

TRANSPORTATION SYSTEMS FINANCE

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

2016
2040 **RTPSCS**

APPENDIX
ADOPTED | APRIL 2016

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APPENDIX
TRANSPORTATION SYSTEM | TRANSPORTATION FINANCE
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TRANSPORTATION FINANCE

INTRODUCTION

In accordance with federal fiscal constraint requirements (23 U.S.C. § 134(i)(2)(E)), the Transportation Finance Appendix for the 2016 RTP/SCS identifies how much money the Southern California Association of Governments (SCAG) reasonably expects will be available to support our region's surface transportation investments. The financially constrained 2016 RTP/SCS includes both a "traditional" core revenue forecast comprised of existing local, state and federal sources and more innovative but reasonably available sources of revenue to implement a program of infrastructure improvements to keep freight and people moving. The financial plan further documents progress made since past RTPs and describes steps we can take to obtain needed revenues to implement the region's transportation vision.

The financial plan highlights the importance of finding new and innovative ways to pay for transportation, including our ever-expanding backlog of projects to preserve our existing transportation system. Nationally, we continue to face an insolvency crisis with the Federal Highway Trust Fund, as fuel tax receipts have declined precipitously. Similarly, the viability of California's State Highway Account remains in question, as only a fraction of our needs are funded through state sources. Our region continues to rely heavily on local sources of tax revenue. Seven sales tax measures in the region generate 71 percent of core revenues for transportation improvements.

It is vital that we find new ways to make transportation funding more sustainable in the long-term, and efforts are underway to explore how we can transition from our current system based on fuel taxes to a more direct system based on user fees. Recent action by the state Legislature to launch the California Road Charge Pilot Program is a critical step in this transition.

In our region, numerous policy and technical studies have been conducted on the subject, and more work is planned to examine and demonstrate the viability of user fee systems, including toll networks. Our region has successfully implemented toll systems in the past, with the Transportation Corridor Agencies' network of privately financed toll roads, the State Route 91 Express Lanes in Orange County, and more recently with the express lanes along Interstate 10 and Interstate 110 in Los Angeles County.

The SCAG region has secured the necessary resources to support transportation investments detailed in past RTPs, and our current financial plan will continue to meet necessary milestones to implement the 2016 RTP/SCS. The following sections describe the financial assumptions and methodologies used for forecasting revenues and expenditures for transportation investments. Other SCS implementation costs are not included in this analysis.

REVENUE ASSUMPTIONS

The region's revenue forecast timeframe for the 2016 RTP/SCS is FY2015-16 through FY2039-40. Consistent with federal guidelines, the financial plan takes into account inflation and reports statistics in nominal (year-of-expenditure) dollars. The underlying data are based on financial planning documents developed by the local county transportation commissions and transit operators. The revenue model also uses information from the California Department of Transportation (Caltrans) and the California Transportation Commission (CTC). The regional forecasts incorporate the county forecasts where available and fill data using a common framework. This ensures consistency between the SCAG forecast and the planning documents of the county transportation commissions. When there are gaps in the financial projections in the outer years between the county forecasts and the 2016 RTP/SCS time horizon, growth assumptions are extrapolated from historical trends based on published data.

The basic process for developing the revenue forecast is to:

- Incorporate financial planning documents developed by local county transportation commissions and transit operators in the region, where available;
- Ensure consistency with both local and state planning documents;
- Utilize published data sources to evaluate historical trends; and
- Conduct sensitivity testing of assumptions to augment local forecasts, as needed.

The next few sections describe specific economic assumptions and challenges in developing the regional revenue forecasts.

ECONOMIC CONDITIONS

Overall economic conditions play a large role in determining the level of revenues available for transportation through 2040. SCAG's financial model reflects historical growth trends and reasonable future expectations for key revenue sources. The inability of existing excise taxes to keep pace with increasing transportation needs and the impacts of increasing fuel efficiency on traditional revenue sources are key considerations in the financial plan.

INFLATION

Inflation can have a profound impact over the long-term time horizon of our Plan. SCAG's revenue model accounts for historical inflation trends as measured by the Gross Domestic Product (GDP) Price Deflator.

FIGURE 1 shows the trends in inflation by the GDP Price Deflator. Although inflation rates have varied considerably over time, they have generally trended between 2 and 4 percent. Accordingly, a 2.4 percent inflation rate is used to adjust constant dollar (revenue) forecasts into nominal (or year-of-expenditure) dollars.

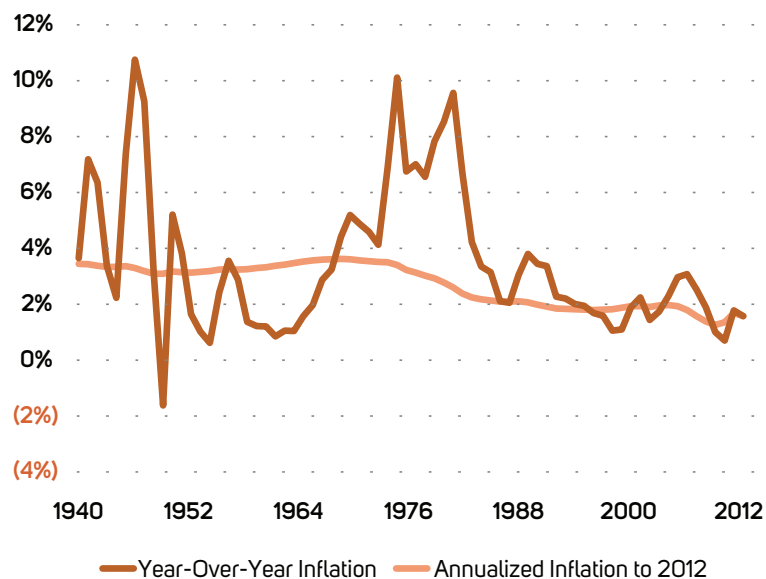
RETAIL SALES GROWTH

Changes in personal consumption patterns and the overall population are main contributors to the growth in retail sales. Over the 30-year period from FY1981-82 to FY2011-12, statewide retail sales grew by 1.8 percent in real terms (when the effects of inflation are eliminated). The financial plan assumes retail sales growth ranging from 1.8 percent to 3.9 percent in real terms.

FUEL CONSUMPTION

Excise taxes on gasoline and diesel fuels are the basis of most federal and state transportation funding sources. Since these taxes are based on cents-per-gallon purchased, they depend solely on fuel consumption and are not indexed to inflation or construction

FIGURE 1 Historical Inflation Trends (Annual Inflation)



Source: Office of Management and Budget, Budget of the United States Government, Fiscal Year 2016 Budget (FY2016)

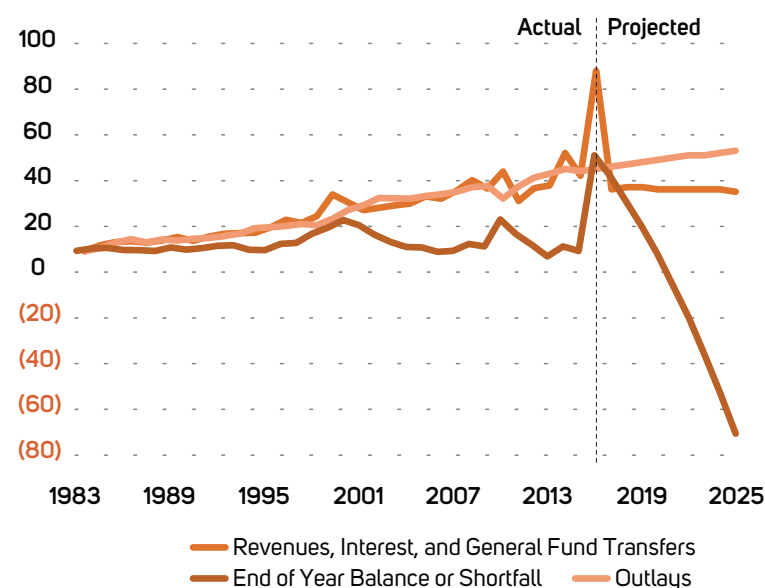
costs. While changes in vehicle miles traveled (VMT) will continue to play a role during the Plan period, increases in conventional fuel efficiency and the adoption of alternative fuel vehicles will reduce overall fuel consumption. The financial plan assumes that increases in vehicle fuel efficiency will reduce fuel consumption by 0.9 percent per year during the Plan period.

STATUS OF THE FEDERAL HIGHWAY TRUST FUND

The Federal Highway Trust Fund provides federal highway and transit funding from a nationally imposed 18.3 cent-per-gallon gasoline excise tax. Since 2008, the Trust Fund has failed to meet its obligations and has required the United States Congress to authorize \$141.1 billion in transfers from the General Fund to keep it solvent. The negative balances shown on **FIGURE 2** illustrate the projected inability of the Trust Fund to pay its obligations into the highway account.

At the time of the 2016 RTP/SCS, nearly a decade has passed without substantive Congressional agreement on a long-term solution to provide adequate funding for the Trust Fund. The recently passed transportation reauthorization known as the FAST Act relies on \$70 billion of one-time, non-user fees to keep the Trust Fund solvent through 2020.

FIGURE 2 Status of the Federal Highway Trust Fund (\$ Billions)



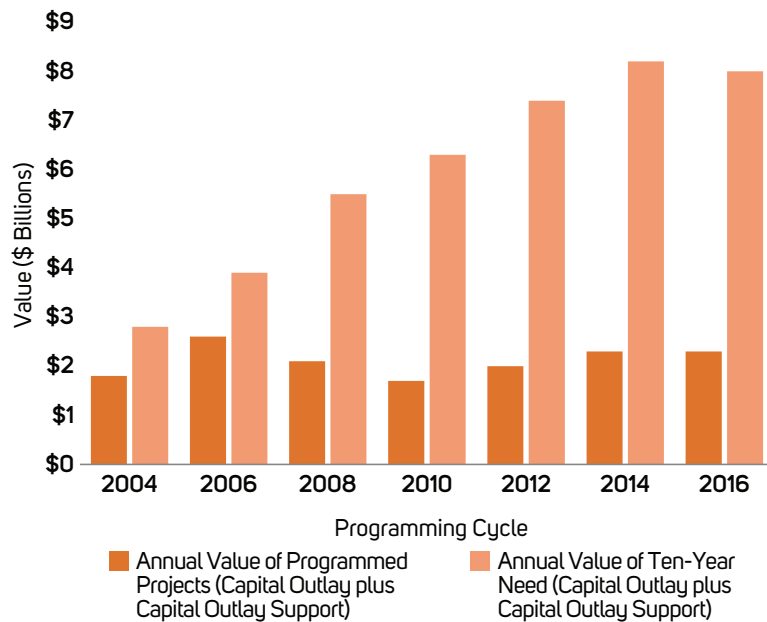
Source: Congressional Budget Office and Federal Highway Administration

It does not address the present, long-term structural deficiency that exists in funding the Trust Fund. Although the financial plan assumes that Congress will reach agreement on reauthorizing federal spending for transportation programs over the plan horizon, the core revenues available from the Trust Fund are expected to decline due to increasing fuel efficiency and other factors.

STATUS OF THE STATE HIGHWAY ACCOUNT

Despite the “Gas Tax Swap,” the effective state gas excise tax rate of 18 cents per gallon has remained unadjusted for more than 20 years. Gas tax revenues remain the only source of funding for the State Highway Operation and Protection Program (SHOPP), which funds projects to maintain the State Highway System. As shown in **FIGURE 3**, previous levels of funding have been considerably less than actual needs. Statewide, the 2015 Ten-Year SHOPP Plan identifies \$8.0 billion in statewide annual needs, while expenditures programmed for the next four years are only \$2.3 billion annually. Continued underinvestment in the maintenance needs of the State Highway System will only increase the cost of bringing our highway assets back to a state of good repair.

FIGURE 3 Status of the State Highway Operation and Protection Program (SHOPP)



Source: California Department of Transportation, 2015 Ten-Year SHOPP Plan

LOCAL SALES TAX MEASURES

The SCAG region continues to rely heavily on local sales tax measures for the timely delivery of transportation projects. While most counties impose a 0.5 percent sales tax to fund transportation projects, Los Angeles County levies a 1.5 percent tax—a combination of two permanent half-cent sales taxes and Measure R at 0.5 percent. Measure R is not permanent and expires in 2039. Riverside County’s Measure A also expires in 2039. Measure I in San Bernardino County expires in 2040, followed by Orange County’s Measure M in 2041. Measure D in Imperial County expires in 2050. Ventura County is the only county in the region without an existing dedicated sales tax for transportation. However, Ventura County is in the process of seeking voter approval on a half-cent sales tax, which is reflected as part of the reasonably available revenues.

CORE AND REASONABLY AVAILABLE REVENUES

The 2016 RTP/SCS financial plan includes two types of revenue forecasts. Both are included in the financially constrained plan:

- Core revenues
- Reasonably available revenues

The core revenues identified are existing transportation funding sources projected to FY2039–40. The core revenue forecast does not include future increases in state or federal gas excise tax rates (other than the adjustments reflecting the state gasoline sales tax swap) or adoptions of regional gasoline taxes, mileage-based user fees, and new tax measures. These revenues provide a benchmark from which additional funding can be identified.

The region’s reasonably available revenues include new sources of transportation funding likely to materialize within the 2016 RTP/SCS timeframe. These sources include adjustments to existing state and federal gas tax rates; value capture strategies; potential national freight program funds; tolls for specific facilities; and private equity participation. Federal guidelines on fiscal constraint permits the inclusion of revenues that are reasonably available. Further, the Plan includes strategies for ensuring the availability of these sources.

CORE REVENUES

TABLE 1 shows the core revenues in five-year increments by county.

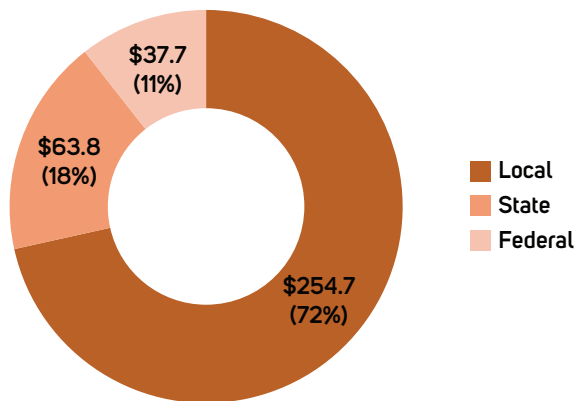
As shown in FIGURE 4, the majority of revenues in the SCAG region come from local sources. The share of state sources (18 percent) has increased since the last RTP as a result of Cap-and-Trade Auction Proceeds revenues.

TABLE 1 Core Revenue Forecast FY 2016–2040 (in Nominal Dollars, Billions)

| County | FY2016– FY2020 | FY2021– FY2025 | FY2026– FY2030 | FY2031– FY2035 | FY2036– FY2040 | Total |
|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------|
| Imperial | \$0.5 | \$0.5 | \$0.6 | \$0.7 | \$0.8 | \$3.2 |
| Los Angeles | \$34.3 | \$38.0 | \$45.4 | \$53.1 | \$55.0 | \$225.8 |
| Orange | \$8.5 | \$8.5 | \$10.1 | \$12.1 | \$14.2 | \$53.4 |
| Riverside | \$5.4 | \$6.3 | \$7.6 | \$9.3 | \$10.0 | \$38.6 |
| San Bernardino | \$4.2 | \$4.8 | \$5.6 | \$6.5 | \$7.5 | \$28.6 |
| Ventura | \$1.0 | \$1.1 | \$1.3 | \$1.5 | \$1.7 | \$6.5 |
| Total | \$53.9 | \$59.2 | \$70.6 | \$83.1 | \$89.3 | \$356.1 |

Source: SCAG Revenue Model 2015
Note: Numbers may not sum to total due to rounding

FIGURE 4 Core Revenues (in Nominal Dollars) \$356.1 Billion Total

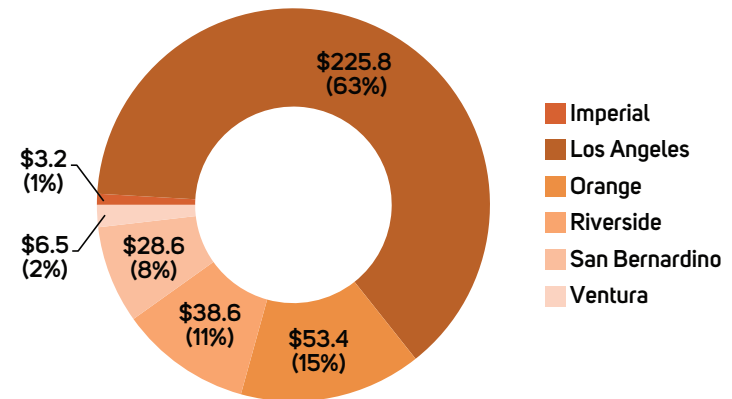


Source: SCAG Revenue Model 2015
Note: Numbers may not sum to total due to rounding

FIGURE 5 shows the breakdown of revenues by county. With three local sales tax measures, Los Angeles County accounts for 63 percent of the funding available in the SCAG region.

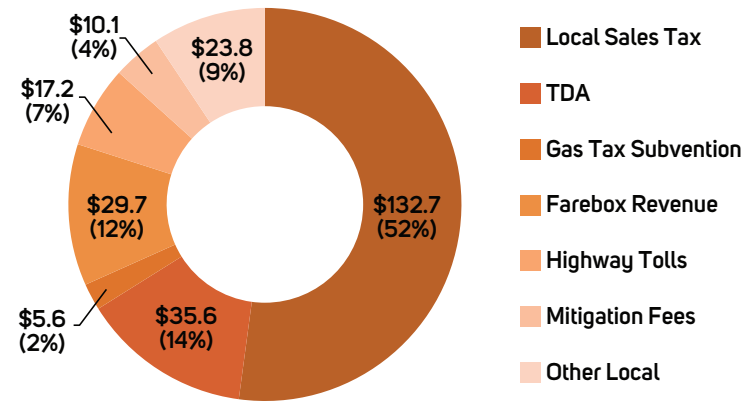
Local sales taxes provide the largest single source of local funding, as shown in FIGURE 6. When local sales taxes in all five counties with such measures are included, these taxes account for more than half (52 percent) of local sources.

FIGURE 5 Core Revenues by County (in Nominal Dollars) \$356.1 Billion Total



Source: SCAG Revenue Model 2015
Note: Numbers may not sum to total due to rounding

FIGURE 6 Core Revenues, Local Sources (in Nominal Dollars) \$254.7 Billion Total



Source: SCAG Revenue Model 2015
Note: Numbers may not sum to total due to rounding

As shown in **FIGURE 7**, the State Transportation Improvement Program (STIP), the State Highway Operations and Protection Program (SHOPP), and the State Gasoline Sales Tax Swap account for the bulk of the state funding available.

As shown in **FIGURE 8**, federal sources are anticipated to represent a small portion of overall transportation funds (\$37.7 billion). The Federal Highway Trust Fund is expected to remain solvent but will decline due to increases in fuel efficiency. Federal Transit Administration (FTA) funds account for 57 percent of federal funding in the SCAG region. The financial plan also assumes that funding from the Congestion and Air Quality (CMAQ) Improvement Program will decline in 2022, 2031 and 2036 due to the region achieving attainment for a number of pollutants and reducing the severity level of other pollutants.

REASONABLY AVAILABLE REVENUES

There are several new funding sources that are reasonably expected to be available for the 2016 RTP/SCS. The following guiding principles were used for identifying reasonably available revenues:

- Establish a user fee based system that better reflects the true cost of transportation, provides firewall protection for new and existing transportation funds, and ensures an equitable distribution of costs and benefits.

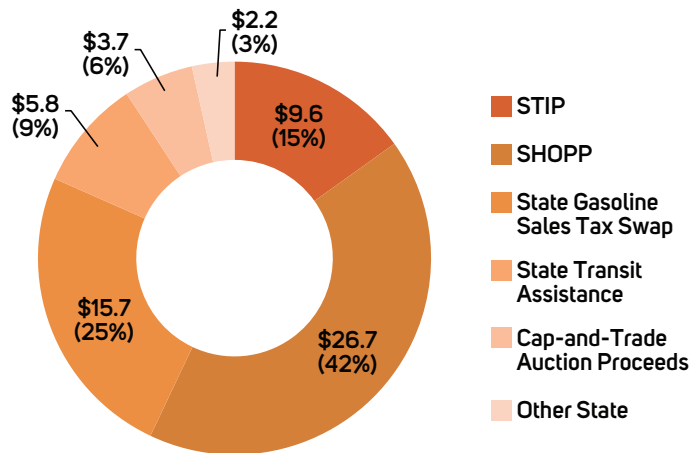
- Promote national and state programs that include return-to-source guarantees while maintaining flexibility to reward regions that continue to commit substantial local resources.
- Leverage locally available funding with innovative financing tools (e.g., tax credits and expansion of the Transportation Infrastructure Finance and Innovation Act [TIFIA]) to attract private capital and accelerate project delivery.
- Promote funding strategies that strengthen the federal commitment to the nation's goods movement system, recognizing the pivotal role that our region plays in domestic and international trade.

TABLE 2 identifies eight categories of funding sources that are considered to be reasonably available and are included in the financially constrained plan. These sources were identified on the basis of their potential for revenue generation, historical precedence and the likelihood of their implementation within the timeframe of the 2016 RTP/SCS. For each funding source, SCAG has examined the policy and legal context of implementation and has prepared an estimate of the potential revenues generated.

ASSUMPTIONS BY REVENUE SOURCE

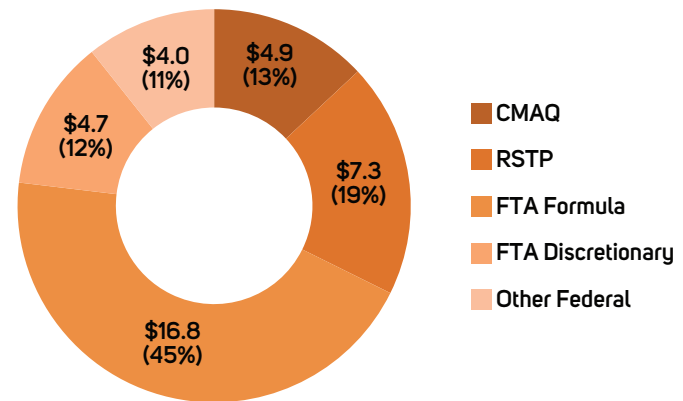
TABLE 3 describes the specific revenue assumptions used for the financially constrained 2016 RTP/SCS. A more detailed discussion of revenue sources is included in Appendix A.

FIGURE 7 Core Revenues, State Sources (in Nominal Dollars) \$63.8 Billion Total



Source: SCAG Revenue Model 2015
Note: Numbers may not sum to total due to rounding

FIGURE 8 Core Revenues, Federal Sources (in Nominal Dollars) \$37.7 Billion Total



Source: SCAG Revenue Model 2015
Note: Numbers may not sum to total due to rounding

TABLE 2 New Revenue Sources and Innovative Financing Strategies (in Nominal Dollars, Billions)

| Revenue Source | Description | Amount | Actions to Ensure Availability | Responsible Party(ies) |
|---|---|-------------------------------|--|--|
| State and Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power | Additional \$0.10 per gallon gasoline tax imposed at the state and the federal levels starting in 2020 to 2024 to maintain purchasing power. | \$6.0 | Requires action of state Legislature and Congress. Strategy is consistent with recommendations from two national commissions to move immediately with augmenting fuel tax resources through conventional Highway Trust Fund mechanisms. Rate is also consistent with proposals introduced in state Legislature during 2015–2016 session. | State Legislature, Congress |
| Mileage-Based User Fee (or equivalent fuel tax adjustment) | Mileage-based user fees would be implemented to replace gas taxes—estimated at about \$0.04 (in 2015 dollars) per mile starting in 2025 and indexed to maintain purchasing power. | \$124.8 (est. increment only) | Requires action of state Legislature and Congress. Strategy is consistent with recommendations from two national commissions to move toward a mileage-based user fee system. In 2014, state Legislature passed Senate Bill (SB) 1077 (DeSaulnier) directing California to conduct a pilot program to study the feasibility of a road charge as a replacement to the gas tax beginning no later than January 1, 2017. The FAST Act establishes the Surface Transportation System Funding Alternatives program, which provides grants to states to demonstrate alternative user-based revenue mechanisms that could maintain the long-term solvency of the Trust Fund. | State Legislature, Congress |
| Highway Tolls (includes toll revenue bond proceeds) | Toll revenues generated from East-West Freight Corridor and regional express lane network. | \$23.5 | Assembly Bill (AB) 1467 (Nunez) Chapter 32, Statutes of 2006 authorized Caltrans and regional transportation agencies to enter into comprehensive development lease agreements with public and private entities or consortia of those entities for certain types of transportation projects. Further, AB 521 (Runner) Chapter 542, Statutes of 2006 modified provisions in AB 1467. Senate Bill Second Extraordinary Session 4 (SBX2 4) Chapter 2, Statutes of 2009 (Cogdill) established the legislative authority until January 1, 2017, allowing for regional transportation agencies and Caltrans to enter into an unlimited number of public-private partnerships (PPP) and deleted the restrictions on the number and type of projects that may be undertaken. Chapter 474, Statutes of 2009 (AB 798) established the California Transportation Financing Authority (CTFA). Highway projects that meet planning and environmental review requirements are eligible for tolling subject to meeting requirements of the CTFA. AB 798 also lifted the requirement for express lane projects authorized under AB 1467 to have separate legislative approval. SB 1316 (Correa) enabled RCTC to impose tolls along SR-91 Express Lanes. The I-15 Express Lanes in Riverside County were authorized by AB 1954 (Jeffries). SB 1298 (Hernandez) authorized continued tolling along the I-10 and I-110 Express Lanes in Los Angeles County. AB 914 (Brown) allowed express lanes along I-10 and the I-15 in San Bernardino County. AB 194 (Frazier) allowed the California Transportation Commission to authorize additional express lane projects. | MPO, CTCs, Caltrans, CTFA, and FHWA as may be applicable |

TABLE 2 Continued

| Revenue Source | Description | Amount | Actions to Ensure Availability | Responsible Party(ies) |
|--|--|--------|---|---|
| Private Equity Participation | Private equity share as may be applicable for key initiatives: e.g., toll facilities; also, freight rail package assumes railroads' share of costs for main line capacity and intermodal facilities. | \$3.4 | Region has authority as noted above. Current funding plans for specific intermodal facilities assume private sources. | MPO, CTCs, private consortium, state Legislature, and Union Pacific/BNSF as appropriate for specific facilities |
| Freight Fee/National Freight Program | The recent reauthorization of the federal surface transportation act (the FAST Act) provides dedicated federal funding for infrastructure improvements supporting the national freight network through the newly created National Highway Freight Program and the Nationally Significant Freight and Highway Projects program. These programs are funded at approximately \$2.1 billion per year nationally. Regional estimate assumes a conservative percentage of national totals. | \$5.4 | Current efforts at the local/regional level continue to endorse a federal program for freight. Other mechanisms to ensure the establishment of a funding program for freight may entail working with local/regional, state, and federal stakeholders to assess a national freight fee. Freight fees could be assessed in proportion to relative impacts on the transportation system. | Congress and potentially state Legislature as well as local/regional stakeholders |
| State Bond Proceeds, Federal Grants & Other for California High-Speed Rail Program | State general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under American Recovery and Reinvestment Act and High-Speed Intercity Passenger Rail Program; Cap-and-Trade Auction Proceeds; potential use of qualified tax credit bonds; and private sources. | \$34.0 | Estimate for Southern California segments based on statewide system total per 2014 California High-Speed Rail Business Plan. Further coordination anticipated with the California High-Speed Rail Authority in finalizing business plan; additionally, the High-Speed Rail Authority will pursue private-sector participation as a source of system financing. | MPO, California High-Speed Rail Authority, local/regional stakeholders, private-sector partners |
| Value Capture Strategies | Assumes formation of special districts (Enhanced Infrastructure Financing Districts) including use of tax increment financing for specific initiatives. | \$1.2 | Pursue necessary approvals for special districts by 2020. Benefit assessment districts require majority approval by property owners; community facility districts require two-thirds approval; work with private entities for joint development opportunities as may be applicable. | MPO, CTCs, local jurisdictions, property owners along project corridors, developers |
| Local Option Sales Tax | Half-cent sales tax measure for Ventura County | \$2.1 | Local sales tax measure to be placed on ballot by 2020 | Ventura County |

TABLE 3 Summary of Revenue Sources

| 3.1 Core and Reasonably Available Revenue Projections—Local Revenue Sources (in Nominal Dollars, Billions) | | |
|--|---|------------------|
| Revenue Source | Revenue Projection Assumptions | Revenue Estimate |
| Local Option Sales Tax Measures | <p>Description: Locally imposed ½ percent sales tax in four counties (Imperial, Orange, Riverside, and San Bernardino). Permanent 1 percent (combination of two ½ cent sales taxes) plus Measure R through 2039 in Los Angeles County. Measure D in Imperial County expires in 2050; Measure M in Orange County expires in 2041; Measure A in Riverside County expires in 2039; and Measure D in San Bernardino County expires in 2040.</p> <p>Assumptions: Sales taxes grow consistent with county transportation commission forecasts and historical trends.</p> | \$132.7 |
| Transportation Development Act (TDA)—Local Transportation Fund | <p>Description: The Local Transportation Fund (LTF) is derived from a ¼ cent sales tax on retail sales statewide. Funds are returned to the county of generation and used mostly for transit operations and transit capital expenses.</p> <p>Assumptions: Same sales tax growth rate as used for local option sales tax measures.</p> | \$35.6 |
| Gas Excise Tax Subventions (to Cities and Counties) | <p>Description: Subventions to counties and local jurisdictions in region from the California state gas tax. Revenues for the forecast are proportionate to the percentage of streets and roads that are regionally significant.</p> <p>Assumptions: Gasoline fuel consumption declines in real terms by 1.6 percent due to increasing fuel efficiency in conventional vehicles and adoption of electric and hybrid vehicles. Regionally significant streets and roads (28 to 48 percent of total roads) are classified as either arterials or collectors.</p> | \$5.6 |
| Transit Farebox Revenue | <p>Description: Transit fares collected by transit operators in the SCAG region.</p> <p>Assumptions: Farebox revenues increase consistent with historic trends, planned system expansions, and operator forecasts.</p> | \$29.7 |
| Highway Tolls (in core revenue forecast) | <p>Description: Revenues generated from toll roads operated by the Transportation Corridor Agencies (TCA), from the SR-91 Express Lanes operated by the Orange County Transportation Authority (OCTA) and Riverside County Transportation Commission (RCTC), and from the express lanes along I-10 and I-110 in Los Angeles County.</p> <p>Assumptions: Toll revenues grow consistent with county transportation commission forecasts and historical trends.</p> | \$17.2 |
| Mitigation Fees | <p>Description: Revenues generated from development impact fees. The revenue forecast includes fees from the Transportation Corridor Agency (TCA) development impact fee program, San Bernardino County's development impact fee program and Riverside County's Transportation Uniform Mitigation Fee (TUMF) for both the Coachella Valley and Western Riverside County.</p> <p>Assumptions: The financial forecast is consistent with revenue forecasts from TCA, Riverside County Transportation Commission (RCTC), and the San Bernardino Associated Governments (SANBAG).</p> | \$10.1 |
| Other Local Sources | <p>Description: Includes committed local revenue sources such as transit advertising and auxiliary revenues, lease revenues, and interest and investment earnings from reserve funds.</p> <p>Assumptions: Revenues are based on financial data from transit operators and local county transportation commissions.</p> | \$23.8 |
| Local Subtotal | | \$254.7 |

Note: Numbers may not sum to total due to rounding

TABLE 3 Continued

| 3.2 Core and Reasonably Available Revenue Projections—State Revenue Sources (in Nominal Dollars, Billions) | | |
|--|--|------------------|
| Revenue Source | Revenue Projection Assumptions | Revenue Estimate |
| State Transportation Improvement Program (STIP) | <p>Description: The STIP is a five-year capital improvement program that provides funding from the State Highway Account (SHA) for projects that increase the capacity of the transportation system. The SHA is funded through a combination of state gas excise tax, the Federal Highway Trust Fund, and truck weight fees. The STIP may include projects on state highways, local roads, intercity rail, or public transit systems. The Regional Transportation Planning Agencies (RTPAs) propose 75 percent of STIP funding for regional transportation projects in Regional Transportation Improvement Programs (RTIPs). Caltrans proposes 25 percent of STIP funding for interregional transportation projects in the Interregional Transportation Improvement Program (ITIP).</p> <p>Assumptions: Funds are based upon the 2014 Report of STIP Balances County and Interregional Shares, August 1, 2014. Fuel consumption declines in real terms by 0.9 percent due to increasing fuel efficiency in conventional vehicles and adoption of electric and hybrid vehicles.</p> | \$9.6 |
| State Highway Operation and Protection Plan (SHOPP) | <p>Description: Funds state highway maintenance and operations projects.</p> <p>Assumptions: Short-term revenues are based on overlapping 2012 and 2014 SHOPP programs. Long-term forecasts are consistent with STIP forecasts and assume decline in fuel consumption.</p> | \$26.7 |
| State Gasoline Sales Tax Swap | <p>Description: Prior to 2010, state sales tax on gasoline funded discretionary projects through the Transportation Investment Fund, which distributed revenues to the STIP, local streets and roads, and transit. In 2010, the sales tax revenues were “swapped” for an increased excise tax (initially 17.3 cents) recalculated each year to ensure revenue neutrality.</p> <p>Assumptions: The forecast is based on current funding levels as reported by the State Controller. Future revenues grow by 1.8 percent (in real terms) to be revenue neutral consistent with the gasoline sales tax swap.</p> | \$15.7 |
| State Transit Assistance Fund (STA) | <p>Description: STA is funded from the diesel sales tax and is distributed by population share and revenue share of the transit operators</p> <p>Assumptions: The forecast is based on current funding levels reported by the State Controller. Future funding declines with fuel consumption using assumptions consistent with other sources.</p> | \$5.8 |
| Cap-and-Trade Auction Proceeds | <p>Description: The Global Warming Solutions Act of 2006 (AB 32) established the goal of reducing greenhouse gas (GHG) emissions statewide to 1990 levels by 2020. In order to help achieve this goal, the California Air Resources Board (ARB) adopted a regulation to establish a Cap-and-Trade program that places a “cap” on the aggregate GHG emissions from entities responsible for roughly 85 percent of the state’s GHG emissions. As part of the Cap-and-Trade program, ARB conducts quarterly auctions where it sells emission allowances. Revenues from the sale of these allowances fund projects that support the goals of AB 32, including transit and rail investments. Funds associated with non-transportation investments High-Speed Rail are not included in this amount. Funds associated with High-Speed Rail are address under Innovative Financing and New Revenue Sources.</p> <p>Assumptions: The forecast is based on current revenue estimates from the Legislative Analyst’s Office (LAO). The LAO projects statewide revenues to reach a cumulative program total of \$15 billion by 2020. Given the uncertainty about future allowance prices, annual growth is assumed to be flat beyond 2020. SCAG’s revenue projection for Cap-and-Trade Auction Proceeds is conservative and represents a bottom floor estimate for the region. Proceeds for transportation could be significantly greater.</p> | \$3.7 |
| Other State Sources | <p>Description: Other state sources include remaining Highway Safety, Traffic, Air Quality, and Port Security Bond Act of 2006 (Proposition 1B), Active Transportation Program, and other miscellaneous state grant apportionments for the SCAG region.</p> <p>Assumptions: Short-term revenues are based on actual apportionments. Future Active Transportation Program funding declines with fuel consumption using assumptions consistent with other sources.</p> | \$2.2 |
| State Subtotal | | \$63.8 |

Note: Numbers may not sum to total due to rounding

TABLE 3 Continued

| 3.3 Core and Reasonably Available Revenue Projections—Federal Revenue Sources (in Nominal Dollars, Billions) | | |
|---|--|------------------|
| Revenue Source | Revenue Projection Assumptions | Revenue Estimate |
| FHWA Non-Discretionary Congestion Mitigation and Air Quality (CMAQ) Program | <p>Description: Program to reduce traffic congestion and improve air quality in non-attainment areas.</p> <p>Assumptions: Short-term revenues are based upon the Caltrans apportionment estimates. Long-term revenues assume that fuel consumption declines by 0.9 percent (in real terms) annually. CMAQ funding is assumed to be reduced by 25 percent in 2022, an additional 25 percent in 2031, and an additional 25 percent in 2036 due to improved air quality.</p> | \$4.9 |
| FHWA Non-Discretionary Regional Surface Transportation Program (RSTP) | <p>Description: Projects eligible for RSTP funds include rehabilitation and new construction on any highways included in the National Highway System (NHS) and Interstate Highways (including bridges). Also, transit capital projects, as well as intracity and intercity bus terminals and facilities, are eligible.</p> <p>Assumptions: Short-term revenues are based upon the Caltrans apportionment estimates. Long-term revenues assume that fuel consumption declines by 0.9 percent (in real terms) annually.</p> | \$7.3 |
| FTA Formula Programs 5307 Urbanized Area Formula, 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Formula, 5311 Rural Formula, 5337 State of Good Repair Formula, and 5339 Bus and Bus Facilities Formula | <p>Description: This includes a number of FTA programs distributed by formula. 5307 is distributed to state urbanized areas with a formula based upon population, population density, number of low-income individuals, and transit revenue and passenger miles of service. Program funds capital projects, planning, job access and reverse commute projects, and operations costs under certain circumstances. 5310 funds are allocated by formula to states for projects providing enhanced mobility to seniors and persons with disabilities. 5311 provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. 5337 is distributed based on revenue and route miles and provides funds for repairing and upgrading rail transit systems, high-intensity bus systems that use High-Occupancy Vehicle (HOV) lanes, including bus rapid transit (BRT). 5339 provides capital funding to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities.</p> <p>Assumptions: Formula funds are assumed to decline in proportion with the Federal Highway Trust Fund. As with the FHWA sources, fuel consumption declines by 0.9 percent (in real terms) annually.</p> | \$16.8 |
| FTA Non-Formula Program 5309 Fixed Guideway Capital Investment Grants ("New Starts") | <p>Description: Provides grants for new fixed guideways or extensions to fixed guideways (projects that operate on a separate right-of-way exclusively for public transportation, or that include a rail or a catenary system), bus rapid transit projects operating in mixed traffic that represent a substantial investment in the corridor, and projects that improve capacity on an existing fixed guideway system.</p> <p>Assumptions: Operators are assumed to receive FTA discretionary funds in rough proportion to what they have received historically. As with the FHWA sources, fuel consumption declines by 0.9 percent (in real terms) annually.</p> | \$4.7 |
| Other Federal Sources | <p>Description: Includes other federal programs, such as Transportation Investment Generating Economic Recovery (TIGER) competitive grant program, Highway Safety Improvement Program, Federal Safe Routes to School, Highway Bridge Program, and earmarks.</p> <p>Assumptions: Short-term revenues are based on actual apportionments. Long-term revenues assumes a 0.9 percent (in real terms) annual decline in fuel consumption as used for other federal funding sources.</p> | \$4.0 |
| Federal Subtotal | | \$37.7 |

Note: Numbers may not sum to total due to rounding

TABLE 3 Continued

| 3.4 Core and Reasonably Available Revenue Projections—Innovative Financing and New Revenue Sources (in Nominal Dollars, Billions) | | |
|---|--|----------------------------------|
| Revenue Source | Revenue Projection Assumptions | Revenue Estimate |
| State and Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power | Description: Additional 10-cents-per-gallon gasoline tax imposed by the state and federal government starting in 2020 through 2024. Assumptions: Forecast consistent with historical tax rate adjustments for both state and federal gas taxes. | \$6.0 |
| Mileage-Based User Fee (or equivalent fuel tax adjustment) | Description: Mileage-based user fees would be implemented to replace existing gas taxes (state and federal) by 2025. Assumptions: Consistent with recommendations from two national commissions established under SAFETEA-LU, it is assumed that a national mileage-based user fee system would be established during the latter years of the RTP/SCS. An estimated \$0.04 per mile (in 2015 dollars) is assumed starting in 2025 to replace existing gas tax revenues. | \$124.8 (est. increment only) |
| Highway Tolls (includes toll revenue bond proceeds) | Description: Toll revenues generated from regional toll facilities (e.g., East-West Freight Corridor and regional express lane network). Assumptions: Toll revenues based on recent feasibility studies for applicable corridors. Also includes toll revenue bond proceeds. | \$23.5 |
| Private Equity Participation | Description: Private equity share as may be applicable for key initiatives. Assumptions: Private capital is assumed for a number of projects, including toll facilities; also, freight rail package assumes railroads' share of costs for main line capacity and intermodal facilities. | \$3.4 |
| Freight Fees/National Freight Program | Description: Establishment of a national freight program consistent with federal surface transportation reauthorization (FAST Act) and/or establishment of freight fees imposed nationally. Assumptions: The recently passed federal transportation reauthorization bill provides dedicated freight funding of approximately \$2.1 billion per year nationally. Regional estimate assumes a conservative percentage of proposed national program. | \$5.4 |
| State Bond Proceeds, Federal Grants & Other for California High-Speed Rail Program | Description: Estimated total per 2014 California High-Speed Rail Business Plan. Assumptions: State general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under ARRA and the High-Speed Intercity Passenger Rail Program (HSIPR); Cap-and-Trade Auction Proceeds; potential use of qualified tax credit bonds; and private sources. | \$34.0 |
| Value Capture Strategies | Description: Formation of special districts—Enhanced Infrastructure Financing Districts. Assumptions: This strategy refers to capturing the incremental value generated by transportation investments. Specifically, SCAG assumes the formation of special districts, including Enhanced Infrastructure Financing Districts (EIFDs) for specific projects (e.g., East-West Freight Corridor). | \$1.2 |
| Local Option Sales Tax | Description: Locally imposed ½ percent sales tax measure for Ventura County. Assumptions: Sales tax grows consistent with historical trends in county retail sales. | \$2.1 |
| New Revenue Source Subtotal | | \$200.4 |
| Grand Total | | \$556.5 |

Note: Numbers may not sum to total due to rounding

REVENUE SOURCE AVAILABILITY AND RISK ASSESSMENT

TABLE 4 Availability Assumptions and Risk Assessment

| Revenue Source | New or Existing | Availability Assumption | Potential Risk | Risk Mitigation |
|--|-----------------|---|---|--|
| Federal Non-Discretionary Funds (apportioned) (FTA/FHWA) | Existing | Continued federal funding at current apportionment levels but declines with increasing fuel efficiency. | Lack of federal authorization bill upon immediate expiration of current legislation. | Funds continue on incremental basis, at historic levels (continuing resolution). |
| Federal Funds Discretionary (FTA/FHWA) | Existing | Reasonably available based on historical allocations to the region or state. | Lack of authorization or award. | Alternative funding sources substituted; RTP/SCS amended if needed. |
| Local Option Sales Taxes | Existing | All local sales tax measures will continue through the majority of the 2016 RTP/SCS timeframe. Los Angeles County levies a 1.5 percent tax—a combination of two permanent half-cent sales taxes and Measure R at 0.5 percent. Measure R is not permanent and expires in 2039. Riverside County's Measure A also expires in 2039. Measure I in San Bernardino County expires in 2040, followed by Orange County's Measure M in 2041. Measure D in Imperial County expires in 2050. | Sales tax generation substantially less than anticipated. | Alternative funding sources substituted; RTP amended if needed. |
| State Funds (STIP; SHOPP; STA; Gas Tax Swap; Cap-and-Trade Auction Proceeds) | Existing | Continued state funding at current apportionment levels but declines with increasing fuel efficiency for applicable source categories. | Transfer of state transportation funds to General Fund for non-transportation purposes and/or potential changes to Gas Tax Swap and/or Cap-and-Trade Auction Proceeds impacting transportation sources. | Alternative funding sources substituted; RTP amended if needed. |
| Value Capture Strategies | New | Reasonably available based on past history of local jurisdiction financing/match for project development; economic development potential analyzed for specific initiatives (e.g., East-West Freight Corridor). | Property owner approval fails; joint development effort generates less than expected resources. | Alternative funding sources substituted; RTP amended if needed. |
| Highway Tolls | New | Reasonably available based on the region's project finance experience with toll corridors, namely the SR-91, I-10, and I-110 Express Lanes and the TCA toll road corridors. | Toll revenue generation is inadequate; necessary toll authorization for specific facilities fails to pass. | Alternative funding sources substituted; RTP amended if needed. |
| State and Federal Gas Excise Tax Adjustment | New | Reasonably available based on historical precedence—estimate in line with historical revenues. | Fails to garner congressional and state legislative actions. | Alternative funding sources substituted; RTP amended if needed. |
| Freight Fees/National Freight Program | New | Reasonably available based on historical precedence (e.g., Alameda Corridor experience) and recent federal surface transportation reauthorization—FAST Act. | Fails to garner congressional action. | Alternative funding sources substituted; RTP amended if needed. |
| Private Equity Participation | New | Reasonably available based on current discussions with private entities and experience in other parts of the nation with PPP initiatives. | Fails to meet appropriate legislative provisions currently authorized as may be necessary for specific projects; fails to adequately negotiate with private entities/consortium. | Alternative funding sources/financing substituted; RTP amended if needed. |

TABLE 4 Continued

| Revenue Source | New or Existing | Availability Assumption | Potential Risk | Risk Mitigation |
|--|-----------------|---|---|---|
| State Bond Proceeds, Federal Grants & Other for California High-Speed Rail Program | New | Reasonably available based on state general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants authorized under ARRA and HSIPR, Cap-and-Trade Auction Proceeds, etc. | Fail to garner private-sector commitment; fail to adequately generate system user-fee revenues to pay debt obligations. | Alternative funding sources/financing substituted; RTP amended if needed. |
| Mileage-Based User Fee (or equivalent fuel tax adjustment) | New | Reasonably available based upon recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission) created by Congress. The incremental amount assumed is equivalent to the historical 5 percent (in nominal terms) long-term growth in the HTF (due to periodic adjustments in the gas tax and growth in fuel consumption). In 2014, State Legislature passed Senate Bill (SB) 1077 (DeSaulnier) directing California to conduct a pilot program to study the feasibility of a road charge as a replacement to the gas tax. | Fails to garner congressional and state legislative actions. | Alternative funding sources substituted; RTP amendment if needed. |
| Local Option Sales Tax for Ventura County | New | If Ventura County voter approve the local sales tax, the amount of additional revenues will be \$2.1 billion through the life of the 2016 RTP/SCS. | Initiative fails. | Alternative funding sources/financing substituted; RTP amended if needed. |

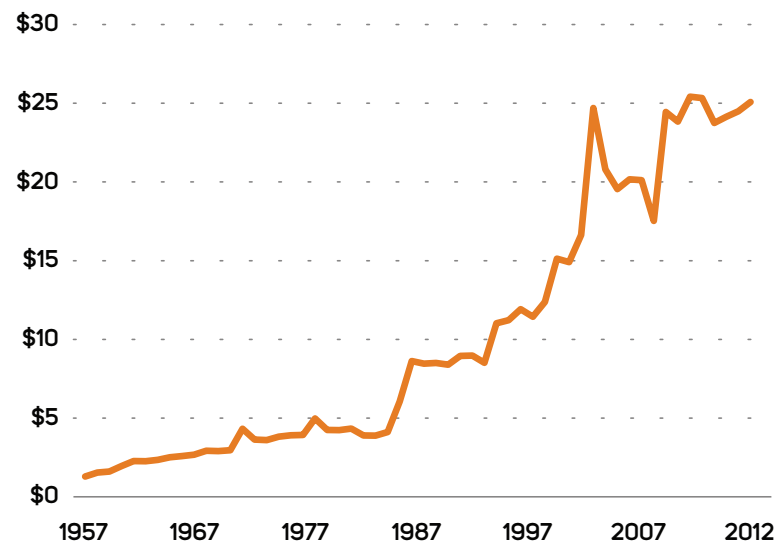
HISTORICAL TRENDS

Despite declines in recent years, the Federal Highway Trust Fund has historically grown by about 5 percent annually (in nominal dollars). The historic growth is due to periodic adjustments in the gas tax and growth in VMT. The historic growth of the Trust Fund from gas tax revenues is shown in **FIGURE 9**. Future VMT is projected to grow at a slower rate than the historical average.

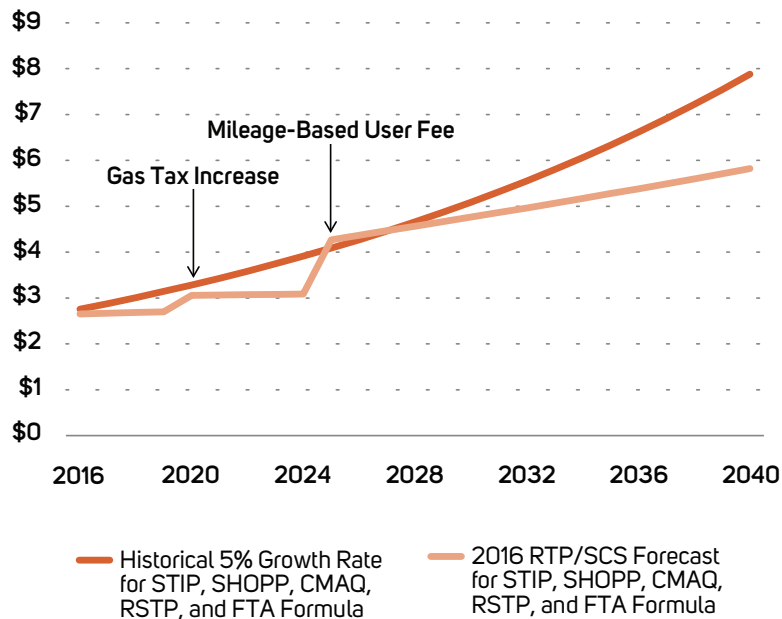
COMPARISON TO HISTORICAL TRENDS

The projected revenue from the mileage-based user fee and adjustments to state and federal gas excises taxes, when combined with the core revenue forecast for state and federal sources, generate less revenue than the historic average increase in state and federal transportation revenues sources of 5 percent annually. **FIGURE 10** shows a comparison of the revenues projected for select gas tax-funded sources under the historic growth rate of 5 percent annually (in nominal dollars) and under the mileage-based user fee and adjustments to state and federal gas excises taxes.

FIGURE 9 Historical Highway Trust Fund Revenue from Gasoline Excise Tax (\$ Billions)



Source: Federal Highway Administration

FIGURE 10 Growth of Fuel Tax Generated Sources (\$ Billions)

Note: Light orange line assumes gas tax adjustment and eventual replacement with mileage-based user fee

EXPENDITURE CATEGORIES AND METHODOLOGY

Transportation expenditures in the SCAG region are summarized into three main categories:

- Capital costs for transit, state highways and regionally significant arterials (local streets and roads)
- Operating and maintenance costs for transit, state highways and regionally significant arterials (local streets, and roads)
- Debt service payments (for current and anticipated bond issuances)

In preparing the 2016 RTP/SCS, each of the county transportation commissions submit detailed capital costs for highway and transit projects proposed. The 2016 RTP/SCS expenditure estimates also include capital costs for regionally significant arterials, active transportation, goods movement, intelligent transportation systems and transportation demand management investments. **FIGURE 11** shows an example of the standardized template that the county transportation commissioned used to submit cost information for capital projects.

CAPITAL PROJECT COSTS

The rise in construction costs can further erode the purchasing power of transportation revenues. **FIGURE 12** shows the increase and decline in California highway construction costs since the early 1970s. While recent corrections have slowed the longer-term increase in costs, the growth still remains above general inflation. The financial plan uses a 3.2 percent annual inflation factor to estimate future and nominal (or year-of-expenditure) costs.

TABLE 5 describes the multimodal capital investments included in the 2016 RTP/SCS.

TRANSIT OPERATING AND MAINTENANCE (O&M) COSTS

Future transit O&M costs depend on a variety of factors, such as future revenue-miles of service, labor contracts and the age of rolling stock. Over the last decade, these O&M costs grew 1 to 10 percent annually, depending on the transit operator (see **FIGURE 13**).

For the 2016 RTP/SCS, transit O&M costs are estimated based upon historical increases:

- The regional average increase (2.7 percent) is used for most operators.
- For Los Angeles County, the financial plan relies on detailed forecasts from the county transportation commission. These forecasts are consistent with historical data.

FIGURE 11 Example of Capital Project Inputs

| Project Costs by Category | | | | | | | |
|--|--------------------------|---------------------------|-------------------------|---------------------------|----------------------|-----------------------------|---------------------------|
| Engineering (\$1,000's) | Right-of-Way (\$1,000's) | Construction (\$1,000's) | Total Costs (\$1,000's) | | | | |
| \$2,000 | \$4,000 | \$49,000 | \$55,000 | | | | |
| Project Expenditures by Funding Source | | | | | | | |
| FEDERAL FUNDING (\$1,000'S) | FEDERAL FUNDING SOURCE | STATE FUNDING (\$1,000'S) | STATE FUNDING SOURCE | LOCAL FUNDING (\$1,000'S) | LOCAL FUNDING SOURCE | PRIVATE FUNDING (\$1,000'S) | TOTAL FUNDING (\$1,000'S) |
| \$45,000 | CMAQ | \$7,000 | STIP | \$3,000 | Agency | \$0 | \$55,000 |

TABLE 5 Capital Investments (Nominal Dollars, Billions)

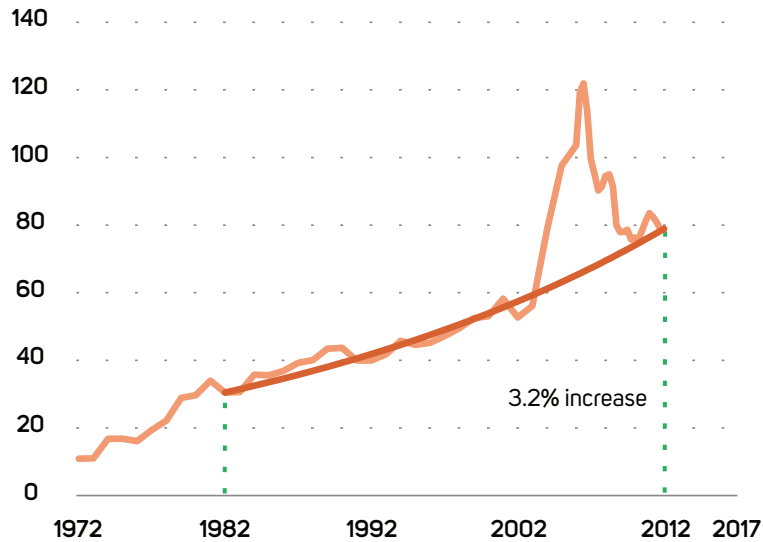
| Component | Description | Cost |
|---|--|---------------|
| Transit | | \$56.1 |
| Bus | New and expanded bus service in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties | \$22.9 |
| Bus Rapid Transit (BRT) | New BRT routes, extensions, and/or service enhancements in Los Angeles, Orange, Riverside, and San Bernardino counties | \$4.5 |
| Light Rail Transit (LRT) | New Light Rail routes, extensions and/or service enhancements in Los Angeles, Orange, and San Bernardino counties | \$17.3 |
| Heavy Rail | Heavy Rail extension and service enhancements in Los Angeles County | \$11.5 |
| Passenger and High-Speed Rail | | \$38.6 |
| Commuter Rail | Metrolink extensions in Riverside County and Metrolink systemwide improvements to improve service | \$4.0 |
| High-Speed Rail (HSR) | Improvements to the Los Angeles to San Diego (LOSSAN) Rail Corridor with an ultimate goal of providing San Diego-Los Angeles express service in under two hours Phase I of the California High-Speed Rail (HSR) project that would provide high-speed service from Los Angeles and Anaheim to the San Francisco Bay Area and the Central Valley | \$34.6 |
| Active Transportation | | \$8.1 |
| Various Active Transportation Strategies | Increase our bikeways, bring significant amount of sidewalks into compliance with the Americans with Disabilities Act (ADA), safety improvements, and various other strategies | \$8.1 |
| Transportation Demand Management (TDM) | | \$6.9 |
| Various TDM Strategies | Strategies to incentivize drivers to reduce solo driving: <ul style="list-style-type: none"> • Increase carpooling and vanpooling • Increase the use of transit, bicycling, and walking • Redistribute vehicle trips from peak periods to non-peak periods by shifting work times/days/locations • Encourage greater use of telecommuting • Other "first mile/last mile" strategies to allow travelers to easily connect to and from transit service at their origin and destination. These strategies include the development of mobility hubs around major transit stations, the integration of bicycling and transit through folding-bikes-on-buses programs, triple bike racks on buses, and dedicated racks on light and heavy rail vehicles | \$6.9 |

TABLE 5 Continued

| Component | Description | Cost |
|--|---|--------------------------------------|
| Transportation Systems Management (TSM) (includes Intelligent Transportation Systems (ITS)) | | \$9.2 |
| Various TSM Strategies | Deploy active traffic management strategies, enhanced incident management, advanced ramp metering, traffic signal synchronization, advanced traveler information, improved data collection, universal transit fare cards (Smart Cards), and Transit Automatic Vehicle Location (AVL) to increase traffic flow and reduce congestion | \$9.2 |
| Highways | | \$35.8 |
| Mixed-Flow and Interchange Improvements | Interchange improvements to and closures of critical gaps in the highway network to provide access to all parts of the region | \$12.2 |
| High-Occupancy Vehicle (HOV)/ Express Lanes | Closure of gaps in the high-occupancy vehicle (HOV) lane network and the addition of highway-to-highway direct HOV connectors to complete Southern California's HOV network A connected network of express lanes | \$15.2 |
| Toll Facilities | Closure of critical gaps in the highway network to provide access to all parts of the region | \$8.4 |
| Arterials | | \$18.4 |
| Various Arterial Improvements | Spot widenings, signal prioritization, driveway consolidations and relocations, grade separations at high-volume intersections, new bicycle lanes, and other design features such as lighting, landscaping, and modified roadway, parking, and sidewalk widths | \$18.4 |
| Goods Movement (includes Grade Separations) | | \$70.7 |
| Various Goods Movement Strategies | Port access improvements, freight rail enhancements, grade separations, truck mobility improvements, intermodal facilities, and emission-reduction strategies | \$70.7 |
| Aviation and Airport Ground Access | | Included in modal investments |
| Various Airport Ground Access Improvements | Rail extensions and improvements to provide easier access to airports, and new express bus service from remote terminals to airports | Included in modal investments |

Note: Numbers may not sum to total due to rounding

FIGURE 12 Growth in Highway Capital Costs (Index Value)

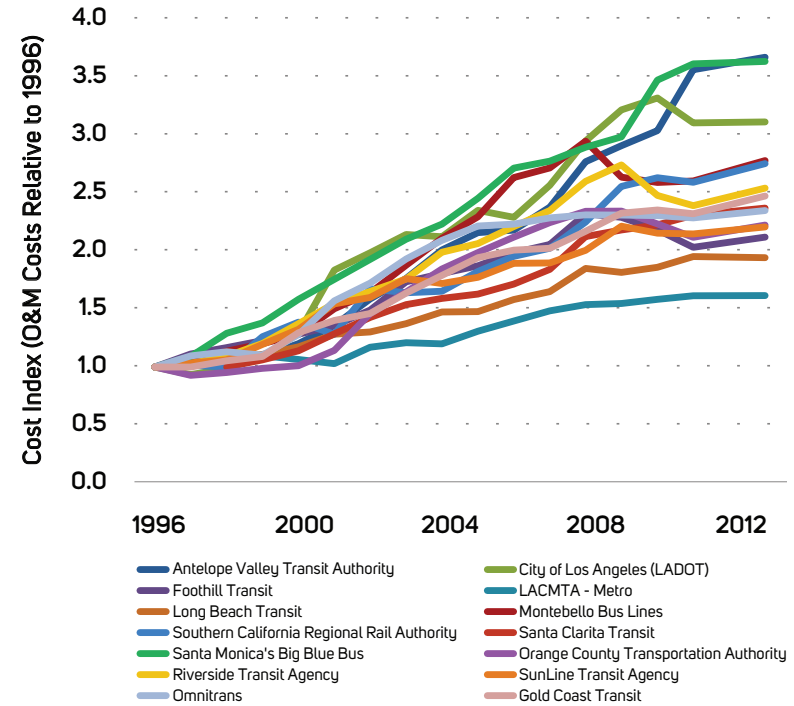


Source: California Department of Transportation

TABLE 6 Multimodal System Preservation and Maintenance Needs (in Nominal Dollars, Billions)

| System | State of Good Repair Needs Included in Estimate | Estimated State of Good Repair Cost |
|---|--|-------------------------------------|
| Transit | O&M Existing Service; O&M Service Expansion; O&M Major New Service; Preservation | \$156.7 |
| Passenger Rail | O&M Existing Service; O&M Service Expansion; O&M Major New Service; Preservation | \$15.7 |
| Regionally Significant Local Streets and Roads* | Pavement; Essential Components; Bridges; Goods Movement Corridors; Active Transportation Safety Improvements | \$37.3 |
| State Highways | Bridges, Pavement, Roadside; Mobility, Collision Reduction; Mandates, Facilities; Emergency Response | \$65.8 |
| Total | | \$275.5 |

FIGURE 13 Growth in Transit Operating and Maintenance Costs



Source: SCAG Analysis of National Transit Database Statistics

MULTIMODAL SYSTEM PRESERVATION AND MAINTENANCE

TABLE 6 summarizes the total system preservation and maintenance needs assumed in the 2016 RTP/SCS to bring transit, passenger rail, regionally significant local streets and roads, and the State Highway System to a state of good repair.

DEBT SERVICE

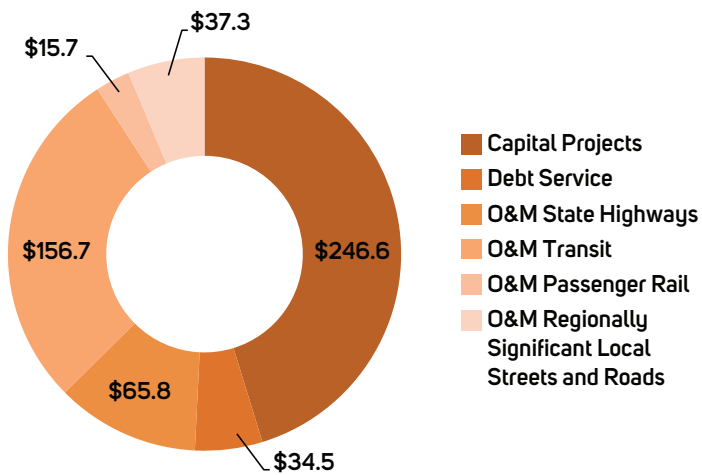
Local agencies in the SCAG region continue to rely on debt financing to ensure that revenues are available to meet the cash flow requirements of future expenditures. The Los Angeles County Metropolitan Transportation Authority develops a detailed county financial model that includes debt service. Other county transportation commissions prepare debt service forecasts for rating agencies and report current debt service in their comprehensive annual financial reports (CAFRs). The 2016 RTP/SCS financial plan includes all outstanding commitments and interest payments on future bonds and commercial paper consistent with the county transportation commissions' forecasts.

SUMMARY OF REVENUE SOURCES AND EXPENDITURES

As shown in **FIGURE 14**, capital projects total \$246.6 billion in nominal dollars. O&M costs total \$275.5 billion, while debt service obligations total \$34.5 billion. Transit-related costs compose the largest share of O&M costs for the region, totaling \$156.7 billion. This expenditure summary meets a total regional budget of \$556.5 billion over the 2016 RTP/SCS time horizon, as shown in **FIGURE 15**.

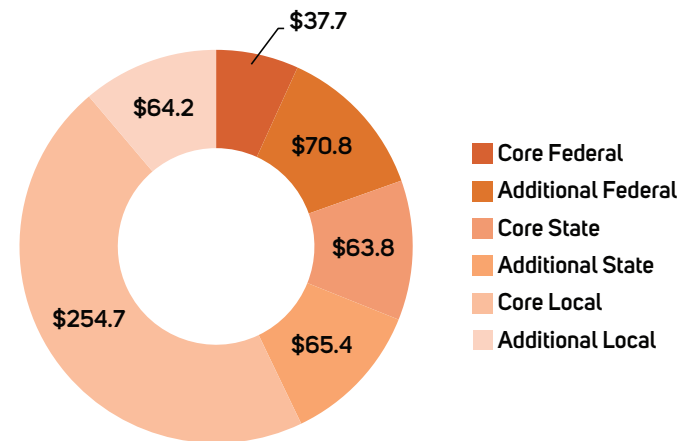
TABLE 7 provides details of the SCAG region’s financial plan revenue forecast by source in five-year increments from FY2015-16 through FY2039-40. This is followed by **TABLE 8**, which provides details of the region’s expenditures by category in five-year increments.

FIGURE 14 FY 2016–2040 RTP/SCS Expenditures (in Nominal Dollars, Billions) \$556.5 Billion Total



Note: Numbers may not sum to total due to rounding

FIGURE 15 FY 2016–2040 RTP/SCS Revenues (in Nominal Dollars, Billions) \$556.5 Billion Total



Note: Numbers may not sum to total due to rounding

TABLE 7 FY 2016–2040 RTP/SCS Revenues (in Nominal Dollars, Billions)

| Revenue Sources | | FY 2016–FY2020 | FY 2021–FY2025 | FY 2026–FY2030 | FY 2031–FY2035 | FY 2036–FY2040 | Total |
|---|---|----------------|----------------|----------------|----------------|----------------|----------------|
| LOCAL | Sales Tax | \$21.1 | \$26.6 | \$32.8 | \$40.9 | \$46.8 | \$168.3 |
| | • Local Option Sales Tax Measures | \$16.8 | \$21.2 | \$26.1 | \$32.4 | \$36.3 | \$132.7 |
| | • Transportation Development Act (TDA)—Local Transportation Fund | \$4.3 | \$5.4 | \$6.8 | \$8.5 | \$10.6 | \$35.6 |
| | Gas Excise Tax Subventions (to Cities and Counties) | \$1.0 | \$1.1 | \$1.1 | \$1.2 | \$1.2 | \$5.6 |
| | Transit Farebox Revenue | \$3.9 | \$4.9 | \$5.9 | \$6.9 | \$8.2 | \$29.7 |
| | Highway Tolls (in core revenue forecast) | \$2.0 | \$2.6 | \$3.3 | \$4.2 | \$5.2 | \$17.2 |
| | Mitigation Fees | \$1.7 | \$1.9 | \$2.1 | \$2.3 | \$2.1 | \$10.1 |
| | Other Local Sources | \$7.0 | \$3.6 | \$5.3 | \$5.6 | \$2.4 | \$23.8 |
| | Local Total | \$36.7 | \$40.5 | \$50.5 | \$61.0 | \$65.9 | \$254.7 |
| STATE | State Transportation Improvement Program (STIP) | \$1.4 | \$1.8 | \$2.0 | \$2.1 | \$2.3 | \$9.6 |
| | • Regional Transportation Improvement Program (RTIP) | \$1.1 | \$1.4 | \$1.5 | \$1.6 | \$1.7 | \$7.2 |
| | • Interregional Transportation Improvement Program (ITIP) | \$0.4 | \$0.5 | \$0.5 | \$0.5 | \$0.6 | \$2.5 |
| | State Highway Operation and Protection Plan (SHOPP) | \$4.3 | \$5.0 | \$5.4 | \$5.8 | \$6.2 | \$26.7 |
| | State Gasoline Sales Tax Swap | \$2.0 | \$2.4 | \$3.0 | \$3.7 | \$4.6 | \$15.7 |
| | State Transit Assistance Fund (STA) | \$0.9 | \$1.0 | \$1.2 | \$1.3 | \$1.4 | \$5.8 |
| | Cap-and-Trade Auction Proceeds | \$0.7 | \$0.8 | \$0.8 | \$0.8 | \$0.8 | \$3.7 |
| | Other State Sources | \$0.7 | \$0.3 | \$0.4 | \$0.4 | \$0.4 | \$2.2 |
| | State Total | \$10.0 | \$11.4 | \$12.6 | \$14.1 | \$15.7 | \$63.8 |
| FEDERAL | Federal Transit | \$4.0 | \$4.1 | \$4.2 | \$4.7 | \$4.3 | \$21.5 |
| | • Federal Transit Formula | \$2.9 | \$3.1 | \$3.3 | \$3.6 | \$3.9 | \$16.8 |
| | • Federal Transit Non-Formula | \$1.2 | \$1.0 | \$0.9 | \$1.1 | \$0.5 | \$4.7 |
| | Federal Highway & Other | \$3.1 | \$3.1 | \$3.3 | \$3.3 | \$3.3 | \$16.2 |
| | • Congestion Mitigation and Air Quality (CMAQ) | \$1.2 | \$1.1 | \$1.1 | \$0.9 | \$0.7 | \$4.9 |
| | • Regional Surface Transportation Program (RSTP) | \$1.2 | \$1.3 | \$1.4 | \$1.6 | \$1.7 | \$7.3 |
| | • Other Federal Sources | \$0.7 | \$0.7 | \$0.8 | \$0.9 | \$0.9 | \$4.0 |
| Federal Total | \$7.2 | \$7.3 | \$7.5 | \$8.0 | \$7.7 | \$37.7 | |
| INNOVATIVE FINANCING & NEW REVENUE SOURCES | State and Federal Gas Excise Tax Adjustment | \$1.3 | \$4.8 | \$0.0 | \$0.0 | \$0.0 | \$6.0 |
| | Mileage-Based User Fee | \$0.0 | \$5.5 | \$31.9 | \$39.6 | \$47.9 | \$124.8 |
| | Highway Tolls (includes toll revenue bond proceeds) | \$0.2 | \$9.0 | \$4.2 | \$4.6 | \$5.5 | \$23.5 |
| | Private Equity Participation | \$1.1 | \$0.1 | \$2.1 | \$0.1 | \$0.0 | \$3.4 |
| | Freight Fee/National Freight Program | \$0.7 | \$0.9 | \$1.0 | \$1.2 | \$1.5 | \$5.4 |
| | State Bond Proceeds, Cap-and-Trade Auction Proceeds, & Other for California High-Speed Rail Program | \$6.0 | \$10.0 | \$8.0 | \$5.0 | \$5.0 | \$34.0 |
| | Value Capture Strategies | \$0.0 | \$1.2 | \$0.0 | \$0.0 | \$0.0 | \$1.2 |
| | Local Option Sales Tax (Ventura County) | \$0.1 | \$0.4 | \$0.5 | \$0.6 | \$0.7 | \$2.1 |
| Innovative Financing & New Revenue Sources Total | \$9.4 | \$31.8 | \$47.6 | \$51.1 | \$60.5 | \$200.4 | |
| Revenue Total | \$63.3 | \$91.1 | \$118.2 | \$134.2 | \$149.8 | \$556.5 | |

Note: Numbers may not sum to total due to rounding

TABLE 8 FY 2016–2040 RTP/SCS Expenditures (in Nominal Dollars, Billions)

| RTP Costs | FY 2016-2020 | FY 2021-2025 | FY 2026-2030 | FY 2031-2035 | FY 2036-2040 | Total |
|---|--------------|--------------|--------------|--------------|--------------|---------|
| Capital Projects: | \$27.6 | \$46.7 | \$56.0 | \$57.0 | \$59.2 | \$246.6 |
| Arterials | \$3.3 | \$2.2 | \$2.4 | \$5.0 | \$5.4 | \$18.4 |
| Goods Movement (includes Grade Separations) | \$8.0 | \$18.9 | \$19.5 | \$12.2 | \$12.1 | \$70.7 |
| High-Occupancy Vehicle/Express Lanes | \$2.7 | \$2.2 | \$2.5 | \$3.7 | \$4.1 | \$15.2 |
| Mixed-Flow and Interchange Improvements | \$2.2 | \$1.4 | \$2.6 | \$2.9 | \$3.0 | \$12.2 |
| Toll Facilities | \$1.8 | \$3.2 | \$2.3 | \$0.6 | \$0.5 | \$8.4 |
| Transportation Systems Management (including ITS) | \$0.9 | \$1.1 | \$1.4 | \$2.9 | \$2.9 | \$9.2 |
| Transit | \$6.4 | \$8.6 | \$11.0 | \$14.4 | \$15.7 | \$56.1 |
| Passenger Rail | \$0.8 | \$6.3 | \$10.3 | \$10.4 | \$10.8 | \$38.6 |
| Active Transportation | \$0.8 | \$1.7 | \$1.7 | \$2.0 | \$2.0 | \$8.1 |
| Transportation Demand Management | \$0.2 | \$0.2 | \$1.6 | \$2.3 | \$2.6 | \$6.9 |
| Other (includes Environmental Mitigation, Landscaping, and Project Development Costs) | \$0.5 | \$0.6 | \$0.7 | \$0.7 | \$0.2 | \$2.7 |
| Operations and Maintenance: | \$30.8 | \$38.0 | \$54.9 | \$69.3 | \$82.5 | \$275.5 |
| State Highways | \$9.0 | \$10.5 | \$12.4 | \$15.7 | \$18.2 | \$65.8 |
| Transit | \$18.5 | \$23.3 | \$29.4 | \$38.6 | \$46.9 | \$156.7 |
| Passenger Rail | \$1.6 | \$2.3 | \$3.0 | \$3.8 | \$5.0 | \$15.7 |
| Regionally Significant Local Streets and Roads* | \$1.7 | \$1.9 | \$10.1 | \$11.1 | \$12.5 | \$37.3 |
| Debt Service | \$4.9 | \$6.4 | \$7.3 | \$7.9 | \$8.0 | \$34.5 |
| Cost Total | \$63.3 | \$91.1 | \$118.2 | \$134.2 | \$149.8 | \$556.5 |

Note: Numbers may not sum to total due to rounding.

* Includes \$4.8 billion for active transportation in addition to capital project investment level of \$8.1 billion for a total of \$12.9 billion for active transportation improvements.

APPENDIX A: DETAILS ABOUT REVENUE SOURCES

LOCAL REVENUE SOURCES

LOCAL OPTION SALES TAX MEASURES

Description: Revenues are derived from locally imposed 0.5 percent sales taxes for select counties. Imperial, Los Angeles, Orange, Riverside and San Bernardino Counties currently have sales tax measures dedicated to transportation expenditures.

Most local sales tax measures are for a limited term, but all continue through the 2016 RTP/SCS planning period. Imperial County Measure D continues through 2050, Orange County Measure M continues through 2041, Riverside County Measure A continues through 2039, and San Bernardino County Measure I continues through 2040. Los Angeles County levies a permanent 1 percent tax (a combination of two 0.5 percent sales taxes—Proposition A and Proposition C). In addition, Los Angeles County Measure R provides a temporary, additional 0.5 percent sales tax (on top of the existing, permanent 1 percent sales tax) and continues through 2039.

Base Year: FY2013-14.

Data Sources: Sales tax forecast data provided by the local transportation commissions; UCLA Anderson Forecast; historical data on revenues reported by State Board of Equalization (SBOE) in FY1985–86 through FY2013–14 Annual Reports, Table 21C.

Real Growth Rate: The growth rates are consistent with those for the Transportation Development Act since both sources are tied to sales tax revenue generation: Imperial County—2.1 percent; Los Angeles County—1.8 percent; Orange County—2.0 percent; Riverside County—3.9 percent; San Bernardino County—1.8 percent to FY2021-22, 2.4 percent to FY2039-40; Ventura County—1.8 percent.

Revenue Total: \$132.7 billion (nominal dollars).

TRANSPORTATION DEVELOPMENT ACT (LOCAL TRANSPORTATION FUND)

Description: The Transportation Development Act (TDA) provides two major sources of funding for public transportation—the Local Transportation Fund (LTF) and the State Transit Assistance (STA) fund. LTF funds are derived from a quarter-cent sales tax on retail sales statewide. Funds are returned to the county of tax generation. This category includes Article 3, 4, 4.5 and 8 of the Government Code. In the SCAG region, TDA funds are used mostly for transit operations and transit capital expenses. Article 3 funds support bicycle and pedestrian facilities.

Base Year: FY2013-14.

Data Sources: Sales tax forecast data provided by the local transportation commissions; UCLA Anderson Forecast; historical data on revenues reported by the SBOE in FY1985–86 through FY2013–14 Annual Reports, Table 21B.

Real Growth Rate: Imperial County—2.1 percent; Los Angeles County—1.8 percent; Orange County—2.0 percent; Riverside County—3.9 percent; San Bernardino County—1.8 percent to FY2021-22, 2.4 percent to FY2039-40; Ventura County—1.8 percent.

Revenue Total: \$35.6 billion (nominal dollars).

GAS EXCISE TAX SUBVENTIONS

Description: Gas tax subventions to counties and cities in the region.

Base Year: FY2013-14.

Data Sources: Gas tax subvention revenue data was collected for each city and county in the SCAG region from the California State Controller (Controller), FY1999-00 through FY2011-12 Street and Roads Annual Reports (Tables 3 and 9). Actual gas tax subvention allocations for FY2012-13 and FY2013-14 are provided by the Controller reports as well. Growth in subvention revenues is based on expected changes in vehicle fuel consumption forecasted by SCAG. Increasing fuel efficiency in conventional vehicles due to adopted CAFE standards as well as greater use of hybrid and electric vehicles are expected to reduce fuel consumption in California and the SCAG region.

SCAG uses a 1.6 percent annual decline (in real terms) in gasoline consumption to produce a conservative estimate of changes in revenues associated with fuel taxes.

Revenues for the forecast are shown in proportion to the percentage of streets and roads that are regionally significant in each county. Regionally significant streets and roads are generally classified as either arterials or collectors.

The proportion of regionally significant roads is consistent with the prior RTPs and is based upon road classification and lane-mile data collected from Caltrans and local county transportation commissions. The proportion of arterials and collectors in each county was calculated relative to the total lane-miles for that county and applied to the total subvention revenues for the county. The percentages are: Imperial County—49 percent; Los Angeles County—38 percent; Orange County—28 percent; Riverside County—39 percent; San Bernardino County—45 percent; Ventura County—34 percent.

Real Growth Rate: Negative 1.6 percent annually (nominal growth rate is 0.8 percent).

Revenue Total: \$5.6 billion (nominal dollars).

TRANSIT FAREBOX REVENUE

Description: Transit fares collected by transit operators in the SCAG region.

Base Year: FY2012-13.

Data Sources: Historical fare revenue data were collected from the Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1978–79 through FY2012–13, Table 1—Statement of Revenues and Expenses. Additional fare revenue projections were derived from financial sections of long-range transportation plans from the Los Angeles County Metropolitan Transportation Authority (LACMTA) and the Orange County Transportation Authority (OCTA). Revenues in the forecast account for fixed-route services (e.g., bus, urban rail and light rail), smart shuttles, paratransit and dial-a-ride services. Revenues were forecasted separately for 12 major regional operators in addition to other operators in the region.

Fare revenue forecasts were also collected from the Southern California Regional Rail Authority (SCRRA) for the Metrolink commuter rail system. The commuter rail revenues are distributed among the counties that support the rail service, based on data provided by SCRRA.

Real Growth Rate: Historically, the region has experienced a real growth rate in fare revenues of about 2.7 percent. The following rates were used in the forecast: Los Angeles County—0.9 percent (consistent with the LACMTA long-range plan); Orange County—0.8 percent (consistent with the OCTA long-range plan); Metrolink and Other Transit Operators in the region—2.7 percent. These rates result in fare revenue growth below historical averages.

Revenue Total: \$29.7 billion (nominal dollars).

HIGHWAY TOLLS

Description: This category includes revenues generated from toll roads operated by the Transportation Corridor Agencies (TCA) and express lanes operated by LACMTA, OCTA and Riverside County Transportation Commission (RCTC). TCA consists of two separate government entities—the San Joaquin Hills Transportation Corridor Agencies (SJHTCA), which oversees the San Joaquin Hills (State Route 73) toll road, and the Foothill/Eastern Transportation Corridor Agencies (FETCA), which oversees the Foothill (State Route 241) and Eastern (State Route 241, State Route 261, and State Route 133) toll roads. LACMTA operates express lanes along Interstate 10 and Interstate 110. OCTA operates the 91 Express Lanes. Revenues are used for that facility exclusively. RCTC will operate the State Route 91 Express Lanes in Riverside County, currently under construction at the time of the 2016 RTP/SCS.

Base Year: Various.

Data Sources: TCA for annual Transaction Tables from FY1996-97 to FY2013-14, Financial Statements, June 30, 2006 to 2010; OCTA's 91 Express Lanes Fund, Financial Statements, June 30, 2004 to 2014; LACMTA Financial Statements FY2012-13 to FY2013-14; RCTC revenue forecasts.

Real Growth Rate: Various.

Revenue Total: \$17.2 billion (nominal dollars).

MITIGATION FEES

Description: This category includes revenues generated from development impact fees. These fees are based on the general principle that future development within a specified area/jurisdiction will benefit from the construction of transportation improvements. Fees are assessed on new residential and non-residential (e.g., commercial and industrial) development. Within the region, a number of programs fund regionally significant transportation investments—TCA development impact fee program; Riverside County's Transportation Uniform Mitigation Fee (TUMF for both the Coachella Valley and Western Riverside County); and San Bernardino County's Development Impact Fee (DIF) program.

The 2016 RTP/SCS financial forecast is consistent with revenue forecasts from RCTC and San Bernardino Associated Governments (SANBAG). The growth in mitigation fees is consistent with projected growth in retail sales.

Base Year: Various.

Data Sources: Revenue forecast collected from Coachella Valley Association of Governments (CVAG); Western Riverside Council of Governments (WRCOG); RCTC; and SANBAG. Additional sources—TCA Financial Statements, June 30, 2006 to 2014; OCTA's 91 Express Lanes Fund, Financial Statements, June 30, 2004 to 2014; and Controller, Transportation Planning Agencies Annual Report, FY1987–88 through FY2011–12, Table 1—Statement of Revenues for All Fund Types.

Real Growth Rate: Various.

Revenue Total: \$10.1 billion (nominal dollars).

LOCAL AGENCY FUNDS

Description: Includes local revenue sources such as transit advertising and auxiliary revenues, lease revenues and interest and investment earnings from reserve funds. For Los Angeles County, interest income from Propositions A and C and Measure R, and LTF

are included under this source. Income from financing is also included, while principal and interest payments are included as part of debt service. For Orange County, interest income from Measure M and LTF as well as general funds and several transit-related programs are included.

Base Year: FY2012-13.

Data Source: Revenues are based on financial data from transit operators and local county transportation commissions.

Real Growth Rate: Not applicable.

Revenue Total: \$23.8 billion (nominal dollars).

STATE REVENUE SOURCES

STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)

Description: The State Highway Account (SHA) is funded through a combination of state gas excise tax, the Federal Highway Trust Fund (HTF), and other miscellaneous revenues (e.g., interest and sale of property). In addition, the SHA received money as a result of the "Gas Tax Swap." The Gas Tax Swap revenues are estimated separately in the SCAG revenue forecast as explained further below.

The STIP is a five-year capital improvement program that provides funding from the SHA for capital projects that increase the capacity of the transportation system. The STIP may include projects on state highways, local roads, intercity rail or public transit systems. The STIP is renewed every two years and consists of separate projects. The Regional Transportation Planning Agencies propose 75 percent of STIP funding for regional transportation projects in Regional Transportation Improvement Programs (RTIPs). Caltrans proposes 25 percent of STIP funding for interregional transportation projects in the Interregional Transportation Improvement Program (ITIP).

Funds are based on 2014 STIP programs of projects for the five years covering FY2014-15 through 2018-19. Starting in FY2019-20, the average allocation from the 2014 STIP program is included and grown by forecasted changes in fuel consumption. As with other revenue sources, the 2016 RTP/SCS adopts a conservative assumption that fuel consumption declines by 0.9 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Base Year: FY2014-15 to FY2018-19.

Data Sources: California Transportation Commission, 2014 Report of STIP Balances County

and Interregional Shares, August 1, 2014; SCAG estimates of fuel consumption.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$9.6 billion (nominal dollars).

STATE HIGHWAYS OPERATION AND PROTECTION PLAN (SHOPP)

Description: The SHOPP is a four-year program that provides funding from the SHA to be used for projects that reduce collisions and hazards to motorists, preserve and rehabilitate bridges and roadways, enhance and protect roadsides, and improve the operation of the State Highway System. It does not include projects that increase the capacity of the transportation system. SHOPP revenues are taken "off the top" before allocations are made for the STIP. As with the STIP, the SHOPP receives additional money from the Gas Tax Swap. These additional revenues are explained further below.

Short-term SHOPP revenues are based on the 2012 and 2014 SHOPP programs provided by Caltrans. These overlapping programs provide funds that cover FY2012-13 to FY2015-16 and FY2014-15 to FY2017-18.

Starting in FY2018-19, long-term SHOPP revenues are estimated by the average of annual revenues grown by forecasted changes in fuel consumption. Since SHOPP revenues have been variable, the annual average is based on the SHOPP allocations for the last eight years. Consistent with other revenue sources, the 2016 RTP/SCS adopts a conservative assumption that fuel consumption declines by 0.9 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

The 2015 Ten-Year SHOPP identifies \$8.0 billion in statewide annual needs, while expenditures programmed for the next four years are only \$2.3 billion annually. The financial plan assumes that the state gas excise tax remains unchanged with the same percentage split of funding available for capital projects. However, the increase in fuel efficiency will erode the funding available over the 2016 RTP/SCS planning period.

Base Year: FY2010-11 to FY2017-18.

Data Sources: Caltrans, 2004 SHOPP, Approved April 8, 2004; Caltrans, 2006 SHOPP, Approved March 16, 2006; Caltrans, 2008 SHOPP, Approved March 13, 2008; Caltrans, 2010 SHOPP, Approved February 24, 2010; Caltrans, 2012 SHOPP, Approved March 28, 2012; Caltrans, 2014 SHOPP, Approved March 20, 2014; SCAG estimates of fuel consumption.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$26.7 billion (nominal dollars).

STATE GASOLINE SALES TAX SWAP

Description: Prior to 2010, the state of California charged sales tax on gasoline purchases. Passed by the general electorate in March 2002, Proposition 42 amended the State Constitution to transfer state sales taxes on gasoline, other than revenues calculated under the spillover formula, from the General Fund to a Transportation Investment Fund (TIF) for transportation purposes. Through a series of provisions enacted by Assembly Bill x8-6 (Chapter 11, Statutes of 2010), Senate Bill 70 (Chapter 9, Statutes of 2010), and Assembly Bill 105 (Chapter 6, Statutes of 2011), the California Legislature eliminated the sales tax on gasoline and replaced the tax with an additional excise tax on gasoline. In essence, the state gasoline sales tax revenues were “swapped” for an increased state excise tax.

Effective July 1, 2010, the gasoline excise tax increased by 17.3 cents. On July 1, 2011, sales taxes on diesel fuel increased by 1.75 percent and the excise tax decreased—to ensure local transit operators received STA funding (share also increased from two-thirds to 75 percent). Each year, the SBOE is required to adjust the excise tax, so the Gas Tax Swap remains revenue neutral. As a result, the financial plan assumes that the Gas Tax Swap generates the same revenues as generated under the prior state sales tax on gasoline.

Although the revenues derived from the new excise tax cannot be used to pay bond debt service or loans to the State General Fund, the Controller backfills Truck Weight Fees that AB 105 directs to State General Fund from the SHA to pay off obligation bond debt service for specified voter-approved transportation bonds.

The remaining net revenues derived from the new excise tax are allocated 44 percent to local streets and roads, 44 percent to the STIP, and 12 percent to the SHOPP. For the purposes of the financial plan, the revenues allocated to local streets and roads are included here. Revenues allocated to the STIP and SHOPP are incorporated those forecasts.

Future revenues are expected to grow by the increase in fuel prices.

Base Year: FY2013-14.

Data Sources: Controller, Monthly Apportionment of Highway Users Tax, FY2010-11 through FY2013-14; SCAG estimates of fuel prices.

Real Growth Rate: 1.8 percent annually.

Revenue Total: \$15.7 billion (nominal dollars).

STATE TRANSIT ASSISTANCE FUND (STA) FROM THE PUBLIC TRANSPORTATION ACCOUNT (PTA)

Description: The Public Transportation Account (PTA) is a trust fund that derives its revenues

from a 4.75 percent sales tax on diesel fuel. One-half of the PTA trust fund is directed toward the STA for local transit.

Prior to the Gas Tax Swap, the PTA also received funding from a 4.75 percent sales tax on the 9-cent state excise tax on gasoline and “spillover” funds (4.75 percent tax on all taxable sales minus 5 percent tax on all taxable sales minus gasoline). The legislation enacted in 2011 (Assembly Bill 105), reenacted the provisions of the Gas Tax Swap and addressed issues previously raised by the passage of Propositions 22 and 26. The legislation also increased the state sales tax on diesel fuel by 1.75 percent in FY2014-15 and reduced the state excise tax on diesel fuel to 13 cents. The revenue from the increased portion of the state sales tax is allocated to the STA to maintain funding to local transit.

As with the Gas Tax Swap, the changes in the diesel excise tax are intended to be revenue neutral. The SBOE adjusts the diesel excise tax annually to be consistent with the revenue loss from the sales tax changes on diesel.

Actual historical funding figures are reported by the Controller through FY2013-14 along with estimates for FY2014-15 and FY2015-16. Future funding is estimated for the financial plan using the growth in fuel consumption. Consistent with other funding sources, the financial plan assumes that fuel consumption will decline by 0.9 percent annually.

Base Year: FY2015-16.

Data Sources: Controller, Transportation Planning Agencies Annual Report, FY 1987-88 through FY2007-08, Table 1—Statement of Revenues for All Fund Types; data for FY2008-09 through FY2015-16 comes from Quarterly State Transit Assistance reports from the Controller; SCAG estimates of fuel consumption.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$5.8 billion (nominal dollars).

CAP-AND-TRADE AUCTION PROCEEDS

Description: The Global Warming Solutions Act of 2006 (AB 32) established the goal of reducing greenhouse gas (GHG) emissions statewide to 1990 levels by 2020. In order to help achieve this goal, the California Air Resources Board (ARB) adopted a regulation to establish a Cap-and-Trade program that places a “cap” on the aggregate greenhouse gas emissions from entities responsible for roughly 85 percent of the state’s greenhouse gas emissions. As part of the Cap-and-Trade program, ARB conducts quarterly auctions where it sells emission allowances. Revenues from the sale of these allowances fund projects that support the goals of AB 32, including transit and rail investments. Cap-and-Trade Auction Proceeds associated with non-transportation elements and the state High-Speed Rail

program are not included here.

The forecast is based on current revenue estimates from the Legislative Analyst's Office (LAO). The LAO projects statewide revenues to reach a cumulative program total of \$15 billion by 2020. Given the uncertainty about future allowance prices, annual growth is assumed to be flat beyond 2020.

The regional estimate assumes a 5 percent share of the statewide total for transportation to be conservative. Proceeds could be significantly greater.

Data Sources: LAO, The 2014-15 Budget: Cap-and-Trade Auction Revenue Expenditure Plan, February 2014; LAO, Cap-and-Trade May Auction Results, May 28, 2015; SCAG estimates of fuel consumption.

Real Growth Rate: Not applicable.

Revenue Total: \$3.7 billion (nominal dollars).

OTHER STATE SOURCES

Description: Other state sources include remaining Highway Safety, Traffic, Air Quality, and Port Security Bond Act of 2006 (Proposition 1B) funds; the Active Transportation Program (ATP); and other miscellaneous state grant apportionments for the SCAG region.

The financial plan includes all Proposition 1B allocations included in the 2015 Federal Transportation Improvement Program (2015 FTIP), including allocations through FY2019-20. No additional Proposition 1B funds are assumed after FY2019-20.

All ATP allocations included in the 2015 FTIP are included in the financial plan, and future allocations are assumed to be consistent. Similar to other sources, the financial plan assumes that ATP funding will grow with fuel consumption and decline by 0.9 percent annually.

Base Year: Various.

Data Source: SCAG, 2015 FTIP.

Real Growth Rate: Various.

Revenue Total: \$2.2 billion (nominal dollars).

FEDERAL REVENUE SOURCES

CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

Description: The CMAQ program is a federal funding program to reduce traffic congestion and improve air quality in federally designated air quality non-attainment areas.

Short-term revenues through FY2017-18 are based upon apportionment estimates provided by Caltrans for each county. Starting in FY2018-19, revenues are expected to decline along with the Federal Highway Trust Fund (HTF). Over the 25-year period from 1987 to 2012, HTF income grew by 1.9 percent (1.8 percent in the Highway Account) in real terms, while HTF expenditures grew by 3.0 percent (2.4 percent in the Highway Account) in real terms. Since 2008, the HTF has failed to meet its obligations and has required Congress to authorize \$65.3 billion in transfers from the General Fund to keep it solvent.

The financial plan assumes that Congress will reach agreement on maintaining solvency of the HTF over the 2016 RTP/SCS planning period. However, the core revenues available from the HTF are expected to decline due to increasing fuel efficiency. Consistent with other revenue sources, the financial plan uses a conservative assumption that fuel consumption declines by 0.9 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Reflecting improvements in air quality, the 2016 RTP/SCS assumes that the SCAG region will reach attainment in stages for a number of pollutants and that the severity level for other pollutants will lessen over the planning period. To reflect these conditions, CMAQ funding is expected to decline by 25 percent in 2022, an additional 25 percent in 2031, and an additional 25 percent in 2036.

Base Year: FY2017-18.

Data Sources: Caltrans, CMAQ Apportionments for FY1997-98 through FY2017-18, various years; Federal Highway Administration (FHWA), Federal Highway Statistics 2012, Table FE-210: Status of the Federal Highway Trust Fund 1957-2012.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$4.9 billion (nominal dollars).

REGIONAL SURFACE TRANSPORTATION PROGRAM (RSTP)

Description: The Regional Surface Transportation Program (RSTP) was established by California state statute to utilize Surface Transportation Program funds, which are a federal source reauthorized under the Moving Ahead for Progress in the 21st Century Act (MAP-21). Projects eligible for RSTP funds include projects to preserve and improve the

conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

Short-term revenues through FY2017-18 are based upon apportionment estimates provided for each county by Caltrans. Starting in FY2018-19, revenues are estimated to decline with the HTF. As with CMAQ funding, the financial plan uses the assumption that the core revenues available from the HTF will decline due to increasing fuel efficiency. Consistent with other revenue sources, fuel consumption is expected to decline by 0.9 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Base Year: FY2017-18.

Data Sources: Caltrans, RSTP Apportionments for FY1997–98 through FY2017–18, various years; Caltrans, FHWA, Federal Highway Statistics 2012, Table FE-210: Status of the Federal Highway Trust Fund 1957–2012.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$7.3 billion (nominal dollars).

FTA FORMULA—SECTIONS 5307, 5310, 5311, 5337, AND 5339

Description: This includes a number of FTA programs distributed by formula. FTA Section 5307 is distributed to state urbanized areas with a formula based upon population, population density, number of low-income individuals, and transit revenue and passenger miles of service. Section 5307 funds capital projects, planning, job access and reverse commute projects, and operations costs under certain circumstances. FTA Section 5310 funds are allocated by formula to states for projects providing enhanced mobility to seniors and persons with disabilities. FTA Section 5311 provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. FTA Section 5337 is distributed based on revenue and route miles and provides funds for repairing and upgrading rail transit systems, high-intensity bus systems that use High-Occupancy Vehicle (HOV) lanes, including bus rapid transit (BRT). FTA Section 5339 provides capital funding to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities.

Starting in FY2014-15, the financial plan uses the assumption that FTA formula revenues will decline in proportion with the HTF. Over the 25-year period from 1987 to 2012, HTF income grew by 1.9 percent (2.4 percent in the Mass Transit Account) in real terms, while HTF expenditures grew by 3.0 percent (8.1 percent in the Mass Transit Account) in real terms. As with CMAQ and RSTP funding, the financial plan uses the assumption that the core revenues available from the HTF will decline due to increasing fuel efficiency. Consistent with other

revenue sources, fuel consumption is expected to decline by 0.9 percent annually due to changes in CAFE standards and the adoption of hybrid and electric vehicles.

Base Year: FY2013-14.

Data Sources: FTA, FTA FY2006-06 to FY2013-14 Apportionments and Allocations, various years; Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1987–88 through FY2012–13, Table 1—Statement of Revenues and Expenses; FHWA, Federal Highway Statistics 2012, Table FE-210: Status of the Federal Highway Trust Fund 1957–2012.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$16.8 billion (nominal dollars).

FTA DISCRETIONARY—SECTION 5309 FIXED GUIDEWAY CAPITAL INVESTMENT GRANTS

Description: FTA Section 5309 provides funding for new fixed guideways or extensions to fixed guideways (projects that operate on a separate right-of-way exclusively for public transportation, or that include a rail or a catenary system), bus rapid transit projects operating in mixed traffic that represent a substantial investment in the corridor, and projects that improve capacity on an existing fixed guideway system.

The 2016 RTP/SCS uses the assumption that, on average, operators will continue to receive discretionary funding in rough proportion to what they have received historically. Consistent with other federal sources from the HTF, it is assumed that revenues will decline with fuel consumption by 0.9 percent per year.

Actual apportionments are used through FY2014-15. Starting in FY2015-16, future allocations are estimated by the average apportionment from FY2010-11 to FY2014-15 and a 0.9 percent decline in fuel consumption.

Base Year: FY2012.

Data Source: FTA, FTA FY2005-06 to FY2014-15 Apportionments and Allocations, various years; 2015 FTIP; FHWA, Federal Highway Statistics 2012, Table FE-210: Status of the Federal Highway Trust Fund 1957–2012.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$4.7 billion (nominal dollars).

OTHER FEDERAL FUNDS

Description: Includes other federal programs, such as Transportation Investment Generating Economic Recovery (TIGER) competitive grant program, Federal Highway Safety Improvement Program, Federal Safe Routes to School, Highway Bridge Program, and earmarks.

The financial plan uses actual programmed amounts in 2015 FTIP for discretionary sources like TIGER funds or earmarks. These amounts continue only through FY2019-20. Federal Highway Safety Improvement Program, Federal Safe Routes to School, and Highway Bridge Program revenues are estimated in the short term using program allocations provided by Caltrans through FY2017-18. Longer-term estimates for Federal Highway Safety Improvement Program and Federal Safe Routes to School are based upon the average of allocations from FY2014-15 to FY2017-18 and the 0.9 percent decline in fuel consumption assumption used for other federal funding sources. Highway Bridge Program are based upon the average of allocations from FY2010-11 to FY2017-18 and the 0.9 percent decline in fuel consumption assumption used for other federal funding sources.

Base Year: Various.

Data Sources: Caltrans, Division of Local Assistance, FY2006-07 to FY2017-18 for Highway Bridge Program, various; Caltrans, Division of Local Assistance, FY2014-15 to FY2017-18 for Federal Highway Safety Improvement Program and Federal Safe Routes to School, June 27, 2014; SCAG, 2015 FTIP.

Real Growth Rate: Negative 0.9 percent annually (nominal growth rate is 1.5 percent).

Revenue Total: \$4.0 billion (nominal dollars).

NEW REVENUE SOURCES/INNOVATIVE FINANCING

STATE AND FEDERAL GAS EXCISE TAX ADJUSTMENT TO MAINTAIN HISTORICAL PURCHASING POWER

Description: Historical extrapolation of gas tax revenues equivalent to additional 10 cents-per-gallon gasoline tax imposed by the state and federal governments starting in 2020. Forecast based on historical trends in adjustments to both state and federal gas excise taxes. Rate is consistent with proposals introduced in the State Legislature during 2015-16 session.

Base Year: FY2019-20.

Data Source: Not applicable.

Real Growth Rate: 0.0 percent annually.

Revenue Total: \$6.0 billion (nominal dollars).

MILEAGE-BASED USER FEE (OR EQUIVALENT FUEL TAX ADJUSTMENT)

Description: Mileage-based user fees would be implemented to replace existing gas taxes. Analysis assumed an estimated \$0.04 (2015 dollars) per mile starting in 2025 and indexed at a rate of 2.4 percent.

Advancements in technologies enabling greater use of electric or alternative fuel vehicles will continue to impact gas tax revenues. ARB, in the 2014 EMFAC, estimates that fuel efficiency for all light-duty vehicles will steadily increase, from an average weighted MPG of just over 21 in 2010 to over 45 in 2040. The fuel efficiency of freight trucks also is expected to improve, although at a slower rate. However, pending U.S. Environmental Protection Agency and National Highway Safety Administration proposed standards for medium- and heavy-duty vehicles would lower fuel consumption by 16 to 24 percent by 2027. This projection assumes there is not a major paradigm shift in vehicle fuel technology, such as affordable electric cars or hybrid heavy-duty trucks. It also assumes no shift will occur in public policy or public attitudes that encourage people to reduce their long-term travel habits or shift to more efficient vehicles more quickly. Given the growing concern about climate protection and fuel price volatility, however, such changes are likely, which would lead to a more rapid deterioration in the long-term viability of the current fuel tax.

SCAG projections indicate that the total number of vehicle miles traveled in the SCAG region will increase by about 25 percent by 2040. The National Surface Transportation Infrastructure Financing Commission also predicts an increase in VMT nationwide. The Financing Commission evaluated a combination of short- and long-term factors, identifying that short-term motor fuel price volatility combined with a weak economy could have a considerable negative impact. They indicate that despite a recent national decline in VMT, travel growth nationally will resume a trajectory of about 1.5 to 1.8 percent per year for the foreseeable future due to factors such as population growth, economic growth, and land use patterns. Accordingly, the Financing Commissions' findings and recommendations indicate that the most viable approach to efficiently fund investments in transportation in the medium to long run will be a user charge system based more directly on miles driven (and potentially on factors such as time of day, type of road, vehicle weight, and fuel efficiency) rather than indirectly on fuel consumed. Additionally, the National Surface Transportation Policy and Revenue Study Commission identified consistent findings and recommendations.

In 2013, the Oregon Legislatures passed Senate Bill 810, the first legislation in the United States to establish a road usage charge system for transportation funding. The bill authorizes the Oregon Department of Transportation to set up a mileage collection system for 5,000 cars and light commercial vehicles beginning July 1, 2015. For those who volunteer to participate, the Road Usage Charge Program will assess a charge of 1.5 cents per mile and issue a gas tax credit as warranted.

In 2014, the California Legislature passed Senate Bill (SB) 1077 (DeSaulnier) directing California to conduct a pilot program to study the feasibility of a road charge as a replacement to the gas tax beginning no later than January 1, 2017. The pilot program will be implemented by the California State Transportation Agency (CalSTA). The outcomes of the road charge pilot program will be reported back to the pilot program technical advisory committee, the California Transportation Commission (CTC), and the State Legislature no later than June 30, 2018. The Legislature will then decide whether and how to enact a full-scale permanent road charge program. Some key policy issues that the Legislature will need to address include specific governance, accountability and approaches for protecting privacy, preventing potential penalties as well as addressing income and geographic (e.g., urban vs. rural) equity impacts.

For the SCAG region, revenue from mileage-based fees total \$153.4 billion from FY2024-25 to FY2039-40. This analysis assumes that mileage-based fees would replace existing state and federal gas taxes. As such, the incremental increase in revenue resulting from the transition to a more direct mileage-based charge system would generate \$124.8 billion, from FY2024-25 to FY2039-40.

Base Year: FY2024-25.

Data Source: ARB, 2014 EMFAC, December 2014; SCAG travel demand forecast for 2016 RTP/SCS.

Real Growth Rate: 0.9 percent annually.

Revenue Total: \$124.8 billion (nominal dollars)—estimated incremental revenue only.

HIGHWAY TOLLS

Description: Toll revenues generated from the East-West Freight Corridor and regional express lane network. This revenue category also includes toll revenue bond proceeds.

The financing plan for the East-West Freight Corridor includes toll revenue bonds. Toll revenue bonds are issued in FY2021-22, FY2024-25 and FY2029-30, totaling \$5.5 billion in par amount that provides \$4.9 billion in proceeds. The bonds are sized with a 1.3x debt service coverage ratio.

Base Year: Various—subject to capital project completion.

Data Sources: Reviewed other toll facility data sources including TCA Financial Statements; additional sources include Riverside County-Orange County Major Investment Study Final Project Report, SR-91 Implementation Plan, 2014, and LACMTA 2009 Long Range Transportation Plan and 2014 Short Range Transportation Plan.

Real Growth Rate: 0.0 percent to 4.0 percent annually.

Revenue Total: \$23.5 billion (nominal dollars); estimate includes anticipated bond proceeds.

PRIVATE EQUITY PARTICIPATION

Description: Local transportation agencies within the SCAG region, including LACMTA, RCTC, OCTA and SANBAG, have been or are currently analyzing alternative project delivery options for funding and delivery of their projects, from a public-private partnership (P3) financing using a concession to P3 delivery using availability payments.

Under a concession delivery model, a transportation agency would award a long-term contract to a private firm or consortium of firms to design, build, finance, operate and maintain a revenue-generating project (e.g., a tolled road) for a specific term. The benefits of the concession model include life-cycle costing, which transfers operations and maintenance cost risks to the private sector and creates incentives for the private sector to make tradeoffs between higher upfront capital costs and lower long-term O&M costs. Adding the financing element to this model means that in the best case, the transportation agency would not be financially liable for the project and that it would be up to the private sector to raise the necessary funds, manage the construction and assume the traffic and revenue risk on the project. The concession may reduce the local agency's local funding requirement because of the private investment.

Private concession models are assumed for the analysis of a number of projects including the East-West Freight Corridor. Development of the high-speed rail system is also anticipated to involve significant private-sector engagement; this is discussed under the HSR program funding section.

Under an "availability payment" P3 project structure, the transportation agency would contract with a private-sector partner to design, construct, operate, and/or maintain a highway for a contracted period of time. Availability payments are often used for highway projects not expected to generate adequate revenues to pay for their own construction and operation, either because the highway is un-tolled or the tolls are not forecast to generate sufficient income. This requires that the project sponsor have sufficient and credible non-toll sources of funding to make all required availability payments. Under availability payment structures, the project sponsor generally retains the revenue risk rather than the private partner if it were for a tolled highway.

The potential benefit of an availability payment structure is that the payments made by the project sponsor could be less than they would be under a traditional project delivery approach. If the payments are less, the transportation agency would achieve savings and be able to apply the freed-up revenues for other projects.

Financial analysis for the 2016 RTP/SCS also assumes that the two Class I freight railroads—Burlington Northern Santa Fe (BNSF) Railway and the Union Pacific Railroad (UP)—will fund their respective capacity and operational initiatives. It is assumed, for example, that the UP will invest an estimated \$500 million in a modernization project that will increase container throughput at the Intermodal Container Transfer Facility (ICTF). Additionally, it is assumed that the BNSF will invest approximately \$500 million to construct the Southern California International Gateway (SCIG), a new near-dock facility adjacent to the San Pedro Bay Ports with direct access to the Alameda Corridor.

Analysis also includes a freight rail investment package including main line rail improvements (rail-to-rail grade separations, double or triple tracking, new signal systems, universal crossovers, new sidings, etc.). The railroads are assumed to fund their respective shares of capital improvement costs.

Base Year: Not applicable.

Data Source: Draft business plans as available.

Real Growth Rate: Not applicable.

Revenue Total: \$3.4 billion (nominal dollars).

FREIGHT FEE/NATIONAL FREIGHT PROGRAM

Description: The National Highway Freight Program and the Nationally Significant Freight and Highway Projects program as described under the Fixing America's Surface Transportation Act (FAST Act) would establish dedicated federal funding for infrastructure improvements that strengthen the nation's freight network.

Combined, the National Highway Freight Program and the Nationally Significant Freight and Highway Projects program total approximately \$2.1 billion per year nationally. Regional estimate assumes a conservative percentage of proposed national program.

Base Year: FY2015-16.

Data Source: Fixing America's Surface Transportation Act (FAST Act).

Real Growth Rate: Not applicable.

Revenue Total: \$5.4 billion (nominal dollars).

STATE BOND PROCEEDS, FEDERAL GRANTS, AND OTHER FOR CALIFORNIA HIGH-SPEED RAIL PROGRAM

Description: The 2016 RTP/SCS financial plan assumes state general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008. Proposition 1A authorized the state to issue \$9.95 billion of general obligation bonds, of which \$9 billion will be used to develop the high-speed rail system and \$950 million will be used for capital projects on other passenger rail lines to provide connectivity with high-speed rail. As per the California High-Speed Rail Authority's Draft 2016 Business Plan for the High Speed Rail Program, financial assumptions also include leveraging private sector innovation and expertise in delivery. Additional funding from federal grants authorized under the America Recovery and Reinvestment Act (ARRA), the High-Speed Intercity Passenger Rail Program (HSIPR), and Cap-and-Trade Auction Proceeds are included in the financial plan.

Large-scale private-sector involvement in the development and implementation of the HSR system is contemplated. The Draft 2016 Business Plan identifies cost containment, risk mitigation, and the potential for additional capital as rationale for private-sector participation. Various contractual project delivery options are considered, including concession models.

Base Year: FY2017-18.

Data Source: California High-Speed Rail Authority Draft 2016 Business Plan, February 18, 2016.

Real Growth Rate: Not applicable.

Revenue Total: \$34.0 billion (nominal dollars).

VALUE CAPTURE STRATEGIES

Description: Refers to capturing the incremental value generated by transportation investments. A number of techniques are assumed. Assessment districts and community facilities districts (CFDs) are longstanding and widely used mechanisms in California to fund public infrastructure, including transit and transportation investments. Each has unique benefits, voter threshold, and procedural requirements, but both place the funding burden on those that benefit. Assessments districts and CFDs can be used for local projects, such as a road improvement, or to fund regional transportation projects, such as rail or highway extensions, with the coordination of local agencies and their activities. The districts are an area created by the property owners (or, in some instances, registered voters for a CFD) within its boundaries for the purposes of funding public improvements.

The property owners agree to impose assessments on each parcel that are proportional to the benefit created by the public improvements. There are many assessment districts currently in existence in the SCAG region—most of which are relatively small and were

created to fund local streets, water and sewer laterals, and street lighting. There are also much larger assessment districts, such as the Los Angeles County Park and Open Space District, that impose a countywide assessment. An assessment district or CFD can be formed to fund a portion of major highway projects as well. Highway projects produce a benefit for residents and businesses along corridors with the reduction of congestion on local streets and access improvements to businesses.

The formation of an assessment district requires approval from a majority of the assessments, as opposed to the two-thirds requirement for CFDs. CFDs result in the creation of a special tax that can be used to secure bonds or pay for approved capital and operating costs. The tax may increase over time and have a term that is longer than the bonds. CFDs can be structured to address the characteristics (e.g., number and type of parcels) of the district.

Revenue estimates also reflect other opportunities for value capture financing including tax increment financing. Cities and counties have had the authority since 1990 to create infrastructure financing districts (IFDs) to fund local infrastructure. IFDs divert incremental property tax revenues for 30 years to fund, among other things, highways and transit projects. Revenue estimates were based on case study evaluations of past practices and current trends. Revenue generation can vary significantly by area due to associated economic development potential. Specific capital improvements reviewed include the East-West Freight Corridor.

Senate Bill 628 (SB 628) was signed by the Governor on September 29, 2014 and authorizes the legislative body of a city or county to establish an enhanced infrastructure financing district (EIFD), adopt an infrastructure financing plan, and issue bonds to finance public capital projects and other specific projects of communitywide significance. Unlike IFDs, a two-thirds vote is not required to form an EIFD. The legislative body is required to hold a public hearing before passing a resolution that adopts the infrastructure financing plan, and in turn, a resolution of formation creating the EIFD. Bonds may be issued upon approval of 55 percent of the qualified electors of the EIFD. Tax increment financing would fund infrastructure projects such as highways, interchanges, transit facilities, sewage treatment and water reclamation plants, brownfield restoration and other environmental mitigation, low and moderate income housing, and transit priority projects, in accordance with the infrastructure financing plan and the agreement of affected taxing entities.

Base Year: Various.

Data Source: LACMTA Benefit Assessment District Program, Los Angeles County Assessor's Office County Parcel Data; SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, Warehouse and Distribution Study Task 5.

Real Growth Rate: Not Applicable.

Revenue Total: \$1.2 billion (nominal dollars).

LOCAL OPTION SALES TAX (VENTURA COUNTY)

Description: Locally imposed 0.50 percent sales tax measure for Ventura County.

Base Year: FY2019-20.

Data Source: California Lutheran University Center for Economic Research and Forecasting; historical data on revenues reported by the SBOE in the FY1985-86 through FY2013-14 Annual Reports, Table 21B.

Real Growth Rate: 1.3 percent.

Revenue Total: \$2.1 billion (nominal dollars).

APPENDIX B: SCAG REGIONAL FINANCIAL MODEL

The SCAG regional financial model consists of two Excel workbooks. The first workbook helps SCAG estimate revenues available for transportation capital projects over the timeframe of the 2016 RTP/SCS (FY2015-16 to FY2039-40). The second workbook allows SCAG to compare the revenues to expenditures proposed for the 2016 RTP/SCS.

The revenue model workbook begins with a compilation of historical data from published sources. SCAG relies on published data because it can be collected and verified easily. The model focuses on using revenue data at collection and disbursement levels and includes 41 data tables from a variety of local, state, and federal sources.

All tables and their sources are [TABLE 9](#).

The revenue model uses these tables to estimate long-term historical trends. SCAG tries to use as much data as possible, but definitions and data availability can vary over time.

The next section of the model collects information from the county transportation commissions' forecasts as may be available. The SCAG revenue model takes the county transportation commissions' most recent financial forecasts available and places them into standardized revenue categories. The SCAG model includes the following revenue categories:

TABLE 9 Published Historical Data

| Table | Source(s) |
|--|--|
| 1: State Sales and Use Tax Statistics by County, FY1933-34 to FY2011-12 | SBOE, FY1933-34 through FY2011-12 Annual Reports, Table 20 (or equivalent tables in earlier reports). |
| 2: Revenues Distributed to Counties from County Transportation Tax (i.e., TDA Funding), FY1972-73 to FY2013-14 | SBOE, FY1972-73 through FY2013-14 Annual Reports, Table 21B. |
| 3: Revenues Distributed to Special Districts from Transaction and Use Tax, FY1981-82 to FY2013-14 | SBOE, FY1972-73 through FY2013-14 Annual Reports, Table 21C. |
| 4A: Total Gas Tax Apportionments to Counties and Constituent Cities, FY1999-00 to FY2013-14 | 1) Controller, Streets and Roads Annual Report, FY1999-00 through FY2009-10, Tables 3 and 9—Detailed Statement of Monies Made Available for Street Purposes. 2) Controller, Monthly Highway Users Tax, FY2010-11 through FY2013-14, HUT 2104, HUT 2105, HUT 2016, HUT 2107, HUT 2107.5. |
| 4B: Highway Users Tax 2103 (i.e., Gas Tax Swap), FY1999-00 to FY2013-14 | Controller, Monthly Highway Users Tax, FY2010-11 through FY2013-14, HUT 2103. |
| 5A: Taxable Distributions of Diesel Fuel and Gasoline, FY1923-24 to FY2013-14 | SBOE, FY2013-14 Annual Report, Tables 24 and 25a. |
| 5B: 2014 EMFAC SCAG Region Fuel Consumption, 2012 to 2040 | ARB, 2014 EMFAC Motor Vehicle Emission Inventory |
| 5C: Transportation Energy Use by Fuel Type, 2010 to 2040 | U.S. Energy Information Administration (EIA), Annual Energy Outlook 2014 & 2015, Transportation Sector Energy Use by Fuel Type Within a Mode. |
| 5D: California Gasoline and Diesel Retail Prices, 2001 to 2013 | EIA, Weekly Retail Gasoline and Diesel Prices, California, Annual |
| 5E: Transportation Fuel Price | EIA, Annual Energy Outlook 2014 & 2015, Energy Prices. |
| 6A-6B: Programmed 2008 STIP, FY2008-09 to FY2012-13 | California Transportation Commission (CTC), 2009 Report of STIP Balances County and Interregional Shares, July 31, 2009. |
| 6C-6D: Programmed 2010 STIP, FY2010-11 to FY2014-15 | CTC, 2011 Report of STIP Balances County and Interregional Shares, August 4, 2011 |
| 6E-6F: Programmed 2012 STIP, FY2012-13 to FY2016-17 | CTC, 2013 Report of STIP Balances County and Interregional Shares, July 26, 2013. |
| 6G-6H: Programmed 2014 STIP, FY2014-15 to FY2018-19 | CTC, 2014 Report of STIP Balances County and Interregional Shares, August 1, 2014. |
| 7A: 2008 SHOPP Program and GARVEE Financed Projects, FY2008-09 to FY2011-12 | 1) Caltrans, 2008 SHOPP, Approved March 13, 2008. 2) Caltrans, 2008 SHOPP GARVEE List, May 26, 2010. |
| 7B: 2010 SHOPP Program, FY2010-11 to FY2013-14 | Caltrans, 2011 Report of STIP Balances County and Interregional Shares, August 4, 2011. |
| 7C: 2012 SHOPP Program, FY2012-13 to FY2015-16 | Caltrans, 2012 SHOPP, Approved March 28, 2012. |
| 7D: 2014 SHOPP Program, FY2014-15 to FY2017-18 | Caltrans, 2014 SHOPP, Approved March 20, 2014. |

TABLE 9 Continued

| Table | Source(s) |
|--|---|
| 8: Proposition 1B Apportionments, FY2008-09 to FY2019-20 | 1) SCAG, 2008 Regional Transportation Improvement Program (RTIP), Amendment #08-53. 2) SCAG, 2011 Federal Transportation Improvement Program (FTIP), Amendment #11-34. 3) SCAG, 2013 FTIP, Amendment #13-19. 4) SCAG, 2015 FTIP, Amendment #15-07. |
| 9: Active Transportation Program, FY2014-15 to FY2016-17 | SCAG, 2015 FTIP, Amendment #15-07. |
| 10A: Transit Passenger Fares, FY1978-79 to FY2012-13 | Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1978-79 through FY2012-13, Table 1 - Statement of Revenues and Expenses. |
| 10B: SCRRRA (Metrolink) Budgeted Passenger Fares, FY2012-13 to FY2014-15 | Southern California Regional Rail Authority, FY2012-13 through FY2014-15 Annual Budgets. |
| 10C: FTA Section 5307, FY1987-88 to FY2012-13 | Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1978-79 through FY2012-13, Table 1 - Statement of Revenues and Expenses. |
| 10D: Special Demonstration Project, FY1987-88 to FY2012-13 | Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1978-79 through FY2012-13, Table 1 - Statement of Revenues and Expenses. |
| 10E: Other Financial Assistance, FY1987-88 to FY2012-13 | Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1978-79 through FY2012-13, Table 1 - Statement of Revenues and Expenses. |
| 10F: FTA Section 5310 and 5311, FY1987-88 to FY2012-13 | Controller, Transit Operators and Non-Transit Claimants Annual Report, FY1978-79 through FY2012-13, Table 1 - Statement of Revenues and Expenses. |
| 11A: Federal Section 5307 (Urbanized Area) Funding Allocations, FY2005-06 to FY2013-14 | FTA, FTA Fiscal Year Apportionments and Allocations, multiple years. |
| 11B: Federal Section 5310 (Enhanced Mobility of Seniors and Individuals with Disabilities) Funding Allocations, FY2012-13 to FY2013-14 | FTA, FTA Fiscal Year Apportionments and Allocations, multiple years. |
| 11C: Federal Section 5337 (State of Good Repair Formula) Funding Allocations, FY2012-13 to FY2013-14 | FTA, FTA Fiscal Year Apportionments and Allocations, multiple years. |
| 11D: Federal Section 5339 (Bus and Bus Facilities Formula) Funding Allocations, FY2012-13 to FY2013-14 | FTA, FTA Fiscal Year Apportionments and Allocations, multiple years. |
| 11E: Federal Section 5309 (Fixed Guideway Capital Investment Grants) Funding Allocations, FY2005-06 to FY2014-15 | FTA, FTA Fiscal Year Apportionments and Allocations, multiple years. |
| 12: Other Federal Transit, FY2008-09 to FY2019-20 | 1) SCAG, 2008 RTIP, Amendment #08-53. 2) SCAG, 2011 FTIP, Amendment #11-34. 3) SCAG, 2013 FTIP, Amendment #13-19. 4) SCAG, 2015 FTIP, Amendment #15-07. |
| 13: Other Federal Highway, FY2008-09 to FY2019-20 | 1) SCAG, 2008 RTIP, Amendment #08-53. 2) SCAG, 2011 FTIP, Amendment #11-34. 3) SCAG, 2013 FTIP, Amendment #13-19. 4) SCAG, 2015 FTIP, Amendment #15-07. |

TABLE 9 Continued

| Table | Source(s) |
|--|--|
| 14: Highway Toll Revenues, FY1997-97 to FY2013-14 | 1) TCA Website for annual Transaction Tables from FY1996-97 to FY2013-14, Financial Statements, June 30, 2006 to 2010. 2) OCTA, 91 Express Lanes Fund, Financial Statements, June 30, 2004 to 2014. 3) LACMTA Financial Statements FY2012-13 to FY2013-14. |
| 15A: Developer Fees, FY1987-88 to FY2012-13 | Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987-88 through 2012-13, Table 1 - Statement of Revenues for All Fund Types. |
| 15B: Interest Earned by Transportation Planning Agencies, FY1987-88 to FY2012-13 | Controller, Transportation Planning Agencies Annual Report, Fiscal Years 1987-88 through 2012-13, Table 1 - Statement of Revenues for All Fund Types. |
| 15C: State Transit Assistance Funds, FY1987-88 to FY2015-16 | 1) Controller, Transportation Planning Agencies Annual Report, FY1987-88 through FY1996-97, Table 1 - Statement of Revenues for All Fund Types. 2) Controller, State Transit Assistance Fund Allocation 1997-1998 Fiscal Year to 2007-2008 Fiscal Year. 3) Controller, Quarterly State Transit Assistance for 2008-09 to 2013-14. 4) State Transit Assistance Fund Allocation Estimate for Fiscal Year 2014-15 and Fiscal Year 2015-16. |
| 16: Federal CMAQ Apportionments, FY1997-98 to FY2017-18 | Caltrans, CMAQ Apportionments, multiple years. |
| 17: Federal RSTP Apportionments, FY1997-98 to FY2017-18 | Caltrans, RSTP Apportionments, multiple years. |
| 18: Federal Highway Safety Improvement Program, FY2014-15 to FY2017-18 | Caltrans, Project List for 2015 FTIPS. |
| 19: Federal Safe Route to School Program, FY2014-15 to FY2017-18 | Caltrans, Project List for FY2014-15 and FY2015-16 |
| 20: Highway Bridge Program Federal Funds, FY2006-07 to FY2017-18 | Caltrans, Division of Local Assistance, Highway Bridge Program, multiple years. |
| 21: Status of the Federal Highway Trust Fund, 1957 to 2012 | FHWA, Federal Highway Statistics 2012, Table FE-210, Status of the Federal Highway Trust Fund 1957-2012. |
| 22: GDP (Chained) Price Index, FY1939-40 to FY2019-20 | Office of Management and Budget, Budget of the United States Government, FY2015-16 Budget Transmitted to Congress on February 2, 2015, Table 10.1—Gross Domestic Product and Deflators Used in Historical Tables: 1940-2020. |
| 23: California County Population Estimates, 2000 to 2012 | 1) California Department of Finance (DOF), E-2. California County Population Estimates and Components of Change by Year—July 1, 2000-2010, December 2011. 2) DOF, E-2. California County Population Estimates and Components of Change by Year—July 1, 2010-2012, December 2012. |
| 24: California County Population Projections, 2010 to 2060 | DOF, P-1. California State and County Population Projections — July 1, 2010-2060, December 2014. |

Local Sources

1. Local Option Sales Tax Measures
2. Transportation Development Act (TDA)—Local Transportation Fund from
3. Gas Excise Tax Subventions (to Cities and Counties)
4. Transit Farebox Revenue
5. Highway Tolls (in core revenue forecast)
6. Mitigation Fees
7. Other Local Sources

State Sources

1. State Transportation Improvement Program (STIP)
 - Regional Improvement Program (RIP)
 - Interregional Improvement Program (IIP)
2. State Highway Operation and Protection Program (SHOPP)
3. State Gasoline Sales Tax Swap
4. State Transit Assistance Fund
5. Cap-and-Trade Auction Proceeds
6. Other State Sources

Federal Sources

1. Congestion Mitigation Air Quality (CMAQ) Program
2. Regional Surface Transportation Program (RSTP)
3. FTA Formula (5307, 5310, 5311, 5337, 5339)
4. FTA Discretionary (5309 “New Starts”)
5. Other Federal Sources

In addition to grouping the revenue sources by standard category, the SCAG model also ensures that costs are estimated in the same “dollars” and inflation rates are consistently applied. The SCAG revenue model is capable of estimating revenues in any set of constant dollars or nominal dollars (year-of-expenditure). The default is 2012 constant dollars, although the 2016 RTP/SCS reports revenue estimates in nominal dollars, consistent with federal guidelines.

The SCAG model uses several economic assumptions to forecast future revenues. The most important assumptions are:

- Growth in retail sales for each county
- Changes in fuel consumption
- Increases in farebox revenues for major operators and transit agencies in general
- Changes in toll revenues
- Collection of mitigation fees
- Status of the HTF
- Changes in CMAQ funding due to air quality attainment
- Percentage of local streets and roads that are regionally significant
- Annual inflation for converting revenues to nominal dollars

The assumptions are based on the published historical data. Values are adjusted to ensure consistency with the county transportation commission forecasts and across the region. As an example, **TABLE 10** shows a subset of the model assumptions for retail sales growth and fuel consumption. The county transportation commissions provided retail sales forecasts, which are used in the regional model. For example, SANBAG expects retail sales to grow slower during the early years of the 2016 RTP/SCS planning period. This growth rate is expected to increase in the later years of the forecast. In the case of Imperial County, no retail sales forecasts are available, so sales are expected to grow consistent with historical trends.

TABLE 10 also shows the expected growth in fuel consumption. SCAG expects that fuel consumption will be impacted by a number of changes anticipated over the next several decades, including changes in vehicle miles traveled, changes in vehicle fuel efficiency (due to CAFE standards), and the adoption of alternative fuel vehicles. The SCAG revenue model assumes that these changes cause fuel consumption to drop by 0.9 percent annually for combined fuels and 1.6 percent annually for gasoline alone over the period of the 2016 RTP/SCS—a more conservative assumption than historical trends would suggest. These two examples illustrate how published data are used to supplement and validate the forecasts in the regional revenue model.

The regional model generates forecasts of annual revenues by source for each of the counties in the SCAG region through FY2039-40.

APPENDIX C: IMPLEMENTATION PLAN FOR REASONABLY AVAILABLE REVENUE SOURCES

The following adopted set of key guiding principles form the basis for the 2016 RTP/SCS financial strategies:

TABLE 10 Revenue Model Assumptions

| Assumption | Used in Model | Source/Other Information |
|----------------------------|---------------|---|
| Annual Growth Sales | | |
| Retail Sales: | | |
| Imperial County | 2.1% | Table 1 (State Sales and Use Tax by County) |
| Los Angeles County | 1.8% | Table 1; Percentage to match 2014 SRTP |
| Orange County | 2.1% | Table 1; Percentage to match 2014 LRTP |
| Riverside County | 3.9% | Table 1; Percentage to match 2014 Measure A Forecast |
| San Bernardino County | 1.8% | Table 1; Percentage to match 2014 Measure I 2010-2040 Ten-Year Delivery Plan |
| | 2.4% | Post 2023 Rate |
| Ventura County | 2.3% | Table 1 |
| Statewide | 1.8% | Table 1 |
| Fuel Consumption | | |
| Gasoline | -1.6% | Table 5A (Taxable Distribution of Diesel Fuel and Gasoline); Table 5B (2014 EMFAC SCAG Region Fuel Consumption) |
| Diesel | 1.4% | Table 5A; Table 5B |
| Combined Fuels | -0.9% | Table 5A; Table 5B |

- Establish a user-based system that better reflects the true cost of transportation, provides firewall protection for new and existing transportation funds, and ensures an equitable distribution of costs and benefits.
- Promote national and state programs that include return-to-source guarantees while maintaining flexibility to reward regions that continue to commit substantial local resources.
- Leverage locally available funding with innovative financing tools (e.g., tax credits and expansion of TIFIA) to attract private capital and to accelerate project delivery.
- Promote funding strategies that strengthen federal commitment to the nation's goods movement system, recognizing the pivotal role that our region plays in domestic and international trade.

Further, recognizing that many of the financial strategies identified require additional planning and legislative steps toward implementation, the following section highlights some requisite actions and key milestones for implementing new funding sources identified as a part of the financially constrained 2016 RTP/SCS.

VALUE CAPTURE STRATEGIES

Value capture strategies refer to capturing the incremental value generated by transportation investments. A number of techniques can be utilized to capture this enhanced value including the formation of special districts, such as benefit assessment districts. Benefit assessments are fees on properties used to pay for the cost of capital improvements. Charges are assessed on those properties that benefit from the capital improvements being financed. A benefit of certain special districts is that the boundaries can be drawn across local jurisdictional lines or within well-defined or targeted areas.

Special assessments are subject to Proposition 218, which establishes a common formation and ratification procedure that local jurisdictions would need to pursue as outlined below. To further pursue this strategy, SCAG would need to work with local/regional stakeholders to pursue the following course of actions.

1. Conduct feasibility analysis/engineering report with rates, proposed district boundaries, methodology and rationale for assessments
2. Polling/Public Awareness Surveys
3. Hold public hearing and receive approval from a majority of affected property owners casting ballot (by FY2020-21)

The formation of a Mello-Roos Community Facilities District presents another type of special district financing opportunity. A special district of this type allows a developer or

group of property owners to self-impose a special tax, collected on the property tax roll, to finance a variety of public improvements. Mello-Roos CFDs require two-thirds approval of those voting. There may be a landowner election or a registered voter election, depending on whether there are 12 or more registered voters within the proposed Mello-Roos district (§53326(b)).

Assessment districts and community facilities districts (CFDs) are long-standing and widely-used mechanisms in California to fund public infrastructure, including transportation investments. Each has unique benefits, voter threshold, and procedural requirements, but both place the funding burden on those who benefit. Assessments districts and CFDs can be used for local projects, such as a road improvement, or fund regional transportation projects, such as rail or highway extensions.

The districts are an area created by the property owners (or, in some instances, registered voters for a CFD) within its boundaries for the purposes of funding public improvements. The property owners agree to impose assessments on each parcel that are proportional to the benefit created by the public improvements. There are many assessment districts currently in existence in the SCAG region—most of which are relatively small and were created to fund local streets, water and sewer laterals, and street lighting. There are also much larger assessment districts, such as the Los Angeles County parks and open space district that imposes a countywide assessment. It is conceivable that an assessment district or CFD can be formed to fund a portion of major highway projects in the 2016 RTP/SCS. These projects produce a benefit for residents and business along the corridor as it reduces congestion on local streets and improves access to business.

The formation of an assessment district requires approval from a majority of the assessments, as opposed to the two-thirds requirement for any new tax, including CFDs, local general obligation bond tax (excluding schools), or transportation sales tax. CFDs result in the creation of a special tax that can be used to secure bonds or pay for approved capital and operating costs. The tax may increase over time and have a term that is longer than the bonds.

Often utilized by redevelopment agencies for community improvement projects, tax increment financing can be a critical financing tool to support transportation investment strategies as well. Tax increment establishes a base-year tax level for a project area. Taxes generated above this base-year amount through increases in property values are targeted for improvements/services within the project area. Outside of redevelopment areas, local jurisdictions can establish infrastructure financing districts to use property tax increment financing to pay for public works (Government Code §53395, et seq). With the recent passage of SB 628, enhanced infrastructure financing districts (EIFDs) have a less cumbersome formation process and SCAG and its local jurisdiction partners would need to adhere to the following requisite procedures by FY2020-21:

1. Establish a Public Financing Authority
2. Adopt a resolution of intention to establish district
3. Continue to develop Infrastructure financing plan (IFP)
4. Hold public hearing before adoption of IFP and formation of the EIFD
5. Formation of district elections
 - Tax increment bonds—EIFDs are able to divert property tax from any participating tax entity, with the exception of a school district, within the EIFD.
 - 55 percent vote needed for bond issuance

HIGHWAY TOLLS

With diminishing traditional state and federal funding, the 2016 RTP/SCS identifies toll road financing as a mechanism to support transportation investments. Within the time horizon of the 2016 RTP/SCS, a number of toll road facilities are expected to be implemented, including the East-West Freight Corridor and a regional network of express lanes.

For purposes of developing the 2016 RTP/SCS financial plan, projections of traffic and revenue generation potential were based on a review of toll feasibility studies and consideration of comparable facilities. Revenue potential from tolling facilities depends on several factors including length of lanes, configuration of the facilities, and tolling policies. SCAG continues to evaluate traffic and revenue projections for toll facilities/priced lanes identified in the 2016 RTP/SCS. Efforts to date have included allocation of resources to collect data to better understand the behavioral response of travelers. SCAG recently conducted stated-preference surveys as part of the Express Travel Choices study. The purpose of the stated-preference survey was to estimate toll sensitivity, or the value of time (VOT), in the region as well as travelers' elasticities in shifting mode, route, time of day, and destination. The survey also sought to estimate the levels of trip reduction that could result from various pricing strategies. Additionally, SCAG continues to evaluate the legal framework under which the region's proposed projects can move forward. Since the adoption of the 2012 RTP/SCS, tolling and express lane provisions have progressed considerably. Specific to LACMTA's existing state enabling authority for tolling, SB 1422 (Ridley-Thomas) was enacted on September 28, 2008, providing LACMTA with legal authority to implement the ExpressLanes projects' congestion pricing component by adding Section 149.9 to the California Streets and Highways Code. Two years later, on September 29, 2010, AB 1224 (Eng) was enacted, which extended LACMTA's tolling authority until January 2015. In 2014, SB 1298 (Hernandez) removed the tolling authority sunset date of January 2015. SB 1316 (Correa) enabled RCTC to impose tolls along State Route 91 Express Lanes. The Interstate 15 Express Lanes were authorized by AB 1954 (Jeffries). AB 914 (Brown) allowed express lanes along Interstate 10 and Interstate 15 in San Bernardino County.

In October 2009, the Governor signed AB 798 establishing the California Transportation Financing Authority (CTFA). The CTFA may grant tolling authority to Caltrans or to any regional transportation agency so long as certain conditions are met. AB 798 also lifts the requirement for the express lane projects authorized under AB 1467 (such as Interstate 10 and Interstate 110 ExpressLanes) to have separate legislative approval. AB 194 (Frazier) allowed the California Transportation Commission to authorize additional express lane projects. These changes will significantly increase the potential use of tolling as a financing and traffic management tool in California. The following general actions/steps highlight some key implementation procedures for tolling anticipated in the region:

1. Continue ongoing feasibility and/or environmental review process necessary for proposed toll facilities (e.g., East-West Freight Corridor)
2. Complete Express Travel Choices Phase II with regional stakeholders grant awarded under federal Value Pricing Pilot Program (VPPP) to develop regional concept of operations/implementation plan for regional express lane network
3. Continue traffic and revenue studies for specific facilities
4. Pursue toll authorization for specific facilities as may be applicable—includes federal tolling authority through VPPP for interstate highways as may be necessary and state authorization
5. Anticipated project implementation dates vary for facilities throughout the region—as early as 2017 for initial demonstration of specific facilities to 2040 for full deployment and operation across the region

PRIVATE EQUITY PARTICIPATION

SCAG continues to evaluate various business models appropriate for new facilities or start-up facilities. As stated under the highway tolls discussion, numerous legislative initiatives over the past several years, have established enabling authority for the region to consider private equity strategies as a part of the 2016 RTP/SCS. Additional work related to business plan development and feasibility analyses (traffic and revenue studies) are currently underway. As specific projects progress beyond environmental review, further work would entail continued refinement of project specific business plans and coordination with the California Transportation Commission as may be applicable.

STATE BOND PROCEEDS, FEDERAL GRANTS & OTHER FOR CALIFORNIA HIGH SPEED RAIL PROGRAM

Funding for the California High-Speed Rail project is documented in their Draft 2016 Business Plan. Identified funding includes state general obligation bonds authorized under the Bond Act approved by California voters as Proposition 1A in 2008; federal grants

authorized under the American Recovery and Reinvestment Act and the High Speed Intercity Passenger Rail Program; and state Cap-and-Trade Auction Proceeds. Private investment is also a key component of the business plan.

The High-Speed Rail project received \$250 million from the Cap-and-Trade Auction Proceeds as part of the FY2014-15 State Budget and 25 percent of future Cap-and-Trade Auction Proceed revenues with FY2015-16 funding estimated at \$600 million.

NATIONAL FREIGHT FEES/FREIGHT PROGRAM

Substantial investment is needed to provide the infrastructure to carry goods to and through Southern California safely, quickly and efficiently. Although strategies to identify funding sources have focused on user or beneficiary fees to support infrastructure investment and mitigation needs, analysis to date indicates the importance of implementing such a strategy at the national level. The following general actions/steps highlight some key implementation procedures:

1. Continue to work with goods movement stakeholders to evaluate potential

revenue strategies for specific projects.

2. Continue to work with regional, state and national partners such as the Coalition for America's Gateways and Trade Corridors to secure federal funding for our freight system.
3. Continue working with the Congressional Delegation to maintain support for the National Freight Program emphasizing high priority needs in the system such as the Southern California Goods Movement System.

STATE AND FEDERAL GASOLINE EXCISE TAX ADJUSTMENT

A critical component of the 2016 RTP/SCS financial plan includes an adjustment to the state and federal gasoline excise taxes to maintain historical purchasing power. The adjustment is equivalent to an additional 10 cents-per-gallon excise tax at both the state and federal levels beginning in 2020. Historical tax rate adjustments provide the basis for this assumption. The current state gasoline excise tax was last increased over a five-year window period from 1990 through 1994, when it was doubled from 9 to 18 cents-per-gallon as shown in **TABLE 11**. The current federal gasoline excise tax was last adjusted from 9 to 18.4 cents-per-gallon

TABLE 11 State Gasoline Excise Tax

| Effective Date | Tax Rate (cents-per-gallon) |
|-----------------|-----------------------------|
| October 1, 1923 | 2.0 |
| July 29, 1927 | 3.0 |
| July 1, 1947 | 4.5 |
| July 1, 1953 | 6.0 |
| October 1, 1963 | 7.0 |
| January 1, 1983 | 9.0 |
| August 1, 1990 | 14.0 |
| January 1, 1991 | 15.0 |
| January 1, 1992 | 16.0 |
| January 1, 1993 | 17.0 |
| January 1, 1994 | 18.0 |

Source: State Board of Equalization

TABLE 12 Federal Gasoline Excise Tax

| Effective Date | Tax Rate (cents-per-gallon) |
|-------------------|-----------------------------|
| June 21, 1932 | 1.0 |
| June 17, 1933 | 1.5 |
| January 1, 1934 | 1.0 |
| July 1, 1940 | 1.5 |
| November 1, 1951 | 2.0 |
| July 1, 1956 | 3.0 |
| October 1, 1959 | 4.0 |
| April 1, 1983 | 9.0 |
| January 1, 1987 | 9.1 |
| September 1, 1990 | 9.0 |
| December 1, 1990 | 14.1 |
| October 1, 1993 | 18.4 |
| January 1, 1996 | 18.3 |
| October 1, 1997 | 18.4 |

Source: Federal Highway Administration

over a five-year period as well (see [TABLE 12](#)). Historical extrapolation provides the basis for adjustments within the time horizon of the 2016 RTP/SCS. The rate is also consistent with proposals introduced in the State Legislature during the 2015-16 session.

Consistent with the recommendations provided by the two national commissions established by Congress, SCAG's policy committees have concluded that the best near- to mid-term options for both state and federal resources are increases to current fuel taxes through conventional mechanisms. Since 2008, Congress has authorized \$65.3 billion in transfers from the General Fund to the Federal Highway Trust Fund (HTF), in part to provide revenues that would have otherwise been achieved with a gas tax increase. Given the state of transportation funding today, it is critical to consider increases in fuel taxes to ensure the integrity of the system. Some key requisite actions over the next few years to realize this revenue strategy in the 2020 to 2024 timeframe are as follows:

1. The 2016 RTP/SCS fuel tax and/or transportation funding stabilization recommendations are already key components of SCAG's legislative program. Accordingly, continue to communicate recommendations and coordinate as appropriate with the State Legislature and Congressional Delegation.
2. Advance legislative proposals that would address stabilizing both the State Highway Account (SHA) and the HTF, as identified in the 2016 RTP/SCS.

MILEAGE-BASED USER FEE

The 2016 RTP/SCS financial plan strategies assume the transition from the current transportation funding model based on fuel taxes to a new mileage-based user fee system. Mileage-based user fees would be implemented to replace existing fuel taxes and applicable to all roads and types of vehicles. SCAG's analysis assumes an estimated \$0.04 (in 2015 dollars) per mile starting in 2025 and indexed at a rate of 2.4 percent through the 2016 RTP/SCS horizon year of FY2039-40. In recognizing the importance of establishing critical pathways to implementation, SCAG identifies the following requisite actions related to demonstrations and eventual full deployment of a mileage-based user fee system—to replace the current fuel tax mechanisms at both the state and federal levels.

1. Continue to collaborate with the California State Transportation Agency, the California Transportation Commission, business, and other key parties on the California Road Charge Pilot Program to address key implementation factors such as:
 - Technology and associated privacy issues
 - Cost of implementation and administrative methods for fee collection/revenue allocation
 - Equity concerns and exemptions/credits, as applicable

- Rate structures and associated impacts including evaluation of flat rates, differential pricing by type of vehicle including size and weight, time-of-day, and potentially emissions, including greenhouse gas emissions
 - Economic assessment
2. Apply lessons-learned from pilot program and other demonstration and evaluation efforts of mileage-based fees to inform the State Legislature and Congress about the unique characteristics of Southern California and help tailor state and federal programs to meet the needs of the SCAG region.
 3. Evaluate the impacts of the mileage-based user fee system on existing local transportation funding mechanisms, including toll facilities and sales tax measures—and consider how best to integrate the various transportation funding mechanisms.
 4. Consider how best to develop mileage-based user fee systems to address system preservation needs.
 5. Work with state, federal, and local partners to include provisions in upcoming reauthorization(s) to develop a national roadmap for transitioning to a mileage-based user fee system.
 6. Work with other MPOs and transportation stakeholders in California to develop a statewide initiative to stabilize and secure transportation funding.

APPENDIX D: FINANCIAL PLAN ASSESSMENT CHECKLIST

SCAG used the following checklist to ensure that revenues and expenditures in the financial plan were reasonable:

- Does the RTP contain a financial plan that summarizes current and future revenue sources?
- Is the financial plan and supporting information presented and explained in a format that can be clearly understood?
- Is the financial plan made available to the public as part of the public involvement process?
- Has the financial information in the financial plan been coordinated with all of the affected agencies (MPOs, state DOT, transit operators, local jurisdictions)?
- Are the assumptions and data sources for each revenue source (federal, state, local, other) clearly documented in the financial plan?
- Are the approaches for forecasting future revenues documented and defined?

- Are all revenue figures over consistent timeframes and fiscal years?
- Are consistent dollar values used and defined?
- Are the assumptions used for inflation of costs to future nominal dollars clearly documented and applied consistently?
- Does the RTP clearly indicate which revenue sources currently exist and which are new?
- Are the assumptions about the availability of current revenue sources clearly identified by revenue source?
- Are new revenue sources clearly identified?
- For new revenue sources, are the strategies to achieve these clearly documented? Are the responsible parties for these strategies identified?
- If new revenue sources are not implemented, are the strategies or risk mitigation approaches for how to meet funding shortfalls identified?
- If innovative financing tools and techniques are used as revenue sources, are these clearly identified and documented in the RTP?
- Are the current and future federal funds included in the financial plan based on known or reasonably expected authorization levels?
- Are anticipated discretionary funds consistent with recent levels of discretionary funds actually allocated to the pertinent agencies/jurisdictions?
- If the RTP includes “illustrative” or “vision elements,” are the revenue sources for these clearly separate from the fiscally constrained portion of the plan?



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APPENDIX

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