because the mitigation measures would not be able to reduce the visual elements of urban character to a less	S (-)	S (=)	S (-)	S (+)

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	the surrounding land to limit view blockage. Contour the edges of major cut and fill slopes to provide a more natural looking finished profile.	than significant level.				
Cumulative Impact 3.6-5: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to the overall visual character of the existing landscape setting.	**MM 3.6-5a:** In visually sensitive site areas, local land use agencies shall apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, site grading, etc.	This impact would remain **significant** because the population growth projected by 2030 in combination with the projects in the 2004 RTP would consume currently vacant land that would create significant contrasts with the overall visual character of the existing landscape setting.	S (=)	S (+)	S (-)	S (-)
3.7 <u>Biological Resources</u>						
Impact 3.7-1: Transportation projects included in the 2004 RTP on previously undisturbed land would potentially displace natural vegetation, and thus habitat, some of which is utilized by sensitive species in the SCAG region.	**MM 3.7-1.a:** Each transportation project shall assess displacement of habitat due to removal of native vegetation during route planning. Routes shall be planned in order to avoid and/or minimize removal of native vegetation. **MM 3.7-1.b:** When avoidance of native vegetation removal is not possible, each transportation project shall replant disturbed areas with commensurate native vegetation of high habitat value adjacent to the project (i.e. as opposed to ornamental vegetation with relatively less habitat value). **MM 3.7-1c:** Individual transportation projects shall include offsite habitat enhancement or restoration to compensate for unavoidable habitat losses from the project site.	Although many measures can be employed to minimize the impacts to habitat due to vegetation removal, for a regional plan of this scale, the impact remains **significant**.	S (-)	S (=)	S (-)	S (+)
Impact 3.7-2: The 2004 RTP would potentially contribute to the fragmentation of existing habitat, decreasing habitat patch sizes, reducing habitat connectivity, and causing direct injury to wildlife. The 2004 RTP includes new transportation corridors that may form barriers to animal migration or foraging routes.	**MM 3.7-2a:** Individual transportation projects included in the 2004 RTP shall conduct site-specific analyses of opportunities to preserve or improve habitat linkages with areas on and off-site. Mitigation banking (opportunities to purchase, maintain, and/or restore offsite habitat) is one opportunity that project proponents and jurisdictions may pursue. **MM 3.7-2b:** Each transportation project shall provide wildlife crossings/access at locations useful and appropriate for the species of concern. **MM 3.7-2c:** Individual transportation projects shall include analysis of	Route planning to minimize habitat fragmentation impacts, wildlife crossings, on- and off-site habitat restoration and linkages would all reduce the impacts	S (-)	S (=)	S (-)	S (+)

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	wildlife corridors during project planning. Impacts to these corridors shall be avoided and/or minimized. **MM 3.7-2d:** Each transportation project included in the Plan shall use wildlife fencing where appropriate to minimize the probability of wildlife injury due to direct interaction between wildlife and roads. Inclusion of this mitigation measure shall be considered on a case-by-case basis, as use of wildlife fencing could further increase the effects of habitat fragmentation and isolation for many species.	of habitat fragmentation, isolation, and direct injury to wildlife due to transportation projects. For some species, implementation of MM 3.7-2d would increase the degree of habitat fragmentation. At a regional scale, the fragmentation of habitat due to the large scale of the 2004 RTP would not be fully avoided or mitigated. The impact would remain **significant.**				
Impact 3.7-3: The 2004 RTP includes new transportation facilities that would potentially increase near-road human disturbances such as litter, trampling, light pollution and road noise in previously relatively inaccessible and undisturbed natural areas.	**MM 3.7-3a:** Individual transportation projects shall minimize vehicular accessibility to areas beyond the actual transportation surface. This can be accomplished through fencing and signage. **MM 3.7-3b:** Each project shall establish litter control programs in appropriate areas, such as trash receptacles at road turnouts and view points. **MM 3.7-3c:** Each project shall use road noise minimization methods, such as brush and tree planting, at heavy noise-producing transportation areas that might affect wildlife. Native vegetation should be used.	In many cases, the mitigation measures outlined above would avoid or minimize impacts to wildlife. However, at the regional scale, additional transportation projects would increase wildlife disturbance and the impact would remain **significant**.	S (-)	S (=)	S (-)	S (+)
Impact 3.7-4: The 2004 RTP projects would potentially damage natural vegetation and other habitat components as a result of trampling or off-road machinery during the construction phases	**MM 3.7-4a:** Each project shall be preceded by pre-construction monitoring to ensure no sensitive species' habitat would be unnecessarily destroyed. All discovered sensitive species habitat shall be avoided where feasible, or disturbance shall be minimized.	Full implementation of each of these mitigation measures would avoid and/or	LS (-)	LS (=)	LS (-)	LS (+)

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for these projects. Direct fatalities to wildlife would also potentially occur.	**MM 3.7-4b:** Each project shall schedule work to avoid critical life stages (e.g. nesting) of species of concern. **MM 3.7-4c:** Each project shall fence and/or mark sensitive habitat to prevent unnecessary machinery or foot traffic during construction activities. **MM 3.7-4d:** When removal and/or damage to sensitive species habitat is unavoidable during construction, each project shall replant any disturbed natural areas with appropriate native vegetation following the completion of construction activities.	minimize the construction impacts to **less than significant** levels.				
Impact 3.7-5: The 2004 RTP projects would potentially create noise, smoke, lights and/or other disturbances to biological resources during construction phases for these projects.	**MM 3.7-5a:** Individual projects shall avoid and/or minimize construction activities that have the potential to expose species to noise, smoke, or other disturbances. Pre-construction surveys shall be conducted as appropriate to determine the presence of any species that would need to be protected from such an impact. **MM 3.7-5b:** Individual projects shall be scheduled to avoid construction during critical life stages or sensitive seasons (e.g. the nesting season).	Avoidance and minimization of impacts during construction, with special consideration for critical life stages and seasons of special status species would not reduce this impact to less than significant. The impact remains **significant.**	S (-)	S (=)	S (-)	S (+)
Impact 3.7-6: The 2004 RTP includes projects that would potentially displace riparian or wetland habitat.	**MM 3.7-6a:** Construction through or adjacent to wetlands or riparian areas shall be avoided where feasible through route-planning. **MM 3.7-6b:** Each transportation project shall avoid removal of wetland or riparian vegetation. Specific vegetation that is not to be removed shall be so marked during construction. Riparian vegetation removal shall be minimized. **MM 3.7-6c:** Each transportation project shall replace any disturbed wetland, riparian or aquatic habitat, either on-site or at a suitable off-site location at ratios to ensure no net loss. **MM 3.7-6d:** When individual projects include unavoidable losses of riparian or aquatic habitat, adjacent or nearby riparian or aquatic habitat shall be enhanced (e.g. through removal of non-native invasive wetland species and replacement with more ecologically valuable native species).	The impact to wetlands and riparian areas would remain **significant**.	S (-)	S (=)	S (-)	S (+)
Impact 3.7-7: The 2004 RTP would potentially increase siltation of streams and other water resources from exposures of erodible soils during construction activities.	**MM 3.7-7a:** Individual projects near water resources shall implement Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport. A more	Full implementation of each of these mitigation measures would not avoid the siltation impacts. The	S (-)	S (=)	S (-)	S (+)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	detailed description of BMPs is provided in Section 3.12 Water Resources. **MM 3.7-7b:** Individual projects shall schedule construction activities to avoid sensitive times for biological resources (e.g. steelhead spawning periods during the winter and spring) and to avoid the rainy season when erosion and sediment transport is increased.	impact remains **significant**.				
Impact 3.7-8: Implementation of the 2004 RTP would not conflict with any provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan (NCCP).	No mitigation measures are necessary.	The impact is **less than significant**.	LS (=)	LS (=)	LS (=)	LS (=)
Cumulative Impacts 3.7-9: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization.	The cumulative impacts to biological resources due to the forecast urban development associated with the 2004 RTP, would be mitigated using the same measures detailed for Impacts 3.7-1 through 3.7-8, in addition to the following measure. **MM 3.7-9a:** Future impacts to biological resources shall be minimized through cooperation, information sharing, and program development during the update of the Open Space and Conservation chapter of SCAG's *Regional Comprehensive Plan* and Guide and through SCAG's Energy and Environment Committee. SCAG shall consult with the resource agencies, such as U.S. Fish and Wildlife Service and California Department of Fish and Game during this update process.	The impacts to biological resources due to regional growth would be reduced through application of the mitigation measures; however, the 2004 RTP's accommodation of approximately 6 million people in the SCAG region by 2030 would contribute to cumulative impacts. Implementation of the 2004 RTP would have a cumulatively considerable contribution to urbanization, and, thus, the impact would remain **significant**.	S (=)	S (+)	S (-)	S (-)
3.8 <u>Cultural Resources</u>						
Impact 3.8-1: Development of highway, arterial and transit projects would potentially impact historic resources.	**MM 3.8-1a:** As part of the appropriate environmental review of individual projects, the project implementation agencies shall identify potential impacts to historic resources. A record search at the appropriate Information Center	Due to the size and potentially large number of historic	S (-)	S(=)	S (-)	S (+)

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IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	shall be conducted to determine whether the project area has been previously surveyed and whether resources were identified. **MM 3.8-1b**: As necessary, prior to construction activities, the project implementation agencies shall obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Archaeological Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources within 1,000 feet of the improvement. **MM 3.8-1c:** The project implementation agencies shall comply with Section 106 of the NHPA if federal funding or approval is required. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. This mitigation measure may include, but are not limited to the following: • The project implementation agencies shall carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of any impacted historic resource, which shall be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Weeks and Grimmer (1995). In some instances, the following mitigation measure may be appropriate in lieu of the previous mitigation measure: **MM 3.8-1d:** The project implementation agencies shall secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.	properties listed that could be disturbed as a result of the combined projects, this impact would remain a potentially **significant** impact to historic resources.				
Impact 3.8-2: Construction activities involving excavation and earthmoving would potentially encounter archaeological resources.	**MM 3.8-2a:** As part of the appropriate environmental review of individual projects, the project implementation agencies shall consult with the NAHC to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site. **MM 3.8-2b:** Prior to construction activities, the project implementation agencies shall obtain a qualified archaeologist to conduct a record search at	Due to the size and potentially large number of archaeological sites that could be disturbed as a result of the	S (-)	S(=)	S (-)	S (+)

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IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified. **MM 3.8-2c:** As necessary prior to construction activities, the project implementation agencies shall obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources. **MM 3.8-2d:** If the record search indicates that the project is located in an area rich with cultural materials, the project proponent shall retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property. **MM 3.8-2e:** Construction activities and excavation should be conducted to avoid cultural resources (if found). If avoidance is not feasible, further work may need to be done to determine the importance of a resource. The project implementation agencies shall obtain a qualified archaeologist familiar with the local archaeology, and/or an architectural historian should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under state or federal guidelines, impacts on the cultural resource will need to be mitigated. **MM 3.8-2f:** Project implementation agencies shall stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.	combined projects, this impact would remain a **significant** impact to archaeological resources.				
Impact 3.8-3: Construction activities involving excavation and earthmoving may encounter paleontological materials. This is a significant impact.	**MM 3.8-3a:** As part of the appropriate environmental review of individual projects, the project implementation agencies shall obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist shall also conduct a field survey in these areas. **MM 3.8-3b:** Construction activities shall avoid known paleontological resources, if feasible, especially if the resources in a particular lithic unit formation have been determined through detailed investigation to be unique. If avoidance is not feasible, paleontological resources should be excavated by the qualified paleontologist and given to a local agency, or other applicable institution, where they could be displayed.	Due to the size and potentially large number of paleontological localities that could be disturbed as a result of the combined projects, this impact would remain a **significant** impact.	S (-)	S(=)	S (-)	S (+)

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Impact 3.8-4: Construction activities involving excavation and earthmoving may encounter human remains.	**MM 3.8-4a:** As part of the appropriate environmental review of individual projects, the project implementation agencies, in the event of discovery or recognition of any human remains, during construction or excavation activities associated with the project, in any location other than a dedicated cemetery, shall cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required; and **MM 3.8-4b:** If the remains are of Native American origin, • The coroner will contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make 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. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains. or, • If 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, in which case • The landowner or his authorized representative shall obtain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur: - The NAHC is unable to identify a descendent; - The descendant identified fails to make a recommendation; or - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC Commission fails to provide measures acceptable to the landowner.	The recommended mitigation would require the local jurisdiction to follow a comprehensive procedure to assess the magnitude of the impact, and to avoid or mitigate the impacts, if necessary, therefore this impact is considered **less than significant** after mitigation.	S (-)	S(=)	S (-)	S (+)
Cumulative Impact 3.8-5: Urbanization in the SCAG region will increase substantially by 2030.	The cumulative impacts to cultural resources, due to the forecast urban development associated with the 2004 RTP, would be mitigated using the	The impacts to cultural resources	S (=)	S (+)	S (-)	S (-)

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IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
The 2004 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to existing historic resources and previously undisturbed and undiscovered cultural resources, as described in Impacts 3.8-1 through 3.8-4 above.	same measures detailed for Impacts 3.7-1 through 3.7-8, in addition to the following measure. **MM 3.8-5a:** Future impacts to cultural resources shall be minimized through cooperation, information sharing, and program development of SCAG's *RCPG* and through SCAG's Energy and Environment Committee. The resource agencies, such as the Office of Historic Preservation, shall be consulted during this update process.	due to regional scale growth would be reduced through application of the mitigation measures, however the 2004 RTP's accommodation of approximately 6 million people to the SCAG region by 2030 would contribute to cumulative impacts. The 2004 RTP would **contribute significantly** to cumulative regional cultural impacts.				
3.9 <u>Geology, Soils, and Seismicity</u>						
Impact 3.9-1: Seismic events can damage transportation infrastructure through surface rupture, ground shaking, liquefaction, and landsliding. In addition, seismically induced tsunami and seiche waves can damage transportation infrastructure proximate to coastal areas. Potential impacts to property and public safety from seismic activity would be considered significant in some cases.	**MM 3.9-1a:** Implementing agencies shall ensure that projects be designed in accordance with county and city code requirements for seismic ground shaking. The design of projects shall consider seismicity of the site, soil response at the site, and dynamic characteristics of the structure, in compliance with the appropriate California Building Code standards for construction in or near fault zones. **MM 3.9-1b:** Implementing agencies shall ensure that projects located within or across Alquist-Priolo Zones comply with design requirements provided in Special Publication 117, published by the CGS, as well as relevant local, regional, state, and federal design criteria for construction in seismic areas. **MM 3.9-1c:** The project implementing agencies shall ensure that geotechnical analysis is conducted within construction areas to ascertain soil types and local faulting prior to preparation of project designs.	**Less than significant**.	LS (-)	LS(=)	LS (-)	LS (+)
Impact 3.9-2: Highway and rail construction can require significant earthwork and road cuts, increasing long-term erosion potential and slope failure. Earthwork can also alter unique geologic features. The impacts of projects considered as	**MM 3.9-2a:** The project implementing agencies shall ensure that project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. Design features shall include measures to reduce erosion from stormwater. Road cuts shall be designed to maximize the potential for revegetation.	Given the topography, ecology and meteorology of the SCAG region, long-	S (-)	S (=)	S (-)	S (+)

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part of the 2004 RTP would be considered significant in some cases.	**MM 3.9-2b:** Implementing agencies shall ensure that projects avoid landslide areas and potentially unstable slopes wherever feasible. **MM 3.9-c:** Where practicable, routes and project designs that would permanently alter unique geologic features shall be avoided.	term erosion and the potential for slope-failure will remain **significant**.				
Impact 3.9-3: Local geology can affect transportation infrastructure. Potentially significant impacts to property and public safety could occur due to subsidence and the presence of expansive soils.	**MM 3.9-3a:** Implementing agencies shall ensure that geotechnical investigations are conducted by a qualified geologist to identify the potential for subsidence and expansive soils. Recommended corrective measures, such as structural reinforcement and replacing soil with engineered fill, shall be implemented in project designs. **MM 3.9-3b:** Implementing agencies shall ensure that, prior to preparing project designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.	L**ess than significant**.	LS (-)	LS (=)	LS (-)	LS (+)
Cumulative Impact 3.9-4: The actions considered by the 2004 RTP have the potential to cause cumulatively considerable adverse effects on human beings, when considered at the regional scale.	The project-level mitigation measures (MM 3.9-1 to MM 3.9-3) specified in the three impact categories discussed above, are expected, generally, to provide some measure of additive relief from the potential hazards due to geologic and seismic factors. In addition, the regional-scale planning and growth visioning activities carried out by SCAG in preparation of the 2004 RTP are expected to heighten awareness, particularly among county and city agencies, of the importance of appropriate siting decisions. As can be read from the maps used in this analysis, while it is meaningful to speak of the ubiquity of seismic and geologic hazards throughout the SCAG region, it is also notable that many of the hazards are highly localized. Appropriate use of engineering technologies, when coupled with well thought-out siting decisions, can considerably lessen the potential for harm to human life and property resulting from these factors, taken together.	Despite the inclusion of the proposed mitigation measures, the cumulative impact remains **significant**.	S (-)	S (=)	S (-)	S (+)
3.10 <u>Hazardous Materials</u>						
Impact 3.10-1: The implementation of the 2004 RTP would create a potential hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during transportation. This would be a significant impact.	**MM 3.10-1a:** SCAG shall encourage the USDOT, the Office of Emergency Services, and the Caltrans to continue to conduct driver safety training programs and encourage the private sector to continue conducting driver safety training. **MM 3.10-1b:** SCAG shall encourage the USDOT and the CHP to continue to enforce speed limits and existing regulations governing goods movement and hazardous materials transportation.	The improvements to the regional transportation system by 2030 would facilitate a substantial increase in the transportation of all goods, including hazardous materials. Even with the above mitigation, this impact would	S (-)	S (+)	S (-)	S (+)

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		remain **significant**.				
Impact 3.10-2: The implementation of the 2004 RTP would create a potential hazard to the public or the environment through the use or disposal of hazardous materials in the construction and maintenance of transportation facilities.	**None required**.	The impact is **less than significant**.	LS (-)	LS (=)	LS (-)	LS (+)
Impact 3.10-3: Implementation of the 2004 RTP would result in the potential release of hazardous materials within one-quarter mile of schools.	**MM 3.10-3a:** SCAG shall encourage the USDOT, the Office of Emergency Services, and Caltrans to continue to conduct driver safety training programs and encourage the private sector to continue conducting driver safety training **MM 3.10-3b:** SCAG shall encourage the USDOT and the CHP to continue to enforce speed limits and existing regulations governing goods movement and hazardous materials transportation. **MM 3.10-3c:** Prior to approval of any RTP project, the Lead Agency for each individual project shall consider existing and known planned school locations when determining the alignment of new transportation projects and modifications to existing transportation facilities.	The transportation of hazardous materials within one-quarter mile of schools would remain a **significant** impact, even with the above mitigation.	S (-)	S (=)	S (-)	S (=)
Impact 3.10-4: Implementation of the 2004 RTP would create a potential hazard to the public or the environment by the disturbance of contaminated property during the construction of new or the expansion of existing transportation facilities.	**MM 3.10-4a:** Prior to approval of any RTP project, the project implementation agency shall consult all known databases of contaminated sites in the process of planning, environmental clearance, and construction for projects included in the 2004 RTP. Where contaminated sites are identified, the project implementation agency shall develop appropriate mitigation measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction.	The mitigation measure would assure that contaminated properties are identified and appropriate steps taken to minimize human exposure and prevent any further environmental contamination. The impact after mitigation would be **less than significant**.	LS (-)	LS (=)	LS (-)	LS (=)
Cumulative Impact 3.10-5: The 2004 RTP would contribute a cumulatively significant amount of hazardous material transportation impacts to counties outside of the SCAG region.	The projects and measures designed to minimize VHT and VMT that are included in the 2004 RTP as well as Mitigation Measures 3.3-1a, 3.4-1a, and 3.4-1b, would minimize this effect.	Even with the above mitigation, the regional contribution would remain	S (+)	S (+)	S (-)	S (+)

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		significant.				
Cumulative Impact 3.10-6: Implementation of the investments and policies in the 2004 RTP would create a potential hazard to the public or the environment by the disturbance of contaminated sites as a result of population and housing growth in the region.	**MM 3.10-6a:** As with new or expanded transportation projects, planners and private developers can and should check published lists of contaminated properties, which are continually updated, to identify cases where new development would involve the disturbance of contaminated properties.	With the use of these published lists, this impact should be less than cumulatively considerable and therefore **less than significant** with mitigation.	LS (-)	LS (-)	LS (+)	LS (=)
3.11 <u>Energy</u>						
Impact 3.11-1: The implementation of the 2004 RTP is likely to use electricity, natural gas, gasoline, diesel, or other non-renewable energy types in the construction and expansion of the regional transportation system.	**None.**	The impact is **less than significant**.	LS (-)	LS (=)	LS (-)	LS (+)
Impact 3.11-2: The implementation of the 2004 RTP is likely to substantially increase the consumption of electricity, natural gas, gasoline, diesel, or other non-renewable energy types in the operation of the transportation system between the current conditions and 2030. This would be a significant impact.	In addition to the mitigation measures specified below, mitigation measures for the impacts of transportation system usage would serve to mitigate the impacts of growing transportation energy demand. In particular, Mitigation Measures **MM 3.3-1a, MM 3.4-1a and MM 3.4-1b** would contribute to energy impact mitigation. **MM 3.11-2a:** Project implementation agencies shall review energy impacts as part of project-specific environmental review as required by CEQA. For any identified impacts, appropriate mitigation measures should be identified. The project implementation agency or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures. **MM 3.11-2b:** For any project anticipated to require substantial electrical usage, the project implementation agency shall submit projected electricity and natural gas demand calculations to the local electricity or natural gas provider, respectively, for its analysis. Any infrastructure improvements necessary for project construction shall be completed according to the specifications of the energy provider. **MM 3.11-2c:** Transit providers shall, as feasible, assure that designers of new transit stations incorporate solar panels in roofing and tap other renewable energy sources to offset new demand on conventional power sources. **MM 3.11-2d:** SCAG shall encourage state and federal lawmakers and regulatory agencies to pursue the design of programs to either require or	The regional increase in transportation-related energy demand as a result of implementing the 2004 RTP would remain a **significant** impact, even with the above mitigation.	S (+)	S (+)	S (-)	S (-)

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	incentivize the expanded availability and use of alternative-fuel vehicles to reduce the impact of shifts in petroleum fuel supply and price.					
Cumulative Impact 3.11-3: Implementation of the investments and policies in the 2004 RTP would contribute to a cumulatively considerable increase in the amount of total energy consumed in the SCAG region between 2000 and 2030. This would be a significant impact.	Mitigation Measures **MM 3.11-2a through MM 3.11-2d** will help to mitigate the cumulative impacts on energy consumption related to the 2004 RTP in addition to the following measure: **MM 3.11-3a:** SCAG shall continue to work with local jurisdictions and energy providers, through its Energy and Environment Committee and other means, to encourage regional-scale planning for improved energy management. Future impacts to energy shall be minimized through cooperative planning, and information sharing within the SCAG region. This cooperative planning shall occur during the update of the Energy chapter of SCAG's *RCPG*.	Even with mitigation, this cumulative impact can be expected to remain **significant**.	S (=)	S (+)	S (-)	S (-)
3.12 <u>Water Resources</u>						
Impact 3.12-1: Local surface water quality would potentially be degraded by increased roadway runoff created by RTP projects, potentially violating water quality standards associated with wastewater and stormwater permits. These projects would potentially alter the existing drainage patterns in ways that could result in substantial erosion or siltation.	In addition to **MM 3.7-7a** and **MM 3.9-2a**, the following mitigation measures are recommended: **MM 3.12-1a:** Transportation improvements shall comply with federal, state, and local regulations regarding storm water management. State-owned highways and other transportation facilities are subject to compliance with a statewide stormwater permit issued to Caltrans. **MM 3.12-1b:** Project implementation agencies shall ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff. Wherever feasible, detention basins shall be equipped with oil and grease traps and other appropriate, effective and well-maintained control measures. **MM 3.12-1c:** Project implementation agencies shall ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are implemented to prevent water quality degradation. **MM 3.12-1d:** SWPPPs shall be submitted to the SWRCB when proposed transportation improvement projects require construction activities. In these activities BMPs shall be followed to manage site erosion and spill control. **MM 3.12-1e:** Projects requiring the discharge of dredged or fill materials into U.S. waters, including wetlands, shall comply with sections 404 and 401 of the CWA including the requirement to obtain a permit from the U.SACE and the governing RWQCB. **MM 3.12-1f:** Long-term sediment control shall include an erosion control and revegetation program designed to allow reestablishment of native vegetation on slopes and undeveloped areas.	The mitigation measures would not fully mitigate water quality degradation, violation of water quality standards, or prevent erosion or siltation. The impact remains **significant.**	S (-)	S (=)	S (-)	S (+)

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	MM 3.12-1g: Drainage of roadway runoff should, wherever possible, be designed to run through vegetated median strips, contoured to provide adequate storage capacity and to provide overland flow, detention and infiltration before it reaches culverts. Detention basins and ponds, aside from controlling runoff rates, can also remove particulate pollutants through settling.					
Impact 3.12-2: Increased impervious surfaces due to transportation projects would reduce groundwater infiltration.	**MM 3.12-2a:** Project implementation agencies shall avoid designs that require continual dewatering where feasible. **MM 3.12-2b:** Project implementation agencies shall ensure that projects that do require continual dewatering facilities implement monitoring systems and long-term administrative procedures to ensure proper water management that prevents degrading of surface water and minimizes adverse impacts on groundwater for the life of the project. Construction designs shall comply with appropriate building codes and standard practices including the Uniform Building Code. **MM 3.12-2c:** Detention basins, infiltration strips, and other features to control surface runoff and facilitate groundwater recharge shall be incorporated into the design of new transportation projects.	Implementation of these mitigation measures would reduce the regional impact to **less than significant**.	LS (-)	LS (=)	LS (-)	LS (+)
Impact 3.12-3: The 2004 RTP would potentially increase flooding hazards, by placing structures, such as transportation investments, on alluvial fans and within 100-year flood hazard areas. The proposed 2004 RTP could alter existing drainage patterns or substantially increase the rate or amount of surface runoff in a manner that would result in flooding or produce or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems.	In addition to **MM 3.7-6a** through **MM 3.7-6d**, the following mitigation measures are recommended: **MM 3.12-3a:** Natural riparian conditions near projects shall be maintained, wherever feasible, to minimize the effects of stormwater flows at stream crossings. **MM 3.12-3b:** Prior to construction, a drainage study shall be conducted for each new project. Drainage systems shall be designed to maximize the dissipation of storm flow velocities with the use of detention basins and vegetated areas, measures that will reduce storm flow risks to areas downstream of a project. Projects shall consider designs for the lateral transmission of storm water and other similar means to minimize the risks of upstream flooding **MM 3.12-3c:** All roadbeds for new highway and rail facilities should be elevated at least one foot above the 100-year base flood elevation. Since alluvial fan flooding is not often identified on FEMA flood maps, the risk of alluvial fan flooding shall be evaluated and projects shall be sited to avoid alluvial fan flooding where feasible. **MM 3.12-3d:** Transportation improvements shall comply with local, state, and federal floodplain regulations. Projects requiring federal approval or funding shall comply with Executive Order 11988 on Floodplain Management, which requires avoidance of incompatible floodplain	After implementation of the mitigation measures, the 2004 RTP projects would regionally have a **less than significant** impact.	LS (-)	LS (=)	LS (-)	LS (+)

Key:
+ Greater Adverse Impact than Proposed 2004 RTP
= Similar Impact as Proposed 2004 RTP
- Less Adverse Impact than Proposed 2004 RTP

B = Beneficial
LS = Less-than-Significant
S = Significant

Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	development, restoration and preservation of the natural and beneficial floodplain values, and maintenance of consistency with the standards and criteria of the National Flood Insurance Program. **MM 3.12-3e:** Improvement projects on existing facilities shall include upgrades to stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities. System designs shall be completed to eliminate increases in peak flow rates from current levels.					
Cumulative Impact 3.12-4: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth would contribute to the conversion of undeveloped land to urban uses, resulting in impacts to water quality.	**Mitigation Measures 3.12-1a through 3.12-1g** shall be applied to all urban development projects, as feasible, in addition to the following measure. **MM 3.12-4a:** SCAG shall continue to work with local jurisdictions and water quality agencies, through its Water Policy Task Force and other means, to encourage regional-scale planning for improved water quality management and pollution prevention. Future impacts to water quality shall be avoided through cooperative planning, information sharing and comprehensive pollution control measure development within the SCAG region. This cooperative planning shall occur during the update of the Water Resources and Water Quality chapters of SCAG's RCPG and through SCAG's Water Policy Task Force. This task force offers an opportunity for local jurisdictions and water agencies to share information and strategies to plan for water quality in the region.	The urban development expected by 2030 would create adverse water quality and waste discharge conditions and/or unfavorably alter existing drainage patterns in a manner that would result in substantial erosion or siltation. The 2004 RTP's influence on growth distribution is a cumulatively considerable contribution to this **significant impact.**	S (=)	S (+)	S (-)	S (-)
Cumulative Impact 3.12-5: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth would contribute to the conversion of undeveloped land to urban uses, resulting in impacts to stormwater infiltration and groundwater recharge.	**Mitigation Measures 3.12-2a through 3.12-2c** shall be applied to all urban development projects, as feasible, in addition to the following measure. **MM 3.12-5a:** SCAG shall continue to work with local jurisdictions and water agencies, through its Water Policy Task Force and other means, including the update of the Water Quality and Water Resources chapters for SCAG's RCPG, to encourage regional-scale planning for improved stormwater management and groundwater recharge. Future adverse impacts shall be avoided through cooperative planning, information sharing, and comprehensive implementation efforts within the SCAG region. SCAG's Water Policy Task Force offers an opportunity for local jurisdictions and water agencies to share information and strategies for improving regional	The urban development expected by 2030 would potentially affect stormwater infiltration and groundwater recharge. Future planning and implementation efforts may reduce	S (=)	S (+)	S (-)	S (-)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	performance in these efforts.	the significance of this impact. However, given current conditions, the 2004 RTP's effects on stormwater infiltration and groundwater recharge would contribute to a **significant impact** on regional water resources.				
Cumulative Impact 3.12-6: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth would contribute to the conversion of undeveloped land to urban uses, resulting in flooding hazard impacts.	**Mitigation Measures 3.12-3a through 3.12-3e** shall be applied to all urban development projects, as feasible.	Urban development expected by 2030 would potentially result in additional structures in areas with flood hazards. Future planning efforts may reduce the significance of this impact; however, to assume that all flood hazards would be avoided would be speculative. The 2004 RTP's effects on population distribution and its associated contribution to the impact of flooding hazards is **significant.**	S (=)	S (+)	S (-)	S (-)
Cumulative Impact 3.12-7: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and by including land-use-transportation measures,	**MM 3.12-7a:** Local jurisdictions should encourage new development and industry to locate in those service areas with existing wastewater infrastructure and treatment capacity. **MM 3.12-7b:** Wastewater treatment agencies are encouraged to have	The mitigation measures would lessen the impacts on wastewater	S (=)	S (=)	S (=)	S (=)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
influences the pattern of this urbanization. The 2004 RTP's influence on growth would contribute to the need for increased wastewater treatment capacities in the region by 2030.	expansion plans, approvals and financing in place once their facilities are operating at 80 percent of capacity. Through the update to the Water Quality and Water Resources chapter of SCAG's RCPG, SCAG shall provide opportunities for information sharing and program development. **MM 3.12-7c:** Local jurisdictions should promote reduced wastewater system demand by: • designing wastewater systems to minimize inflow and infiltration to the extent feasible, • reducing overall source water generation by domestic and industrial users, • deferring development approvals for industries that generate high volumes of wastewater until wastewater agencies have expanded capacity.	treatment capacity in the region; however, they are not expected to prevent an imbalance between the demand for regional capacity and existing regional capacity. The 2004 RTP would make a cumulatively considerable contribution to this **significant impact.**				
Cumulative Impact 3.12-8: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth would contribute to an increased demand for water supply and its associated infrastructure. Comparing 2030 demands to existing supplies does not fully reflect the ongoing water planning conducted by water agencies in the region. While existing supplies and infrastructure may not be sufficient to meet expected 2030 demands, most water agencies have plans in place to respond to future growth. However, the *existing* water supplies and infrastructure would not be sufficient to meet the expected demand in 2030.	**MM 3.12-8a:** SCAG shall facilitate local water agencies' informing local jurisdictions of their continued efforts to evaluate future water demands and establish the necessary supply and infrastructure, as documented in their Urban Water Management Plans. **MM 3.12-8b:** SCAG shall facilitate local water agencies' informing local jurisdictions of their continued efforts to develop supplies to meet projected demand in 2030. **MM 3.12-8c:** SCAG shall facilitate information-sharing about the kind of regional coordination throughout California and the Colorado River Basin that develops and supports sustainable growth policies. **MM 3.12-8d:** Future impacts to water supply shall be minimized through cooperation, information sharing, and program development during the update of the Water Resources chapter of SCAG's *RCPG* and through SCAG's Water Policy Task Force. This task force presents an opportunity for local jurisdictions and water agencies to share information and strategies (such as those listed above) about their on-going water supply planning efforts, including the following types of actions: • Minimize impacts to water supply by developing incentives, education and policies to further encourage water conservation and thereby reduce demand. • Involve the region's water supply agencies in planning efforts in order to make water resource information, such as water supply and water quality, location of recharge areas and groundwater, and other useful information available to local jurisdictions for use in their land use planning and decisions.	Full implementation of these water supply mitigation measures would provide an adequate and reliable future water supply and infrastructure. The various water agencies update their Urban Water Management Plans to ensure that planning for the water needs of future growth is accommodated in a timely manner. However, CEQA requires the determination of significance to be based on a comparison between *existing* water supply	S (=)	S (=)	S (+)	S (+)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	• Provide, as appropriate, legislative support and advocacy of regional water conservation, supply and water quality projects. • Promote water-efficient land use development. The Water Policy Task Force and the update to SCAG's *RCPG* present an opportunity for SCAG to partner with the region's water agencies in outreaching to local government on important water supply issues. SCAG provides a unique opportunity to increase communication between land use and water planners. The goals of the Task Force would not be to duplicate existing efforts of the water agencies.	and infrastructure and expected future demand. Although ensuring a reliable water supply for urban and other water demands in 2030 is probable, the current, existing water supply and infrastructure would not be able to support the population in the Plan in 2030. Through its influence on regional growth, the 2004 RTP would make a cumulatively considerable contribution to this **significant impact.**				
3.13 <u>Public Services and Utilities</u>						
Impact 3.13-1: Construction and implementation of the 2004 RTP would affect the level of transportation-related public services facilities, such as police and fire/emergency personnel and associated stations or other public facilities in the SCAG Region.	**MM 3.13-1a:** The project implementation agency shall ensure that prior to construction all necessary local and state road and railroad encroachment permits are obtained. The project implementation agency shall also comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements: 1. Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow. 2. Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction	The impact would be **less than significant** with mitigation.	LS (-)	LS (=)	LS (-)	LS (=)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
	zone. 3. Scheduling of truck trips outside of peak morning and evening commute hours. 4. Limiting of lane closures during peak hours to the extent possible. 5. Usage of haul routes minimizing truck traffic on local roadways to the extent possible. 6. Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. 7. Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones. 8. Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions shall be asked to identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures. 9. Storage of construction materials only in designated areas. 10. Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. **MM 3.13-1b:** The project implementation agency shall identify projects in the 2004 RTP that require police protection, fire service, and emergency medical service and shall coordinate with the local fire department and police department to ensure that the existing public services and utilities would be able to handle the increase in demand for their services. If the current levels of services at the project site are found to be inadequate, infrastructure improvements and/or personnel requirements for the appropriate public service shall be identified in each project's CEQA documentation.					
Impact 3.13-2: Construction necessary to implement the 2004 RTP may uncover and potentially sever underground utility lines (electric and natural gas).	**MM 3.13-2a:** Prior to construction, the implementing agency shall identify the locations of existing utility lines. The contractor shall avoid all known utility lines during construction.	The impact would be **less than significant** after mitigation.	LS (-)	LS (=)	LS (-)	LS (=)
Impact 3.13-3: Construction necessary to implement the 2004 RTP would affect the	**MM 3.13-3a:** Projects identified in the 2004 RTP that require solid waste collection will coordinate with the local public works department to ensure	The impact would be **less than**	LS (-)	LS (=)	LS (-)	LS (=)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
demand for solid waste services in the SCAG region.	that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility shall be identified in each project's CEQA documentation. **MM 3.13-3b:** Each of the proposed projects identified in the 2004 RTP shall comply with applicable regulations related to solid waste disposal. **MM 3.13-3c:** The construction contractor shall work with the respective County's Recycling Coordinator to ensure that source reduction techniques and recycling measures are incorporated into project construction. **MM 3.13-3d:** The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.	**significant** after mitigation.				
Cumulative Impact 3.13-4: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to a less than significant impact to the response times of police, fire, and emergency services in the SCAG Region.	Less than significant. None required.	The impact would not be cumulatively considerable and would be **less than significant.**	S (+)	S (+)	LS (=)	S (+)
Cumulative Impact 3.13-5: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable fire threat to development in the SCAG Region.	**MM 3.13-5a:** SCAG shall encourage local jurisdictions to strengthen and fully enforce fire codes and regulations. **MM 3.13-5b:** SCAG shall encourage the use of fire-resistant materials when constructing projects in areas with high fire threat. **MM 3.13-5c:** SCAG shall encourage the use of fire-resistant vegetation and the elimination of brush and chaparral in the immediate vicinity of development in areas with high fire threat. **MM 3.13-5d:** SCAG shall help reduce fire threats in the region as part of the Growth Visioning process and as policies in the update of SCAG's Regional Comprehensive Plan and Guide.	The impact would remain **significant** because development would occur in areas that have a high, very high or extreme threat of fire.	S (+)	S (+)	S (-)	S (-)
Cumulative Impact 3.13-6: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to the staffing level of police and fire and emergency	**MM 3.13-6a:** Implementation agencies shall carefully evaluate the growth inducing potential of individual projects so that the full implications of the project are understood. Individual environmental documents shall quantify indirect impacts (growth that could be facilitated or induced) on public services and utilities to the extent feasible. Implementation agencies shall work with lead and responsible agencies to make any necessary adjustments to the applicable General Plan. Any such identified adjustment shall be communicated to SCAG.	The demand to hire and train approximately 22,000 police personnel and 7,000 fire and emergency personnel would remain a **significant**	S (=)	S (=)	S (=)	S (=)

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Table ES-1: 2004 RTP Impacts, Mitigation Measures and Comparison for Alternatives

IMPACT	MITIGATION MEASURES	2004 RTP SIGNIFICANCE AFTER MITIGATION	No Project	Modified 2001 RTP	PILUT 1 (Infill)	PILUT 2 (5th Ring)
services in the SCAG Region.		impact.				
Cumulative Impact 3.13-7: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and by inclusion of land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence on growth contributes to regional cumulatively considerable impacts to the number of school-age children and the demand for school facilities in different parts of the SCAG Region.	**MM 3.13-7a:** Project implementation agencies shall undertake project specific review of the public utilities and services as part of project specific environmental review. For any identified impacts, project implementation agencies shall ensure that the appropriate school district has the school capacity, or is planning for the capacity, that the project will generate. Appropriate mitigation measures, such as new school construction or expansion, shall be identified. The project implementation agencies or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures. SCAG shall be provided with documentation of compliance with any necessary mitigation measures.	The region's cumulative demand for approximately 1,000 new schools and approximately 50,000 new teachers would be a **significant** impact on public services.	S (=)	S (=)	S (=)	S (=)
Cumulative Impact 3.13-8: Implementation of the 2004 RTP in combination with potential changes to the growth distribution potentially would uncover and potentially sever underground utility lines (electric and natural gas).	**MM 3.13-8a:** Prior to construction, the implementing agency shall identify the locations of existing utility lines. The contractor shall avoid all known utility lines during construction.	The impact would be **less than significant.**	LS (=)	LS (=)	LS (=)	LS (=)
Cumulative Impact 3.13-9: Urbanization in the SCAG region will increase substantially by 2030. The 2004 RTP, by increasing mobility and including land-use-transportation measures, influences the pattern of this urbanization. The 2004 RTP's influence would create a cumulatively considerable impact to the demand for solid waste services in the SCAG region.	**MM 3.13-9a:** SCAG shall encourage the CIWMB to continue to enforce solid waste diversion mandates that are enacted by the Legislature. **MM 3.13-9b:** SCAG shall encourage local jurisdictions to continue to adopt programs to comply with state solid waste diversion rate mandates and, where possible, shall encourage further recycling to exceed these rates. **MM 3.13-9c:** Future impacts related to management of solid waste shall be minimized through cooperation, information sharing, and program development during the update of the Integrated Solid Waste Management chapter of SCAG's RCPG and through SCAG's Energy and Environment Committee. SCAG shall consult with the CIWMB during this process.	While disposal capacity for the solid waste in 2030 has been identified, the cumulative impacts of collecting solid waste, transporting it to an available facility, and disposing of it would remain **significant**.	S (=)	S (=)	S (=)	S (=)

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1.0 INTRODUCTION

SUMMARY

The Southern California Association of Governments (SCAG) prepared this Program Environmental Impact Report (PEIR), pursuant to the California Environmental Quality Act (CEQA), for the 2004 Regional Transportation Plan (RTP or "the Plan"). The 2004 RTP is a long-range regional transportation plan that provides a blueprint to help achieve a coordinated and balanced regional transportation system. The RTP includes a policy element that is shaped by goals, policies, and performance indicators, an action element that identifies projects, programs, and implementation, and a description of regional growth trends that identifies future needs for travel and goods movement. The PEIR for the 2004 RTP serves as an informational document to inform decision-makers and the public of the potential environmental consequences of approving the proposed Plan, and it includes alternatives and mitigation measures designed to help avoid or minimize significant environmental impacts.

SCOPE AND METHODOLOGY

This PEIR fulfills the requirements of the CEQA. It is a programmatic document that provides a region-wide assessment of the potential significant environmental effects of implementing the projects, programs, and policies included in the proposed 2004 RTP. A PEIR "may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) As logical parts in the chain of contemplated actions, (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways" (CEQA Guidelines Section 15168). A PEIR provides a regional consideration of cumulative effects and includes broad policy alternatives and program wide mitigation measures. This PEIR offers useful regional-scale analysis and mitigation for subsequent, site-specific environmental reviews conducted by implementing agencies as individual projects in the RTP are developed.

The focus of the environmental analysis in this PEIR is on the potential regional-scale and cumulative impacts of implementation of the Plan and the alternatives. The long-range planning horizon of more than 25 years necessitates that many of the highway, arterial, goods movement, and transit projects included in the Plan and the alternatives are identified at the conceptual level, and this document addresses environmental impacts to the level that they can be assessed without undue speculation. This PEIR acknowledges this uncertainty and incorporates these realities into the methodology to evaluate the environmental effects of the 2004 RTP, given its long-term planning horizon.

The potential significant environmental effects of implementing the Plan were identified by employing multiple analytical methods, including spatial analysis, transportation, noise, and air quality modeling, and other quantitative, ordinal, and qualitative techniques. Spatial analysis using Geographic Information Systems (GIS) was employed to evaluate the potential effects of

the major freeway, rail, and transit projects on numerous resource categories, such as land use, biological, and water resources. Sophisticated transportation, noise, and air quality simulation models were used to estimate the transportation, noise, and air quality impacts. Project and policy elements of the Plan and alternatives were incorporated into the modeling analysis and into the socioeconomic projections. The specific techniques used to evaluate each potential environmental effect are fully described in each resource section in Chapter Three of this document.

Baseline for Determining Significance

The PEIR must identify significant impacts that would be expected to result from implementation of the 2004 RTP. Significant impacts are defined as "a substantial or potentially substantial, adverse change in the environment" (Public Resources Code § 21068). Significant impacts must be determined by applying explicit significance criteria to compare the future Plan conditions to the existing environmental setting (CEQA Guidelines § 15126.2(a)). The existing setting is described in detail in each resource section of Chapter Three of this document, and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are included in each resource section in Chapter Three of this document.

Comparison with the No Project

It is important to emphasize that urbanization in the SCAG region will increase substantially by 2030, with or without implementation of the 2004 RTP, and the CEQA-required environmental baseline of current conditions means that the impact assessment for many of the resource categories is cumulative in nature. Therefore, the analysis for each resource category also includes a direct comparison between the expected future conditions with the proposed Plan and the expected future conditions if no Plan were adopted. This evaluation is not included in the determination of the significance of impacts; however, it provides a meaningful perspective on the effects of implementing the 2004 RTP. A direct comparison between the proposed Plan and the No Project Alternative (defined below) is included in each resource section of Chapter Three of this document.

Proposed Plan and RTP EIR Alternatives

This PEIR evaluates a reasonable range of alternative regional transportation plans at an equal level of detail. The alternatives evaluated for the RTP Environmental Impact Report (EIR) include:

The proposed **Plan** is a blueprint to help achieve a coordinated and balanced regional transportation system. The Plan contains transportation and urban-form strategies that encourage compact growth, increased jobs/housing balance, and centers-based development, where feasible, in all parts of the region. The proposed Plan is fully described in the Project Description (Chapter Two of this document).

The **No Project** Alternative includes only those programmed transportation projects that received federal environmental clearance by December 2002. These reasonably foreseeable projects fulfill the definition of the mandated CEQA No Project Alternative (CEQA Guidelines § 15126.6(e)).

The **2001 RTP Modified** Alternative is an update of the adopted 2001 RTP to reflect the most recent growth estimates and transportation planning decisions and assumptions. This Alternative does not include urban-form strategies.

The **PILUT[1] 1 (Infill)** Alternative includes transportation and urban-form strategies that encourage a substantial portion of future growth to concentrate in existing urban centers through infill and redevelopment. This Alternative was designed by Fregonese Calthorpe Associates, SCAG's consultant, to reduce consumption of open space and habitat compared to the 2004 RTP. The PILUT 1 Alternative analyzed in this PEIR represents one potential vision of what could occur if the investments, urban form strategies, and goals of this Alternative were fully realized. Overall, impacts from the PILUT 1 Alternative would be less adverse than the Plan for each resource category, and the PILUT 1 alternative is the environmentally superior alternative.

The **PILUT 2 (Fifth Ring)** Alternative includes transportation and urban-form strategies that encourage a more decentralized urban form, with many compact, infill-intense urban centers throughout the region, resulting in an improvement in the jobs/housing balance in the outlying areas. Specifically, PILUT 2 focuses on improving and expanding infrastructure to utilize undeveloped land on the outer edges of the urbanized area. The PILUT 2 Alternative analyzed in this EIR represents a relatively compact, centers-based vision of what could occur if the investments, urban form strategies, and goals of this Alternative were fully realized.

Each alternative maintains a constant population total in 2030. The year 2030 growth projection for each Alternative differs from one another in two ways: 1) numbers of households and jobs and/or 2) distribution of people, households and jobs. The alternatives differ in terms of numbers of households and jobs because different investments in the alternatives would be expected to stimulate different levels of job creation and household development. The alternatives differ in terms of the distribution because the different transportation investments and urban form strategies would be expected to support different regional distributions of population, households, and employment.

Mitigation Measures

Mitigation measures proposed in the PEIR can be incorporated as policies into the Final 2004 RTP and into the updated Regional Comprehensive Plan, as appropriate and feasible. This integration of mitigation with regional plans would help ensure that feasible measures are

[1] The development of the 2004 RTP proceeded via an integrated process called Planning for Integrated Land Use and Transportation, or PILUT (see page 1-4). The regional growth visioning effort, known as Southern California Compass, guided this process and contributed two contrasting alternatives to the 2004 RTP that were analyzed in this PEIR, known as PILUT 1 and PILUT 2.

implemented at the project level. The implementing agencies shall be responsible for ensuring adherence to the mitigation measures prior to construction. SCAG shall be provided with documentation of compliance with mitigation measures through SCAG's monitoring efforts, including SCAG's Intergovernmental Review Process.

Public Participation Process

SCAG has employed an innovative planning process that integrates transportation, land-use, and the environment. The process, known as PILUT—Planning for Integrated Land Use and Transportation—has been guided by Compass Growth Visioning, which is a participatory effort to help move Southern California towards a more sustainable future. Active participation from decision-makers, stakeholders, and the public is helping ensure that the process is relevant, inclusive, and useful.

As the Metropolitan Planning Organization (MPO), SCAG is required to implement a public involvement process to provide complete information, timely public notice, and full public access to key decisions and to support early and continuing public involvement in developing its regional plans. SCAG formally adopted a Public Participation Program in September 1993. Further, Title VI of the Civil Rights Act of 1964 and associated regulations and policies, including President Clinton's 1994 Executive Order 12898 on Environmental Justice, seek to assure that minority and low-income populations are involved in the planning process.

To fulfill these expectations, SCAG has used a combination of methods to stimulate public involvement. For the development of the 2004 RTP, the following public outreach methods have been used:

- Presentations on the RTP to established organizations throughout the Region
- Public workshops on the RTP throughout the Region
- Posting of all public outreach events via an Outreach calendar on the SCAG web site
- Direct outreach to minority and low-income populations
- Development of written and visual material to communicate the status and content of the RTP, including fact sheets and presentations.
- A public comment form used throughout the outreach program (in person, at public meetings and online)
- SCAG's web site, featuring a section dedicated to the 2004 RTP, including public meeting notices and the latest written information on the RTP
- Outreach to media including newspaper editorial boards, local television and radio stations, and ethnic media

- Selected radio and television appearances by elected officials and senior SCAG staff.

In addition to these targeted outreach efforts, all regular and special meetings of the RTP task forces, the Transportation and Communications Committee and the SCAG Regional Council are publicly noticed and opportunities for public comment are provided. Specific public comments on the RTP are being recorded and considered by SCAG in the development of the 2004 RTP.

In preparing the 2004 RTP, twelve task force committees (i.e. Aviation, Goods Movement, Transit, etc.), including several subcommittees, worked for more than two years to identify and refine Plan components. Each assigned task force committee, comprised of elected officials and regional stakeholders, held numerous meetings focused on development of specific transportation modes and transportation and urban form strategies.

ENVIRONMENTAL REVIEW PROCESS

Pursuant to CEQA Guidelines § 15082, the Notice of Preparation (NOP) for the 2004 RTP PEIR was released on June 9, 2003, and was received and circulated by the State Clearinghouse (SCH) on June 13, 2003. In response to NOP comments and a desire to encourage additional participation in the RTP EIR process, SCAG convened an RTP EIR scoping meeting on September 16th, and extended the comment period to end on September 25, 2003. A copy of the original NOP is included in the Technical Appendices. SCAG received dozens of comments on the NOP, which are included in Technical Appendices, and incorporated appropriate comments into the scope and methodology of the environmental analysis of this document. Continuing participation from interested agencies and individuals is encouraged throughout the RTP EIR process.

ORGANIZATION OF THE PEIR

This document is organized into eight Chapters plus an Executive Summary. The Executive Summary contains a review of the expected environmental impacts of implementation of the proposed 2004 RTP and the measures recommended to mitigate those impacts. The summary also includes a comparison of the expected environmental effects of each RTP EIR Alternative.

Chapter 1: Introduction. This Chapter is comprised of this introduction and analytical approach. It describes the purpose, scope and methodology of the PEIR, the Environmental Review Process, and an overview of the contents of the PEIR.

Chapter 2: Project Description. In this Chapter the background and location of the RTP is given including a review of the state and federal legislation that guides the process of developing the RTP. A discussion of the purpose and need for the 2004 RTP is presented with the projected growth in the region. An overview of the major components of the 2004 RTP is presented.

Chapter 3: Environmental Setting, Impacts, and Mitigation Measures. This Chapter identifies the setting for the 2004 RTP and provides a detailed analysis of the 2004 RTP for the region. It examines the environmental impacts of the 2004 RTP on the following categories: Land Use, Population, Employment and Housing, Transportation, Air Quality, Noise, Aesthetics and Views,

Biological Resources, Cultural Resources, Geology, Soils and Seismicity, Hazardous Materials, Energy, Water Resources, and Public Services and Utilities. For each of these environmental areas the analysis addresses the Environmental Setting, Regulatory Setting, Methodology, Significance Criteria, and Impacts and Mitigation Measures.

Chapter 4: Comparison of Alternatives. In this Chapter the RTP PEIR alternatives are evaluated and compared to the 2004 RTP for each resource area, such as land use and energy.

Chapter 5: Long Term Effects. This Chapter identifies the significant unavoidable environmental changes, significant irreversible impacts, growth-inducing impacts, and cumulative impacts of the 2004 RTP.

Chapter 6: Report Authors, Organizations, Persons Consulted, References, and Acronyms. This Chapter lists the contributors, references and the acronyms used in the preparation of this PEIR.

Chapter 7: Technical Appendices. This Chapter includes the NOP, Responses to Notice of Preparation, Air Emissions Tables, Biological Resource Tables - California Department of Fish and Game Natural Diversity Database (CNDDB), Water Resources Tables, Cultural Resources Data, and Sites in the SCAG Region Listed on the National Register of Historic Places.

Chapter 8: Figures. This Chapter includes all the Figures referenced throughout the PEIR.