2.0 PROJECT DESCRIPTION

This chapter provides a detailed description of the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (2012-2035 RTP/SCS or Plan). The project description discussion includes the background of the proposed project, the project objectives, and a description of the existing environment in the SCAG region.

2.1 PROJECT BACKGROUND AND LOCATION

This Program Environmental Impact Report (PEIR) evaluates the potential environmental impacts associated with the adoption of the 2012-2035 RTP/SCS by the Southern California Association of Governments (SCAG). This document has been prepared to meet the requirements of the California Environmental Quality Act (CEQA) Statutes Public Resources Code Section 21000 et seq., CEQA Guidelines Title 14 California Code of Regulations (CCR), § 15000 et seq., and Senate Bill (SB) 375.

SCAG is the federally designated Metropolitan Planning Organization (MPO) under Title 23, United States Code (U.S.C.) 134(d)(1) for the six-county region that includes the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. These counties are shown in **Map 2-1** located in Chapter 8.0 (Maps). As an MPO, SCAG is required to adopt and update a long-range transportation plan every four years.

The SCAG region also contains 14 subregions as shown in **Map 2-2** located in Chapter 8.0 (Maps). The total area of the region is approximately 38,000 square miles and stretches from the state borders of California/Nevada and California/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 land area in the nation, San Bernardino County, as well as the county with the highest population in the nation, Los Angeles County. The SCAG region is home to 18 million people, or 49 percent of California's population. If it were its own state, the SCAG region would be the fifth most populous in the nation, just behind Florida and ahead of Illinois.

The SCAG region encompasses several federally designated non-attainment and maintenance areas for air quality standards. The U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) under Section 176(c) of the Federal Clean Air Act [42 U.S.C. 7506(c)] require that for a non-attainment area conformity determinations on updated transportation plans and programs must be made every four years. The 2012-2035 RTP/SCS is the quadrennial update to the RTP that was last adopted in May 2008. All RTPs must conform to air quality requirements, as well as meet a number of other requirements, including specific requirements on the "horizon" year of regional transportation plans (the horizon year must be at least 20 years in to the future). In order to comply with those requirements, the 2012-2035 RTP/SCS includes a horizon year of 2035. Transportation investments in the SCAG region that receive State and federal funds or require federal approvals must be consistent with the RTP and must be included in SCAG's Federal Transportation Improvement Program (TIP) when funded. The TIP covers six years and is updated biennially on an even-year cycle. It represents the immediate, near-term commitments of the RTP. In order to continue receiving federal transportation funds the SCAG region must have a conforming RTP/SCS in place by June 2012.

SCAG is also required to prepare a RTP and pursuant to Section 65080 of the California Government Code. The State requirements largely mirror the federal requirements and require each Regional Transportation Planning Agency (RTPA) in urban areas to adopt and submit an updated RTP to the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans) every four years. To ensure a degree of statewide consistency in the development of RTPs, the CTC under Government

Code Section 14522 prepared RTP Guidelines. The adopted guidelines include a requirement for program level performance measures, which include objective criteria that reflect the goals and objectives of the RTP. In addition, the initial years of the plan must be consistent with the Federal Transportation Improvement Program (TIP). Pursuant to SB 375, SCAG is required to submit the Sustainable Communities Strategy to the California Air Resources Board for the purpose of determining whether the greenhouse gas targets have been met.

The 2012-2035 RTP/SCS is a long-range Regional Transportation Plan that includes projects, policies, and strategies to create a blueprint for the region's growth through 2035. The Plan includes improvements to the transportation system. These improvements include closures to critical gaps in the network that hinder access to certain parts to the region, as well as the strategic expansion of the transportation system. In addition to new projects that are included in the Plan, many projects from the 2008 RTP are included in the 2012-2035 RTP/SCS and are now considered committed or at least reasonably foreseeable (i.e., they are in the FTIP and are thus included in the No Project condition).

The 2012-2035 RTP/SCS is intended to meet the changing socioeconomic, transportation infrastructure, financial, technological and environmental conditions of the region. Individual projects are preliminarily identified in the 2012-2035 RTP/SCS; however, this PEIR is programmatic in nature and does not specifically analyze these projects. Project-level analyses will be prepared by implementing agencies on a project-by-project basis as projects proceed through the design and decision-making process. Project-specific planning and implementation undertaken by each project sponsor/implementing agency will depend on a number of issues, including: policies, programs and projects adopted at the local level; restrictions on federal, State and local transportation funds; the results of feasibility studies for particular corridors; and project-specific environmental review.

Under SB 375, the California's Sustainable Communities and Climate Protection Act, SCAG is also required to prepare an SCS as part of the RTP, that reduces greenhouse gas (GHG) emissions by eight percent per capita by 2020 and 13 percent per capita by 2035, as set by the California Air Resources Board (ARB). According to Section 65080 of the California Government Code, in summary the SCS must:

- Identify existing land use;
- Identify areas to accommodate long-term housing needs;
- Identify areas to accommodate an eight-year projection of regional housing needs;
- Identify transportation needs and the planned transportation network;
- Consider resource areas and farmland;
- Consider state housing goals and objectives;
- Set forth a forecasted growth and development pattern; and
- Comply with federal law for developing an RTP.

SCAG's SCS demonstrates the region's ability to attain the GHG emissions reduction targets set forth by the ARB. The SCS outlines SCAG's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs and changing demographics, and transportation demands.

Prior to adopting the 2012-2035 RTP/SCS, SCAG's Regional Council must certify the PEIR for the Plan. Local and State transportation agencies will use the 2012-2035 RTP/SCS and the PEIR as a reference for their own planning purposes.

2.2 PURPOSE AND NEED FOR ACTION

The purpose of the 2012-2035 RTP/SCS is to provide a clear, long-term vision of the regional transportation goals, policies, objectives and strategies for the SCAG region while at the same time providing strategies to reduce greenhouse gas emissions as required by SB 375. The necessity for the RTP/SCS is driven by the need to plan for improvements to the aging regional transportation system and preserve its long-term viability in light of the projected population growth.

The 2012-2035 RTP/SCS reduces greenhouse gas emissions as required by SB 375. The 2012-2035 RTP/SCS identifies infrastructure projects and improvements to reduce traffic and congestion. The 2012-2035 RTP/SCS includes mobility as an important component and also incorporates added emphasis on sustainability and integrated planning. The vision for the 2012-2035 RTP/SCS encompasses three principles: mobility, economy, and sustainability. The Plan contains projects, policies, and strategies to achieve a wide range of positive outcomes. It identifies reasonably available sources of funding for transportation. The 2012-2035 RTP/SCS is a blueprint for improving the quality of life for residents of the SCAG region by planning for wise transportation investments and informed land use choices. The Plan aims to achieve variety and efficiency in travel choices, as well as a safe, secure, and efficient transportation system that would provide improved mobility and access. The Plan would also generally improve air quality (except for re-entrained roadway dust resulting from total vehicle miles travelled), improve health (as a result of greatly reduced diesel particulates that are strongly correlated with cancer risk) and reduce greenhouse gas emissions consistent with SB 375 requirements. The plan achieves its overall objectives by combining transportation investment and policies with integrated land use strategies that reduce VMT and emissions. These land use strategies include:

- Focusing new growth and development in areas well served by transit,
- Promoting a better fit between jobs and housing,
- Redirecting future housing growth toward more compact unit types, and
- Promoting a mix of uses and neighborhood design that enables more walk and bike trips.

Over the lifetime of the 2012-2035 RTP/SCS, SCAG forecasts that there will be an additional 3.88 million people added to this large and diverse area. The 2012-2035 RTP/SCS is based on growth forecasts in the region in 2035 as shown in **Table 2-1**.

TABLE 2-1: 2035 POPULATION, HOUSEHOLDS, AND EMPLOYMENT IN THE SCAG REGION

	2035 Population		2035 Households		2035 Employment	
County	**No Project**	**Plan**	**No Project**	**Plan**	**No Project**	**Plan**
Imperial	288,200	288,200	90,800	90,800	121,100	121,100
Los Angeles	11,350,400	11,350,400	3,851,300	3,851,300	4,826,600	4,826,600
Orange	3,417,800	3,417,800	1,123,500	1,123,500	1,779,000	1,779,000
Riverside	3,380,900	3,380,900	1,091,500	1,091,500	1,236,800	1,236,800
San Bernardino	2,749,800	2,749,800	847,400	847,400	1,059,400	1,059,400
Ventura	958,700	958,700	318,400	318,400	413,200	413,200
SCAG Region	**22,145,800**	**22,145,800**	**7,322,900**	**7,322,900**	**9,436,100**	**9,436,100**

SOURCE: SCAG Population Growth Forecasting, 2011.

Federal guidelines (40 CFR §1502.13) require the preparation of a statement of purpose and need in conjunction with environmental documents prepared to meet the requirements of the National Environmental Policy Act (NEPA). In accordance with these guidelines, these statements are prepared to briefly specify the underlying purpose of the project and the need for the project to which the lead agency is responding in proposing actions and/or alternatives. Although adoption of the 2012-2035 RTP/SCS is not subject to NEPA, SCAG has chosen to include this statement of purpose and need to enable proponents of specific projects

included in the 2012-2035 RTP/SCS to discuss the purpose and need for their individual projects relative to the Plan.

This statement of purpose and need has been prepared to identify the underlying purpose for adopting the 2012-2035 RTP/SCS. It was not prepared to be a comprehensive statement of need for each individual RTP/SCS project. Where appropriate, this statement of need may be incorporated by reference in project-specific NEPA documents as provided in 40 CFR §1502.21.

The transportation planning process for the 2012-2035 RTP/SCS is continuous as the region is constantly undergoing change. The 2012-2035 RTP/SCS presents an assessment of the growth and economic trends in the SCAG region for the years 2008 through 2035 and provides strategic direction for investments during this period.[1]

2.3 PROJECT DESCRIPTION

SCAG is the federally designated MPO under Title 23, U.S.C. 134(g)(1), for the six-county region. SCAG is required by State and federal mandates to prepare an RTP/SCS every four years.

The 2012-2035 RTP/SCS 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 included in the RTP/SCS in order to receive federal funding. Transportation projects are listed in Appendix B: Detailed RTP/SCS Project List. The 2012-2035 RTP/SCS is comprised of the following elements: (1) a policy element that presents an overview of the challenges facing the region; the RTP/SCS goals, policies and performance outcomes; (2) the SCS, which includes land use policies and forecasted future growth and land use for the region; (3) an action element that describes the transportation investments and programs necessary to implement the Plan and performance measures to determine how the Plan performs; and (4) the financial element that summarizes the cost of Plan implementation constrained by a realistic projection of available revenues and provides recommendations for the allocation of funds.

The projects, policies and strategies that have committed, available or reasonably available funding sources constitute the 2012-2035 RTP/SCS that is also referred to as the "constrained plan" or Plan.

The 2012-2035 RTP/SCS also contains an additional chapter called the "strategic plan." Unlike the constrained plan, the strategic plan presents a vision for regional improvements beyond committed, available, or reasonably available funding sources. It also identifies additional projects that require study and consensus building before the decision can be made as to whether to commit the funding to include these projects in a future RTP/SCS's constrained plan. These are projects for which funding sources have not been identified, but the implementation of which would provide transportation, air quality and health benefits to the region. These projects include some High-Speed Train (HST) projects as well as additional transit projects, and public transportation investments.

This PEIR does not analyze these strategic projects because their lack of funding indicates that implementation is speculative at this point. In general these projects would improve transportation-related performance in the region and reduce certain types of air emissions. Many of the segments would have environmental impacts along their routes (similar to impacts discussed for RTP/SCS projects) as they may pass through environmentally sensitive areas. If these projects become reasonably foreseeable, their impacts will be addressed in future RTP/SCSs and associated PEIRs.

[1]Note that the RTP/SCS baseline is 2008 as required for RTPs. This PEIR properly uses 2011 as the existing conditions against which impacts are analyzed.

The following describes the major functional components of the 2012-2035 RTP/SCS. Chapters that are not covered in this summary description (i.e. Financial Plan, Public Participation, and Strategic Plan) support the projects, policies and strategies in the sections described here and do not, on their own, contribute to environmental impacts. The chapters of the 2012-2035 RTP/SCS that are relevant to the analysis of potential environmental impacts of the Plan include: Chapter 1: Vision; Chapter 2: Transportation Investments; Chapter 4: Sustainable Communities Strategy; and Chapter 5: Measuring Up, which contains the Environmental Justice component and is associated with a corresponding Environmental Justice Technical Appendix that includes analysis of some of the same issues addressed in the PEIR (noise, air quality) as relevant to low income, minority and other protected groups.

Chapter 1: Vision

The vision for the 2012-2035 RTP/SCS encompasses three principles: mobility, economy, and sustainability. Each of these components is discussed below.

Mobility. A successful transportation network allows the residents of the region to access daily needs, including work, school, shopping, and recreation, without undue burdens of cost, time, or physical danger. An emphasis on mobility will allow residents to choose from a variety of transportation modes that suit their preferences and needs, including active, non-motorized modes such as biking and walking that allow for physical activity and greater health.

Economy. A successful RTP/SCS will create opportunities for business, investment, and employment. The 2012-2035 RTP/SCS proposes $525 billion in investments over the next 25 years.

Sustainability. The 2012-2035 RTP/SCS is subject to specific requirements for environmental performance. Beyond simply meeting these requirements, a successful Plan would allow future residents to enjoy better quality of life, including the ability to lead a healthy lifestyle enjoying clean air and water and ample opportunities for recreation and physical activity. It would have direct benefits by reducing pollutant emissions and expanding opportunities for active transportation.

To guide development of the projects, programs, and strategies, SCAG's Regional Council adopted goals and objectives that help carry out the 2012-2035 RTP/SCS vision. The regional goals reflect the wide-ranging challenges facing transportation planners and decision-makers in achieving the RTP/SCS vision. The goals demonstrate the need to balance many priorities in the most cost-effective manner. SCAG's Regional Council will adopt these goals, shown in **Table 2-2** below, as part of the 2012-2035 RTP/SCS.

TABLE 2-2: 2012-2035 RTP GOALS
Align the plan investments and policies with improving regional economic development and competitiveness
Maximize mobility and accessibility for all people and goods in the region
Ensure travel safety and reliability for all people and goods in the region
Preserve and ensure a sustainable regional transportation system
Maximize the productivity of our transportation system
Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)
Actively encourage and create incentives for energy efficiency, where possible
Encourage land use and growth patterns that facilitate transit and non-motorized transportation
Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies
SOURCE: SCAG, 2012-2035 RTP/SCS, Chapter 1: Vision, Table 1.1, page 13, 2011.

The 2012-2035 RTP/SCS guiding policies help focus future investments on the best-performing projects and strategies that seek to preserve, maintain, and optimize the performance of the existing system. These policies, shown in **Table 2-3,** also emphasize the importance of tracking the Plan's performance through specific indicators.

TABLE 2-3: RTP POLICIES
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 should be the highest RTP priorities for any incremental funding in the region.
3. RTP land-use and growth strategies in the RTP will respect local input and advance smart growth initiatives.
4. Transportation Demand Management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1.
5. High-Occupancy Vehicle (HOV) gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1.
6. Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan.
SOURCE: SCAG, 2012-2035 RTP/SCS, Chapter 1, Vision, Table 1.2, Page 15, 2011.

As directed by the first RTP policy, performance measures play a critical role in the development of the 2012-2035 RTP/SCS. Performance measures help quantify regional goals, estimate the impacts of proposed investments, and evaluate progress over time. The 2012-2035 RTP/SCS adds two new outcomes: location efficiency and public health. The location efficiency outcome reflects the degree to which land use is improved to provide shorter and easier access to desired destinations, therefore encouraging transit and active transportation modes. The public health outcome monitors pollution emitted from transportation, which causes health problems such as asthma and even premature deaths. The performance measures for the 2012-2035 RTP/SCS builds upon earlier experiences and adds specificity and technical depth to the original measures.

Performance measures are closely tied to the broader goals to ensure that the implementation of the 2012-2035 RTP/SCS moves the region closer to achieving these goals. **Table 2-4** depicts the relationship between the RTP goals and performance measures while **Table 2-5** described the performance measures in greater detail.

Chapter 2: Transportation Investments

The transportation investments included in the 2012-2035 RTP/SCS are comprised of a substantial list of components that are described here, including:

- Safety and Security
- System Monitoring and Evaluation
- System Preservation
- Smart Land Use
- Transportation Demand Management (includes several sub-components)
- Congestion Management Process Systems
- Transportation Systems Management
- Corridor System Management Plans
- System Expansion (includes several sub-components)
- Transit (includes several sub-components)
- Aviation and Ground Access
- Goods Movement Strategies (includes several sub-components)
- Goods Movement Environmental Strategy

TABLE 2-4: RTP GOALS AND RELATED PERFORMANCE MEASURES

RTP Goals	Mobility/ Accessibility	Reliability	Location Efficiency	Productivity	Safety and Health	Economic Well-Being	Cost Effective-ness	System Sustain-ability	Environ-mental Quality
Align the plan investments and policies with improving regional economic development and competitiveness						X			
Maximize mobility and accessibility for all people and goods in the region	X						X		
Ensure travel safety and reliability for all people and goods in the region		X			X				
Preserve and ensure a sustainable regional transportation system								X	X
Maximize the productivity of our transportation system	X			X					
Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)					X				X
Actively encourage and create incentives for energy efficiency, where possible			X						
Encourage land use and growth patterns that facilitate transit and non-motorized transportation			X						
Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*									

* SCAG does not yet have an agreed-upon security performance measure; therefore it is not included in the table.
SOURCE: SCAG, 2012-2035 RTP/SCS, Chapter 1: Vision, Table 1.3, Page 15, 2011.

TABLE 2-5: RTP OUTCOMES AND PERFORMANCE MEASURES

Outcome	Performance Measures/Indicator(s)	Definition	Performance Target	Data Sources Used
Location Efficiency	Share of growth in High Quality Transit Areas (HQTAs)	Share of the region's growth in households and employment in HQTAs	Improvement over No Project Baseline	Census (including annual American Community Survey), InfoUSA
	Land consumption	Additional land needed for development that has not previously been developed or otherwise impacted, including agricultural land, forest land, desert land and other virgin sites	Improvement over No Project Baseline	Rapid Fire Model
	Average distance for work and non-work trips	The average distance traveled for work or non-work trips separately	Improvement over No Project Baseline	Travel Demand Model
	Percent of work trips less than three miles	The share of total work trips which are fewer than three miles	Improvement over No Project Baseline	Travel Demand Model
	Work trip length distribution	The statistical distribution of work trip length in the region	Improvement over No Project Baseline	Travel Demand Model
Mobility and Accessibility	Person delay per capita	Delay per capita can be used as a supplemental measure to account for population growth impacts on delay	Improvement over No Project Baseline	Travel Demand Model
	Person delay by facility type (mixed flow, HOV, arterials)	Delay – excess travel time resulting from the difference between a reference speed and actual speed	Improvement over No Project Baseline	Travel Demand Model
	Truck delay by facility type (Highway, Arterials)	Delay – excess travel time resulting from the difference between a reference speed and actual speed	Improvement over No Project Baseline	Travel Demand Model
	Travel time distribution for transit, SOV, HOV for work and non-work trips	Travel time distribution for transit, SOV, HOV for work and non-work trips	Improvement over No Project Baseline	Travel Demand Model
Safety and Health	Collision/accident rates by severity by mode	Accident rates per million vehicle miles by mode (all, bicycle/ pedestrian and fatality/killed)	Improvement over Base Year	CHP Accident Data Base, Travel Demand Model Mode Split Outputs
	Criteria pollutant emissions	CO, NO_X, PM2.5, PM10, and VOC.	Meet Transportation Conformity requirements	Travel Demand Model/ARB EMFAC Model
Environmental Quality	Criteria and greenhouse gas emissions	CO, NOX, PM2.5, PM10, and VOC Per capita greenhouse gas emissions (CO2)	Meet Transportation Conformity requirements and SB375 GHG per capita emission reduction targets	Travel Demand Model/ARB EMFAC Model

TABLE 2-5: RTP OUTCOMES AND PERFORMANCE MEASURES

Outcome	Performance Measures/Indicator(s)	Definition	Performance Target	Data Sources Used
Economic Well-Being	Additional jobs supported by improving competitiveness	Number of jobs added to the economy as a result of improved transportation conditions which make the region more competitive.	Improvement over No Project Baseline	Regional Economic Model REMI
	Additional jobs supported by transportation investment	Total number of jobs supported in the economy as a result of transportation expenditures.	Improvement over No Project Baseline	Regional Economic Model REMI
	Net contribution to Gross Regional Product	Gross Regional Product due to transportation investments and increased competitiveness	Improvement over No Project Baseline	Regional Economic Model REMI
Investment Effectiveness	Benefit/Cost Ratio	Ratio of monetized user and societal benefits to the agency transportation costs.	Greater than 1.0	California Benefit Cost Model
System Sustainability	Cost per capita to preserve multi-modal system to current and state of good repair conditions	Annual costs per capita required to preserve the multi-modal system to current conditions.	Improvement over Base Year	Estimated using SHOPP Plan and recent California Transportation Commission 10-Year Needs Assessment

Note: Performance measures tied to goals for reliability, preservation, productivity, health, energy efficiency, and security cannot currently be reliably forecasted and are not included in Table 5.1. However, SCAG has identified related measures to be used for monitoring purposes, and these are discussed in the Performance Measures Technical Report.
SOURCE: SCAG 2012-2035 RTP/SCS, Chapter 5, Measuring Up, Table 5.1, Page 162, 2011.

The approach to developing an investment package for the 2012-2035 RTP/SCS emphasizes system management to maximize the productivity of, and strategically expand the region's existing transportation system. This approach recognizes that an integrated, multi-faceted approach is necessary to address the region's mobility needs.

Safety and Security. Safety improvements are included in the Plan at all levels. Many of the strategy and investment categories in the RTP/SCS aim to improve the safety of the existing transportation network. For instance, enhancing maintenance and preservation of the region's buses, rail track, bridges, and roadway pavements will contribute to reduced accidents and improved safety. Similarly, expanding the network of bike lanes and sidewalks, and bringing them into American with Disabilities Act (ADA) compliance will reduce accidents. Deploying technology such as advanced ramp metering to manage traffic flow also reduces collisions at on-ramps and critical freeway-to-freeway interchanges. SCAG has two main safety and security goals:

- Ensure transportation safety, security, and reliability for all people and goods in the region; and
- Prevent, protect, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property, the transportation network and the regional economy.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) required that each state develop a Strategic Highway Safety Plan (SHSP). California adopted a SHSP which had a goal of reducing roadway fatality rate to less than 1.0 fatality per 100 million vehicle miles traveled (VMT) by 2010; California achieved this goal in 2009. California is currently updating their SHSP to further reduce fatality rates. The 2012-2035 RTP/SCS is consistent with that plan as required by federal law.

System Monitoring and Evaluation. System monitoring is the foundation of the transportation system and plays a large part in the 2012-2035 RTP/SCS. As discussed above, SCAG has developed performance measures and tools to track and monitor the progress of the transportation system so that the region can make informed decisions regarding transportation investments. Additionally, transportation professionals and decision-makers have recently committed to improving the region's ability to properly fund the investments needed to comprehensively monitor and evaluate system performance. These investments include detection, closed circuit television systems, bus global positioning systems, and automatic ridership counting systems. Although funding is modest for these activities, they lead to more informed decisions.

System Preservation. Over the decades, the region has invested hundreds of billions of dollars in a multi-modal transportation system. Approximately $217 billion, or almost half of all proposed expenditures through 2035, is allocated to system preservation and maintenance.

Smart Land Use. Since initiating one of the nation's first large-scale regional growth visioning efforts in 2000, SCAG has sought to integrate land use and transportation by working with sub-regions and local communities to increase development densities and improve the jobs/housing balance. Implementing such smart strategies encourages walking, biking, and transit use, and, therefore reduces vehicular demand. That in turn saves travel time, reduces pollution, and leads to improved health. Land use is described fully in Chapter 4 of the 2012-2035 RTP/SCS.

Transportation Demand Management (TDM). In an effort to address travel demand, TDM strategies reduce vehicular demand and thereby congestion, particularly during peak periods. These measures are designed to influence an individual's travel behavior by making alternatives to the single-occupant automobile more attractive. Some examples of TDM strategies are carpools and telecommuting, and "First Mile/Last Mile" strategies to allow travelers to easily connect to and from transit service at their origin and destination. Other strategies include vanpool services for larger employers and rideshare matching services. Los Angeles, Orange, Riverside and San Bernardino Counties jointly sponsor a regional "Guaranteed Ride Home Program," which provides transportation for carpoolers and transit users in emergency situations. In total, the 2012-2035 RTP/SCS dedicates $4 billion to TDM investments.

Increasing Carpooling and Vanpooling. Carpooling is supported by a host of strategies. High Occupancy Vehicle (HOV) lanes and convenient Park-and-Ride Lots increase carpool usage.

Increase the use of transit, bicycling, and walking. The 2012-2035 RTP/SCS also commits $6 billion to active transportation, which will expand bikeways, improve local streets, and address ADA requirements. Additional strategies include traffic calming and Complete Streets strategies, particularly near transit stations and schools, so as to further reduce vehicle trips by improving safety and desirability of active transportation.

Congestion Management Process (CMP). The federal requirement for a CMP was initially enacted in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, and continued in the Transportation Equity Act for the 21st Century (TEA-21) in 1998 and subsequently in SAFETEA-LU. CMP requires monitoring, performance measures, and, in certain cases, mitigation measures. Above all, CMP requires and ensures that highway capacity projects that significantly increase the capacity for single occupancy vehicles (SOV) be developed in a comprehensive context that considers all possible alternatives, including transit, TDM and TSM strategies.

SCAG is proposing two critical improvements to the current CMP process. First, SCAG will incorporate a requirement in the TIP Guidelines that calls for submittal of documentation by the sponsoring agencies associated with significant roadway capacity projects (greater than $50 million) to ensure documentation of all the alternatives considered in defining the project, as well as identifying appropriate mitigation that would be implemented in conjunction with the project.

Second, the 2012-2035 RTP/SCS recognizes the importance of addressing non-recurring congestion (collisions, stalled cars, severe weather). Non-recurring congestion accounts for almost 50 percent of all congestion on the roadway system. So, for the first time, the 2012-2035 RTP/SCS identifies non-recurring congestion delay on the state highway system, both for general purpose lanes and carpool lanes, as a key performance metric that will be monitored and reported over time to ensure SCAG is making progress towards addressing this critical issue.

Transportation Systems Management (TSM). TSM increases the productivity of the existing multi-modal transportation system, thereby reducing the need for costly system expansion. TSM relies in part on intelligent transportation system (ITS) technologies to increase traffic flow and reduce congestion. The 2012-2035 RTP/SCS dedicates up to $6.8 billion to TSM. Examples of TSM categories and their associated benefits are described. TSM will also play an increasingly larger role in regional goods movement improvements.

The Ports of Los Angeles and Long Beach have identified ITS technologies, specifically automated vehicle location (AVL), as a major component in their proposed air quality mitigation strategies. Advanced monitoring will assist in achieving system efficiencies in ports and intermodal operations, reducing delays and wait times at gates and destinations, and allowing for more flexible dispatching, all of which reduce emissions. Weigh-in motion systems and enhanced detection will allow for better enforcement of commercial vehicle rules, reducing pavement damage, and identifying critical paths for goods movement planning in the future. **Table 2-6** shows the TSM categories and their associated benefits.

Corridor System Management Plans (CSMPs). With the passage of Proposition 1B by California voters in November 2006, a program of funding called the Corridor Mobility Improvement Account (CMIA) was created to improve mobility on the state highway system. The CTC adopted guidelines for the CMIA program that required the development of CSMPs for those projects receiving CMIA funding, to ensure that mobility improvements would be maintained over time.

System Expansion. Southern California's highways and arterials extend for almost 22,000 center-line miles and 67,000 lane-miles and serve 53 million travelers each weekday. However, critical gaps remain in the network. Closing these gaps to complete the system will allow greater access and opportunities. **Map 2-3** located in Chapter 8.0 (Maps) shows the Major Highway Projects included in the 2012-2035 RTP/SCS.

TABLE 2-6: TRANSPORTATION SYSTEM MANAGEMENT CATEGORIES AND BENEFITS	
Category	**Benefit**
Enhanced Incident Management	Reduces incident related congestion which is estimated to represent half of the total congestion in urban areas
Advanced Ramp Metering	Alleviates congestion and reduces accidents at on-ramps and freeway to freeway interchanges
Traffic Signal Synchronization	Minimizes wait times at traffic signals and therefore reduces travel time
Advanced Traveler Information	Provides real-time traffic conditions, alternative routing, and transportation choices to the public
Improved Data Collection	Allows agencies to monitor system performance and optimize the impact of transportation investments
Universal Transit Fare Cards (Smart Cards)	Reduces time required to purchase transit tickets and allows inter-operability among transit providers
Transit Automatic Vehicle Location (AVL)	Enables monitoring of transit vehicles and ensuring on-time performance
SOURCE: SCAG, 2012-2035 RTP/SCS, Chapter 2: Transportation Investments, Table 2.1, Page 41, 2011.	

Highway Improvements and Local Arterials. The expansion of highways and local arterials has slowed over the last decade, in part due to increasing costs and environmental concerns. However, critical gaps in the network remain. Locally developed county transportation plans have identified projects that close these gaps and complete the system, and they are included in the Plan. **Map 2-4** located in Chapter 8.0 (Maps) shows the number of existing freeway lanes (2008) and **Map 2-5** located in Chapter 8.0 (Maps) shows the number of freeway lanes in 2035. **Table 2-7** highlights some of these highway completion projects.

TABLE 2-7: MAJOR HIGHWAY COMPLETION PROJECTS		
County	**Project**	**Completion Year /a/**
Imperial	SR-115 Limited Access Expressway	2018
Los Angeles	SR-710 Gap Closure	2030
Los Angeles, San Bernardino	High Desert Corridor	2020
Orange	SR-241 Improvements	2020-2030
Orange, Riverside	CETAP Inter-county Corridor A	2035
Ventura	U.S. 101 and SR-118 Improvements	2018
/a/ Represents the completion year for which the project was analyzed for the RTP modeling and regional emissions analysis. **SOURCE:** SCAG, 2012-2035 RTP/SCS, 2011; Chapter 2: Transportation Investments, Table 2.2, Page 42, 2011.		

Additional categories of highway improvements included in the 2012-2035 RTP/SCS are HOV lanes and connectors, mixed flow (or general purpose) lanes, toll facilities, and Express/High Occupancy Toll (HOT) lanes, and local arterial improvements, as described below. **Table 2-8** summarizes arterial investments in the Plan.

TABLE 2-8: ARTERIAL INVESTMENT SUMMARY	
County	**Investment (in billions)**
Imperial	$1.6
Los Angeles	$6.7
Orange	$4.4
Riverside	$6.1
San Bernardino	$2.6
Ventura	$0.7
Total	**$22.1**
SOURCE: SCAG, 2012-2035 RTP/SCS, 2011; Chapter 2, Transportation Investments, Table 2.4, Page 44, 2011.	

HOV Gap Closures and Connectors. Southern California has invested heavily in HOV lanes, producing one of the nation's most comprehensive HOV networks and highest utilization rates. The 2012-2035 RTP/SCS includes many additional investments to extend the HOV network, strategically close gaps in the HOV network, convert certain limited access HOV lanes to allow for continuous access and construct additional direct freeway-to-freeway HOV connectors to maximize the overall system performance by minimizing weaving conflicts and maintaining travel speeds. **Map 2-6** located in Chapter 8.0 (Maps), shows the 2035 HOV Lane System while **Table 2-9** lists the major HOV projects included in the Plan.

TABLE 2-9 MAJOR HOV PROJECTS

County	Route	From	To	Completion Year /a/
HOV LANE ADDITIONS				
Los Angeles	I-10	I-605	Puente Ave	2014
Los Angeles	I-10	Puente Ave	SR-57/I-210	2018
Los Angeles	I-5	LA/OC County Line	I-605	2018
Los Angeles	I-5	Pico Canyon	Parker Road	2030
Los Angeles	I-405	I-10	U.S. 101	2018
Los Angeles	SR-14	Ave P-8	Ave L	2030
Orange	I-5	Avenida Pico	San Juan Creek Rd	2020
Orange	I-5	SR-55	SR-57	2035
Orange	SR-73	I-405	MacArthur	2035
Riverside	I-215	Nuevo Rd	Box Springs Rd	2030
Riverside	SR-91	Adams St	SR-60/I-215	2018
Riverside	I-15	RIV/SB County Line	I-15/I-215	2020
San Bernardino	I-10	Haven Ave	Ford St	2020
San Bernardino	I-10	Ford St	Riv/SB County Line	2030
San Bernardino	I-215	Spruce St	Orange Show Rd	2014
San Bernardino	I-215	SR-210	I-15	2030
San Bernardino	I-15	RIV/SB County Line	SR-18/Mohave River	2020
FREEWAY TO FREEWAY HOV CONNECTORS				
Los Angeles	I-5/SR-14	Connector		2014
Los Angeles	I-5/I-405	Connector (partial)		2030
Orange	I-405/SR-73	Connector		2035
San Bernardino	I-10/I-15	Connector (partial)		2020
San Bernardino	I-10/I-215	Connector		2030

/a/ Represents the completion year for which the project was analyzed for the RTP modeling and regional emissions analysis.
SOURCE: SCAG Transportation Modeling, 2011

Mixed Flow. Since mixed flow lanes carry more traffic than any other component of SCAG's transportation system, mixed-flow capacity enhancements are also necessary to address traffic bottlenecks and relieve congestion on heavily traveled corridors. This is especially true in areas outside of the urban core where transit service and the HOV network are not fully developed. The 2012-2035 RTP/SCS includes a variety of mixed flow lane additions, mostly outside of Los Angeles County. **Map 2-7**, which is located in Chapter 8.0 (Maps), shows the 2035 Mixed Flow transportation system.

Toll and Express/High Occupancy Toll (HOT) Lane Corridors and Facilities. The 2012-2035 RTP/SCS also includes an expansion of the existing Express/HOT lanes and toll road system in Orange County to address the congested commuter corridor between housing-rich Riverside County and jobs-rich Orange County. Additionally, improvements to several major corridors in other parts of the region are proposed to be financed by tolls, including the SR-710 Tunnel Gap Closure and the High Desert Corridor. **Map 2-8**, in Chapter 8.0 (Maps), shows the 2035 Express/HOT lanes and tolls.

Transit. The 2012-2035 RTP/SCS calls for expansion of transit facilities and service over the next 25 years. **Table 2-10** shows major transit projects included in the 2012-2035 RTP/SCS. The local county sales tax programs, most recently Measure R in Los Angeles County are providing for much of this expansion. In addition, the coordination of development in and around transit stations and corridors, improved service reliability and performance, and a highly focused transit capital investment program appear to yield the best results within the budget limitations that the region faces.

TABLE 2-10: MAJOR TRANSIT PROJECTS

County	Project	Completion Year [/a/]
Los Angeles	Crenshaw/LAX Transit Corridor	2018
Los Angeles	Eastside Transit Corridor – Phase 2	2035
Los Angeles	Exposition Line – Phase 2 to Santa Monica	2018
Los Angeles	Gold Line Extension to Glendora	2018
Los Angeles	Gold Line Extension to Montclair	2035
Los Angeles	Green Line LAX Extension	2035
Los Angeles	Green Line South Bay Extension	2035
Los Angeles	Regional Connector	2020
Los Angeles	San Fernando Valley (East) North/South Rapidways	2018
Los Angeles	San Fernando Valley Orange Line Canoga Extension	2014
Los Angeles	West Santa Ana Branch Corridor	2030
Los Angeles	Westside Subway Extension to Century City	2030
Los Angeles	Westside Subway Extension to Westwood	2035
Orange	Anaheim Rapid Connection	2020
Orange	Bristol/State College, Harbor, and Westminster BRT	2030
Orange	Orange County Metrolink Service Expansion Program	2035
Orange	Santa Ana/Garden Grove Fixed Guideway	2020
Riverside	Metrolink Perris Valley Line Extension to San Jacinto and Temecula	2035
San Bernardino	E Street BRT (sbX)	2014
San Bernardino	Redlands Rail – Phase 1	2018
San Bernardino	Redlands Rail – Phase 2	2020

[/a/] Represents the completion year for which the project was analyzed for the RTP modeling and regional emissions analysis.
SOURCE: SCAG, 2012-2035 RTP/SCS, 2011; Chapter 2, Transportation investments, Table 2.5, Page 49, 2011.

In addition to the specific transit plans, projects and programs proposed, the 2012-2035 RTP/SCS also supports the following policies and actions:

- Encourage the development of new transit modes in our sub-regions, such as BRT, rail, limited-stop service, and point to point express services utilizing the HOV and Express/HOT lane networks;
- Encourage transit providers to increase frequency and span of service in transit-oriented development (TOD) and high quality transit areas (HQTAs) and along targeted corridors where there is latent demand for transit services;
- Collaborate with local jurisdictions to provide a network of local community circulators that serve new TOD and HQTAs, providing an incentive for residents and employees to make trips on transit;
- Develop first mile/last mile strategies on a local level to facilitate access to the transit system via local circulators, active transport, scrip, or vehicle sharing. Continue partnering with member cities and sub-regions to do localized first mile/last mile planning;
- Encourage transit fare discounts and local vendor product and service discounts for residents and employees of TOD and HQTAs, or for a jurisdiction's local residents in general who have fare media. Advocate for increased operational funding for transit service from the state sources;

- Encourage transit properties to pursue cost containment strategies;
- Work with the cities to identify and mitigate choke points in the regional transportation system that affect transit; and
- Work with CTCs, municipalities, and transit operators to develop bus facilities.

The 2012-2035 RTP/SCS also includes significant investments in commuter rail, intercity passenger rail, and the eventual implementation of the California High-Speed Train (HST) Program. This plan lays out an investment strategy of incremental speed and capacity improvements to existing Amtrak and Metrolink service to provide interim high speed service within the SCAG region, while building towards an eventual connection to the statewide high speed network. Specifically, a series of grade separations, grade closures, track expansions, station improvements, earthen works, and other early investments will allow more and faster service in the Los Angeles to San Diego (LOSSAN) and Antelope Valley Corridors. A phased California High-Speed Train implementation strategy, in accordance with the California High Speed Rail Program Draft 2012 Business Plan, will provide initial high-speed train service to the San Fernando Valley, with an extension by 2035 south to Los Angeles Union Station and the Anaheim Regional Transportation Intermodal Center. **Map 2-9**, located in Chapter 8.0 (Maps) shows the 2035 rail transit system. As these efforts are still in the initial stages of planning and analysis, alignment and schedule details are subject to change.

Passenger and High-Speed Rail. The 2012-2035 RTP/SCS proposes three Passenger Rail strategies (improvements to the LOSSAN Corridor, improvements to the existing Metrolink system, and the implementation of Phase I of the California High-Speed Train [CA HST] project) that will provide additional travel options for long-distance travel within the region and to neighboring regions. The recent release of the Draft CA HST Business Plan now estimates a statewide Phase I cost of $98.5 billion (in year of expenditure dollars) with service extended to the SCAG region in 2033. Within the Draft CA HST Business Plan, there are a variety of strategies to connect Northern and Southern California to the state network and includes incremental improvements that can be made in advance of and in preparation for that connection. Therefore, stakeholders throughout Southern California are seeking to implement a phased and blended implementation strategy for high-speed rail by employing state and federal high-speed rail funds to improve existing services, eventually meeting the Federal Rail Administration's (FRA) 110 miles per hour (MPH) definition of high-speed service. These speed and service improvements to the existing LOSSAN and Metrolink corridors will deliver the California High-Speed Rail Authority's (Authority) new blended approach, and at the same time permanently improve the SCAG region's commuter and intercity rail services. In addition to the specific plans, projects, and programs proposed, the 2012-2035 RTP/SCS supports the following policies and actions related to the passenger and high-speed rail program:

- Implement cooperative fare agreements and media between Amtrak and LOSSAN, and CA HST when it begins revenue service;
- Implement cooperative marketing efforts between Amtrak and LOSSAN, and CA HST when it begins revenue service;
- Encourage regional and local transit providers to develop rail interface services at Metrolink, Amtrak and high-speed rail stations; and
- Work with the Authority and local jurisdictions to plan and develop optimal levels of retail, residential and employment development that fully takes advantage of new travel markets and rail travelers.

The California High-Speed Train (HST) Project. In 2005, the Authority issued a PEIR selecting a Phase I alignment from Anaheim to Los Angeles, on to the Antelope Valley via the San Fernando Valley, along SR-99 through the San Joaquin Valley, and into the Bay Area via San Jose and along the San Francisco Peninsula. Phase II would add connections to the Inland Empire, San Diego, Sacramento, and possibly the East Bay. In November of 2008, California voters approved Proposition 1A, allocating $9 billion in bond

funds for the project. In 2009 and 2010, the FRA awarded the Authority $3.6 billion in High-Speed and Intercity Passenger Rail discretionary grants, which will be used in the San Joaquin Valley as per FRA direction. Proposition 1A also included $950 million for upgrading and improving connectivity for current rail services that will connect with the HST project, so the need to make speed and service improvements for current rail services in the SCAG region, coupled with the Authority's new blended implementation approach, calls for the need to spend these funds in the next few years.

The primary benefits of Phase I will be realized on a statewide level; however, the SCAG region's interregional travel facilities will also benefit. If successful, the HST system will attract many interregional trips now made by car or airplane, providing an alternative to congested interregional highways and relieving ground congestion near local airports. The Los Angeles to the Bay Area travel market is currently the nation's seventh busiest aviation corridor, and the region's second busiest. Phase I has the potential to free up gate space at regional airports for more international and long haul routes, and relieve some airfield congestion. Similarly, when both Phases I and II are complete, the system will offer connectivity to several airports, helping to meet SCAG's long-term goal of regionalizing air travel in Southern California. Phase I will also provide regional connectivity in general. All these connections will complement and feed each other, thereby boosting rail and transit ridership across the SCAG region.

Improvements to the Los Angeles to San Diego (LOSSAN) Rail Corridor. The LOSSAN Joint Power Authority partners have begun work on a Strategic Implementation Plan, which will guide service and business planning and provide a corridor wide implementation plan for capital improvement projects. Strategies in the LOSSAN program will include grade closures, the installation of quad gates and raised medians, grade separations, the installation of sidings and double tracks, electronic and positive train control technologies, track straightening, and other speed capacity improvements. Ultimately, the goal is that express services along the corridor will travel between San Diego and Los Angeles in under two hours.

Improvements to the Existing Metrolink System. The Southern California Regional Rail Authority is currently the sole operator of the Metrolink system, which serves primarily as a commuter rail service in the SCAG region. Metrolink operates 512 track miles of service along seven routes in Ventura, Orange, Los Angeles, San Bernardino, Riverside and San Diego Counties. Metrolink passengers travel much further than most transit passengers, having an average trip length of 36.9 miles. Four routes, the Ventura County Line, the Orange County Line, the Inland Empire/Orange County Line, and the SR-91 Line, share portions of the LOSSAN Corridor with the Pacific Surfliner. By 2035, the HST project will provide a high-speed travel option to the Bay Area and the Central Valley via the existing valley subdivision, which is currently used by the Metrolink Antelope Valley Line. An aggressive program of track straightening, grade separations, and track and siding expansion is expected to reduce express travel times to roughly one hour. When Phase I of the State HST project is completed, Metrolink and Amtrak routes will serve as feeders, providing access to a new long distance travel mode. Travelers expected to access the State project at stations in the cities of Los Angeles, Burbank, San Fernando, Palmdale, Norwalk and Anaheim. The Authority's 2009 Business Plan posits that passengers will travel between Los Angeles and San Francisco in less than three hours, for about 80 percent of comparable airfare.

Bus Transit. **Map 2-10** located in Chapter 8.0 (Maps) shows the bus network in 2035. The 2012-2035 RTP/SCS allocates additional funding to bus transit in the region. Fixed route bus lines in the region are continuously evaluated and adjusted. Los Angeles County also offers Bus Rapid Transit (BRT) on many of its core corridors. In addition, new services are planned across the region, including:

- Orange County's first BRT services and new trolley systems in Santa Ana, Anaheim, and Garden Grove
- Riverside and San Bernardino Counties' first BRT services
- Development of an extensive express bus point-to-point network based on the expanding HOV and Express/HOT lane networks

- Increasing the frequency and quality of fixed-route bus service and the introduction of local community circulators to provide residents of smart growth developments with the option of taking transit over using a car to make short, local trips
- The implementation of transit priority facilities, such as bus lanes and traffic signal priority

Active Transportation. Active transportation (e.g., bicycling and walking) are essential and increasingly important modes of transportation. These non-motorized modes are low-cost, do not emit greenhouse gases, help reduce roadway congestion, and increase health and the quality of life. As the region works towards reducing congestion and air pollution, walking and bicycling will become more essential to meet the future needs of the residents. National Household Travel Survey (NHTS) data indicate that approximately 21 percent of all trips in the region in 2009 were conducted by walking (19 percent) or bicycling (2 percent), representing an approximately 75 percent increase from the 12 percent active transportation mode share in 2000. The 2009 NHTS data also showed that there was an 11 percent decrease in driving from 84 percent to 75 percent. More active transportation has placed a greater focus on the preservation, maintenance and expansion of active transportation infrastructure. As the population in the SCAG region grows and matures, and as parts of the region move towards denser, mixed-use, and transit-oriented development, the demand and use of active transportation will increase. **Map 2-11** located in Chapter 8.0 (Maps) shows the regional bicycle network.

Coastal Trails. In addition to bikeways, local trails have played an important role to increase accessibility and provide opportunities for active transportation. Trails along the coast of California have been utilized as long as people have inhabited the region. In an effort to develop a "continuous public right-of-way along the California coastline; a trail designed to foster appreciation and stewardship of the scenic and natural resources of the coastal trekking through hiking and other complementary modes of non-motorized transportation," the California Coastal Trail (CCT) was established. SCAG proposes the completion of the CCT to increase active transportation access to the coast. Completion of the CCT would provide 183 miles of multi-purpose trails.

Safe Routes to School (SRTS). SAFETEA-LU established the SRTS program to "enable and encourage primary and secondary school children to walk and bicycle to school" and to support infrastructure-related and behavioral projects that are "geared toward providing a safe, appealing environment for walking and bicycling that will improve the quality of children's lives and support national health objectives by reducing traffic, fuel consumption, and air pollution in the vicinity of schools." SRTS programs play a critical role in eliminating some of the vehicle trips that occur during peak periods to drop-off or pick up students by ensuring safe routes to bike or walk to school.

Complete Streets. The Complete Streets Act of 2008 (AB 1358) requires cities and counties to incorporate the concept of Complete Streets in their general plan updates to ensure that transportation plans meet the needs of all users of the roadway system. SCAG supports and encourages implementation of Complete Street policies in the 2012-2035 RTP/SCS. SCAG will work with the local jurisdictions as they implement Complete Streets strategies within their jurisdictions by providing information and resources to support local planning activities.

Aviation. Air travel in the SCAG region continues to grow. The 2012-2035 RTP/SCS's regional air passenger demand forecast is 145.9 million annual air passengers (MAP) in 2035. See **Figures 2-1** and **2-2** (from the 2012-2035 RTP/SCS, page 60) for forecast passenger and cargo demands by airport in 2035. This forecast is based on, but lower than, forecasts adopted in previous RTPs, such as the 165.3 MAP forecast adopted in the 2008 RTP. At 5.61 million tons of cargo in 2035, the Plan's air cargo demand forecast is also much more conservative than what was adopted in the 2008 RTP for 2035 (8.28 million tons).

Figure 2-1: Passenger Airport Allocations

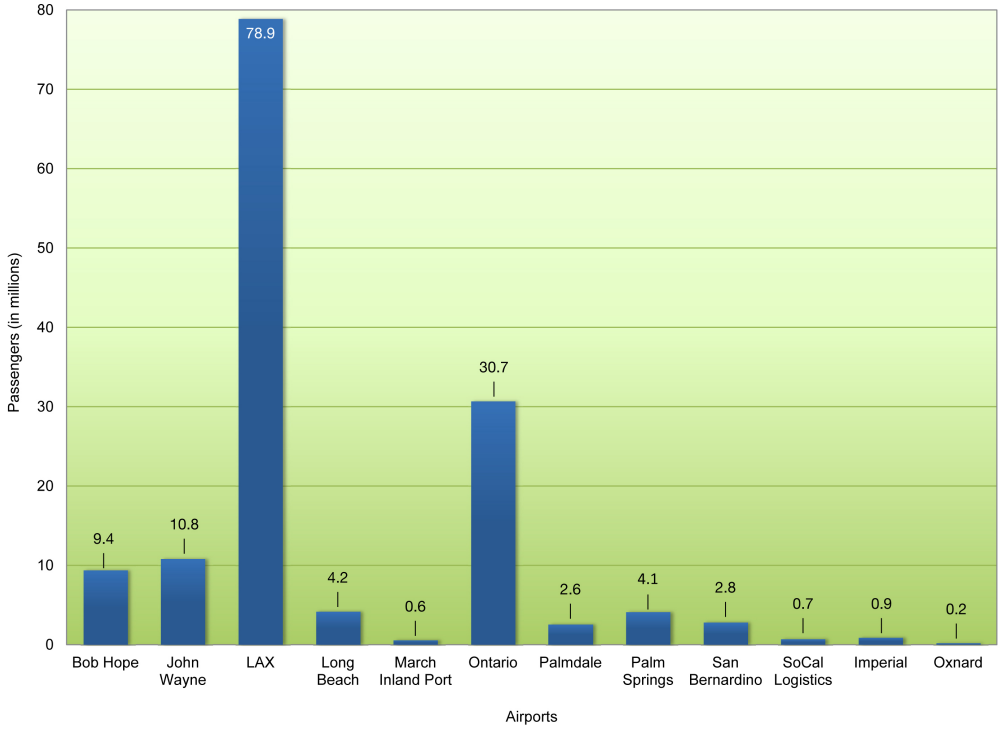
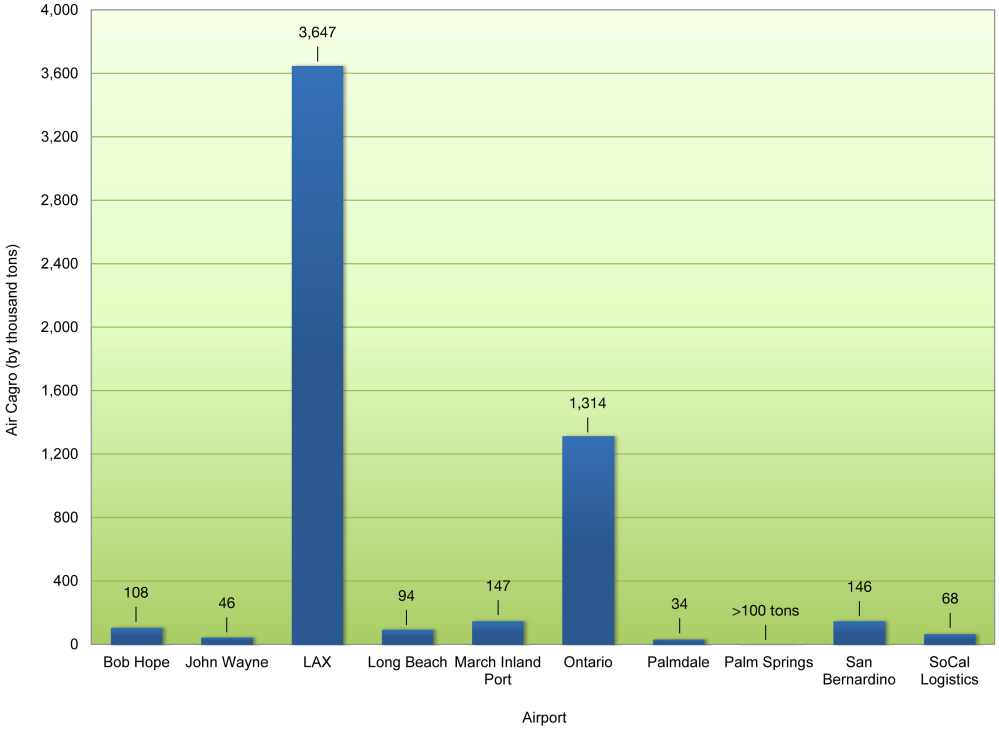


Figure 2-2: Air Cargo Demand Airport Allocations



Like previous forecasts, this long-range forecast is based on interim forecasts that show the urban capacity-constrained airports of Los Angeles International Airport (LAX), Bob Hope, Long Beach and John Wayne airports all reaching their defined legally permissible capacity or physical capacity constraints well before 2035. The remaining air travel demand is served by the other, suburban airports with ample capacity to serve future demand, including Ontario International, San Bernardino International, March Inland Port, Palmdale, Southern California Logistics, and Palm Springs airports. A small amount of future air passenger demand would also be served by the two commuter airports in the region, Oxnard and Imperial airports.

Recent trends question the ability to shift air traffic from the urban airports to the outlying/suburban airports that have the capacity to accommodate the forecast growth. In order to attract the number of passengers to the suburban airports envisaged in the 2035 regional air passenger demand forecast, some incentives are likely to be needed to encourage airlines to offer service at these airports. Potential incentives fall into three broad categories:

- Improvements to the airport ground access system that would make the alternate airports more accessible to travelers from those parts of the region that currently find the core urban airports more convenient;
- Measures that would reduce the cost to the airlines of offering service at the alternate airports, either through direct subsidy or by reducing airport fees and charges relative to the more congested airports; and
- Marketing programs to encourage air travelers to consider using the air services at the alternate airports.

General Aviation. SCAG also updated regional general aviation demand forecasts for the 44 general aviation airports in the region, as well as for the 10 commercial airports in the region that support general aviation activity. The forecast developed by SCAG shows a decline in regional general aviation operations by about 32 percent from 2010 to 2035. The main reason for the anticipated decline is the fact that the aging pilot population is not expected to be adequately replenished by new student pilot starts.

Airport Ground Access Strategy. The RTP identifies strategies to improve airport ground access (and egress). SCAG coordinates closely with airport authorities and county transportation commissions to identify and prioritize specific projects." To be effective in attracting passengers to air service at the alternate airports, ground access improvements will need to significantly reduce the travel time and/or cost of accessing the suburban airports. This is likely to be a particular concern with airports such as Palmdale, which is almost 70 miles from Downtown Los Angeles and approximately 50 miles from communities in the San Fernando Valley.

Improved transit and rail services that are planned to connect to airports include the extension of the Metro Gold Line to Ontario and improvements to Metrolink service on the Antelope Valley and San Bernardino lines. While the volume of airport passengers alone would not justify the cost of these projects, if they are being done anyway to address other travel needs, SCAG can work with the relevant agencies to make sure that the connections to the alternate airports are well planned and marketed. In the case of Ontario Airport, airport passenger volumes may be high enough to support express bus service from remote terminals at such locations as the Anaheim Regional Transportation Intermodal Center, Los Angeles Union Station, and the Van Nuys FlyAway terminal in the San Fernando Valley. These facilities all currently exist or will exist by 2035, so it would be necessary to operate the bus service. It is unlikely that the volumes of air passengers at the other three alternate airports would be high enough to support dedicated express bus service, but it might be possible to serve San Bernardino International Airport as an extension of express bus service to Ontario Airport from Union Station or Van Nuys.

Goods Movement Strategies. Goods movement and freight transportation are essential to support the SCAG regional economy and quality of life. In 2010, over 1.15 billion tons of cargo valued at almost $2 trillion moved across the region's system.[2] Whether carrying imported goods from the San Pedro Bay Ports to

[2]FHWA Freight Analysis Framework: http://faf.ornl.gov/fafweb/Extraction0.aspx, accessed November 2011.

regional distribution centers, supplying materials for local manufacturers, or delivering consumer goods to SCAG residents, the movement of freight provides the goods and services needed to sustain regional industries and consumer needs on a daily basis. The region's goods movement system is comprised of seaports, land ports, air cargo facilities, interstate highways and local roads, Class I railroads and warehouse and distribution centers and is shown in **Map 2-12** located in Chapter 8.0 (Maps)**.**

Following the completion of the 2008 RTP, SCAG initiated the Comprehensive Regional Goods Movement Plan and Implementation Strategy. This effort, involving diverse regional stakeholders, is intended to identify a multimodal regional freight plan that integrates existing strategies and projects with newly developed regional initiatives advanced through the study. Some of these strategies are highlighted below.

Regional Clean Freight Corridor System. In past RTPs, SCAG has envisioned a system of truck-only lanes extending from the San Pedro Bay Ports to Downtown Los Angeles along the I-710, connecting to an east-west segment, and finally reaching the I-15 in San Bernardino County. As part of the 2012-2035 RTP/SCS, SCAG includes a refined concept for the east-west corridor component of the system and connections to an initial segment of I-15. After adoption of the 2012-2035 RTP/SCS, it is anticipated that significant additional study of alignments will be conducted, including an alternatives analysis completed as part of a full environmental review.

The East-West Freight Corridor would carry between 58,000 and 70,000 trucks per day—trucks that would be removed from adjacent general-purpose lanes and local arterial roads. The corridor would benefit a broad range of goods movement markets: between 25–40 percent of the trucks would be port-related, almost 40 percent would serve local goods movement dependent industries, and the remainder would support domestic trade. Truck delay would be reduced by up to 11 percent while speeds for autos on SR-60 would be improved by 11 to 12 percent. Truck traffic on the SR-60 general purpose lanes would be reduced by 42 to 82 percent, depending on location, by as much as 33 percent on I-10, and by as much as 20 percent on adjacent arterials. Separating trucks and autos would also reduce truck-involved accidents on east-west freeways that currently have some of the highest accident levels in the region (20 to 30 accidents a year on certain segments).

For the 2012-2035 RTP/SCS, the regional freight corridor system also includes an initial segment of I-15 that would connect to the East-West Freight Corridor, reaching just north of I-10. Additional study will be undertaken to complete specification of the I-15 component of this project.

Bottleneck Strategies. SCAG recently studied key regional truck bottlenecks and associated projects. Through this analysis, project concepts that may address the highest priority truck bottlenecks and have the most significant impact on delay were identified and continue to be evaluated. The 2012-2035 RTP/SCS allocates an estimated $5 billion to address goods movement bottleneck relief strategies. Examples of bottleneck relief strategies include ramp-metering, extension of merging lanes, ramp and interchange improvements, capacity improvements, and auxiliary lane additions. Annually, 3.6 million hours of heavy truck delay during the most congested time periods on area roadways could be eliminated if the highest priority truck bottlenecks in the region are addressed.

Rail Strategies. As part of the Comprehensive Regional Goods Movement Plan and Implementation Strategy, SCAG worked closely with regional stakeholders to develop a set of rail strategies aimed at increasing freight and passenger mobility, promoting job creation and retention, improving safety, and mitigating environmental impacts. **Map 2-13** located in Chapter 8.0 (Maps) shows grade separations within the SCAG region.

Mainline rail improvements and capacity expansion includes rail-to-rail grade separations, double or triple-tracking certain rail segments, implementing new signal systems, building universal crossovers, and constructing new sidings.

These improvements would benefit both freight rail and passenger rail service depending on their location:

- **Rail yard improvements**: This includes upgrades to existing rail yards as well as construction of new yards. These projects would provide vital improvements to the region's ability to handle the projected growth in cargo volumes.
- **Rail operation safety improvements**: This includes technology such as Positive Train Control (PTC) that can greatly reduce the risk of rail collisions.
- **Grade separations of streets from rail lines**: These projects reduce vehicular delay, improve emergency vehicle access, reduce the risk of accidents, and lower emissions levels.

Key rail projects in the 2012-2035 RTP/SCS include:

- Rail-to-rail grade separation at Colton Crossing;
- Additional mainline tracks for the BNSF San Bernardino and Cajon Subdivisions and the UPRR Alhambra and Mojave Subdivisions;
- Southern California International Gateway (SCIG);
- Modernization of the Intermodal Container Transfer Facility (ICTF);
- Highway-rail grade separations; and
- Port-area rail improvements, including on-dock rail enhancements.

The benefits of the rail strategies to the region are considerable, and include mobility, safety, and environmental gains. As shown in **Table 2-11**, these strategies could eliminate almost 6,000 hours of vehicle delay per day at grade crossings, decrease emissions (NO_X, CO_2, and PM2.5) by almost 23,000 pounds per day, and reduce overall train delay to 2005 levels.

TABLE 2-11: BENEFITS OF THE SCAG REGIONAL RAIL STRATEGY

Mobility	Reduces train delay to 2005 levels
	Provides mainline capacity to handle projected demand in 2035 (includes 43.2 million TEU port throughput)
	Eliminates 5,782 vehicle hours of delay per day at grade crossings in 2035
Safety	Eliminates 69 at-grade railroad crossings
Environment	Reduces 22,789 lbs of emissions per day (CO_2, NO_X and PM2.5 combined) from idling vehicles at grade crossings
	Facilitates on-dock rail
	Reduces truck trips to downtown rail yards and associated emissions

SOURCE: SCAG, 2012-2035 RTP/SCS, 2011; Chapter 2, Transportation investments, Table 2-10, Page 73, 2011.

Goods Movement Environmental Strategy. In Southern California, goods movement and air quality are inextricably linked. Much of the SCAG region (and nearly all of the urbanized area) does not meet federal ozone and fine particulate (PM2.5) air quality standards. Goods movement is a major source of emissions that contributes to these regional air pollution problems as well as localized air pollution "hot spots" that can have adverse health impacts. Goods movement is also a major source of GHG emissions that contribute to global climate change. Although reduction in GHG emissions from goods movement sources is not required under SB 375 (which focuses solely on light-duty vehicle emissions), the state has established GHG reduction goals under California Assembly Bill 32 (AB 32). Clean goods movement activities can contribute to these goals. The region's goods movement strategy is complementary to sustainable communities planning.

The two air pollutants of greatest concern in Southern California are nitrogen oxides (NOx) and fine particulate matter (PM2.5). The South Coast Air Basin is classified as an extreme nonattainment area per the federal ambient ozone standard, with a required attainment date of 2023. Many of the remaining portions of the SCAG region are also in nonattainment for the federal ozone standards.

The 2012-2035 RTP/SCS focuses on a two-pronged approach for achieving an efficient freight system that reduces environmental impacts. For the near-term, the regional strategy supports the deployment of commercially available, low-emission trucks and locomotives while centering on continued investments into improved system efficiencies. For example, upgrading switcher locomotive engines could reduce 1 to 3 percent of regional rail emissions. Additionally, heavy-duty hybrid trucks are already in use, but market penetration can be increased. In the longer term, the strategy focuses on a more fundamental shift in technology—taking critical steps toward gradual implementation of a zero-emission or near zero-emission freight system. Two of many promising technologies that merit further investigation are battery electric trucks and electrified rail systems. This latter component of the regional strategy offers the promise of longer-term environmental sustainability, including significant reductions in GHG emissions. Additionally, SCAG's planning efforts are cognizant of the need to incorporate evolving technologies into new infrastructure.

Both near-term and long-term approaches require substantial investment and lead-time. A path forward to development and deployment of a zero or near-zero emission freight system is summarized below:

- Phase I (2012): Project Scoping—current research and technology testing of some vehicle prototypes constitutes Phase 1.
- Phase II (2014): Evaluation, Development, and Prototype Demonstrations—convene working groups and increase understanding of logistics. Evaluate, develop and test prototype trucks and rail locomotives, as well as wayside power options. Work with public and private sector partners to secure funding commitments for the development of new technology prototypes and demonstrations.
- Phase III (2016): Initial Deployment and Operational Demonstration—Truck fleet evaluation testing and advanced technology locomotive demonstrations.
- Phase IV (2035): Full Scale Demonstrations and Commercial Deployment—includes implementation of regulatory and market mechanisms needed to launch commercialization.

It is important that the region work collaboratively to pursue advanced technologies and secure funding for their development and deployment. Although several regional forums currently exist, SCAG anticipates building on these efforts by establishing a logistics working group with key stakeholders. Participants may include government agencies, logistics industry representatives, and original equipment manufacturers (OEMs).

Modeling of environmental strategies has determined that significant emissions benefits could be achieved from implementation of different zero and near-zero emission environmental strategies. As summarized in **Table 2-12**, the zero-emission East-West Freight Corridor would eliminate 4.7 tons of NO_X, 0.16 tons of PM2.5, and 4,000 tons of CO_2 emissions daily. Full electrification of the rail system, though still a concept at this point, would remove comparable amounts of NO_X, PM2.5, and CO_2. Regionally, a 20 percent market penetration of low-emission trucks (which could fall into the Phase III timeline) would achieve a reduction of 8.3 tons of NO_X, 0.16 tons of PM2.5, and 3,200 tons of CO_2 daily.

TABLE 2.-12: ENVIRONMENTAL BENEFITS

Strategy Impact	NO_X	PM2.5	CO_2
East-West Freight Corridor with 100% Zero-Emission Vehicles (ZEVs)	4.7	0.16	4,000
Full Railroad Main Line Electrification*	10.4	0.19	2,400
20% Penetration of Plug-in Hybrid Trucks	8.3	0.16	3,200

* Further evaluation is required to determine feasible options for implementation of rail electrification or other zero-emission rail systems.
SOURCE: SCAG, 2012-2035 RTP/SCS, 2011; Chapter 2, Transportation investments, Table 2-11, Page 75., 2011

Transportation Investment Summary

Combined, the elements described fully above are the 2012-2035 transportation network. This combination of projects and strategies through the year 2035 are what is evaluated in the PEIR. **Table 2-13** summarizes the project types and costs associated with implementing the 2012-2035 RTP/SCS. In addition, **Tables 2-14**, **2-15** and **2-16** show the existing (note the year 2012 was used for existing conditions throughout this PEIR as modeled data was readily available and it is anticipated to be very close to 2011), No Project and 2012-2035 RTP/SCS lane miles by county.

TABLE 2-13: SUMMARY OF 2012-2035 RTP/SCS PROJECT TYPES (EXCLUSIVE OF MAINTENANCE AND MONITORING PROJECTS)

Project Type	Total Cost (in nominal dollars, billions)
Total Capital Projects	**262.8**
Arterials	22.1
Grade Separation & Goods Movement	47.9
High Occupancy Vehicle/High Occupancy Toll Lanes	18.7
Mixed Flow & Interchange Improvements	18.4
Toll Facilities	35.2
Transportation System Management (including ITS)	6.8
Transit (includes High Speed Rail)	101.3
Active Transportation	6.00
Transportation Demand Management	4.0
Other (includes environmental mitigation, landscaping, and project development costs)	2.5

SOURCE: SCAG Transportation Modeling, 2011.

TABLE 2-14: EXISTING (2012) LANE MILES BY COUNTY

County	Freeway Lane Miles	Toll Lane Miles	Major Arterial Lane Miles	Minor Arterial Lane Miles	Collector Lane Miles	HOV Lane Miles	Total Lane Miles in Each County
Imperial	379	0	433	697	2,445	0	3,954
Los Angeles	4,583	45	8,848	9,076	3,761	479	26,791
Orange	1,294	331	3,242	3,147	601	241	8,857
Riverside	1,722	0	1,181	3,235	3,868	83	10,090
San Bernardino	2,512	0	1,934	4,365	6,080	105	14,996
Ventura	532	0	908	986	682	0	3,108
Total Lane Miles by Project Type	**11,023**	**376**	**16,547**	**21,506**	**17,437**	**908**	**67,796**

SOURCE: SCAG Transportation Modeling 2011.

TABLE 2-15: 2035 NO PROJECT LANE MILES BY COUNTY

County	Freeway Lane Miles	Toll Lane Miles	Major Arterial Lane Miles	Minor Arterial Lane Miles	Collector Lane Miles	HOV Lane Miles	Total Lane Miles in Each County
Imperial	379	0	459	663	2,464	0	3,965
Los Angeles	4,609	0	8,851	9,116	3,844	581	27,002
Orange	1,326	549	3,197	3,167	606	255	9,100
Riverside	1,727	0	1,199	3,126	3,842	102	9,996
San Bernardino	2,503	0	1,886	4,389	6,018	115	14,911
Ventura	510	0	891	971	686	8	3,066
Total Lane Miles by Project Type	**11,055**	**549**	**16,484**	**21,432**	**17,460**	**1,060**	**68,040**

SOURCE: SCAG Transportation Modeling 2011.

TABLE 2-16: 2035 PROJECT LANE MILES BY COUNTY

County	Freeway Lane Miles	Toll Lane Miles	Major Arterial Lane Miles	Minor Arterial Lane Miles	Collector Lane Miles	HOV Lane Miles	Truck Lane	Total Lane Miles in Each County
Imperial	417	0	455	729	2,435	0	0	4,036
Los Angeles	4,681	476	9,234	9,155	3,780	413	193	27,931
Orange	1,426	704	3,261	3,184	604	188	0	9,367
Riverside	1,988	228	1,606	3,976	4,569	125	11	12,503
San Bernardino	2,742	192	2,379	5,030	6,535	168	226	17,271
Ventura	558	0	930	1,010	683	8	0	3,188
Total Lane Miles by Project Type	**11,811**	**1,599**	**17,866**	**23,084**	**18,606**	**902**	**430**	**74,297**

SOURCE: SCAG Transportation Modeling 2011.

The 2012-2035 RTP/SCS includes a conservation planning policy that indicates SCAG could demonstrate progress and satisfy SAFETEA-LU requirements by developing and implementing strategies to support natural land restoration, conservation, protection and acquisition which would also offer greenhouse gas (GHG) emissions reduction benefits. Strategies include engaging in a strategic planning process to determine critical components; identifying and mapping regional priority conservation areas; engaging with partners to determine priority conservation areas and developing an implementation plan; and developing regional mitigation policies or standards.

Chapter 4: Sustainable Communities Strategies (SCS)

The passage of Senate Bill 375 (SB 375) gave SCAG a new area of responsibility and provides the region with a renewed opportunity to focus on an integrated planning effort for the future. SB 375 was established to implement the state's GHG emissions reduction goals, as set forth by AB 32, in the sector of cars and light trucks. This mandate requires the California Air Resources Board to determine per-capita GHG emission reduction targets for each Metropolitan Planning Organization (MPO) in the state at two points in the future—2020 and 2035. Because GHG emissions in the transportation section relate closely with VMT, a mandated GHG reduction essentially requires SCAG to devise a regional plan and a series of strategies that will produce per capita reduction in VMT over the next 25 years, though strategies that do not reduce VMT are also included (such as efforts to encourage non-polluting vehicles). Under SB 375, SCAG and California's 17 other MPOs must address GHG reduction in a SCS as part of the RTP.

Transportation strategies contained in the RTP – managing transportation demand and making transportation system improvements, are major components of the SCS. However, the SCS also focuses on the general land use growth pattern for the region because geographical relationships between land uses (such as density and intensity) help determine the need for travel. The SCS includes both a transportation component (described above) and a land use component (described below). In summary, under SB 375, an SCS must:

- Identify existing and future land use patterns;
- Consider statutory housing goals and objectives;
- Identify areas to accommodate long-term housing need;
- Identify areas to accommodate eight-year housing need;
- Consider resource areas and farmland;
- Identify transportation needs and the planned transportation network;
- Set forth a future land use pattern to meet GHG emissions reduction targets; and
- Comply with federal law for developing an RTP.

However, SB 375 specifically states that the SCS cannot dictate local General Plan policies, but rather is intended to provide a regional policy foundation that local governments may build upon if they so choose and generally includes the quantitative growth projections from each city and county in the region going forward. In addition, qualifying projects that meet statutory criteria and are consistent with the SCS are eligible for streamlined environmental review.

The SCS demonstrates the region's ability to attain and exceed the GHG emission reduction targets set forth by the ARB. The SCS outlines a plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs and changing demographics, and transportation demands.

The regional vision of the SCS maximizes current local efforts that support the goals of SB 375, as evidenced by several Compass Blueprint Demonstration Projects and various county transportation improvements. In accordance with Government Code Section 65080(b)(2)(B)(vii), the 2012-2035 RTP/SCS will achieve GHG emission reductions of eight percent per capita in 2020 (meeting the target for 2020) and 16 percent per capita in 2035 (surpassing the 13 percent reduction target for 2035).

The SCS focuses the majority of new housing and job growth in High Quality Transit Areas (HQTA) and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for TOD. (An HQTA is generally a walkable transit village or corridor, consistent with the adopted RTP/SCS, that has a minimum density of 20 dwelling units per acre and is within a mile of a well-serviced transit stop with 15-minute or less service frequency during peak commute hours.) This overall land use development pattern supports and compliments the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

The 2012-2035 RTP/SCS fully integrates the two sub-regional SCSs prepared by the Gateway Cities Council of Governments (COG) and Orange County COG. **Table 2-17** shows the goals and benefits of the SCS.

TABLE 2-17: GOALS AND BENEFITS OF THE SCS	
Better Placemaking	Creating better places for people to live and work, such as walking and bicycling opportunities, varied housing options and more compact development can reduce travel time and relieve road congestion.
Lower Cost to Taxpayers and Families	Developing more compact neighborhoods and placing everyday destinations closer together can reduce the burden of development to taxpayers and reduce the everyday cost of housing and transportation for families.
Benefits to Public Health and the Environment	Better placemaking and reducing the footprint of new development will provide more opportunities for an active lifestyle and protect natural resources and greenfield sites.
Greater Responsiveness to Demographics and the Changing Housing Market	More walkable neighborhoods with varied housing options and transportation choices will be more responsive to the changes in market demand being driven by the region's demographic changes.
Improved Access and Mobility	Enhancing critical auto connections and increasing alternative transportation options can improve people's ability to move around the region and provide easy access to everyday destinations.
SOURCE: SCAG, 2012-2035 RTP/SCS, 2012.	

The RTP/SCS was built primarily from local General Plans and input from local governments, the sub-regional COGs, from the County Transportation Commissions using the Local Sustainability Planning Tool. The adopted sub-regional SCSs of the Gateway Cities COG and the Orange County COG were integrated as provided into the regional SCS. These sub-regional SCSs were developed in close collaboration with SCAG and utilize various strategies that help achieve estimated GHG reduction targets.

The strategies contained in the 2012-2035 RTP/SCS will produce benefits for the region far beyond simply reducing GHG emissions. Because it is the latest refinement of an evolving regional blueprint that SCAG has been working on since 2000, the RTP/SCS will help the region deal with many ongoing issues across a wide range of concerns, including better place-making (a process of developing locations where people can live and work that include a pleasant and convenient walking environment that reduces their reliance on their car), lowering the cost of living, improving the environment and public health, responsiveness to changes in the marketplace, and improved access and mobility.

Compass Blueprint Growth Vision. SCAG's Compass Blueprint Growth Vision, one of the first large-scale regional growth visioning efforts in the nation, is guided by four core principles, Mobility, Livability, Prosperity and Sustainability. These efforts have effectively given the region a "jump-start" in implementing this SCS. SCAG's Compass Blueprint Growth Vision seeks to integrate land use and transportation with the goal of accommodating approximately 3.89 million additional residents between 2012 and 2035, while improving mobility for all residents, fostering livability in all communities, enabling prosperity for all people, and promoting sustainability for future generations. The location of Compass Blueprint Demonstration projects is shown in **Map 2-14** located in Chapter 8.0 (Maps). Developed in close collaboration with cities throughout the region, the policies of the Vision are:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;
- Develop "complete communities;"
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for a changing demand in types of housing;
- Continue to protect stable existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

The policies at the foundation of the 2012-2035 RTP/SCS encourage changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These include reductions in travel time, vehicle miles traveled (VMT), vehicle hours traveled (VHT), and vehicle hours of delay. Concurrently, the plan yielded increased transit use and mode share, and all of these effects lead to both mobility and air quality improvements.

Land Use Development Pattern. The land use development pattern of the 2012-2035 RTP/SCS, which assumes a significant increase in small-lot single-family and multi-family housing will mostly occur in infill locations near transit infrastructure, in so-called HQTAs. In some cases, the land use pattern assumes that more of these housing types will be built than is currently anticipated in local general plans, and in most cases, this shift in housing type—especially the switch from large-lot to small-lot single-family homes—will occur naturally in the marketplace as developers shift to products in high demand. In 2008, 45 percent of total housing units were multi-family products. The 2012-2035 RTP/SCS projects that in 2035, 68 percent of new homes in the SCAG region will be multi-family units.

Of the 648,000 new housing units expected in 2020, 28 percent will be at a minimum 30 dwelling units per acre; and of the 1.5 million new housing units expected in 2035, 34 percent will be at a minimum 30 dwelling units per acre. In accordance with Government Code Section 65080(b)(2)(B)(ii), these projected housing densities will help the region accommodate the projected housing needs at all income levels over the life of the 2012-2035 RTP/SCS, especially housing at the lower income categories. Additionally, SCAG moves towards improving the current distribution of households by income category in the region through the allocation of projected housing needs at the local level. After the final RHNA plan is adopted in October 2012, SCAG jurisdictions will revise their Housing Elements to meet their respective allocations. The SCS's strategies will inform the development of those Housing Elements.

As significant changes occur in existing communities there is potential for "gentrification," or the displacement of lower-income residents if new development brings higher-income residents into a neighborhood. As the 2012-2035 RTP/SCS is implemented, jurisdictions in the SCAG region must be sensitive to the possibility of gentrification and work to employ strategies that can ameliorate it. One strategy is the general approach of higher-density infill development, which means that neighborhoods will be adding to the local housing stock rather than maintaining the current stock and simply changing the residential population. A second strategy is the development of permanently affordable housing, through deed restrictions or development by nonprofit developers, which will ensure that some units will remain affordable to lower income households. SCAG will work with local jurisdictions and community stakeholders to seek resources and provide assistance to address any possible gentrification effects of new development on existing communities and vulnerable populations.

The 2012-2035 RTP/SCS land use development pattern accommodates over 50 percent of new housing and employment growth in HQTAs, while keeping jurisdictional totals consistent with local input. It moves the region towards more compact, mixed-use development leading to more opportunities for walking and biking, more transit use, and shorter auto trips. The 2012-2035 RTP/SCS allocates growth according to five community types that are further subdivided into 13 development types. The 13 development types, provide for a broad range of housing types, including smaller-lot single family homes, townhomes, and multifamily condominiums and apartments. The 13 development types are as follows:

Urban Center. Urban Centers are the highest intensity places in the Southland. The most well-known would be places such as Downtown Los Angeles or high intensity corridors such as Wilshire Boulevard. These centrally located areas are jobs rich with significant amounts of employment, typically located in office towers. Housing is also typically located in towers that cater to an urban customer. These areas have the best transit service of anywhere in the region. These areas typically represent the convergence of a number of high capacity transit facilities. The Urban Center community type can be used in several parts of the region to signify high-density land uses, mixing of uses and a saturation of non-auto transport options.

City Center. City Centers are similar to urban centers. The mix of jobs to housing is similar as they too are significant employment centers. They are on average roughly one-half the intensity of urban centers. They share similar levels of transit and other non-auto infrastructure. They are likely home to one or two high capacity transit facilities and a number of bus routes. Cities such as Pasadena provide a relevant reference for the City Center community type.

Town Center. Town Centers are another highly mixed use community type. They are roughly one-third the level of intensity as found in the City Centers. They are employment centric but also provide housing opportunities that are located very close to daily services and jobs, but in a smaller town type of setting. Cities such as Ventura or Santa Monica are examples of town centers. Buildings are generally less than six stories on average. Sidewalks and bike facilities are plentiful and the areas typically benefit from one high capacity transit facility and local buses.

Suburban Center. Suburban Centers can contain a mix of uses, but may alternately have a focus leaning toward either jobs or housing with very little mix. These areas are predominately served by automobiles, but likely have bus service or in some cases commuter rail. Buildings are typically one or two stories, but in some cases will go higher when surrounded by ample landscaping. These areas do provide some travel choice, but not at the scale of the town or city centers.

Urban Residential. Urban residential areas represent high-density concentrations of housing, typically in residential towers. Because of the high number of residents these areas provide a large number of customers for business districts located nearby. Within the district there may also be pockets of shopping, restaurants and some professional services. These neighborhoods benefit from excellent transit service. They are typically situated along or near at least one high capacity transit corridor.

City Residential. City Residential neighborhoods are relatively high-density residential areas. They are typified by pre-war development patterns containing a mix of single and multi-family housing. Buildings range from one and two story bungalows to 5 or 10 story apartments and condos. Major streets in and near the neighborhood will have high frequency bus service. Jobs in these areas are limited to some home offices and small, local-serving shops and restaurants. Residents in these areas have quick access to a range of activities and job locations by foot, bike, car or transit.

Town Residential. Town Residential neighborhoods are common prewar neighborhoods where single family homes on modest lots prevail, with the some garden apartments located perhaps a block away from busier commercial streets. Townhomes, duplexes and accessory dwelling units will be interspersed, likely on corners or between apartments and single-family homes. This type of neighborhood is becoming increasingly popular in new developments. The streets in these neighborhoods are generally low volume and include full sidewalk coverage and parking on the street. They are easily navigable via car, bike or on foot. Transit service is often located within 0.25 to 0.50 miles of homes.

Suburban Residential. Suburban Residential neighborhoods are familiar to many as they have been the dominant form of housing in the SCAG region for the last several decades. These areas are the least dense form of development in the region. With larger lots and their separation from active areas these areas are sought by many. Utilizing transit often requires residents to drive to nearby park and ride facilities.

Urban Employment. Urban Employment community type is focused on jobs. At 160 jobs per acre or more, buildings are typically hi-rise with parking in structures or underground. These districts are typically located in the center of an urban core and served by multiple high capacity transit lines. These districts will draw their employees from residences located throughout the region.

City Employment. City Employment community type represents the employment core of a city. Jobs are typically in hi-rise structures with a mix of surface and structured parking. The areas are often served by one or more high capacity transit lines. These core areas are recognizable by their skyline, but do not dominate

in the same way as Downtown Los Angeles' does. They will draw workers from nearby neighborhoods and cities.

Town Employment. Town Employment community type represents the employment core of a smaller town, or an independent job node. Jobs are typically in low to mid-rise structures with mostly surface parking. The areas are often served by one high capacity transit line, or frequent bus service. They will draw workers from nearby neighborhoods and some from adjacent cities.

Suburban Employment. Suburban Employment type represents job nodes that are typically situated along major arterials or near interchanges. The job density is quite low and is likely to take the form of shopping, restaurants or services. Jobs are typically in one-story structures with surface parking. These areas are served primarily by automobiles, but may have bus access or even be located near commuter rail facilities.

Rural. Rural community type is more diverse than any of the others. While it includes both jobs and housing, the two are rarely found together. Housing is typically in acreage lots or ranchettes, often far from services or jobs. Jobs are likely to be located in isolated nodes such as rural cross-roads or highway service areas. These areas are rarely served by transit. Few people occupy these areas, but those that do are auto reliant.

In order to conduct transportation modeling for the 2012-2035 RTP/SCS, SCAG distributed the growth forecast allocation data to transportation analysis zones (TAZs) to capture localized effects of the interaction of land use and transportation.

SB 375 offers local governments potential CEQA relief for qualified development projects consistent with an adopted SCS. SCAG suggests that utilizing "development types" at the TAZ level of geography (with an average size of 160 acres) offers local jurisdictions adequate information and flexibility to make appropriate consistency findings for projects to be eligible to receive CEQA streamlining benefits.

For purposes of SCAG's SCS, a Development Type reflects an estimated average density of 22 residential units per acre. However, it is important to note that the designation is a potential ultimate average for the TAZ—and is not an absolute project-specific requirement that must be met in order to determine consistency with the SCS. In other words, the SCS was not developed with the intent that each project to be located within any given TAZ must exactly equal the density and relative use designations that are indicated by the SCS Development Type in order for the project to be found consistent with the SCS's use designation, density, building intensity and applicable policies. Instead, any given project, having satisfied all of the statutory requirements of either a residential/mixed-use project or TPP, may be deemed by the lead agency to be consistent with the SCS so long as the project does not prevent achieving the estimated average use designations, densities and building intensities indicated by the Development Type within the TAZ, assuming that the TAZ will be built-out under reasonable local planning and zoning assumptions.

The 2012-2035 RTP/SCS incorporates the overall RHNA target for the SCAG region and provides a land use pattern that shows where new housing growth can be accommodated in the future. In 2008, the SCAG region was comprised of about 17.9 million people, 5.8 million homes and 7.7 million jobs. The 2035 Integrated Growth Forecast projects that the region will grow by another 4 million people by 2035, and nearly 1.5 million households and 1.7 million jobs will be added. The Plan land use pattern contains sufficient residential capacity to accommodate the region's future growth, including the 8-year regional housing need, as shown in **Table 2-18**. As shown in **Table 2-19,** the land use pattern also encourages improvement in the jobs-housing balance by accommodating 680,000 additional jobs in 2020 and approximately 1.7 million additional jobs in 2035 (note numbers in tables below have been rounded).

Currently, SCAG is home to approximately 6 million households, 55 percent of which live in detached single-family homes. However, the changing nature of households, in particular the growth in household without children, means there will be less demand for single-family homes, especially those on large lots. As a result there is expected to be an increase in demand for small-lot single-family houses and multi-family

housing in close proximity to amenities, including local shopping and transit service. This shift is apparent in the land use development patterns of the 2012-2035 RTP-SCS. It is anticipated that in most cases, the shift in housing type will occur naturally in the marketplace as developers increase production of products in high demand. The factors described below were all considered in the land use development pattern as either incentives (HQTAs) or disincentives (resource areas) to development.

TABLE 2-18: TOTAL HOUSING UNITS FORECAST IN RTP/SCS

Community Type	Existing Housing Units (2008)	Total Forecasted Housing Units (2020)	New Housing Units (2008-2020)	Total Forecasted Housing Units (2035)	New Housing Units (2008-2035)
Urban	139,000	180,000	41,000	226,000	87,000
City	685,000	755,000	70.000	948,000	263,000
Town	2,496,000	2,760,000	264,000	3,159,000	663,000
Suburban	2,333,000	2,556,000	223,000	2,750,000	417,000
Rural	162,000	212,000	50,000	241,000	79,000
Total	**5,815,000**	**6,462,000**	**648,000**	**7,324,000**	**1,509,000**

SOURCE: SCAG, 2012-2035 RTP/SCS, 2011; Chapter 4, Sustainable Communities Strategy, Table 4.1, Page 126, 2011.

TABLE 2-19: TOTAL JOBS FORECAST IN RTP/SCS

Community Type	Existing Jobs (2008)	Total Forecasted Jobs (2020)	New Jobs (2008-2020)	Total Forecasted Jobs (2035)	New Jobs (2008-2035)
Urban	503,000	531,000	28,000	573,000	70,000
City	1,029,000	1,077,000	48,000	1,193,000	164,000
Town	2,872,000	3,098,000	226,000	3,575,000	703,000
Suburban	3,183,000	3,515,000	332,000	3,874,000	691,000
Rural	147,000	195,000	48,000	221,000	74,000
Total	**7,734,000**	**8,416,000**	**682,000**	**9,436,000**	**1,702,000**

SOURCE: SCAG, 2012-2035 RTP/SCS, 2011; Chapter, 4, Sustainable Communities Strategy, Table 4.2, Page 127, 2011.

Main Streets, Downtowns, and Corridors. The demand for smaller lots and multi-family housing often goes hand-in-hand with a desire to be close to amenities, retail, restaurants and recreation. The land use pattern places a high percentage of new housing and jobs in main streets, downtowns, and along corridors where infrastructure already exists. This geographical placement makes sense given the SCAG region's trend toward revitalization of these older, traditionally commercial areas. Such a pattern has many co-benefits, including walking access to community amenities, lower VMT, lower transportation cost for both cities and individuals, and lower overall infrastructure cost.

Resource Areas and Farmland. In identifying the overall land use pattern, the 2012-2035 RTP/SCS also considers areas that are to be protected from development, as required by Government Code Section 65080(b)(2) (B)(v). These areas, which include parklands, open space, natural resource areas, and farmland, are critical for the region's environmental and economic health. Data gathered from the sources listed below were compiled into relevant datasets and provided to local jurisdictions within the region for review and revision.

The updated information was then used to ensure the protection of resources areas in the development of the overall land use pattern:

- California Natural Diversity Database (California Department of Fish and Game)
- Flood Insurance Rate Maps (Federal Emergency Management Agency)

- Natural Community Conservation Planning Program (California Department of Fish and Game)
- California Protected Areas Database (GreenInfo)
- Farmland Mapping & Monitoring Program (Division of Land Resource Protection in California Department of Conservation)

SCAG is also developing a natural lands acquisition and open space conservation strategy to encourage large-scale acquisition and management of critical habitat to mitigate impacts, including greenhouse gas emissions, related to future transportation projects. The strategy will identify appropriate agencies with which to collaborate in order to develop a regional conservation plan based on identified priority areas.

Transit Stations and High Quality Transit Areas (HQTAs). The overall land use pattern focuses jobs and housing in the designated HQTAs, as illustrated in **Map 2-15**, located in Chapter 8.0 (Maps). A HQTA is generally a walkable transit village, consistent with the adopted SCS that has a minimum density of 20 dwelling units per acre and is within 0.5 miles of a well-serviced transit stop, and includes transit corridors with minimum 15-minute or less service frequency during peak commute hours. The 2012-2035 RTP/SCS assumes that 51 percent of new housing developed between 2008 and 2035 will be within HQTAs, along with 53 percent of new employment growth (compared with 39 and 48 percent, respectively in 2008). Aligning a high quality transit network and new housing and jobs offers Southern Californians more complete communities that offer a variety of transportation and housing choices, while reducing the negative impacts of automobile use on public health and the environment.

Transportation Network. The 2012-2035 RTP/SCS calls for an expanded transportation network that will complement the overall land use pattern's focus on locating new growth in HQTAs and other opportunity areas, which in turn allows the RTP/SCS to leverage greater improvement in transportation capacity and system operations than would otherwise be the case. Working together, these complementary land use and transportation strategies can significantly reduce VMT- a primary goal of SB 375 by increasing transit ridership, increasing walking and biking, and reducing the length of auto trips.

All of the components described above comprise the SCS and were used to develop the 2012-2035 land use pattern for the SCAG region. **Map 2-16** through **Map 2-22**, located in Chapter 8.0 (Maps), show the land use pattern for the region that was developed for the Plan. These maps show the regional distribution, as well as the county level land use distributions.

Regional Housing Needs Assessment (RHNA). SB 375 combines transportation and housing planning by integrating the RHNA process with the 2012-2035 RTP/SCS. Specifically, Government Code Section 65080(b)(2)(B), subparagraphs (iii) and (vi), require that the SCS identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region and consider the state housing goals specified in Government Code Sections 65580 and 65581.

The SCAG region's official regional housing need from the California Department of Housing & Community Development (HCD) for the planning period 2014–2021 is 409,000–438,000 housing units. Of these, approximately 164,000–176,000 are expected to be in the very low- and low-income category (affordable to those who make less than 80 percent of area median income), 72,000–77,000 are expected to be in the moderate-income category (affordable to those who make between 80 percent and 120 percent of median income), and 173,000–185,000 are expected to be offered at above moderate-income category.

The 2012-2035 RTP/SCS incorporates the overall RHNA target for the SCAG region and provides a land use pattern that shows where new housing growth can be accommodated in the future. In 2008, the SCAG region was comprised of about 17.9 million people, 5.8 million homes and 7.7 million jobs. The 2035 Integrated Growth Forecast projects that the region will grow by another 4 million people by 2035, and nearly 1.5 million households and 1.7 million jobs will be added. The 2012-2035 RTP/SCS land use pattern contains sufficient residential capacity to accommodate the region's future growth, including the 8-year regional housing need. The land use pattern accommodates approximately 648,000 additional housing units in the

SCAG region in 2020, and over 1.5 million additional housing units in 2035. The land use pattern also encourages improvement in the jobs-housing balance by accommodating 680,000 additional jobs in 2020 and approximately 1.7 million additional jobs in 2035.

Chapter 5: Measuring Up

Environmental Justice

The concept of environmental justice is about equal and fair access to a healthy environment, with the goal of protecting underrepresented and poorer communities from incurring disproportionate environmental impacts. Consideration of environmental justice in the transportation planning process stems from Title VI of the Civil Rights Act of 1964. Title VI of the Civil Rights Act of 1964 establishes the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include low-income communities. In addition to Federal requirements, SCAG must comply with California Government Code Section 11135, which states that, "no person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state." **Table 2-20** lists the demographic categories that are used in SCAG's Environmental Justice analysis.

TABLE 2-20: DEMOGRAPHIC CATEGORIES

Ethnic/Racial/Other Categories (persons)	Income Categories (households)
White (Non-Hispanic)	Below Poverty Level
African-American	Income Quintile 1 (lowest)
American Indian	Income Quintile 2
Asian/Pacific Islander	Income Quintile 3
Hispanic (Latino)	Income Quintile 4
Other Racial Categories	Income Quintile 5
Disabled/Mobility Limited	
Age 65 and Above	
Non English speaking	
Without High School Diploma	
Household without a car	
Foreign born population	
Sensitive Receptors: hospitals, daycare facilities, schools, senior centers, parks/open space	

SOURCE: SCAG 2012-2035 RTP/SCS, Environmental Justice Report, Page 5, 2011.

FHWA and the FTA have a commitment to assuring environmental justice in the programs they fund. Both of these federal agencies recently issued proposed revised planning regulations regarding environmental justice. This was done in part to comply with 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. Generally these laws prohibit discrimination on the basis of race, income, age, or disability. On August 4, 2011, seventeen federal agencies signed the "Memorandum of Understanding on Environmental Justice and Executive Order 12898." The signatories, including the U.S. Department of Transportation, agreed to develop environmental justice strategies to protect the health of people living in communities overburdened by pollution and provide the public with annual progress reports on their efforts. In the transportation-planning context, SCAG's role is to ensure that when transportation decisions are made, low-income and minority communities have ample opportunity to participate in the decision-making process and that they receive an equitable distribution of benefits and not a disproportionate share of burdens. A detailed

methodology and analysis of environmental justice is contained in Chapter 5 of the 2012-2035 RTP/SCS and a corresponding Environmental Justice Appendix.

SCAG's environmental justice program includes two main elements: public outreach and technical analysis. The public outreach efforts are intended to assure that all members of the public have an opportunity to participate meaningfully in the planning process. SCAG held two environmental justice workshops and convened focus groups on the environmental justice analysis to ensure that all members of the public have an opportunity to participate meaningfully in the planning process. As a result of these workshops, new issues such as impacts from rail transportation, gentrification and displacement, pollution exposure along heavily traveled corridors, and impacts from revenue generating mechanisms such as congestion pricing were raised and are addressed in the 2012-2035 RTP/SCS.

The Environmental Justice Appendix to the 2012-2035 RTP/SCS identifies impacts to Environmental Justice communities in a number of subject areas also analyzed in this PEIR, including but not limited to Air Quality (including health effects discussed in the Air Quality impact analysis), Noise, and Transportation. However, the PEIR analyzes impacts from the Plan on the community as a whole, and not with respect to specific community groups. Nevertheless, the analysis included in this PEIR was performed consistently where possible with the Environmental Justice analysis. For informational purposes, sections of this PEIR indicate that there is information concerning impacts to low-income, minority and other protected groups included in the Environmental Justice section of the Plan and the associated appendix. For example, maps developed related to air and noise impacts are included in both documents. The Environmental Justice analysis includes subject areas not addressed by CEQA and therefore not included in the PEIR such as identification of impacts to socio-economic, minority and other protected groups. In general, readers interested in analysis of disproportionate impacts by socio-economic and other protected groups are directed to Chapter 5 and the Environmental Justice Appendix of the 2012-2035 RTP/SCS.

The Environmental Justice Appendix also includes a framework of mitigation approaches that can be applied by project sponsors to reduce impacts on protected communities. A particular effort has been made to coordinate this mitigation framework with the Mitigation Measures identified in this PEIR, including specifying like measures where applicable.

Public Health

The 2012-2035 RTP/SCS places a substantial emphasis on public health. Public health is affected by the Plan in several ways, notably through its impact on the total level of air emissions, the exposure of the population to those emissions as a function of their location, and opportunities for physical activities including active transportation and recreation.

Under the Plan criteria pollutant emissions will be reduced or stay the same as existing conditions and will be less than the No Project Alternative, with the exception of re-entrained roadway dust which is a function of total vehicle miles travelled and therefore under the Plan would be greater than existing but less than the No Project Alternative. This improvement is a result of increased emissions controls over the planning horizon, in addition to operational efficiencies and improvements as a result of the Plan itself. The improvements associated with the Plan include a greater mode split for walking, biking, and transit, and result from Plan strategies such as transit expansion and improved transportation/land use coordination.

The Plan dramatically increases the opportunities for active transportation and access to recreation. The total regional expenditure for walk and bike infrastructure improvements for the 2012-2035 RTP/SCS is $6 billion, more than triple the amount for the 2008 Plan. In addition, urban form improvements featured in the SCS will leverage the system improvements for active transportation by allowing for a greater number of communities that are well suited to walking and biking. Analysis of the benefits of this system improvement can be found in the PEIR in the Transportation section as well as in Chapter 4 Alternatives. Of note, the Plan

achieves a saving of 24 percent in costs associated with respiratory health incidences compared with the existing conditions, based on estimation through the Rapid Fire model.

The 2012-2035 RTP/SCS also contains substantial Environmental Justice analysis (the Environmental Justice component of the Plan is summarized above), which has a focus on cancer risk and respiratory hazard in protected communities. The Environmental Justice component of the Plan analyses emissions exposure, health risk, access to recreational opportunities and other parameters with respect to groups protected by Environmental Justice regulations and guidelines. Readers interested in analysis of potential disproportionate impacts by socio-economic and other protected groups are directed to Chapter 5 of the Plan, as well as the Plan's Environmental Justice Appendix. Analyses contained within the Environmental Justice portions of the Plan that pertain to impacts on the physical environment to the community as a whole are addressed in this PEIR.

Finally, the PEIR contains a Screening Level Health Risk Assessment, summarized in the Air Quality section and included in Appendix F, which quantifies cancer risk associated with exposure to mobile source emissions at eight locations in the region. The methodology for the Screening Level Health Risk Assessment was designed to evaluate risk at locations exposed to some of the highest mobile source emissions in the region, in particular diesel particulate matter (DPM) associated with high levels of goods movement activity. The Air Quality analysis and Screening Level Health Risk Assessment conclude that while cancer risk remains high in locations adjacent to freeways, it would decrease substantially as compared to existing conditions. Therefore, the PEIR concludes that in concert with other regulations the Plan improves health outcomes compared to current conditions due to the introduction of stricter emission controls during the plan period in addition to some decline in emissions associated with efficiency improvements to the goods movement system. The Air Quality analysis also identifies that Plan policies designed to concentrate growth would result in more people living near transportation facilities than under existing conditions. It includes a mitigation measure to address this impact.

2.4 PROPOSED PLAN AND RTP/SCS PEIR ALTERNATIVES

Each of the alternatives evaluated in the 2012-2035 RTP/SCS PEIR includes a collection of transportation projects and strategies or transportation network and a growth scenario. The alternatives evaluated for the 2012-2035 RTP/SCS PEIR are as follows:

1. The **2012-2035 RTP/SCS** (Plan or Project), which includes all of the elements summarized above, contains transportation/urban form strategies that encourage compact growth, increased jobs/housing balance, and development located in centers with a mix of uses designed to reduce vehicle trips and trip lengths, where feasible, in all parts of the region. The elements described above comprise the Plan network and the Plan growth scenario.

2. The **No Project Alternative** includes only those transportation projects that are under construction, undergoing right-of-way acquisition included in the first year of the previously conforming transportation plan and/or TIP, or have completed environmental review by December 2010. These reasonably foreseeable projects fulfill the definition of the CEQA-mandated "No Project Alternative." The growth scenario included in the No Project Alternative is based on 2008 RTP local input which was then adjusted to reflect 2012-2035 RTP/SCS regional population, housing and jobs totals.

3. The **2008 Modified RTP Alternative** is an update of the adopted 2008 RTP to reflect the most recent growth estimates and transportation planning decisions and assumptions. This alternative does not include urban form strategies included within SCS, but includes all of the modifications and projects in the 2008 RTP through RTP Amendment 4. The growth scenario for the 2008 Modified RTP Alternative is a combination of local input and existing general plan and land use data provided by local jurisdictions.

4. The **Envision 2 Alternative** builds on the enhanced density and ideas of the SCS as described in the Plan and goes further. It includes far more aggressive densities than the 2012-2035 RTP/SCS, especially around HQTAs, increases mobility, reduces emissions, and limits the development of single-family housing that would be built in the region. The Envision 2 transportation network is similar to the Plan network with minor changes to goods movement and transit projects. The growth network associated with Envision 2 maximizes urban centers, TODs and HQTAs. It also includes a more progressive jobs/housing distribution optimized for TOD and infill.

2.5 RELATIONSHIP TO OTHER EIRS

The 2012-2035 RTP/SCS PEIR builds on the analysis and mitigation contained in the 2008 RTP PEIR. The 2012-2035 RTP/SCS project list is similar to the project list for the 2008 RTP, although some of the transportation projects from the 2008 RTP are now considered committed and are included in the No Project Alternative. The 2012-2035 RTP/SCS PEIR evaluates the most recent projects and policies and provides more direct comparisons between current conditions and expected future Plan conditions. The 2012-2035 RTP/SCS PEIR includes additional analysis of cumulative, growth-inducing and other indirect impacts.

2.6 INTENDED USES OF THE PEIR

SCAG will use this PEIR as part of its review and approval of the 2012-2035 RTP/SCS. The lead agencies for individual projects may use this PEIR as the basis of their regional and cumulative impacts analysis. In addition, for projects that may be eligible for CEQA Streamlining, applicable mitigation measures from this EIR shall be incorporated into those projects as appropriate. It is the intent of SCAG that member agencies and others use the information contained within the PEIR in order to "tier" subsequent environmental documentation of projects in the region. Information from this document may also be incorporated in future County Congestion Management Programs and associated environmental documents, as applicable.

The 2012-2035 RTP/SCS is intended to meet the changing socioeconomic, transportation infrastructure, financial, technological and environmental conditions of the region. Individual projects are preliminarily identified in the 2012-2035 RTP/SCS; however, this PEIR is programmatic in nature and does not specifically analyze these projects. Project-level analysis will be prepared by implementing agencies on a project-by-project basis. Project-specific planning and implementation undertaken by each implementing agency will depend on a number of issues, including: policies, programs and projects adopted at the local level; restrictions on federal state and local transportation funds; the results of feasibility studies for particular corridors; and further environmental review of proposed projects.