2024 Regional Transportation Plan Guidelines

for Regional Transportation Planning Agencies

CALIFORNIA TRANSPORTATION COMMISSION

2024
Regional Transportation Plan Guidelines for Regional Transportation Planning Agencies

Adopted by the California Transportation Commission
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Pursuant to California Government Code Section 14522

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Chapter 1

Introduction

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Chapter 1 Introduction

1.0 Applicability of the Regional Transportation Plan Guidelines

Every Regional Transportation Planning Agency (RTPA) that has the appropriate planning and programming role for their particular county is required by law to conduct long-range transportation planning to ensure the region's vision and goals are clearly identified. The long-range plan, known as the Regional Transportation Plan (RTP), is an important policy document that is based on the unique needs and characteristics of a region. The RTP impacts a region's economy, environment, public health, safety, and social equity future, along with communicating a regional vision to the State and federal government. The RTP supports the State's goals as enumerated in California Government Code (GC) Section 65041.1.

The California Transportation Commission (Commission or CTC) is authorized to develop the following guidelines by GC Section 14522, which reads:

> *In cooperation with the regional transportation planning agencies (RTPA), the commission may prescribe study areas for analysis and evaluation by such agencies and guidelines for the preparation of the RTPs.*

The 26 rural RTPAs that are responsible for the development of an RTP, in alphabetical order, are:

Alpine County Transportation Commission (CTC), Amador CTC, Calaveras Council of Governments (COG), Colusa CTC, Del Norte Local Transportation Commission (LTC), El Dorado CTC, Glenn CTC, Humboldt County Association of Governments, Inyo LTC, Lake County/City Area Planning Council, Lassen CTC, Mariposa LTC, Mendocino COG, Modoc CTC, Mono LTC, Transportation Agency for Monterey County, Nevada CTC, Placer County Transportation Planning Agency, Plumas CTC, Council of San Benito County Governments, Santa Cruz County Regional Transportation Commission, Sierra LTC, Siskiyou CTC, Tehama CTC, Trinity CTC, and Tuolumne CTC.

While the guidelines include both state and federal requirements, RTPAs have the flexibility to be creative in selecting transportation planning options that best fit their regional needs. The guidelines recognize that "one size does not fit all." Solutions and techniques used by a larger RTPA will be different than those used by a smaller RTPA.

The 2024 RTP Guidelines continue to use the words "Shall" and "Should", a convention established by the previous RTP Guidelines. Where the RTP Guidelines reflect a state or federal statutory or regulatory requirement, the word "Shall" is used with a statutory or regulatory citation. The word "Should" is used where the Guidelines reflect a permissive or optional statutory reference such as "May" or "Should." Each section ends with federal and state requirements (Shalls) and federal and state recommendations (Shoulds). Planning practice examples are intended to highlight exemplary; state of the

art planning practices that RTPAs can seek to emulate as financial and technical resources allow.

Pursuant to 23 CFR 450.202, the CTC requires RTPAs to address federal planning regulations during the preparation of their RTPs. The federal planning regulations address metropolitan planning organizations (MPOs) and statewide/nonmetropolitan transportation planning for the State of California and the 26 rural RTPA areas of the State. The State of California addresses some of the federal statewide planning regulations through the California Transportation Plan (CTP) (prepared by the California Department of Transportation or "Caltrans") and the Federal State Transportation Improvement Program (FSTIP). In cases where the statewide/nonmetropolitan federal regulations do not have the same requirements as the MPO regulations, the CFR for MPOs is cited and is clearly identified as a recommendation or "should" for RTPAs.

As RTPA RTPs are updated every four or five years (including Regional Housing Needs Allocation - RHNA cycle adjustments), there is a continuous cycle of RTPs in the development and adoption stages. As RTP development is a continuous process, consideration is given to RTPAs that will be too far along in the planning process to conform their RTPs to the 2024 RTP Guidelines. All RTP updates started after the 2024 RTP Guidelines are adopted by the CTC must use the new RTP Guidelines.

1.1 Why Conduct Long-Range Transportation Planning?

The RTP or Long-Range Transportation Plan is the mechanism used by RTPAs to conduct long-range (minimum of 20 years) transportation planning, integrated with local jurisdictions' land use planning, in their regions to achieve local and regional goals, in consideration of State and federal goals. As a result of State legislation, as well as Executive Orders (EOs), Greenhouse Gas (GHG) emission reduction, transportation electrification, climate resilience, improving transportation mobility, equity, addressing federal air quality criteria pollutants, and ensuring that the statewide regional transportation system addresses tribal, local, regional, statewide mobility, accessibility, and economic needs are key priorities in the statewide and regional transportation planning process.

The long-range transportation planning process in rural regional areas is uniquely suited to address a number of federal, State, regional, and local goals, from supporting economic growth to achieving environmental goals, promoting public health, quality of life, and social equity. Not only does the transportation system provide for the mobility of people and goods, but it also influences patterns of growth and economic activity through accessibility to housing, jobs, critical services, and other destinations. Furthermore, the performance of this system affects public policy concerns like exposure to air pollution, greenhouse gas (GHG) emissions, natural resources, environmental protection and conservation, social equity, public health, smart growth, housing affordability, jobs/housing balance, economic development, safety, and security. Transportation planning recognizes and accounts for the critical links between transportation and societal goals. The planning process is more than merely a listing of

multimodal capital investments; it requires developing strategies for operating, managing, maintaining, funding, and financing the region's transportation system in a way that advances the area's long-term goals and vision.

In 2008, transportation planning and land use planning became further linked following the passage of Senate Bill 375 (SB 375, Chapter 728, Statutes of 2008). Even though RTPAs were not a primary focus of SB 375, RTPAs can and do contribute to the reduction of GHG. In 2013, the connection between higher density development and GHG was strengthened further yet with the passage of SB 743 (Chapter 386, Statutes of 2013) that required an update in the California Environmental Quality Act (CEQA) transportation metrics to align with climate and planning goals.

Equally important to consider in long-range transportation planning is how transportation can affect human health in many ways, for example: safety – reduction of collisions; air quality – reduction of hazardous air pollutants from vehicle emissions; physical activity – increasing biking and walking; access to goods, services, and opportunities – increasing livability in communities; and noise – designing road improvements to decrease sound exposure. A timely opportunity to address public health outcomes is early during the RTP development process. RTPAs can consider health priorities in selection of projects for the RTP. RTPAs also can play a significant role in engaging residents and stakeholders in the regional transportation planning process to ensure the improvement of health outcomes for all segments of the population.

As interest in the link between transportation and health has grown, much cross-sector coordination and collaboration between transportation professionals and health practitioners has occurred at all levels of government, with input from public health and equity advocates, as well as active transportation stakeholders. The optimal result of this process is to improve transportation decisions and thereby improve access to healthy and active lifestyles. Public health is further discussed in **Section 2.3**.

Lastly, long-range transportation planning provides the opportunity to compare alternative scenarios and improvement strategies, track implementation and plan performance over time, and identify funding priorities. In addition to federal performance-based planning, the State of California has articulated numerous state goals for the transportation system, the environment, the economy, and social equity through statute, regulation, and EO. Regional Transportation Plans are developed to reflect regional and local priorities and goals, but they are also instruments that can be used by federal and state agencies to demonstrate how regional agency efforts contribute to those federal and state agencies meeting their own transportation system goals. Inclusion of goal setting in RTPs allows the federal and state governments to both understand regional goals, and track progress toward federal and state goals.

Performance-based planning is the application of performance management within the planning process to help the federal government, states and regional agencies achieve desired outcomes for the multimodal transportation system. The benefits of well-designed and appropriately used performance measures are transparency about the benefits of the RTP, not only for transportation system performance, but also for other regionally important priorities such as improved public health, housing affordability,

farmland conservation, habitat preservation, and cost-effective infrastructure investment. As the performance-based approach is implemented at the federal and State levels, performance measures will continue to develop over the years to come. Transportation performance management and the performance-based approach are further discussed in **Chapter 7**.

1.2 Regional Transportation Plans and the California Transportation Plan

The California Transportation Plan (CTP) is a core document that addresses the applicable federal statewide and non-metropolitan transportation planning regulations and helps tie together several internal and external plans and programs to help define and plan transportation in California. Unlike an RTP, it is not project specific or subject to both federal air quality conformity regulations and the California Environmental Quality Act (CEQA, but it does explore how RTP/SCS implementation will influence the statewide multimodal transportation system, as well as how the state will redouble efforts to achieve maximum feasible GHG emission reductions in order to mitigate impacts of climate change. While the CTP is prepared by Caltrans, it is developed in collaboration with various stakeholders through an ongoing public engagement process. Furthermore, the CTP is a fiscally unconstrained aspirational policy document that integrates and builds upon six Caltrans modal plans (Interregional Plan, Freight Plan, Rail Plan, Aviation Plan, Transit Plan, and Bicycle and Pedestrian Plan) as well as the fiscally constrained RTPs prepared by the RTPAs. RTPAs address transportation from a regional perspective, while the CTP, building on regional plans, addresses the connectivity and/or travel between regions and applies a statewide perspective for the transportation system. Therefore, integration of CTP and RTP goals (where applicable and consistent with federal and State fiscal constraint requirements) may provide greater mobility choices for travelers not only within their regions but across the state. The CTP and the RTP can be developed in a cyclical pattern aligning one with another using comprehensive, cooperative, and continuous planning. This should result in delivering better projects and using resources more efficiently. The following diagrams illustrate the relationship between the CTP and RTP.

1.3 Background and Purpose of the RTP Guidelines

The purposes of these RTP Guidelines are to:

1. Promote an integrated, statewide, multimodal, regional transportation planning process and effective transportation investments
2. Set forth a uniform transportation planning framework throughout California by identifying federal and State requirements and statutes impacting the development of RTPs
3. Promote a continuous, comprehensive, and cooperative transportation planning process that facilitates the rapid and efficient development and implementation

of projects that maintain California's commitment to public health and environmental quality; and,

4. Promote a planning process that considers the views of all stakeholders

The purpose of RTPs is to encourage and promote the safe and efficient management, operation, and development of a regional intermodal transportation system that, when linked with appropriate land use planning, will serve the mobility needs of goods and people. The RTP Guidelines are intended to provide guidance so that RTPAs will develop their RTPs to be consistent with federal and state transportation planning requirements. This is important because state statutes require that RTPs serve as the foundation of the Federal State Transportation Improvement Program (FSTIP). The FSTIP is prepared by Caltrans in coordination with MPOs/RTPAs and identify the next four years of transportation projects to be funded for construction. The CTC cannot program projects that are not identified in the RTP.

Since the mid-1970s, with the passage of AB 69, (Chapter 1253, Statutes of 1972) California state law has required the preparation of RTPs to address transportation issues and assist local and state decision-makers in shaping California's transportation infrastructure. The RTP Guidelines are to be developed pursuant to California Government Code Sections 14522 and 65080 which state:

"14522. In cooperation with the regional transportation planning agencies, the commission may prescribe study areas for analysis and evaluation by such agencies and guidelines for the preparation of the regional transportation plans."

"65080 (d) Except as otherwise provided in this subdivision, each transportation planning agency shall adopt and submit, every four years, an updated regional transportation plan to the California Transportation Commission and the Department of Transportation. A transportation planning agency located in a federally designated air quality attainment area or that does not contain an urbanized area may at its option adopt and submit a regional transportation plan every five years. When applicable, the plan shall be consistent with federal planning and programming requirements and shall conform to the regional transportation plan guidelines adopted by the California Transportation Commission. Prior to adoption of the regional transportation plan, a public hearing shall be held after the giving of notice of the hearing by publication in the affected county or counties pursuant to Section 6061."

The California RTP Guidelines were first adopted by the CTC in 1978 and subsequently revised in 1982, 1987, 1991, 1992, 1994, 1999, 2007, 2010 and 2017.

The 1999 revision of the Guidelines was prepared to achieve conformance with State and federal transportation planning legislation and was based on the Federal Transportation Equity Act for the 21st Century and California SB 45 (Chapter 622 Statutes 1997). A 2003 Supplement was also prepared that was based on a 2003 RTP Evaluation Report completed for the CTC. The federal surface transportation reauthorization bill called the SAFETEA-LU was signed into law in 2005. The 2007 revision of the RTP Guidelines was prepared in order to address changes in the planning process resulting from SAFETEA-LU.

Subsequent to the passage of AB 32 (California Global Warming Solutions Act of 2006), an addendum to the 2007 RTP Guidelines was adopted by the CTC in May 2008 to address a request from the California Legislature to ensure climate change issues were incorporated in the RTP process. That addendum was adopted by the CTC prior to the September 2008 passage of SB 375.

Since the last RTP Guidelines document was adopted by the CTC in 2017, new federal programs impacting the development of RTPs were finalized. The final rulemaking for federal Performance Measures 2 and 3 was released, establishing new requirements for performance management to promote the efficient investment of federal transportation funds, and a federal surface transportation re-authorization bill, the Bipartisan Infrastructure Law (BIL), has been signed into law. It includes the largest federal investment in public transportation to date and a re-authorization of the core federal surface transportation program, which sets federal funding levels and policy direction from fiscal years 2022 through 2026.

1.4 RTPAs in California

In cooperation with the Governor, 26 state statutorily created RTPAs prepare RTPs in California. Pursuant to 23 CFR 450.202, the CTC requires RTPAs to address federal planning regulations during the preparation of their RTPs. California statutes and the RTP Guidelines identify the RTP requirements for RTPAs.

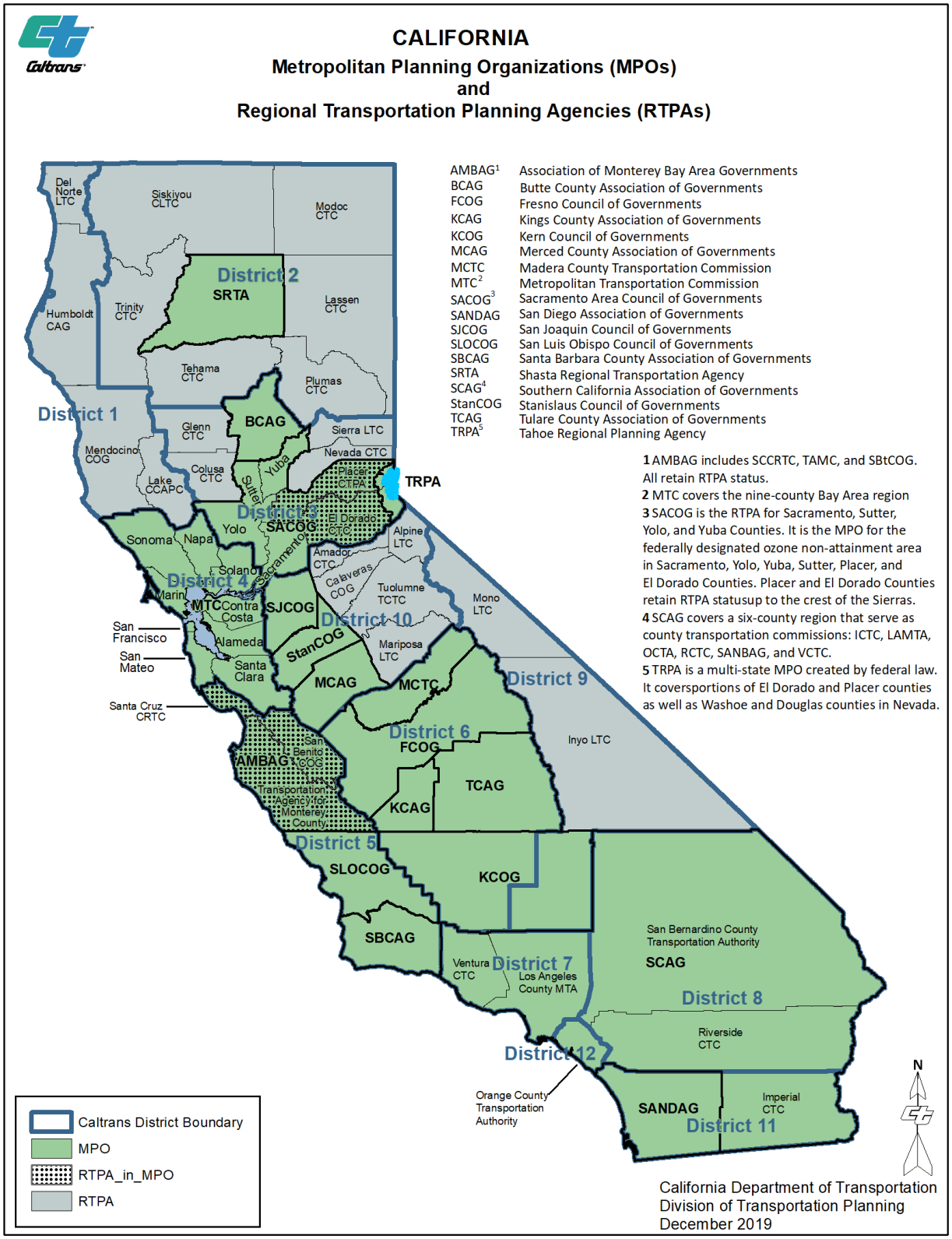
The majority of state designated RTPAs (specifically those responsible for preparing RTPs) are described under California Government Code Section 29532 et seq. One of the core functions of an RTPA is to develop an RTP through the planning process.

An RTPA has five core functions:

1. Maintain a setting for regional decision-making;
2. Prepare an Overall Work Program (OWP);
3. Involve the public in this decision-making;
4. Prepare an RTP; and,
5. Develop a Regional Transportation Improvement Program (RTIP) and a list of federally funded or regionally significant projects for inclusion in the FSTIP.

Each of the 26 designated RTPAs receive annual state planning funds called rural planning assistance (RPA) to carry out their respective regional transportation planning requirements.

The map below identifies the 18 federally designated MPOs (in green) and the 26 state designated RTPAs that prepare RTPs (in grey or dot pattern).


CALIFORNIA
Metropolitan Planning Organizations (MPOs)
and
Regional Transportation Planning Agencies (RTPAs)
AMBAG[1] Association of Monterey Bay Area Governments
BCAG Butte County Association of Governments
FCOG Fresno Council of Governments
KCAG Kings County Association of Governments
KCOG Kern Council of Governments
MCAG Merced County Association of Governments
MCTC Madera County Transportation Commission
MTC[2] Metropolitan Transportation Commission
SACOG[3] Sacramento Area Council of Governments
SANDAG San Diego Association of Governments
SJCOG San Joaquin Council of Governments
SLOCOG San Luis Obispo Council of Governments
SBCAG Santa Barbara County Association of Governments
SRTA Shasta Regional Transportation Agency
SCAG[4] Southern California Association of Governments
StanCOG Stanislaus Council of Governments
TCAG Tulare County Association of Governments
TRPA[5] Tahoe Regional Planning Agency
1 AMBAG includes SCCRTC, TAMC, and SBtCOG. All retain RTPA status.
2 MTC covers the nine-county Bay Area region
3 SACOG is the RTPA for Sacramento, Sutter, Yolo, and Yuba Counties. It is the MPO for the federally designated ozone non-attainment area in Sacramento, Yolo, Yuba, Sutter, Placer, and El Dorado Counties. Placer and El Dorado Counties retain RTPA statusup to the crest of the Sierras.
4 SCAG covers a six-county region that serve as county transportation commissions: ICTC, LAMTA, OCTA, RCTC, SANBAG, and VCTC.
5 TRPA is a multi-state MPO created by federal law. It coversportions of El Dorado and Placer counties as well as Washoe and Douglas counties in Nevada.
Caltrans District Boundary
MPO
RTPA_in_MPO
RTPA
N
California Department of Transportation
Division of Transportation Planning
December 2019

1.5 Purpose of the RTP

RTPs are planning documents developed by RTPAs in cooperation with Caltrans and other stakeholders, including system users. The purpose of the RTP is to establish regional goals, identify present and future needs, deficiencies, and constraints, analyze potential solutions, estimate available funding, and propose investments.

California statute refers to these documents as "Regional Transportation Plans" or RTPs. In California planning circles, these long-range planning documents normally use the term "RTP".

Pursuant to Title 23 CFR Part 450.324 et seq. FHWA describes the development and contents of RTPs as follows:

> *"The transportation plan is the Statement of the ways the region plans to invest in the transportation system. The plan shall "include both long-range and short-range program strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods." The plan has several elements, for example: Identify policies, strategies, and projects for the future; Determine project demand for transportation services over 20 years; Focus at the systems level, including roadways, transit, non-motorized transportation, and intermodal connections; Articulate regional land use, development, housing, and employment goals and plans; Estimate costs and identify reasonably available financial sources for operation, maintenance, and capital investments); Determine ways to preserve existing roads and facilities and make efficient use of the existing system; Be consistent with the Statewide transportation plan; Be updated every five years or four years in air quality nonattainment and maintenance areas; and, should make special efforts to engage interested parties in the development of the plan."*

The regional transportation planning led by RTPAs is a collaborative process, involving a wide range of stakeholders and partners including: the public, community-based organizations, business community, advocacy organizations, Tribal Governments, and federal, state, regional and local governments. The process is designed to foster involvement by all interested parties, such as the business community, California Tribal Governments, community groups, environmental organizations, the general public, and local jurisdictions through a proactive public participation process conducted by the RTPA in coordination with the state and transit operators. It is essential to extend public participation to include people who have been traditionally underserved by the transportation system and services in the region. Neglecting stakeholder/public involvement early in the planning stage can result in delays during the project stage.

The RTPs are developed to provide a clear vision of the regional transportation goals, objectives, and strategies. This vision must be realistic and within fiscal constraints. In addition to providing a vision, the RTPs have many specific functions, including:

1. Providing an assessment of the current modes of transportation and the potential of new travel options within the region
2. Projecting/estimating the future needs for travel and goods movement
3. Identification and documentation of specific actions necessary to address regional mobility and accessibility needs
4. Identification of guidance and documentation of public policy decisions by local, regional, state, and federal officials regarding transportation expenditures and financing and future growth patterns
5. Identification of needed transportation improvements, in sufficient detail, to serve as a foundation for the: (a) Development of the FTIP, and the State Transportation Improvement Program (STIP), (b) Facilitation of the National Environmental Policy Act (NEPA)/404 integration process and (c) Identification of project purpose and need
6. Employing performance measures that demonstrates the effectiveness of the system of transportation improvement projects in meeting the intended goals
7. Promotion of consistency between the CTP, the RTP and other plans developed by cities, counties, districts, California Tribal Governments, and state and federal agencies in responding to statewide and interregional transportation issues and needs
8. Providing a forum for: (1) participation and cooperation and (2) facilitation of partnerships that reconcile transportation issues which transcend regional boundaries; and,
9. Involving community-based organizations, the public, federal, State, and local agencies, California Tribal Governments, as well as local elected officials, early in the transportation planning process to include them in discussions and decisions on the social, economic, air quality and environmental issues related to transportation.

1.6 California Transportation Planning and Programming Process

The State of California and federal transportation agencies allocate millions of dollars of planning funds annually to help support California's transportation planning process. The RTP establishes the basis for programming local, state, and federal funds for transportation projects within a region. Federal regulations and State statute relating to transportation planning and programming legislation has been in place for approximately 50 years and are periodically revised to provide guidance in the use of these funds to plan, maintain and improve the transportation system.

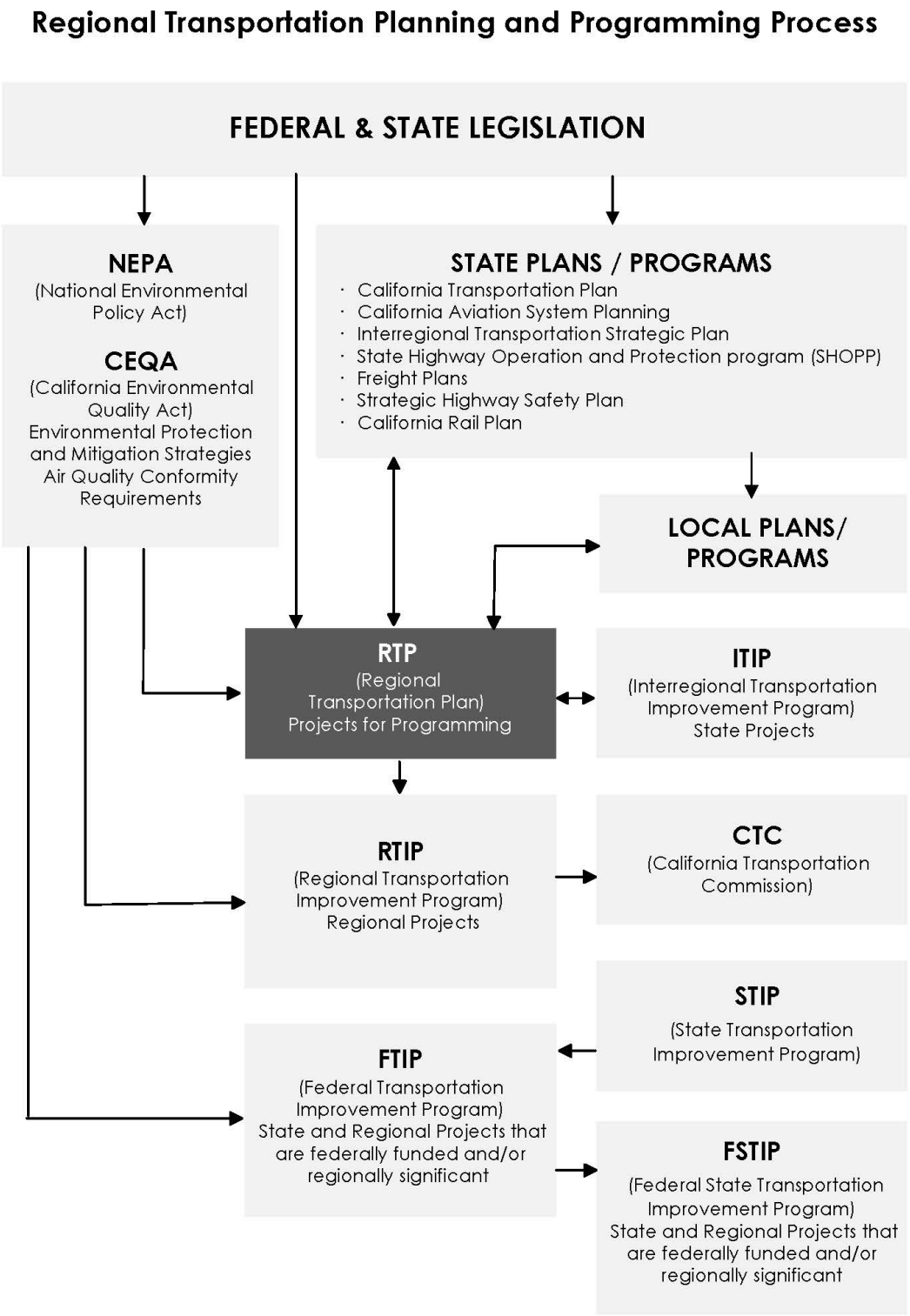
The RTP Guidelines include recommendations and suggestions for providing documentation that is needed to meet the project eligibility requirements of the Federal State Transportation Improvement Program (FSTIP, which includes the STIP). The FSTIP is defined as a constrained four-year prioritized list of regionally significant transportation

projects that are proposed for *federal, state, and local* funding. The FSTIP is developed by Caltrans in coordination with MPOs/RTPAs and approved by the FHWA/FTA and is updated every four years. It is consistent with the RTP, and it is required as a prerequisite for federal programming of funding.

The planning and programming process is the result of state and federal legislation to ensure that:

1. The process is as open and transparent as possible
2. Environmental considerations are addressed
3. Funds are allocated in an equitable manner to address transportation needs

The chart below attempts to provide a simple diagram of a complex process. Each entity in the chart reflects extensive staff support and legislative direction. The result is the planning and programming process that reflects the legislative and funding support of the California transportation system. Additional information regarding the programming process is available in **Sections 2.5** and **6.15**.


Regional Transportation Planning and Programming Process
FEDERAL & STATE LEGISLATION
NEPA
(National Environmental Policy Act)
CEQA
(California Environmental Quality Act)
Environmental Protection and Mitigation Strategies
Air Quality Conformity Requirements
STATE PLANS / PROGRAMS
· California Transportation Plan
· California Aviation System Planning
· Interregional Transportation Strategic Plan
· State Highway Operation and Protection program (SHOPP)
· Freight Plans
· Strategic Highway Safety Plan
· California Rail Plan
LOCAL PLANS/ PROGRAMS
RTP
(Regional Transportation Plan)
Projects for Programming
ITIP
(Interregional Transportation Improvement Program)
State Projects
RTIP
(Regional Transportation Improvement Program)
Regional Projects
CTC
(California Transportation Commission)
STIP
(State Transportation Improvement Program)
FTIP
(Federal Transportation Improvement Program)
State and Regional Projects that are federally funded and/or regionally significant
FSTIP
(Federal State Transportation Improvement Program)
State and Regional Projects that are federally funded and/or regionally significant

1.7 Key Additions and Recommendations to the 2024 RTP Guidelines

Key Additions to the 2024 RTP Guidelines for RTPAs include the following items:

1. Alignment with performance measurements and asset management
2. Goals and policies for the State's Climate Action Plan for Transportation Investments (CAPTI)
3. Planning Practice Examples in Appendix F.

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Chapter 2

RTP Process

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Chapter 2 RTP Process

As addressed in **Chapter 1**, RTPs are the primary planning document prepared by each RTPA and must address a wide range of issues not just limited to future transportation improvements. In addition to addressing important issues within the region, RTPAs must adhere to federal planning regulations and California statutes relating to the development of these long-range plans. Below is a summary of the state statutory requirements and federal regulations directing the preparation of RTPs.

2.1 State Requirements

California statute relating to the development of the RTP is primarily contained in Government Code Section 65080. State planning requirements apply to state designated RTPAs.

Just like federal legislation, Government Code Section 65080 requires that all RTPAs prepare RTPs to update their RTPs every four or five years (including RHNA adjustments).

When applicable, RTPs shall be consistent with federal planning and programming requirements and shall conform to the RTP Guidelines adopted by the CTC pursuant to Government Code Section 65080(d). In addition, the CTC cannot program projects in the State Transportation Improvement Program (STIP) that are not identified in an RTP.

Section 65080 states RTPs shall include the following:

1. **Policy Element:** that describes the transportation issues in the region, identifies and quantifies regional needs, and describes the desired short-range and long-range transportation goals, and pragmatic objective and policy statements. The objective and policy statements shall be consistent with the funding estimates of the financial element.
2. **Action Element:** that describes the programs and actions necessary to implement the plan and assigns implementation responsibilities. The action element may describe all transportation projects proposed for development during the 20-year or greater life of the plan. The action element shall consider congestion management programming activities carried out within the region.
3. **Financial Element:** that summarizes the cost of plan implementation constrained by a realistic projection of available revenues. The financial element shall also contain recommendations for allocation of funds. A county transportation commission created pursuant to the County Transportation Commissions Act (Division 12 (commencing with Section 130000) of the Public Utilities Code) shall be responsible for recommending projects to be funded with regional improvement funds, if the project is consistent with the regional transportation plan. The first five years of the financial element shall be based on the five-year estimate of funds developed pursuant to Section 14524. The financial element may recommend the development of specified new sources of revenue, consistent with the policy element and action element.

The following California Government Code (GC)Sections apply to the development of RTPs:

GC Section 65080.6 – RTPA whose jurisdiction includes a portion of the California Coastal Trail, or property designated for the trail shall coordinate with the State Coastal Conservancy, the California Coastal Commission and Caltrans regarding the development of the trail. The trail must be identified in the RTP.

GC Section 65080.3 – An RTPA with a population exceeding 200,000 persons may prepare at least one "alternative planning scenario" during the development of the RTP. **The purpose is to present an alternative scenario that attempts** to reduce growth in traffic congestion, make more efficient use of existing transportation infrastructure, and reduce the need for costly future public infrastructure.

GC Section 65080.5 – Prior to adoption of the RTP, a public hearing shall be held after publishing notice of the hearing. After the RTP is adopted by the RTPA, the plan shall be submitted to the CTC and Caltrans. One copy should be sent to the CTC. Two copies should be submitted to the appropriate Caltrans district office. The Caltrans district office will send one copy to the headquarters Division of Transportation Planning.

Note that although not specified in statue, hard copies are not required to be submitted and many MPOs do not print hard copies of the final RTP. Electronic copies of the adopted RTP can be submitted to CTC and Caltrans following adoption.

GC Section 65081.1 - Regions that contain a primary air carrier airport (defined by the Federal Aviation Administration as an airport having at least 10,000 annual scheduled passenger boardings) shall work collaboratively to include an airport ground access improvement program within the RTP. This program shall address airport access improvement projects, including major arterial and highway widening and extension projects, with special consideration given to mass transit.

Requirements (Shall)
State: GC Sections 65080, 65080.1, 65080.5, 65081.1

2.2 Background on State Climate Change Legislation and EOs

This section provides background for State climate change legislation and related executive orders. First, a description is provided for AB 32, SB 32, and SB 375 which have direct implications for MPOs only in the development of RTPs. Next, other state legislation that impacts State agencies is outlined to provide important context for RTPAs to consider in development of RTPs. Lastly, executive orders on climate change are discussed to provide a critical framework for RTPAs. While the executive orders are directed at State agencies, RTPAs are encouraged to integrate policies and strategies that support these state policies in the development of RTPs.

SB 32 – California Global Warming Solutions Act of 2006: Emissions Limit

In recognition that GHG emissions reduction is critical for the protection of all areas of the state, but especially for the state's most disadvantaged communities, as those communities are most affected by the adverse impacts of climate change, SB 32 (Chapter 249, Statutes of 2016) was signed into law on September 8, 2016. SB 32 extends the AB 32 required reductions of GHG emissions by requiring a GHG emissions reduction of at least 40 percent of 1990 levels no later than December 31, 2030. Furthermore, SB 32 authorizes CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. CARB shall carry out the process to achieve GHG emissions reductions in a manner that benefits the state's most disadvantaged communities and is transparent and accountable to the public and Legislature.

AB 1279 - The California Climate Crisis Act of 2021

This law establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires the California Air Resources Board (CARB) to ensure that the Scoping Plan updates, identifies, and recommends measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO2 removal solutions and carbon capture, utilization, and storage technologies.

Requirements (Shall)
State: GC Section 65080

The following State legislation is directed at State agencies. MPOs are encouraged to consider and incorporate, where applicable and appropriate, the policies and strategies that support requirements placed on the State.

SB 246 – Climate Change Adaptation

SB 246 (Chapter 606, Statutes of 2015) establishes the Integrated Climate Adaptation and Resiliency Program through the Office of Planning and Research (OPR) to coordinate regional and local adaptation efforts with state climate adaptation strategies.

SB 350 - Clean Energy and Pollution Reduction Act of 2015

SB 350 (Chapter 547, Statutes of 2015) describes the importance of widespread transportation electrification for meeting climate goals and federal air quality standards. SB 350 focuses on "widespread" transportation electrification. The term "widespread" is important because adhering to existing patterns of investment in wealthier communities relative to low- or moderate-income communities would result in underinvestment in low-income communities and overinvestment in wealthier communities. SB 350 notes that "widespread transportation electrification requires

increased access for disadvantaged communities, low- and moderate-income communities, and other consumers of zero-emission and near-zero-emission vehicles."

Pursuant to PUC 740.12(a)(2), it is the policy of the state and the intent of the legislature to encourage transportation electrification as a means to achieve ambient air quality standards and the state's climate goals. Agencies designing and implementing regulation, guidelines, plans, and funding programs to reduce GHG emissions shall take the findings described in paragraph (1) of PUC Section 740.12 into account. RTPAs may incorporate the directives from SB 350 in their planning processes.

EOs on Climate Change Issues

Combating climate change through reducing greenhouse gas emissions is a key goal for the state of California. In July 2021, the California State Transportation Agency (CalSTA) unveiled the Climate Action Plan for Transportation Infrastructure (CAPTI), which details recommendations for investing discretionary transportation dollars to combat climate change. CAPTI builds on Executive Order (EO) N-19-19 and N-79-20 issued in 2019 and 2020, respectively.

EOs on climate change provide a critical framework for RTPAs. While EOs are directed at State agencies, integration of climate change policies in the RTP supports the State's effort to reduce per capita GHG emissions and combat the effects of climate change.

Two EOs were issued since the last guidelines update that address climate change: N-19-19 (September 20, 2019) calls for leveraging the State's investment portfolio to advance climate leadership and create a climate investment framework. CAPTI was developed in response to this EO (Appendix to be added). N-79-20 (September 23, 2020) calls for 100 percent of in-state sales of passenger cars and trucks to be zero-emission by 2035. N-79-20 also establishes the goal of medium and heavy-duty vehicles in the State to be zero-emission by 2045.

These EOs are available at:

N-19-19: https://www.gov.ca.gov/wp-content/uploads/2019/09/9.20.19-Climate-EO-N-19-19.pdf
N-79-20: https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf

2.3 Promoting Public Health and Health Equity

Health-promoting policies are central to transportation planning and are found throughout RTPs. The goal for RTPs is to provide a policy framework promoting the highest level of health for all people, where no person shall, on the ground of race, color, or national origin, be denied benefits or subjected to discrimination (see **Section 4.2** for Title VI and EJ considerations). RTPs often incorporate many or all of the following: air quality and climate change measures, safe routes to school programs; complete streets strategies; equity considerations; transportation safety; strategies to reconnect communities and reduce traffic congestion, and policies to promote transit, biking and walking. These kinds of transportation-related policies and programs foster more accessible, more livable, and healthier communities. Local health departments,

public health practitioners and advocates, school districts, emergency service, community-based organizations (CBOs), and residents can be valuable partners in promoting public health in RTP development. These partnerships can help maximize the RTP's public health and equity benefits and ensure that the RTP is responsive to the needs of all communities.

Federal, state, regional, and local transportation agencies have long focused on improving both air quality and safety, which are fundamental to public health. More recently, the understanding of the relationship of transportation and health has expanded to include a much broader range of community needs. One fundamental example is the way in which transportation can encourage physical activity, such as walking and biking, often referred to as active transportation. There is a demonstrated relationship between increased physical activity and a wide range of health benefits. If a higher level of investment is made on active transportation, the walk and bike mode shares could be increased, which could help a community to lower its rates of obesity, hypertension, and other chronic diseases.

Transportation provides access to important destinations: jobs, education, healthy food, recreation, worship, community activities, healthcare, and more. Improved access to key destinations is especially critical for disadvantaged and underserved communities. The design of the transportation system in combination with land use and housing decision plays a significant role in promoting public health. Coordinated planning of transportation and land use can promote public health through the development of livable, walkable, accessible communities. As nations, states, and regions shift away from fossil fuel-dependent transportation modes, the benefits of reducing the effects of climate change will also help to reduce the public health risks from climate change effects such as extreme heat, storms, and drought. Transportation and public health providers, in collaboration with communities, can help one another to address all these factors, learning from each other and joining their skills to improve transportation for better health outcomes for everyone.

Transportation planning is closely connected to community health, safety, and neighborhood cohesion. Health-focused transportation plans can help reduce the rate of injuries and fatalities from collisions. Some research suggests that there is a multiplier effect: when streets are designed to safely accommodate walking and biking, more people do so, and as more people walk and bike the rate of collisions decline as pedestrians and bicyclists become more visible to motorists.[1] In addition, more people out walking and biking in a neighborhood has an important public safety benefit, as it means there are more "eyes on the street" to deter criminal activity. Taking this a step further, studies have shown that people who live in neighborhoods with less traffic and higher rates of walking, biking, and transit use know more of their neighbors, visit their neighbor's homes more often, and are less fearful of their neighbors.[2] When streets are

[1] At the Intersection of Active Transportation and Equity." Safe Routes to School National Partnership. 2015. < https://www.saferoutespartnership.org/sites/default/files/resource_files/at-the-intersection-of-active-transportation-and-equity.pdf>.
[2] At the Intersection of Active Transportation and Equity." Safe Routes to School National Partnership. 2015. < https://www.saferoutespartnership.org/sites/default/files/resource_files/at-the-intersection-of-active-transportation-and-equity.pdf>.

inhospitable to pedestrians and bicyclists, residents do not feel safe walking or biking to nearby transit and their ability to access regional educational and employment opportunities is hampered. In short, improving traffic safety results in better public health beyond simply reduced injuries and fatalities.

Additional examples of how transportation planning can promote health include:

- Transportation planning can help residents reach jobs, education, social services, and medical care by walking, biking, or public transportation in a timely manner.
- Reducing commute times and increasing public transportation reliability can reduce stress and improve mental health.
- Affordable transportation options enable low-income households to invest in savings, education, and healthier food options—all factors that contribute to greater individual and community health.

2.4 Federal Requirements

Federal requirements for the development of RTPs in non-MPO areas are directed at States and RTPAS as specified in 23 CFR 450.202. The primary federal requirements regarding RTPs are addressed in the Statewide/nonmetropolitan transportation planning and metropolitan transportation planning rules – Title 23 CFR Part 450 and 771 and Title 49 CFR Part 613.

It is important to note that failure to consider any factor specified in Title 23 CFR 450.306 (b) or (d), shall not be reviewable by any court under Title 23 U.S.C., Title 49 U.S.C. Chapter 53, Subchapter II of Title 5 U.S.C. Chapter 5, or Title 5 U.S.C. Chapter 7 in any matter affecting an RTP, TIP, a project or strategy, or the certification of a metropolitan transportation planning process.

Federal Clean Air Act conformity requirements pursuant to the Amendments of 1990, apply in all nonattainment and maintenance areas. Section 176(c) of the Clean Air Act (CAA), as amended (Title 42 U.S.C. 7506(c), and the related requirements of Title 23 U.S.C. 109(j), "transportation conformity" requirement ensures that federal funding and approval are given to transportation plans, programs and projects that are consistent with the air quality goals established by a SIP. In California, as designated under federal and state law, CARB calculates the Motor Vehicle Emission Budget (MVEB) based on emissions inventory and control measures in the SIP.

Title VI of the Civil Rights Act of 1964 (Title VI), and related statutes, ensure that all people, regardless of their race, color, national origin (including limited English proficiency), sexual orientation or income level, have equal access to the transportation planning process. It is important that MPOs comply with this federal civil rights requirement during the RTP development process.

The Americans with Disabilities Act of 1990, Sec. 12132. ensures that no qualified individual with a disability shall, by reason of such disability, be excluded from

participation in or be denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.

The Rehabilitation Act, Section 504 states that "no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under" any program or activity that either receives Federal financial assistance or is conducted by any Executive agency.

Additional information regarding equal access to the transportation planning process is available in **Sections 4.2, 4.3**, and **4.4**.

Requirements (Shall)
Federal: Title 23 CFR Part 450 and 771; 49 CFR Part 613; Title 40 CFR Part 93; and Title VI of the Civil Rights Act of 1964; 23 U.S.C. 134 §11201(d)(3); 23 U.S.C. 134(h)(1)(E)

2.5 Relationship between the RTP and Other Planning & Programming Documents

The key planning documents produced by the MPOs, RTPAs, County Transportation Commissions (CTCs), and Caltrans are:

1. RTP – Looks out over a 20 plus-year period providing a vision for future demand and transportation investment within the region.

2. OWP – The Overall Work Program lists the specific transportation planning studies and tasks to be performed by the MPO, RTPA or member agency during that fiscal year. The OWP should align with the goals and priorities outlined in the RTP and should include the activities needed to implement the RTP and TIP development requirements, including the performance-based planning and programming requirements. The OWP is also referred to as a Unified Planning Work Program (UPWP) in federal regulations.

Federal Program - MPOs Only:

3. Federal Transportation Improvement Program – The FTIP is a financially constrained four-year program listing all federally funded and regionally significant projects in the region.

State Program – RTPAs, County Transportation Commissions (CTCs) and Caltrans:

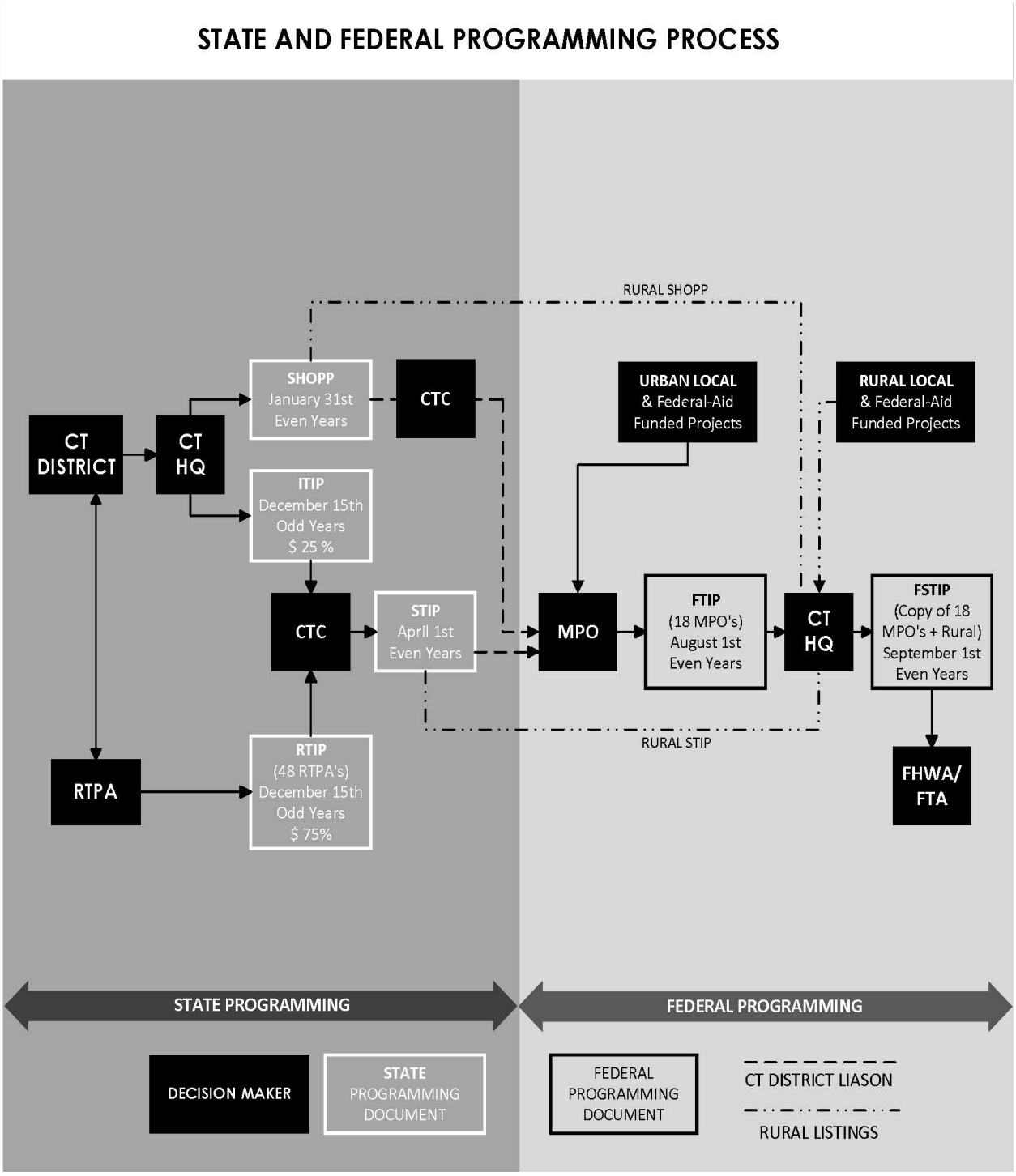
4. State Transportation Improvement Program – The STIP is a biennial program adopted by the CTC. Each STIP covers a five-year period and includes projects proposed by regional agencies in their RTIPs and by Caltrans in its interregional transportation improvement program (ITIP).
    a. RTIP – The RTIP is a five-year program of projects prepared by the RTPAs and County Transportation Commissions. Each RTIP should be based on the RTP and a region wide assessment of transportation needs and deficiencies.

b. Interregional Transportation Improvement Program – The ITIP is a five-year list of projects that is prepared by Caltrans, in consultation with MPOs and RTPAs. Projects included in the interregional program shall be consistent with the Interregional Transportation Strategic Plan and relevant adopted RTP(s).

State and Federal Program – MPOs, RTPAs, and Caltrans:

5. Federal Statewide Transportation Improvement Program (FSTIP) - The FSTIP is a four-year state and federally mandated document that includes a statewide multimodal program of transportation projects funded from *federal, state, and local* funding sources. The FSTIP includes federally funded and regionally significant projects; locally funded, projects that are not regionally significant projects are not required to be included. The FSTIP is updated every two-years and is developed by Caltrans in coordination with MPOs and RTPAs and jointly approved by the FHWA and FTA. It is consistent with the RTP, and it is required as a prerequisite for federal programming of funding.

The following flowchart entitled: "State and Federal Programming Process" helps illustrate the relationship between the RTP process and State and Federal Programming Documents.


STATE AND FEDERAL PROGRAMMING PROCESS
RURAL SHOPP
SHOPP
January 31st
Even Years
CTC
URBAN LOCAL
& Federal-Aid
Funded Projects
RURAL LOCAL
& Federal-Aid
Funded Projects
CT
DISTRICT
CT
HQ
ITIP
December 15th
Odd Years
$ 25 %
CTC
STIP
April 1st
Even Years
MPO
FTIP
(18 MPO's)
August 1st
Even Years
CT
HQ
FSTIP
(Copy of 18
MPO's + Rural)
September 1st
Even Years
RURAL STIP
RTPA
RTIP
(48 RTPA's)
December 15th
Odd Years
$ 75%
FHWA/
FTA
STATE PROGRAMMING
FEDERAL PROGRAMMING
DECISION MAKER
STATE
PROGRAMMING
DOCUMENT
FEDERAL
PROGRAMMING
DOCUMENT
CT DISTRICT LIASON
RURAL LISTINGS

Key Planning and Programming Documents Produced by MPOs/RTPAs & County Transportation Commissions (CTCs)/Caltrans

	Time/Horizon	***Contents***	***Update Requirements***
RTP	*20+ Years*	*Future Goals, Strategies & Projects*	*Nonattainment MPOs – Every 4 Years* *Attainment MPOs – Optional Every 5 Years* *RTPAs – Optional Every 5 Years* *(State law allows option to change from 5 to 4 years)*
OWP	*1 Year*	*Planning Studies and Tasks*	*Annually*
FTIP ***(MPOs Only)***	*4 Years*	*Transportation Projects*	*At least every 4 Years*
RTIP ***(RTPAs/CTCs)***	*5 Years*	*Transportation Projects*	*Every 2 Years*
ITIP ***(Caltrans)***	*5 Years*	*Transportation Projects*	*Every 2 Years*
FSTIP	*4 years*	*Transportation Projects*	*Every 2 Years*

Requirements (Shall)
Federal: Title 23 CFR Part 450.326(a) requires MPOs to prepare a TIP
State: California GC Sections 65082, 14526, 14527 and 14529 require the preparation of the STIP, RTIPs and ITIP.

2.6 Consistency with Other Planning Documents

It is very important that the RTP be consistent with other plans prepared by local, state, federal agencies, and Native American Tribal Governments. Consistency can be described as a balance and reconciliation between different policies, programs, and plans. RTPAs depend upon the collaborative process described in **Chapter 4** for the numerous plans below to be incorporated or consulted with. RTPAs also rely on the aforementioned interested parties to contribute to RTP development, according to their plans and areas of expertise. While preparing an updated RTP, RTPAs should, as appropriate, incorporate or consult such local/regionally prepared documents as:

1. General Plans (especially the Circulation, Land Use, Safety, Environmental Justice, and Housing Elements)
2. Airport Land Use Compatibility Plans
3. Air quality SIPs
4. Short- and Long-Range Transit Plans

5. Habitat Conservation Plans/Natural Community Conservation Plan including an integrated regional mitigation strategy (if applicable)
6. Urban Water Management Plans
7. Local Coastal Programs (if applicable)
8. Public Agency Trail Plans (if applicable)
9. Local Public Health Plans
10. Regional Bicycle and Pedestrian Plans
11. Americans with Disabilities Act Transition Plans
12. Master Plans, Specific Plans
13. Impact Fee Nexus Plans
14. Local Capital Improvement Programs
15. Mitigation Monitoring Programs
16. Countywide Long-Range Transportation Plans (if applicable)
17. Tribal Transportation Plans
18. Climate Action, Adaptation, and Resilience Plans
19. Emergency Evacuation Plans
20. AB 617 Community Emission Reduction Programs (if applicable)
21. Local Hazard Mitigation Plans (especially pertaining to evacuation planning)

RTPAs also should consult State/Federal prepared transportation planning documents such as:

1. California Transportation Plan (CTP)
2. California Rail Plan
3. Interregional Transportation Strategic Plan
4. Comprehensive Multimodal Corridor Plans
5. District System Management Plans
6. California Aviation System Plan
7. Sustainable Freight Action Plan
8. California Freight Mobility Plan
9. Strategic Highway Safety Plan
10. California Strategic Highway Safety Plan
11. Corridor System Management Plans
12. Federal Lands Management Plans
13. Complete Streets Action Plan
14. Toward an Active California - State Bicycle and Pedestrian Plan
15. Climate Action Plan for Transportation Infrastructure

RTPAs should also consult State prepared environmental and climate change adaptation planning documents such as:

1. Draft Environmental Goals and Policy Report
2. State Wildlife Action Plan
3. Vulnerability Assessments and Adaptation Priorities Reports, including future updates
4. California Adaptation Planning Guide and Climate Resilience Plan Alignment Toolkit

5. California Coastal Commission Sea Level Rise Policy Guidance and Critical Infrastructure Guidance, where applicable
6. Ocean Protection Council Sea Level Rise Guidance, where applicable
7. Safeguarding California Plan
8. Safeguarding California: Implementation Action Plans
9. SB 743 Implementation Resources
10. 2022 Scoping Plan Update

Federal regulations require consultation with resource agencies during the development of the RTP. This consultation should include the development of regional mitigation and identification of key documents prepared by those resource agencies that may impact future transportation plans or projects (See **Chapter 5** RTP Environmental Considerations). RTPA staff should make a concerted effort to ensure any actions in the RTP do not conflict with conservation strategies and goals of the resource agencies. Chapter 4 provides the federal requirements for resource agency consultation.

2.7 Coordination with Other Planning Processes

RTPs are prepared within the context of many other planning processes conducted by federal, tribal, state, regional and local agencies. This section provides background information, along with planning practice examples in **Appendix F**, for how RTPAs can integrate the planning processes associated with the Smart Mobility Framework, Complete Streets, Context Sensitive Solutions, Planning and Environmental Linkages, and system planning documents specifically the Interregional Transportation Strategic Plan (ITSP), and other transportation plans into development of the RTP. These initiatives and implementation tools work toward achieving the CTP goals. They also align with the principles of the federal Partnership for Sustainable Communities. As the RTP is bound to fiscal constraints, the strategies, actions, and improvements described in this section are intended to provide guidance and should be considered to the maximum extent feasible in the development of the RTP.

Smart Mobility Framework

Smart Mobility is the movement of people and freight while enhancing California's economic, environmental, and human resources by emphasizing convenient and safe multimodal travel, speed suitability, accessibility, management of the circulation network, and efficient use of land. In 2010, Caltrans introduced smart mobility as an overall approach to respond to the State's interrelated challenges of mobility and sustainability.

The Caltrans Smart Mobility Framework (SMF) Guide 2020 is a starting point for those working to implement multimodal and sustainable transportation strategies in California. SMF Guide 2020 is an update to the Smart Mobility 2010: A Call to Action for the New Decade. SMF Guide 2020 describes strategies, and analysis methods for implementing smart mobility, organized around five themes/chapters: network management, multimodal choices, speed suitability, accessibility and connectivity, and equity.

The SMF Guide is well aligned with Caltrans' mission of providing a safe and reliable transportation network that serves all people and respects the environment. To encourage mode shift and to provide a safer and more equitable transportation network, the SMF Guide includes several strategies on multi-modal transportation network, safety, and equity.

The guide also describes the application of place types to identify transportation planning and project development priorities across California. Case study examples are used to illustrate the application of smart mobility strategies in real-world plans and projects.

Complete Streets

"Complete Streets" refers to a transportation network that is planned, designed, constructed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit and rail riders, commercial vehicles, and motorists appropriate to the function and context of the facility.

The California Complete Streets Act of 2008 (AB 1358, Chapter 657) ensures that the general plans of California cities and counties meet the needs of all users, including pedestrians, transit, bicyclists, older adults, motorists, movers of commercial goods, and people with disabilities. California GC 65040.2 requires cities and counties to identify how the jurisdiction will provide accommodation of all users of roadways during the revision of the circulation element of their general plan. The Governor's Office of Planning and Research amended guidelines for the development of the circulation element to accommodate all users. A comprehensive update of the General Plan Guidelines in 2017 includes guidance on how cities and counties can modify the circulation element to plan for a balanced, integrated, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.

The benefits of Complete Streets can include: Safety; Health; GHG Emission Reduction; and Economic Development and Cost Savings.

Multimodal transportation networks, using complete streets planning practice examples, can lead to safer travel for all roadway users. Designing streets and travel routes that consider safe travel for all modes can reduce the occurrence and severity of vehicular collisions with pedestrians and bicyclists. Streets and other transportation facility design considerations that accommodate a variety of modes and users' abilities can contribute to a safer environment that makes all modes of travel more appealing.

Planning for Complete Streets will enable local governments to provide healthier lives by encouraging physical activity. Public health studies have demonstrated that people are more likely to walk in their neighborhood if it has sidewalks. Also, studies have found that people with safe walking environments within a 10-minute walking radius are more likely to meet recommended physical activity levels. The integration of sidewalks, bike lanes, transit and rail amenities, and safe crossings into initial design

of projects is more cost-effective than making costly retrofits later. Complete Streets is also a key strategy in the reduction of GHG emissions and VMT. Providing community residents with an option that gets them out of their cars is a proven strategy for improving communities, reducing air pollution, and generating local business. Similarly, Complete Streets consider Safe Routes to School, a public health strategy connecting communities to schools, includes but is not limited to child safety, reducing traffic congestion, sidewalks, crosswalks, and bicycle lanes.

Creating integrated, multimodal transportation networks can improve economic conditions for both business owners and residents. A network of Complete Streets can be safer and more appealing to residents and visitors, which can benefit retail and commercial development. Multimodal transportation networks can improve conditions for existing businesses by helping revitalize an area attracting new economic activity. Equally important to sustain economic vitality are commercial vehicles and their operational needs. Vibrant urban environments cannot function without commercial vehicles delivering goods that sustain the economic activities that take place.

Integrating the needs of all users can also be cost-effective by reducing public and private costs. Accommodating all modes reduces the need for larger infrastructure projects, such as additional vehicle parking and road widening, which can be more costly than Complete Streets retrofits.

While AB 1358 provides no statutory requirement for RTPAs, integration of Complete Streets policies support local agencies' requirements to address Complete Streets in circulation elements of their general plan.

RTPAs should also integrate Complete Streets policies into their RTPs, to identify the financial resources necessary to accommodate such policies and should consider accelerating programming for projects that retrofit existing roads to provide safe and convenient travel by all users.

RTPAs should encourage all jurisdictions and agencies within the region to ensure that their circulation elements and street and road standards, including planning, design, construction, operations, and maintenance procedures address the needs of all users. Streets, roads and highways should also be safe for convenient travel in a manner that is suitable within the context of Complete Streets. To the maximum extent feasible, RTPA funded transportation system projects, corresponding Complete Street facilities, and improvements should meet the needs in project areas to maximize connectivity, convenience and safety for all users.

Along the shoreline of coastal counties, one element of the Complete Streets program should be the California Coastal Trail (CCT). For additional information regarding the CCT see **Section 6.11**.

Recommendations (Should)

Federal: 23 CFR Part 490. Safety for users, encourages each State and M PO to adopt standards for the design of Federal surface transportation projects that provide for the safe and adequate accommodation (as determined by the State) of all users of the

surface transportation network, including motorized and non-motorized users, in all phases of project planning development and operation.

Investing in development of Complete Streets Policy Guides that assist member agencies in the adoption of Complete Streets policy for their jurisdictions. A policy guide can function as a template. It can provide flexibility and be revised to accommodate individual agency's needs.

Recommendations (Should)
State: According to GC 65040.2 Section (2)(h)(h), it is the intent of the Legislature to require in the development of the circulation element of a local government's general plan that the circulation of users of streets, roads, and highways be accommodated in a manner suitable for the respective setting in rural, suburban, and urban contexts, and that users of streets, roads, and highways include bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors.

Context Sensitive Solutions

Context Sensitive Solutions is the process of engaging stakeholders in addressing transportation goals with the community, economic, social, and environmental context. It is an inclusive approach used during planning, designing, constructing, maintaining, and operating the transportation system. It integrates and balances community and stakeholder values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary process involving all stakeholders and requires careful, imaginative, and early planning, and continuous stakeholder involvement.

Goals, issues, and values of California Tribal Governments and tribal communities, if applicable, should also be defined identified and addressed through outreach, collaboration, and consultation. This would assist with identification and protection of cultural resources, historic sites, and environmental justice issues as well as, transportation needs and strategies. The evolution of economic development for some California Tribes has created increased demand for improved transportation infrastructure (i.e., roads, traffic control, access, etc.) and increased need for collaboration and consensus building with these stakeholders to address these new demands.

In towns and cities across California, the State highway may also function as a community street. These communities may desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods. Addressing all these needs throughout the planning and development process will help ensure that transportation solutions meet more than transportation objectives.

More information is available at the following links:
https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability

https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/f0004152-ch1-introduction-a11y.pdf

Planning and Environmental Linkages

Federal statute and regulations outline an optional process for incorporating transportation planning documents or other source material directly or by reference into subsequent environmental documents that are prepared in compliance with NEPA. Appendix A to 23 CFR §450 provides additional information to explain the linkage between the transportation planning and project development/NEPA processes; it supports congressional intent that statewide and metropolitan transportation planning should be the foundation for highway and transit project decisions. The results or decisions of transportation planning studies may be used as part of the overall project development process consistent with NEPA and associated implementing regulations. Federal law specifically states that this does not subject transportation plans and programs to NEPA.

Publicly available documents or other source material produced by, or in support of the transportation planning process, may be incorporated directly or by reference into subsequent NEPA documents in accordance with federal regulations. If an RTPA and its project delivery partner(s) decide to take advantage of this opportunity to streamline and simplify the overall project delivery process, they should coordinate regarding the conditions that must be met during regional transportation planning. Most of the conditions, though perhaps not all, are routinely met during preparation of the RTP.

Additional information to further explain the linkages between the transportation and project development/NEPA processes is provided in **Section 5.3**.

NCHRP Report 541, Consideration of Environmental Factors in Transportation Systems Planning, is an additional resource, at:
http://environment.transportation.org/pdf/RT_1_RM_7.pdf.

The FHWA's Environmental Review Toolkit, Program Overview for Planning and Environmental Linkages, also provides information, available at:
https://www.environment.fhwa.dot.gov/integ/index.asp

Recommendations (Should)
Federal: Title 23 U.S.C. 168 Integration of planning and environmental review; Title 23 U.S.C. 139(f)(4)E(ii) Efficient environmental reviews statue; 40 CFR 1500.4(l) and 1501.12 Incorporation by reference; 23 CFR 450.318 Transportation planning studies and project development; Title 23 U.S.C. 169 Development of programmatic mitigation plans; 23 CFR 450.320 Development of programmatic mitigation plans; Appendix A of 23 CFR Part 450 – Linking the Transportation Planning and NEPA Processes

System Planning Documents

Interregional Transportation Strategic Plan (ITSP)

The ITSP is a Caltrans planning document that provides guidance for the identification and prioritization of interregional transportation projects identified on the State's Interregional Transportation System. The ITSP provides an overview of the interregional transportation system, including identification of the major Strategic Interregional Corridors and Priority Interregional Facilities, which are the corridors and transportation facilities that have the greatest impact on interregional travel. Concepts have been created for each Strategic Interregional Corridor that will be used by public agencies to plan and program transportation improvements.

Corridor Plans

Corridor plans are short, medium, and long-range planning documents that provide a vision for a transportation corridor. As outlined in Caltrans' Corridor Planning Process Guide, objectives of comprehensive multimodal corridor planning may include the following:

- Encourage effective communication with partners, stakeholders, Tribal Governments, advocacy groups, and the public by providing a transparent planning process with clear corridor objectives.
- Identify the corridors by considering origin and destination, along with land-use and place-types, to address multimodal transportation opportunities through a comprehensive, cooperative, and continuing planning process.
- Task a multi-disciplinary, multi-organizational corridor team to look at State and local transportation systems, while including community, local, and regional transportation systems.
- Identify opportunities to employ cooperative, multimodal, and systematic improvements by leveraging federal, state, and local funding programs such as self-help county sales tax programs.
- Underscore the importance of corridors identified in the Interregional Transportation Strategic Plan (ITSP) and other statewide plans.
- Support Caltrans' asset management program and emphasize the importance of utilizing maintenance and operational improvements to strengthen the mobility and accessibility options of the community.
- Identify and prioritize projects and strategies to meet future corridor opportunities.
- Analyze multimodal transportation issues and opportunities for optimizing system operations and support a safe and reliable system.
- Further federal and State ambient air standards and GHG emissions reduction standards pursuant to the California Global Warming Solutions Act of 2006 (Division 25.5, commencing with Section 38550, of the Health and Safety Code) and SB 375 (Chapter 728, Statutes of 2008).
- Preserve the character of local communities, create opportunities for neighborhood enhancement, and improve multimodal accessibility including complete streets.
- Consider climate change adaptation and resiliency of the transportation system to reduce disruptions.

- Identify opportunities that achieve a balanced set of transportation, environmental, and community access improvements.

Corridor planning culminates in a clear vision for identified improvements, while recognizing both the positive and negative impacts of changes over time. Corridor Planning within California should address quality of life, access to destinations, environmental factors including GHG, and transportation system performance. The impacts of the benefits and the burdens on different groups and communities should also be considered in the system analysis and improvement discussions.

2.8 Adoption - Update Cycles and Amendments

Regional transportation planning is a dynamic process requiring continuous monitoring and periodic updating. Updating an RTP ensures the planning process is valid and consistent with current and forecasted transportation and land use conditions and trends for at least a 20-year planning horizon.

RTPAs may amend their respective RTP at any time using the procedures in this section without a requirement to extend the horizon year. The transportation plan (and any revisions or amendments) shall be approved by the RTPA's Board and submitted for informational purposes to the CTC and Caltrans. Copies of any revised or amended transportation plans must be provided to the FHWA and the FTA, as appropriate.

California state law, (Government Code Section 65080(d)) mirrors the federal update requirement. An RTPA that is not within an MPO, that is required to adopt a RTP not less than every five years, may elect to adopt the plan not less than every four years in order that their member cities and counties can revise their housing elements every 8 years pursuant to Government Code Sections 65080 (b)(2)(M) and 65588(b).

Non-MPO RTPAs are required by State statute to update their RTPs at least every five years, regardless of whether they are located in an air quality nonattainment or maintenance area. However, some non-MPO RTPAs may elect to synchronize their update schedule with the MPO to align with housing elements. Failure of an RTPA to adhere to the required update period could result in a lack of state and federal funding as projects that are programmed for state or federal funding in the STIP and Federal STIP must be included in the approved RTP.

RTPs can be amended or modified. The U.S. DOT identified two types of revision methods for an RTP (1) A major revision that is an "amendment" and, (2) A minor revision that is an "administrative modification." The definitions in Title 23 CFR Part 450.104 clarify major and minor amendments to RTPs. It is recommended that RTPAs coordinate with Caltrans district regional planners on reviewing, commenting and at times facilitating the determination of what constitutes an RTP Amendment or Administrative modification.

RTP Amendment

RTPs must be amended whenever a plan revision takes place such as the addition or deletion of a project or a major change in project scope, cost and schedule. Other potential triggers for an RTP Amendment could include changing programmed project phases or any major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes). Amendments require public review for possible comments, and demonstration of fiscal constraint.

RTP Administrative Modification

Federal regulations define Administrative Modification as a minor revision to an RTP that includes minor changes to project/project phase costs, minor changes to funding sources of previously included projects, and other minor changes to projects/project phase initiation dates.

An RTP administrative modification is much more flexible and open to wide interpretation. An administrative modification is a revision that does not require public review and comment, re-demonstration of fiscal constraint, or a conformity determination (in nonattainment and maintenance areas).

Re-Adopting Existing RTPs

Re-adopting the existing RTP is an option if no significant factors have occurred within the region that would impact the existing RTP. However, this option would require close evaluation of the current status of the RTPs fiscal constraint, conformity determination including latest planning assumptions; and any changes to the project scope, cost and schedule of the RTPs. Re-adopting an RTP could mean that no new projects are presented in the document, nor will there be new projects in the current update cycle of the RTP.

Conformity Considerations

Isolated rural non-attainment and maintenance areas are not required to prepare a conformity determination on their RTP and must only conduct conformity analysis on non-exempt or regionally significant projects. For more information, see **Section 5.6** Air Quality & Transportation Conformity.

Requirements (Shall)
State: GC Section 65080(d), mandatory RTP update cycles for RTPAs

2.9 RTP Checklist

The RTP Checklist is contained in **Appendix A** of this document. The purpose of the RTP Checklist is to establish a minimum standard for developing the RTP and for the RTPA to

identify where the various federal and state requirements were addressed. The checklist of transportation planning requirements has been updated in order to conform to federal and state RTP requirements.

RTPAs should include the page numbers indicating where the Checklist items are addressed in the region's RTP. This requirement of identifying page numbers will assist the general public, federal, state, and local agencies to locate the information contained in the RTP.

The checklist should be completed by the RTPA and submitted to the CTC and Caltrans along with the draft and final RTP. This checklist is available electronically from Caltrans planning staff. Each RTPA is encouraged to complete the checklist electronically. Following its completion, the RTPA Executive Director (or designated representative) must sign the checklist to indicate that the information is complete and correct.

This checklist is available electronically from Caltrans at: https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/regional-and-community-planning.

Requirements (Shall)
Federal: None
State: Pursuant to California GC Section 14032(a), which authorizes the CTC to request an evaluation of all RTPs statewide to be conducted by Caltrans. RTPAs are required to submit an RTP Checklist with their **Draft** and **Final** RTP when the document is submitted to Caltrans and the CTC.

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Chapter 3

RTP Analysis and Modeling

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Chapter 3 RTP Analysis and Modeling

3.0 Introduction

While not required under federal or state law a number of RTPAs have developed travel demand models (models) to assist with their RTP analysis. The purpose of the guidance is to provide clear and relevant direction to those agencies and provide state, regional, and local agencies with consistent and transparent modeling methodology direction.

The majority of California's RTPAs are located outside of the boundaries of the federally designated MPOs. The RTPAs located within a federally designated MPO boundary may utilize the MPO's travel demand model to support their RTP analysis.

The California Transportation Commission (CTC) recognizes that RTPAs are not required to develop Sustainable Community Strategies as part of their RTP. Further, the California Department of Transportation is responsible (not the RTPAs) for performing project-level air quality conformity analysis on regionally significant federally funded projects in isolated rural nonattainment or maintenance areas. RTPAs are encouraged to follow the Travel Demand Model guidelines (Gov. Code 14522.2(b)). This chapter reflects only RTPA planning practice examples, not federal/state statutory/regulatory requirements and recommendations and planning practice examples related to MPOs.

The 2024 RTP guidelines builds upon the 2017 guidelines, reflects changes in federal and state law, and encourages the best practices in transportation modeling. Achieving California's transportation, air quality, and climate objectives are in large part depend on effective modeling practices and consistency and coordination of modeling among state, regional and local agencies. This chapter reflects current modeling information.

Organization of this Chapter

- **Sections 3.0 to 3.4** - Provides the background and context of regional transportation planning analysis as well as general descriptions of terminology, technical and policies tool, and planning practice examples.
- **Section 3.5** – Lists federal and state statutory or regulatory requirements and recommendations.

Federal/State Requirements, Recommendations, and Planning Practice Examples Terminology

This chapter follows the convention for "Shalls," "Shoulds," and "Planning Practice Examples" as defined in **Section 1.0**.

"Shalls": reflect a federal or state statutory or regulatory requirement and are used with a statutory or regulatory citation.

"Shoulds": reflect a federal or state permissive, optional, or recommended statutory reference such as "may" or "should" and are used with a statutory or regulatory citation.

"Planning Practice Examples": reflect federal/state guidelines, the state of the practices, and good modeling practices. They are not federal or state statutory or regulatory requirements or recommendations. Where Chapter 3 reflects "planning practice examples," the words "encouraged to," "consider," and "can" are used.

3.1 Modeling in the RTP Development Process / Transportation and Land Use Models

Transportation planners and engineers utilize analytical tools to assist in the policy formation and decision-making process during the regional transportation planning process.

Policy Tools:

- Improve the decision-making process by assisting the public and decision-makers in evaluating and identifying strategies that best address the transportation needs of their jurisdiction.
- Used to present market strategies to the public/interested parties. Some models such as Geographical Information Systems (GIS) have excellent geospatial and animation displays that can show "what if" scenarios.

Technical Tools:

- Provide a clear explanation of the modeling and analytical techniques applied in assessing the implications of the land use scenarios and transportation scenarios or other alternatives studied as applicable.
- Demonstrate how various policy assumptions impact the forecast results. For example, they provide estimates of the elasticities and cross-elasticities of demand for various modes of travel with respect to critical variables such as accessibility, travel time, reliability, safety, and cost.
- Assist with the evaluation and prioritization of planning and operational alternatives.
- Assist in the operation and management of existing roadway capacity. Some models provide optimization capabilities, recommending the best design or control strategies to maximize the performance of a transportation facility.

3.2 Requirements for RTP Analysis

State law requires transportation agencies identified under California Government Code sections 29532 or 29532.1 to develop RTPs (Gov. Code, § 65080).

Travel Demand Model

While not required by law, RTPA transportation planners and engineers can utilize a travel demand models to evaluate RTP strategies. A Travel Demand Model utilizes a series of mathematical equations that forecast travel behavior and transportation services demand within a region. The inputs include but are not limited to population, employment, land use, and the transportation network. The outputs of a model are used to assist decision-makers in developing policies and strategies, to inform the public, and for the National Environmental Protection Act (NEPA) and the California Environmental Quality Act (CEQA) analysis.

California Statewide Freight Forecasting Travel Demand Model (CSF2TDM)

Interregional travel is the sum of the following:

1. Trips beginning outside a given RTPA's boundary and ending within it (X-I trip)
2. Trips beginning inside a given RTPA's boundary and ending outside it (I-X trip)
3. Trips beginning outside a given RTPA's boundary, traveling across some portion of the region and ending outside the boundary (X-X trip)

Regional transportation planning agencies may use this data if they do not have access to a Travel Demand Model.
For more information see,
http://www.dot.ca.gov/hq/tpp/offices/omsp/statewide_modeling/cstdm.html

Visualization Techniques and Sketch Modeling of Scenarios

RTPAs may utilize visualization techniques such as GIS-based information, maps charts, and other visual aids that are useable and understandable by the public.

3.3 Travel Demand Model Quality Control & Consistency

Travel Demand Modeling consistency and quality control are essential for creating confidence in modeling results. Furthermore, it is essential that RTPAs, State Agencies, and technical experts, have a voice in developing and determining realistic, relevant, and transparent model input assumptions, variables and factors, and sensitivity.

Model Inputs and Assumptions

Model inputs and assumptions are a necessary part of running a Travel Demand Model. The assumptions are derived from the most current estimates developed and approved by the RTPA or other agencies authorized to make the estimates.

Data

Modeling results are only as good as the data that goes into them. The CTC recognizes that obtaining data is especially difficult in the rural areas of California and that RTPAs may need assistance. If travel survey samples are limited to a given region, other available sources of data include the National Household Travel Survey, American Community Survey, and trip rates associated with a region that is similar in size such as demographic and socioeconomic characteristics. As new technology and data sources (i.e., "big data") become available, regional transportation agencies are encouraged to consider ways to incorporate them into their analysis and modeling practices.

Model Calibration and Validation

Calibration is used to adjust the model parameters until the model matches observed regional travel patterns and demand. Validation involves testing the model's predictive capabilities (ability to replicate observed conditions (within reason)) before it is used to produce forecasts. The outputs and observed or empirical travel data are compared, and the model's parameters are adjusted until the outputs fall within an acceptable

range of error. Static validation tests compare the model's base year traffic volume estimates to traffic counts using statistical measures and threshold criteria.

Because emission estimates are sensitive to vehicle speed changes, U.S. EPA and U.S. DOT suggest that areas using network-based travel models compare the speeds estimated in the validation year with speeds empirically observed during the peak and off-peak periods. The significant sensitivity of emissions to highway speeds emphasizes the need to monitor and maintain the ability of the transportation model to provide accurate speed estimates.[3]

The U.S. EPA and U.S. DOT also suggest that every component of a model, as well as the entire model system, validated[4]. For conventional four-step travel models, may include the four major components – trip generation, trip distribution, mode choice, and mode-specific trip assignment.

Static Validation Criteria

- Volume-to-count ratio – is computed by dividing the volume assigned by the model by the actual traffic count for individual roadways model-wide. It provides a general context for the relationship (e.g., high or low) between model volumes and counts.
- Percent of links with volume-to-count within Caltrans deviation allowance – the deviation is the difference between the model volume and the actual count divided by the actual count. The Caltrans deviation thresholds recognize that allowances shrink as the count increases (i.e., lower tolerance for differences between the model volume estimates and counts).
- Correlation coefficient – estimates the correlation (strength and direction of the linear relationship) between the actual traffic counts and the estimated traffic volumes from the model.
- Percent root mean square error (RMSE) – is the square root of the model volume minus the actual count squared divided by the number of counts. It is a measure similar to standard deviation in that it assesses the accuracy of the entire model.

RTPAs that develop models are encouraged to meet the static validation and transit assignment validation thresholds below. Where a model does not meet the thresholds the RTPA is encouraged to clearly document the impediments.

Recommended Static Validation Thresholds

Validation Metric	Thresholds
Percent of links with volume-to-count ratios within Caltrans deviation allowance	At Least 75%
Correlation Coefficient	At Least 0.88
Percent Root Mean Squared Error (RMSE)	Below 40%

The table below specifies possible transit assignment validation criteria.

[3] Guidance for the Use of Latest Planning Assumptions in Transportation Conformity Determinations, Revision to January 18, 2001, Guidance Memorandum, EAP, December 2008, page 9

[4] Travel Model Validation and Reasonableness Checking Manual second edition, page 1-6, September 24, 2010

Recommended Transit Assignment Validation

Validation Metric	Thresholds
Difference between actual counts to model results for a given year by route group (e.g., local bus, express bus, etc.)	+/- 20%
Difference between actual counts to model results for a given year by Transit Mode (e.g., light rail, bus, etc.)	+/- 10%

For additional guidance see the FHWA's The Travel Model Validation and Reasonableness Checking Manual II Second Edition, September 2010.

Model Sensitivity Analysis

Sensitivity testing is the application of the model and the model set using alternative input data or assumptions. Sensitivity analysis of individual model components can include the estimation of the elasticities and cross-elasticities of model coefficients. However, sensitivity analysis can also be applied to the entire set of models using alternative assumptions regarding the demographic and, socioeconomic input data, or changes in transportation system to determine if the model results are plausible and reasonable.

Sensitivity testing includes both disaggregate and aggregate checks. Disaggregate checks, such as the determination of model elasticities, are performed during model estimation. Aggregate sensitivity testing results from temporal validation. During sensitivity testing, reasonableness and logic checks can be performed. These checks also include the comparison of estimated (or calibrated) model parameters against those estimated in other regions with similar models. "Reasonableness and logic checks can also include "components of change" analyses and an evaluation of whether or not the models "tell a coherent story" as recommended by the FTA for New Starts analysis." *(Travel Model Validation and Reasonableness Checking Manual Second Edition, September 2010, 1-7)*

The output of sensitivity tests can include total VMT, mode share, the number of the person and vehicle trips by purpose, average trip length by mode, and transit boardings. Each RTPA is encouraged to improve model sensitivity and accuracy. However, the application of these quality control criteria will vary based on the size of the RTPA, severity of its nonattainment status, the sophistication of transit system, the degree of model sophistication, among other characteristics.

The following inputs can be changed as part of sensitivity tests:

- Highway Network: Add or delete lanes to a link, change link speeds, and change link capacities
- Land use: Residential and employment density (the households and the number of jobs), proximity to transit, regional accessibility, and land use mix

(For additional guidance see Federal Highway Administration, The Travel Model Validation and Reasonableness Checking Manual, II Second Edition, 10.2 Sensitivity Testing September 2010)

Calculating Vehicle Miles Traveled (VMT)

Vehicle miles traveled (VMT) is key data for transportation planning and management, and a common measure of roadway use and travel demand. Regional transportation agencies use VMT, along with other data, in estimating congestion, GHG emissions, air quality, and potential gas-tax revenues. RTPAs also use VMT or VMT stratified by speed, as inputs in the development of NEPA and CEQA documents, and for purposes other than RTP development.

Documentation

Quality documentation is key to providing planners, engineers, and decision-makers, and the public with a better understanding of the reliability of the tools used to produce the forecast. In addition to documenting the key modeling processes (model estimation, calibration, and validation), it is also important to identify model limitations and document how they are addressed within the post-processing model if an off-model strategy is used.

Model Peer Review / Peer Advisory Committee

RTPAs (that have models) are encouraged to formally seek out peer reviews from Californian transportation modelers from other agencies of similar size during model development or after a major modeling enhancement.

In addition to the committee, transportation modeling agencies are also encouraged to participate in statewide, regional, and local modeling forums and user groups as a way to share ideas, review model inputs and methodologies, and coordinate modeling activities.

3.4 RTP Modeling Improvement Program (MIP) / Planning Practice Examples

Many techniques for travel demand forecasting exist and each of them differs in complexity, cost, and level of effort, sophistication, and accuracy. RTPAs select analysis methods that best meets the needs of the analysis, the availability of current and historical data, the degree of accuracy desired, the forecast time period, the time available to complete the forecast analysis, and the value (cost/benefit) of the forecast to the agency and the public.

Analysis, forecasting tools, and transportation technologies are not static; therefore, it is important that state, regional, local, and air quality agencies have an on-going model improvement program that supports model calibration and validation activities by focusing on increasing model accuracy, policy sensitivity, and data development and acquisition.

The RTP MIP includes planning practice examples that take into account factors such as the size and available resources of the regional transportation agencies and consider modeling capabilities for the referenced counties groupings below. See the next section (3.5 RTP Travel Analysis Groupings) for the delineation of federal and state law requirements and recommendation for RTPAs.

Category - 1 with the attainment of Air Quality (AQ), slow growth in population and jobs, little or no congestion, and no significant capacity-enhancing projects or limited transit expansion plans or areas of non-attainment due to transport.

These counties are not required under federal or state statute or regulation to develop network travel model. Road congestion is not increasing rapidly. Emission changes from higher miles per gallon vehicles can be factored or derived from the ARB inventory.

Category - 2 with the attainment of AQ, slow to moderate growth, small population, and no urbanized area or transit having more than a minimal potential impact on VMT, plus rural isolated non-attainment areas due to transport.

These counties are not required under federal or state statute or regulation to develop a network travel model.

Analysis Tools:

- If using a three-step model, consider running a reasonable convergence towards equilibrium.
- For models with a mode choice step, if the travel demand model is unable to forecast bicycle and pedestrian trips, consider another means to estimate those trips.
- Consider including speed and frequency, days, and hours of operation of service as inputs when modeling the transit mode.
- Consider using models that account for the effects of land use characteristics on travel, either by incorporating effects into the model process or by post-processing.

Visualization Techniques and Sketch Modeling of Scenarios

- Consider developing GIS capabilities that lead to simple land use models.
- Consider entering all natural resources data into the GIS.
- Consider developing parcel data and creating a land use data layer.
- Consider addressing changes in regional demographic patterns.

3.5 RTP Travel Analysis Groupings

MPOs, RTPAs, and congestion management agencies are organized into travel analysis groups based on federal and state laws (see map below). Group A includes Regional transportation planning agencies identified as Isolated Rural Attainment Areas (A1) and Isolated Rural Nonattainment or Maintenance Areas (A2). RTPAs that fall within the A grouping are not required to conduct federal air quality conformity analysis as part of their RTP development. Caltrans is required to perform project-level air quality conformity analysis for regionally significant federal funded projects.

Group B includes federally recognized MPOs not located within a metropolitan transportation area with a population over 200,000 and therefore, not designated transportation management areas (TMAs). This group includes two categories based on federal air quality conformity laws, (B1) Attainment Areas and (B2) Nonattainment or Maintenance Areas. Group C includes MPOs located within TMAs. This grouping includes (C1) Attainment Areas and (C2) Nonattainment or Maintenance Areas.

Federal and State regulations can be found in **Appendix H.**

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Chapter 4

RTP Consultation and Coordination

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Chapter 4 RTP Consultation and Coordination

4.1 Consultation and Coordination

Transportation planning is a collaborative process, led by the RTPA and other key stakeholders. Transportation planning activities include visioning, forecasting population/employment, identifying major growth corridors and areas, projecting future land use in conjunction with local jurisdictions, assessing needs, developing capital and operating strategies to move people and goods, developing a financial plan, identifying implementation actions, and ongoing tracking and monitoring of performance. The required planning processes are designed to foster involvement by all interested parties, such as walking and biking representatives, public health departments and public health non-governmental organizations, affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interests and homeowner associations, the Native American community, local jurisdictions, transit operators, neighboring RTPAs and the general public through a proactive public participation process.

Coordination is the cooperative development of plans, programs and schedules among agencies and entities with legal standing in order to achieve general consistency. Consultation means that one or more parties confer with other identified parties in accordance with the established process and, prior to taking action(s), considers the views of the other parties and periodically informs them about action(s) taken. It is important for the development of the RTP to be conducted both in coordination and in consultation with interested parties.

In addition to having an extensive public participation process, each RTPA should coordinate its regional transportation planning activities with all transportation providers, facility operators such as airports, appropriate federal, state, local agencies, Native American Tribal Governments, environmental resource agencies, air districts, transit, pedestrian and bicycle representatives and adjoining MPOs/RTPAs. The RTP shall (Title 23 CFR Part 450.324(g)(1) and (2)) reflect consultation with resource and permit agencies to ensure early coordination with environmental resource protection and management plans, for additional information regarding consultation with resource agencies see **Section 4.10**.

RTPs are required to be developed in coordination with local and regional air quality planning authorities and shall reflect specific consultation activities with air quality agencies on the development of the RTP (Title 40 CFR Part 93.105 (b)). RTPAs participate in air quality planning by providing travel activity data for emissions inventories. They may also implement Transportation Control Measures (TCMs) to reduce transportation related emissions. This participation helps lay the groundwork for future SIP conformity determinations.

Due to the importance of including a wide range of various parties in the development of the RTP, the 26 rural RTPAs will need to conform to the coordination and consultation requirements as outlined in 23 CFR 450.210 and 450.216(j). Development of the RTP shall

include a documented public involvement process, consultation and coordination with all interested parties and shall, at a minimum, describe explicit procedures, strategies and desired outcomes. RTPAs that reside within MPO boundaries are encouraged to collaborate with their MPO to coordinate the consultation process.

In summary, the consultation process shall:

1. Provide adequate public notice and the opportunity to comment on proposed RTPs and public participation plans
2. To the maximum extent practicable, employ visualization techniques to describe the RTP
3. To the maximum extent practicable, make the RTP electronically accessible, such as posting it on the respective RTPAs website
4. To the maximum extent practicable, hold public hearings at convenient and accessible locations and times
5. Demonstrate explicit consideration and response to public input on the RTP (documentation)
6. Seek out and consider the needs of those traditionally underserved by existing transportation systems, such as low-income households **and people of color**
7. Provide additional opportunities to comment on the RTP, if the final version differs significantly due to additional comments
8. Coordinate with the state transportation planning and public involvement processes; and,
9. Periodically review intended RTP outcomes, products and/or services.

Requirements (Shall)
Federal: Transportation Conformity Regulations of Title 40 CFR Part 93.105; 23 CFR 450.210 requires States to establish a documented public involvement process for development of the RTP. RTPAs shall comply as well.

4.2 Title VI & Environmental Justice Considerations in the RTP

Evaluation of the entire range of a region's needs is a key element in the process of developing an RTP, and consideration of public comment is required by both federal and state law. Providing more transportation and mobility choices such as increased transit, bicycle, and pedestrian facilities, as well as affordable housing choices near job centers increases opportunities for all segments of the population at all income levels. Each region is required by federal regulation and state laws to plan for and implement transportation system improvements that will provide a fair share of benefits to all residents, regardless of race, color, national origin (including limited English proficiency (LEP), ethnicity, or income level. As discussed in **Section 4.4**, the public involvement process must provide for "Seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income households**, people of color, and** individuals, who may face challenges accessing employment and other services." This section discusses separate legal requirements that protect low-income individuals **and people of color**: Title VI of the federal Civil Rights Act of 1964, Section

11135 of the California Government Code, and Presidential Executive Order 12898 on Environmental Justice (EJ) require RTPAs to be sensitive to how all residents, particularly low-income communities, **and communities of color**, may be impacted by possible transportation and land use changes identified in the RTP. While Section 11135 of the California Government Code applies to all RTPAs, Title VI and EJ requirements apply to agencies that receive federal funds.

Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 prohibits discrimination by recipients of federal funds on the basis of race, color or national origin. A similar prohibition applies to recipients of state funds under California Gov. Code section 11135, which prohibits discrimination on the basis of race, color or national origin, as well as ethnic group identification, religion, age, sex, sexual orientation, genetic information, or disability. When an RTPA receives federal funding for only a limited purpose, such as a specific service or project, it is still subject to Title VI in all of its "policies, programs or activities," whether or not they are directly supported with the federal funds.

The general prohibition of Title VI is far-reaching. While U.S. DOT's Title VI regulations (49 CFR § 21.5) enumerates specific prohibitions, they also state that "the enumeration of specific forms of prohibited discrimination in [the regulations] does not limit the generality of the prohibition." Among the numerous specific forms of discrimination the regulations call out are prohibitions on subjecting a person to segregation in any matter related to receipt of any benefit under the program; denying a person the opportunity to participate as a member of a planning, advisory, or similar body which is an integral part of the program; or utilizing any criteria or methods of administration that have the effect of subjecting persons to discrimination. Other discriminatory actions are specifically prohibited. Title VI and its implementing regulations (49 CFR § 21.5) state that the recipient of federal funds may not directly or through contractual or other arrangements, on the grounds of race, color, or national origin:

1. Deny a person any service, financial aid, or other benefit provided under the program;
2. Provide any service, financial aid, or other benefit to a person which is different, or is provided in a different manner, from that provided to others under the program;
3. Subject a person to segregation or separate treatment in any matter related to his receipt of any service, financial aid, or other benefit under the program;
4. Restrict a person in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program;
5. Treat a person differently from others in determining whether he satisfies any admission, enrollment, quota, eligibility, membership, or other requirement or condition which persons must meet in order to be provided any service, financial aid, or other benefit provided under the program;

6. Deny a person an opportunity to participate in the program through the provision of services or otherwise or afford him an opportunity to do so which is different from that afforded others under the program; or
7. Deny a person the opportunity to participate as a member of a planning, advisory, or similar body which is an integral part of the program.

Title VI Requirements

In addition to prohibiting discrimination, the Title VI regulation imposes affirmative obligations on recipients. Among other things, recipients are prohibited from denying a person an opportunity to participate in the program through the provision of services or otherwise afford him an opportunity to do so which is different from that afforded others under the program. The Title VI regulation also requires them to "take affirmative action to assure that no person is excluded from participation in or denied the benefits of the program or activity on the grounds of race, color, or national origin (including LEP)," and both as part of the Title VI report described below and more generally, to "have available for the Secretary racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance."

As described in FTA Circular 4702.1B, "*Title VI Requirements and Guidelines for FTA Recipients,*" the Title VI Plan (certifying compliance every three years) for RTPAs that receive federal funds includes the following information and is submitted to the State as the primary recipient of funding, separately from the RTP.

1. All general requirements set out in Chapter III of the Circular;
2. For agencies that provide fixed-route service, the service standards and policies contained in Chapter IV of the Circular must also be met. These standards and policies must address how service is distributed across the transit system and must ensure that the manner of the distribution affords users access to these assets.

The Circular includes the following related definitions:

1. Discrimination refers to any action or inaction, whether intentional or unintentional, in any program or activity of a Federal aid recipient, sub-recipient, or contractor that results in disparate treatment, disparate impact, or perpetuating the effects of prior discrimination based on race, color, or national origin.
2. Disparate impact refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient's policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.
3. Disproportionate burden refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate burdens where practicable.

4. Disparate treatment refers to actions that result in circumstances where similarly situated persons are intentionally treated differently (i.e., less favorably) than others because of their race, color, or national origin….
5. Minority population means any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

Presidential Executive Order 12898 requires that "each federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin." It also requires federal executive agencies and the entities to which they extend financial support or project approval to "identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations."

The U.S. DOT Order 5610.2(a) on EJ defines "adverse effects" as "the totality of significant individual or cumulative human *health or environmental effects*." That phrase is defined broadly as extending to "interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community." That phrase also includes "the denial of, reduction in, or *significant delay in the receipt of, benefits* of DOT programs, policies, or activities."

Environmental Justice at FHWA means "*identifying and addressing disproportionately high and adverse effects of the agency's programs, policies, and activities on minority and low-income populations to achieve an equitable distribution of benefits and burdens. This includes the full and fair participation by all potentially affected communities in the transportation decision-making process*".

The FTA EJ Circular 4703.1 describes an EJ analysis to determine whether the activity will result in a "[d]isproportionately high and adverse effect on human health and environment." The DOT order prohibits, if further mitigation measures or alternatives that would reduce the disproportionately high and adverse effects are feasible, any "[d]isproportionately high and adverse effect on minority and low-income populations," defined as "an adverse effect that: (I) is *predominately borne by* a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is *appreciably more severe or greater in magnitude* than the

adverse effect that will be suffered by the non-minority population and/or non-low-income population."

DOT EJ Order 5610.2(a) and FTA EJ Circular 4703.1 provide guidance on EJ related to the responsibilities of RTPAs that are federal fund recipients. There are three federally established guiding EJ principles, summarized in FTA Circular 4703.1, to consider throughout transportation planning, public outreach and participation efforts conducted in development of the RTP:

- "To avoid, minimize, or mitigate disproportionately *high and adverse human health and environmental effects, including social and economic effects*, on minority populations and low-income populations.
- To ensure the *full and fair participation* by all potentially affected communities in the transportation decision-making process.
- To prevent the *denial of, reduction in, or significant delay in the receipt of benefits* by minority and low-income populations."

While Title VI and EJ are closely related, FTA Circular 4703.1, "*Environmental Justice Policy Guidance for FTA Recipients,*" provides an understanding of the overlap and distinction between the two. Title VI prohibits discrimination by recipients of federal assistance on the basis of race, color, and national origin. By contrast, the Executive Order on EJ extends its protections not only to "minority populations" but also to "low-income populations."

DOT EJ Order 5610.2(a) defines "Minority Population" to mean "any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity." The U.S. DOT EJ Order similarly defines "Low-Income Population" as "any readily identifiable groups of low-income persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient person (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity." FTA's EJ Circular 4703.1 and FTA's 2012 Title VI Circular 4702.1B include similar definitions.

Requirements (Shall)
Federal: Title 23 CFR Part 450.210(a)(1); For federal fund recipients: portions of FTA Circular 4702.1B – Title VI Requirements and Guidelines for FTA Recipients; Presidential Executive Order 12898 on Environmental Justice (1994): portions of U.S. DOT Order 5610.2(a) (2012) and FHWA Order 6640.23A (2012)
State: Government Code Section 11135

Recommendations (Should)
Federal: For federal fund recipients: FTA Circular 4703.1 – EJ Policy Guidance for FTA Recipients; U.S. DOT EJ Order 5610.2(a); portions of FTA Circular 4702.1B-Title VI Requirements and Guidance for FTA Recipients; portions of U.S. DOT EJ Order 5610.2(a), and FHWA Order 6640.23A (2012).

4.3 Social Equity Factors

Social equity factors relevant to RTP development include, but are not limited to, housing and transportation affordability, access to transportation, displacement and gentrification, community revitalization, accessibility, and the jobs/housing fit.

Title 23 CFR Part 450.210(a)(1)(viii) requires that a public involvement process describe explicit procedures, strategies and desired outcomes for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income households **and people of color**, who may face challenges accessing employment and other services.

RTPAs can encourage the involvement of underserved communities by proactively seeking the input of these households and by making public meetings as accessible as possible. Public engagement strategies employed by RTPAs include, but are not limited to:

- Providing all materials related to the planning process in advance with adequate time for public review and input;
- Holding meetings at convenient and accessible locations and outside of traditional working hours (e.g., evenings and weekends);
- Locating meetings in low-income communities and communities of color;
- Locating meetings at sites accessible via affordable transit;
- Translating meeting materials for non-English speakers **and providing interpreters**;
- Using plain language so that information is easy to read and understand and avoids technical terms and jargon;
- Allowing participants to explore and review materials at their own pace, provide opportunities for one-on-one conversations, when feasible, provide physical materials such as maps/infographics, organize presentations in a thoughtful way with breaks for questions, and include videos;
- Considering the needs to low-income and LEP individuals when translating outreach materials and ensuring that documents are easy to understand (i.e., evaluate the reading level of the materials and quality of translations)
- Making efforts to reach individuals with limited/no internet access, such as those in rural communities;
- Removing potential barriers to attendance such as meeting residents at community events or pop-ups;
- Partnering with Community Based Organizations (CBOs) for engagement activities;
- Providing interpretation at meetings for non-English speakers or consider leading meetings in the language of the community;
- **Having presentations during existing community meetings or during meetings held by a community partner;**
- Ensuring meetings are attended by RTPA decision makers in addition to RTPA staff; and
- Documenting input from the community, staff responses, and any changes made as a result of community feedback or reasons for not including community recommendations.

In addition to the practices listed above, RTPAs are also encouraged, to the extent practicable, to develop partnerships with local, regional and state-wide organizations that can assist in achieving RTP participation goals.

4.4 Public Involvement Process

Involving the public in planning and project development poses a major challenge as well as an opportunity. Many people are skeptical about whether they can truly influence the outcome of a transportation project. Others feel that transportation plans are too abstract and long-term to warrant attention.

The RTP is one of the key processes an RTPA undertakes. It is a primary avenue for public participation in the long-range transportation planning process. Title 23 CFR Part 450.210(a) states the following concerning participation and consultation (RTPAs shall comply as well):

"The State's public involvement process at a minimum shall establish early and continuous public involvement opportunities that provide timely information about transportation issues and decision-making processes to, affected public agencies, representatives of public transportation employees, public ports, freight shippers, private providers of transportation (including intercity bus operators), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties with reasonable opportunities to be involved in the long-range statewide transportation plan and STIP."

Title 23 CFR Part 450. 210(a)(1) also requires that public involvement process be developed in consultation with all interested parties and describe explicit procedures, strategies, and desired outcomes for:
(ii) Providing timely notice and reasonable access to information about transportation issues and processes;
(iii) Providing adequate public notice of public participation activities and time for public review and comment at key decision points, including but not limited to a reasonable opportunity to comment on the proposed RTP;
(iv) Holding any public meetings at convenient and accessible locations and times;
(viii) Seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services.

The purpose of the RTPA's documented public involvement process is to establish the process by which the public can participate in the development of regional transportation plans and programs. The documented public involvement process should be designed to assist RTPA staff in implementing an effective public participation process through a variety of strategies. It provides RTPA staff with a menu of techniques or activities from which they can tailor their specific program's input process. RTPAs should also refer to the CTP Public Participation Plan document, or the CTP/FSTIP Public

Participation Plan, which can provide the most effective methods for engaging with the public. This document can be accessed through the following link: http://www.dot.ca.gov/hq/tpp/offices/osp/ppp_files/CTPE_PPP_Final_052913_dg_29.pdf. Which public participation methods the RTPA uses will require a careful analysis of what is desired to be accomplished as well as the scope of the particular transportation project(s). Plenty of flexibility is available to RTPAs in developing specific public involvement programs. Every given situation or region in California is different, and each approach to a specific public involvement challenge will be unique.

When significant written and oral comments are received on the draft RTP and as a result of the participation process or the interagency consultation process required under the EPA transportation conformity regulations (Title 40 CFR Part 93), a summary, analysis, and report of the proposed comments should be made as part of the final RTP.

It is important to note the documented public involvement process should be prepared prior to the development of the RTP. The documented public involvement procedures should have public input during its preparation and have a 45-day comment period before the RTPAs board adopts it. This enhanced documented public involvement process is a federal requirement.

Title 23 CFR Part 450.210(a)(1)(v) requires the documented public involvement process to use visualization techniques, to the maximum extent practicable, to describe the RTP. Visualization techniques range from a simple line drawing or handwritten chart to technologically complex web cast public meetings, GIS modeling and computer-generated maps. The specific type of visualization technique is determined by the RTPA.

The documented public involvement process, the draft and adopted RTP shall be posted on the RTPA's website to the maximum extent practicable and for the life of the RTP. It is also recommended that RTPAs place hard copies of the draft and adopted copies of RTPs in local libraries and other locations where the public would have access to these documents.

In developing RTPs, the RTPA should consult with agencies and officials responsible for other planning activities within their region that are affected by transportation or at least coordinate the planning process to incorporate input. These areas include, but are not limited to, the listed examples:

1. State and local growth;
2. Public health;
3. Housing;
4. Economic development;
5. Environmental protection;
6. Tourism;
7. Natural disaster risk reduction;
8. Airport operations; and,
9. Goods Movement.

When the RTPA region includes California Indian Tribal Lands (reservations, Rancherias, and allotments) the RTPA shall appropriately involve the federally recognized Native American Tribal Government(s) in the development of the RTP. The RTPA should also seek input even from tribes that are not federally recognized or from other "interested parties" that may have a background and/or history of Native American culture within the region. In addition, AB 52 (Chapter 532, Statutes of 2014) mandates that agencies must consult with tribes regarding impacts to Tribal Cultural Resources as an impact under CEQA. See **Section 4.7** Native American Tribal Government Consultation and Coordination for further discussion.

Similarly, when the RTPA region includes federal public lands, the RTPA shall appropriately involve the federal land management agencies in the development of RTP.

RTPA public participation efforts shall at minimum develop a documented process that outlines roles, responsibilities and provides outreach efforts to all sectors of the local community.

RTPAs may include a separate Public Participation Plan, however RTPAs shall at minimum include a detailed discussion of public participation efforts within the RTP. For example, public hearings, workshops, surveys, brochures and other methods that invite comments or input for the public participation efforts and RTP development.

RTPAs are also encouraged to involve the media, including ethnic media as appropriate, as a tool to promote public participation in the RTP development, review and commenting process.

Public participation and consultation for the development of the RTP remains an essential element of the overall RTP process. Mapping and visualization tools should be used, to the extent practicable, to create visual representations of proposed scenarios. A Public Participation Plan includes public outreach, public awareness, and public input beginning with the planning stage.

For additional information on the consultation process please refer to **Sections 4.6, 4.7**, and **4.8**.

Periodic Evaluation of the Public Involvement Process

A periodic review of the public involvement process is important to evaluate the effectiveness of the procedures and strategies employed during the full and open participation process. This periodic review can help to ensure that the public involvement process, once adopted, is being implemented effectively and is achieving its goals of engaging low-income residents **and people of color** in expressing and prioritizing their needs and their views on how the RTP can best meet those needs.

Requirements (Shall)
Federal: Title 23 CFR Part 450.210
State: Public Resources Code Section 5097.94, and Sections 21073 through 21084.3.

4.5 Private Sector Involvement

Private sector involvement relates to how the goods movement industry and other business, or commercial interests are represented in the development of the RTP. Trucks, freight trains, taxis, Transportation Network Companies, micro-mobility companies, limousines all use the transportation network and are an integral part of the regional transportation system. Additionally, utility companies should be engaged regarding Zero Emission Vehicle (ZEV) and ZEV infrastructure during planning and implementation phases. Other examples of private sector involvement in the development of the RTP include Transportation Management Associations, private transit operators, developers, employers, and Chambers of Commerce. Their absence in the regional transportation planning process adversely impacts the efficiency of the transportation network.

In urbanized areas of California, the number of trucks on the highway system has substantially increased. This has had a direct impact on traffic congestion within these areas. An increased level of truck activity has also had an impact in rural areas of the state, although primarily on the principal routes in rural counties. For these reasons, an RTP that does not include the "Private Sector" in the planning process is not a viable plan. The impact of the private freight sector on the transportation system is significant and must be included and documented in the RTP process.

Unfortunately, in many plans, the private sector is not identified as a planning partner. Where addressed, goods movement is discussed in the abstract with minimal long-range assumptions identified or assessed.

RTPAs should take necessary actions to ensure major trucking firms, large employers and business organizations are formally invited to participate in the preparation of the RTP if appropriate. The RTPA should strive to take into consideration who makes up the private sector and importance of engaging them in major long-range plans, as these organizations may have an impact on the regional transportation system. The purpose is to provide private sector transportation providers a process of communication and involvement into the region's transportation planning process. The specific outreach techniques developed and ultimately used is dependent on the size and composition of the region. These efforts to solicit input into the long-range regional transportation planning process should be documented in the RTP.

Requirements (Shall)
Federal: Federal regulations require private sector involvement as a component of the regional transportation planning process. Title 23 U.S.C. Part 134 (g)(4), Title 23 U.S.C. Section 135(e) and Title 23 CFR Part 450.210(a) require the transportation planning process include input from the goods movement industry and other transportation organizations.

Recommendations (Should)
State: California Government Code Section 14000(d) recommends that a comprehensive multimodal transportation planning process should be established which

involves all levels of government and the private sector in a cooperative process to develop coordinated transportation plans.

4.6 Consultation with Interested Parties

The U.S. DOT defines consultation as when: "*one or more parties confer with other identified parties in accordance with an established process and, prior to taking action(s), considers the views of the other parties and periodically informs them about action(s) taken*." Some areas of consultation could include transportation, land use, employment, economic development, housing, community development and environmental issues.

The U.S. DOT definition of "interested parties" to be engaged in statewide/nonmetropolitan and metropolitan transportation planning has been expanded. The RTPA shall provide the following interested parties with reasonable opportunity to comment on the proposed RTP:

1. Individuals;
2. Affected public agencies;
3. Representatives of public transportation employees;
4. Public ports;
5. Freight shippers;
6. Private providers of transportation;
7. Representatives of users of public transportation;
8. Representatives of users of pedestrian walkways and bicycle transportation facilities;
9. Representatives of people with disabilities;
10. Providers of freight transportation services; and,
11. Other interested parties.

Requirements (Shall)
Federal: Consulting with interested parties on plans, programs and projects shall include individuals or organizations that are mentioned in Title 23 CFR Part 450.210(a)(1)(i). Title 23 CFR Part 450.216(k) requires States to consult with federal land use management agencies, as appropriate during the development of RTP. RTPAs shall comply as well. Title 23 CFR Part 450.216(j) states that States shall consult as appropriate with state and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation during the development of their RTP. RTPAs shall comply with this as well.
State: None

4.7 Native American Tribal Government Consultation & Coordination

During the development of the RTP, Tribal Government ***consultation*** can be described as the meaningful and timely process of seeking, discussing, and carefully considering the views of leaders of federally recognized Tribal Governments and, where feasible, seeking agreement on important matters. The RTPA can do this by sharing information and conducting meetings with leaders of the federally recognized Tribal Governments during the preparation of the RTP prior to taking action(s) on the plan and by making sure to consider input from the tribe as decisions are made. Consultation should be conducted in a way that is mutually respectful of each party's sovereignty. Tribal Government ***coordination*** is the comparison of the RTPAs transportation plans, programs, projects, and schedules with similar documents prepared by the tribe. The RTPA needs to ensure consistency with tribal plans and the RTP.

Currently there are 109 federally recognized tribes in California. The federally recognized Tribal Governments hold inherent power of limited sovereignty and are charged with the same responsibility as other governmental authorities. In addition, California is home to the largest Native American population in the country, including non-federally recognized tribes, and urban Indian communities.

The RTPA should include a discussion of consultation, coordination, and communication with federally recognized Tribal Governments when the tribes are located within the boundary of an RTPA. The RTPA should establish a government-to-government relationship with each tribe in the region. This refers to the protocol for communicating between the RTPAs and the Tribal Governments as sovereign nations. This consultation process should be documented in the RTP. The initial point of contact for Tribal Governments should be the Chairperson for the Tribe.

The RTPA should develop protocol and communication methods for outreach and consultation with the Tribal Governments. However, these protocol and communication methods should be re-evaluated if the agencies are un-successful in obtaining a response during the development of the RTP.

It is important to ensure that efforts in establishing channels of communication are documented in the RTP. For further information and assistance in the consultation process, contact the California Department of Transportation Native American Liaison Branch (NALB) at: http://dot.ca.gov/hq/tpp/offices/ocp/nalb. The NALB webpage also provides contact information for the California Department of Transportation Districts' Native American Liaisons.

The Caltrans Native American Cultural Studies (NACS) Branch may also be contacted for guidance on efforts to integrate tribal cultural and environmental considerations into long-range planning efforts: https://dot.ca.gov/programs/environmental-analysis/cultural-studies/native-american-cultural-studies.

As mentioned above, California is home to many non-federally recognized tribes as well as Native Americans living in urban areas. RTPAs should involve the Native American communities in the public participation processes. Establishing and maintaining government-to-government relations with federally recognized Tribal Governments through consultation is separate from and precedes the public participation process.

Requirements (Shall)
Federal: Title 23 CFR part 450.216(j) requires States to involve the federally recognized Native American Tribal Government in the development of the RTP and project lists. RTPAs shall comply as well. The requirement of including interested parties in the development of the participation plan and the RTP would include federally recognized or non-federally recognized tribes.
State: Public Resources Code Section 5097.94, and Sections 21073 through 21084.3. AB 52 added Tribal Cultural Resources as an impact under CEQA and required consultation to mitigate those impacts with the California Native American tribes as defined in California Public Resources Code Section 21073. Because RTPs are subject to CEQA and a program EIR is prepared to analyze the impacts of implementing an RTP, AB 52 means that RTPAs must consult with tribes with regards to Tribal Cultural Resources as part of the CEQA process.

4.8 Consultation with Resource Agencies

Consultation with resource agencies, State, and local agencies responsible for land use management, environmental protection, conservation, and historic preservation is critical when concerning the development of the RTP.

The consultation efforts involve:

1. Comparing transportation plans with State conservation plans, maps and other data, if available; and,

2. Comparing transportation plans with inventories of natural and historic resources, if available.

Input/comments from resource agencies early in the planning process is critical. The reason for proactive consultation and engagement is to prevent project delays at a later time. In other words, coordinating and consulting with resources agencies early in the planning process, may lead to better coordination, minimal litigation, possible project cost savings and an upfront understanding of resource agency issues.

Some examples of resource agencies that could be included in a more seamless multi-agency process but are not limited to California Environmental Protection Agency (CalEPA), California Coastal Commission, and U.S. Fish and Wildlife, U.S. Army Corp of Engineers, California Department of Fish and Wildlife and California Department of Parks and Recreation.

The FHWA Eco-Logical and Integrated Ecological Framework and the state Regional Advance Mitigation Planning model provides a process by which early consultation with resource agencies and conservation non-profit organizations to develop regional greenprints or conservation plans that identify of areas of conservation value can satisfy federal requirements for early consultation and result in benefits for both transportation agencies and environmental protection. Programmatic mitigation plans, Natural Communities Conservation Plans and Habitat Conservation Plans can provide early consultation and identification of natural resources that need to be avoided or minimized in order to reduce risk and streamline project delivery. For additional information related to coordination of regional mitigation activities with other planning processes, see **Chapter 5.**

An RTPA shall coordinate and consult with resource agencies on data or information sharing, if available. The following is a preliminary list of resource agencies that should be consulted in the development of the RTP:

1. U.S. Environmental Protection Agency
2. U.S. Army Corps of Engineers
3. NOAA Fisheries Services
4. U.S. National Park Service
5. U.S. National Marine and Fishery Service
6. U.S. Fish and Wildlife Service
7. U.S. Forest Service
8. California Coastal Commission
9. California Ocean Protection Council
10. California Energy Commission
11. California Office of Planning and Research
12. California Environmental Protection Agency
13. California Natural Resources Agency
14. California Water Resources Control Board
15. California Regional Water Quality Control Board
16. California Department of Fish and Wildlife
17. California Department of Resources, Recycling, and Recovery
18. California Department of Parks and Recreation
19. California Department of Conservation
20. California State Mining and Geology Board
21. Any additional California environmental, energy, resource, and permit agencies
22. Bay Conservation and Development Commission (Bay Area)
23. California Office of Historic Preservation

It may be challenging to obtain timely responses and comments to the RTP, its programs and projects, when the commenting period is announced to the general public and stakeholders. It is understandable that these efforts will depend on the specific region.

Interagency Consultation for Transportation Conformity – The transportation conformity rule requires that State and local agencies establish formal procedures to ensure interagency coordination on critical transportation conformity issues. Nonattainment and maintenance areas have adopted consultation procedures to meet these

requirements. These procedures are federally enforceable and should be followed for each conformity determination.

Additional guidance regarding federally required consultation with resource agencies during the RTP development process is available in **Section 5.2** Federal Environmental Requirements.

Requirements (Shall)
Federal: Title 23 CFR part 450.216(j) requires that the State shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. RTPAs shall comply as well. The consultation shall involve, as appropriate: (1) Comparison of transportation plans with State conservation plans or maps, if available; or (2) Comparison of transportation plans to inventories of natural or historic resources, if available. In addition, the discussion of mitigation activities required by 23 CFR 450.216(k) (and described more fully in **Section 5.2**) shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies.

State: California Environmental Quality Act (CEQA), requires consultation with agencies, governments or individuals that could potentially be impacted by transportation projects in the RTP.

4.9 Coordinated Public Transit/Human Services Transportation Plans

The aim of the Coordinated Public Transit/Human Services Transportation Plan is to improve transportation services for persons with disabilities, older adults and individuals with lower incomes by ensuring that communities coordinate the available transit resources. Coordination enhances transportation access, minimizes duplication of services and facilitates the most appropriate cost-effective transportation system possible with available resources.

Federal regulation (Title 49 U.S.C. Section 5310(d)(2)) requires that projects selected for funding under the following FTA programs be derived from a coordinated plan: Enhanced Mobility of Seniors and Individuals with Disabilities Program.
https://www.transit.dot.gov/funding/grants/coordinated-public-transit-human-services-transportation-plans

RTPAs are not required to be the lead agency in the development of the coordinated plan. Federal guidance states the coordinated plan may be developed separately or as a part of the transportation planning process. In any case, RTPAs should ensure that the plan is coordinated and consistent with their regions' transportation planning process.

The coordinated plan must be developed through a process that includes representatives of public, private, and non-profit transportation and human services

providers with participation by members of the public. The public participation requirements may be shared with those for the development of the RTP.

As with all FTA programs, transit projects selected for funding must be consistent with the RTP and FTIP.

Recommendations (Should)
Federal: Title 23 CFR Part 450.206(h) states: "Preparation of the coordinated public transit-human services transportation plan, as required by 49 U.S.C. 5310, should be coordinated and consistent with the metropolitan transportation planning process."

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Chapter 5

RTP Environmental Considerations

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Chapter 5 RTP Environmental Considerations

5.0 Introduction

This section will briefly discuss the context for environmental requirements, options for RTP environmental document preparation, federal requirements and recommendations outlined in the Statewide and Nonmetropolitan Transportation Planning *and* Metropolitan Transportation Planning Final Rule (FHWA/FTA Planning Final Rule), key resource areas for avoidance and mitigation and finally, a description of air quality and transportation conformity will be provided.

The federal government has shown its commitment to the environment through the passage of the National Environmental Policy Act (NEPA) in 1970, which requires federal agencies to consider the environmental impacts of their actions. In a similar vein, California passed the California Environmental Quality Act (CEQA) in 1970, which was designed to ensure that public agencies consider the environmental impacts of their decisions.

In California, the environmental review associated with the RTP, and the subsequent project delivery process is two-fold. RTPAs are responsible for the planning contained in the RTP that precedes project delivery. Typically, a local government, consultant or Caltrans is responsible for the actual construction of the project, i.e., project delivery. CEQA applies to the planning document (RTP) while both NEPA and CEQA may apply to the individual projects that implement the RTP during the project delivery process. Likewise, all RTP CEQA Analysis and subsequent transportation project CEQA analysis assess all environmental issue areas identified in the CEQA Guidelines Environmental Checklist Form, Appendix G.

A change to transportation analysis in environmental review under CEQA occurred with the Governor's approval of SB 743 in 2012 which requires an update in the metrics of transportation impact used in CEQA from Level of Service and vehicle delay to one that promotes the reduction of GHGs, the development of multimodal transportation networks, and a diversity of land uses for transit priority areas. Except any of the events specified in Public Resources Code Section 21166, a residential, employment center, or mixed-use development project, including a subdivision or any zoning change is exempted from SB 743 requirements if the project is (a) within a transit priority area; (b) to implement and consistent with a specific plan for which an EIR has been certified; (c) consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in an CARB-accepted SCS/APS (Public Resources Code Sections 21155.4 and 21099; GC Section 65080).

For more information refer to SB 743 implementation resources, https://dot.ca.gov/programs/sustainability/sb-743/sb743-resources

Given that protection of the environment is an important public policy goal, and it is an important aspect of public acceptance during project delivery, best regional planning

practices would seek to plan and implement transportation projects that would avoid or minimize environmental impacts.

5.1 Environmental Documentation

The RTP planning document as well as the projects listed in it are considered to be projects for the purposes of CEQA. Subsequent RTP amendments or updates are discretionary actions that can also trigger CEQA compliance. As defined in California Public Resources Code section 21065, a project means "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following: (a) An activity directly undertaken by any public agency or (b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies".

To initiate CEQA compliance, the RTPA as the lead agency determines if the proposed action is a project and whether the project is statutorily or categorically exempt. If the project is not exempt from CEQA, an Initial Study or equivalent environmental assessment is completed. Based on the outcome of the Initial Study the appropriate type of environmental document is then prepared. The Initial Study can indicate the use of an Environmental Impact Report (EIR), a Mitigated Negative Declaration (MND) or a Negative Declaration (ND). Additionally, there are several types of EIRs such as a Master EIR, a Project EIR or a Program EIR. Information regarding the CEQA process and guidelines for implementation can be found at:

www.opr.ca.gov
http://opr.ca.gov/index.php?a=ceqa/index.html
https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-34-exemptions-to-ceqa
https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance

Program EIR

Many RTPAs prepare a Program Environmental Impact Report (PIER) to analyze the environmental impacts of implementing their RTP. The purpose of the PEIR is to enable the RTPA to examine the overall effects of the RTP i.e., broad policy alternatives, program wide mitigation, growth inducing impacts and cumulative impacts can be considered at a time when the agency has greater flexibility to avoid unnecessary adverse environmental effects. The PEIR is a device that was originally developed by federal agencies under NEPA. The County of Inyo v. Yorty court case established its use under CEQA.

Additionally, environmental documents subsequently prepared for the individual projects contained in the RTP can be tiered off of the PEIR thus saving time and reducing duplicative analysis. Tiering refers to environmental review of sequential actions, where general matters and environmental effects are examined in a broad EIR for a decision such as adoption of a policy, plan, program, or ordinance, and

subsequent narrower or site-specific EIRs are prepared that incorporate by reference the prior EIR and concentrate on environmental effects that can be mitigated or that were not analyzed in the prior EIR. In such instances, the later narrow EIR "tiers" off the prior broad EIR. If a project-specific EIR tiers off from a broader prior EIR such as the PEIR prepared for a RTP, it could help eliminate repetitive discussions of the same environmental issues; facilitate project-level impact analysis by focusing on issues specific to the later project; reduce the burdens from duplicative reconsiderations of a program, plan or policy with a certified EIR; and reduce CEQA delay and paperwork at project level. (See **Appendix D** Glossary for a definition of 'tiering')

Changes to the RTP/FTIP

When the RTPA modifies its RTP/FTIP, it must determine whether the proposed changes have the potential to impact the environment and trigger CEQA review. As a lead agency under CEQA, it is the responsibility of each RTPA to analyze the potential environmental affects that proposed changes of their RTP may have on the environment. This should be done by providing substantial evidence that proposed changes to the RTP would be "minor" or "technical" in nature, if there would be "new" or "more severe" significant environmental impacts, if "circumstances" of the project or "new environmental information" is discovered, or if "substantial" or "major changes" to the RTP are proposed. An abbreviated or focused type of CEQA document will usually suffice. The most common means of addressing changes to the RTP/FTIP are an Addendum, a Supplement, or a Subsequent environmental document.

Addendum

An Addendum may be prepared when minor technical changes or additions are made to the RTP. The Addendum makes the prior EIR, MND or ND adequate when the proposed changes to the RTP do not create any new or substantially more severe significant environmental impacts. An addendum does not require public circulation.

Supplement

A Supplement to the EIR need contain only the information necessary to make the previous EIR adequate for the project as revised. The supplement only needs to meet the circulation and public review requirements of a *draft* EIR.

Subsequent

A Subsequent EIR, MND or ND is used when there are substantial or major changes in the project, in the circumstances of the project or when new environmental information is discovered. A subsequent EIR, MND or ND is intended to be a complete environmental document and it requires the same full level of circulation and public review as the previous EIR, MND or ND.

National Environmental Policy Act Applicability to the RTP

Pursuant to 23 CFR § 450.338, RTPs are not subject to NEPA, however, NEPA review does apply to the individual projects identified in the RTP during the project delivery process when the individual projects are federally funded and/or a federal approval is required (e.g., a permit for wetlands impacts). When NEPA review is required, implementing agencies should reference the Federal Council on Environmental Quality's (CEQ) interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change," published in the Federal Register on January 8, 2023.

Requirements (Shall)
State: Public Resources Code 21000 et seq, Environmental Protection, and CEQA guidelines section 15000 et seq.

5.2 FHWA/FTA Planning Final Rule – Federal Environmental Requirements

Pursuant to Title 23 CFR Part 450.216(k), the RTP must provide a discussion of potential environmental mitigation activities and areas, including those mitigation activities that might maintain or restore the environment that is affected by the plan. This mitigation discussion must happen in consultation with Federal, State and Tribal land management and wildlife regulatory agencies. Additionally, federal regulations contain a planning process mandate that requires the State to compare the RTP with available state conservation plans or maps and inventories of natural or historic resources. RTPAs shall comply as well. This comparison is facilitated by the requirement to "consult as appropriate with state and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation".

Requirements (Shall)
Federal:
Title 23 CFR Part 450.324(f)(10):
Requires that the RTP shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies.
Title 23 CFR Part 450.324(g)(1) and (2):
Requires that the MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as appropriate: (1) Comparison of transportation plans with State conservation plans or maps, if available; or (2)

Comparison of transportation plans to inventories of natural or historic resources, if available.

Title 23 CFR Part 450.306(b)(5):
Requires that the metropolitan transportation planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following factors: Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns. See **Section 5.4** for key resource areas for avoidance and mitigation.

5.3 FHWA/FTA Planning Final Rule – Federal Environmental Recommendations

Appendix A - Linking the Transportation Planning and NEPA processes

Appendix A of Title 23 CFR Part 450 encourages environmental information developed during the transportation planning process to be applied to the project delivery process. The goal is to make planning decisions more sustainable and to maximize the effectiveness of mitigation strategies. Appendix A is optional. It provides details on how the information and analysis from the RTP can be incorporated into and relied upon in the NEPA documents prepared for the individual projects that will implement the RTP in the future. Appendix A presents environmental review as a continuum of sequential study, refinement, and expansion of information.

Recommendations (Should)
Federal: Title 23 CFR Part 450.318 and Appendix A to Part 450 "Linking Planning and NEPA" describes the steps for streamlining the project delivery process by providing environmental information in the RTP.

Programmatic Mitigation

Recently updated federal regulations governing the development of metropolitan transportation plans include an updated section on programmatic mitigation. In particular, Title 23 CFR Sections 450.214 (State) and 450.320 (MPO), on the development of programmatic mitigation plans, indicate that "a State/MPO may utilize the optional framework to develop programmatic mitigation plans as part of the statewide transportation planning process to address the potential environmental impacts of future transportation projects." The FHWA supports an ecological approach to planning infrastructure and transportation projects and provides guidance on establishing a Regional Ecological Framework (REF). *Eco-logical* is a nine-step, voluntary framework that identifies an ecosystem approach to developing infrastructure projects. It outlines a framework for partners to integrate their planning processes, share data, and prioritize areas of ecological significance in order to harmonize economic, environmental, and social needs and objectives. Regionally significant resources like fish passage, terrestrial

and aquatic habitat connectivity, migration corridors, and coastal trails can be incorporated into the regional transportation planning process. In addition, regional and local planning stakeholders can coordinate on mitigation strategies and conservation priorities as part of the regional transportation planning process. If the region elects to include the preparation of a REF or programmatic mitigation plan as part of the RTP update, the region can notify other stakeholders to allow for a more collaborative partnering and planning effort. This environmental review toolkit is available at:

https://www.environment.fhwa.dot.gov/ecological/ImplementingEcoLogicalApproach/.

5.4 Key Resource Areas for Avoidance and Mitigation

Taking these environmental resources and laws into account during the transportation planning process can expedite the delivery of the projects that are contained in the RTP. The transportation planning process and the NEPA/CEQA environmental analysis required during project delivery can work in tandem with the results of the transportation planning process informing the NEPA/CEQA process. The RTP can identify plan-level environmental constraints and consider potential impacts that could allow projects in the plan to be modified to avoid or minimize impacts.

Additional information regarding environmental planning considerations can be found in **Section 2.7**.

SAFETEA-LU and subsequent surface transportation reauthorization acts have codified certain coordination requirements for lead, cooperating, and participating agencies during the project-level environmental review process (23 U.S.C. 139 "Efficient environmental reviews for project decision-making and One Federal Decision"). The first step in this process is to initiate the environmental review process by notifying the Secretary of Transportation (via FHWA) of the type of work, termini, length, general location of the project, and a listing of anticipated federal permits. One means of initiating the process is to include the required information in the discussion of each EIS-level project that is contained in the RTP. The resource areas of concern are enumerated below.

Wetlands

Wetlands and other waters are protected under several laws and regulations, including the federal Clean Water Act, federal EO for the Protection of Wetlands (EO 11990), and state Porter-Cologne Water Quality Control Act and parts of the state Fish and Wildlife Code. Section 404 of the Clean Water Act establishes a permit program that prohibits any discharge of dredged or fill material into wetlands or other "waters of the United States" if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404

permit program is run by the U.S. Army Corps of Engineers (ACOE) with oversight by the U.S. EPA.

The EO for the Protection of Wetlands (EO 11990) states that a federal agency, such as the FHWA, cannot undertake or aid with new construction located in wetlands unless the head of the agency finds that there is no practicable alternative to the construction and the proposed project includes all practicable measures to minimize harm. Strategic retreat or relocation shall be one alternative to be considered.

At the state level, primarily the Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Boards (RWQCB) regulate wetlands and waters. (In certain circumstances, the California Coastal Commission or Bay Conservation and Development Commission may also be involved.) Impacts on wetlands, lakes, streams, or rivers may require a Lake or Streambed Alteration agreement with CDFW. The RWQCB issues water quality certifications in compliance with Section 401 of the Clean Water Act.

Parks, Refuges, and Historic Sites

Section 4(f) of the Department of Transportation Act (Title 49 U.S.C. Section 303) states that FHWA and FTA may not approve the use of land from a publicly owned park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or any historic site of national, State, or local significance unless a determination is made that there is no other feasible and prudent alternative to the use of that land or it is determined that the use will have a *de minimis* impact. If a *de minimis* impact determination cannot be made, Section 4(f) evaluations require the development of an avoidance alternative, however, if no feasible and prudent choices exist, all possible planning must be done to minimize harm to the property resulting from such use.

https://www.environment.fhwa.dot.gov/legislation/section4f.aspx

https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-20-section-4f

Cultural Resources

Cultural Resources is a broad term that includes the "built environment" (e.g., buildings, structures, bridges, railroads, etc.) as well as cultural landscapes, archaeological sites, or places of traditional cultural importance. Such cultural resources may range in age from ancient prehistory to the historic era.

Cultural Resources are protected under several laws and regulations, including the National Historic Preservation Act (NHPA), CEQA, and the California Public Resources Code (PRC) 5024 et seq. Under Section 106 of the NHPA, federal agencies (and local entities receiving federal funding/permits) are mandated to consider the effects of federal undertakings on historic properties affected by federally funded or federally

approved undertakings. If avoidance is not an option, then minimization of impacts and mitigation of the effects are required. Under CEQA, a project which may cause a substantial adverse change in the significance of a historical resource would require mitigation of the project effects by the project's lead CEQA agency. As these laws and regulations are not triggered until there is a programmed, funded project for which environmental compliance studies are conducted, a more robust consideration of cultural heritage resources during early local and regional planning processes can greatly reduce delays and conflicts that often occur during project delivery when heritage resources are affected.

California Coastal Trail (CCT)

The CCT is a state-mandated trail system. Pursuant to SB 908, which was passed in 2001, the Coastal Conservancy, Coastal Commission, and State Parks were directed to coordinate and facilitate development of the CCT. AB 1396 was passed in 2007 and amended Public Resources Code Section 31408 to include Caltrans as another agency responsible for development of the CCT. AB 1396 also added Section 65080.1 to the California GC, which mandates that provisions for the CCT be provided in each RTP for those RTPAs located along the coast. Negative impacts to the CCT network should be avoided and opportunities for fully mitigating any such impacts, or for improving and expanding the CCT, should be clearly identified in each RTP. More information and guidance relative to the CCT can be found in **Section 6.11** and at: http://scc.ca.gov/projects/california-coastal-trail/

www.coastal.ca.gov/access/ca-coastal-trail/coastal-trail.pdf

Threatened and Endangered Species

The primary federal law protecting threatened and endangered species is the federal Endangered Species Act (ESA) (Title 16 U.S.C. Section 1531 et seq.). This act provides for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA, are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not taking actions likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat.

California has enacted a similar law at the state level, the California Endangered Species Act (CESA) (Fish and Game Code, 2050, et seq.). CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. In the Coastal Zone, the California Coastal Commission or Local Coastal Program agency protects Environmentally Sensitive Habitat Areas (ESHA) from uses that are non-resource dependent (Public Resources Code Division 20 Section 30107.5, 30240). Public agencies must make efforts to avoid impacts to EHSA to ensure long-term protection of the habitat.

AB 2087 (Chapter 455, Statutes of 2016) established a conservation planning tool called a Regional Conservation Investment Strategy (RCIS) to promote the conservation of species, habitats, and other natural resources and enable advance mitigation for public infrastructure projects, including transportation. An RCIS provides a non-regulatory assessment and analysis of conservation needs in a region including habitat connectivity and climate resilience. Transportation agencies can use an approved RCIS to secure mitigation credit for conservation investments consistent with the RCIS. CDFW Guidelines for creating Mitigation Credit Agreements (MCAs) can be found at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213325&inline

California Endangered Species Act: https://wildlife.ca.gov/Conservation/CESA
Biogeographic Information and Observation System: https://wildlife.ca.gov/Data/BIOS

Cumulative Impacts

As defined in CEQA, cumulative impacts refer to "two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts". Because the RTP addresses long-range future transportation improvements, cumulative impacts are inherent and need to be fully discussed within the environmental document. Guidance on preparing cumulative impact analysis is available at:

https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-uidance#cumulative

Habitat Connectivity

Section 1930.5 of the California Fish and Game Code expresses the State's policy to promote the voluntary protection of wildlife corridors and habitat strongholds in order to enhance the resiliency of wildlife and their habitats to climate change, protect biodiversity, and allow for the migration and movement of species by providing connectivity between habitat lands. In order to further these goals, it is the policy of the State to encourage voluntary steps to protect the functioning of wildlife corridors through various means, such as the acquisition or protection of wildlife corridors as open space through conservation easements; the installation of wildlife-friendly or directional fencing; siting of mitigation and conservation banks in areas that provide habitat connectivity for affected fish and wildlife resources; and the provision of roadway undercrossings, overpasses, oversized culverts, or bridges to allow for fish passage and the movement of wildlife between habitat areas. Transportation facilities should be designed, engineered, planned, and programmed with habitat connectivity in mind in keeping with these State goals in order to maintain healthy ecological function and climate change resiliency in and between habitat areas.

The Regional Conservation Investment Strategies Program created in statute in 2016 (AB 2087, Chapter 455, Statutes of 2016) created conservation planning tools that are required to address habitat connectivity amongst a variety of other conservation factors. Subsequent legislation passed in 2021 and 2022 (SB 790, Chapter 738, Statutes

of 2021, and AB 2344) establish a Wildlife Connectivity Remediation Program. SB 790 allows for the creation of mitigation credits for the creation of connectivity structures through MCAs or conservation banks. After July 1, 2025, any project on the State Highway System that occurs within an identified connectivity area will need to comply with the requirements of AB 2344.

Below are tools that can help streamline habitat corridor projects in a cost-effective way during the initial phases of project planning and design:

California Water Action Plan: 2016 Update:
http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf

California Essential Habitat Connectivity Project:
https://www.wildlife.ca.gov/conservation/planning/connectivity/CEHC

California State Wildlife Action Plan: https://www.wildlife.ca.gov/SWAP/Final

Growth-Related Indirect Impacts

Growth-related indirect impacts are those impacts associated with a project or plan that would encourage or facilitate development or would change the location, rate, or type, or amount of growth. RTPs typically contain proposed actions that will be built along a new alignment and/or provide new access and those are the types of projects that will typically require a growth-related impact analysis. Where such impacts are identified, appropriate and reasonable steps to avoid or minimize indirect impacts can be considered early in the process and incorporated into the RTP and its associated environmental document. Additional guidance on growth-related indirect impacts is available upon request at:

https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/other-guidance#gri

Recommendations (Should)
Federal: Title 23 CFR 450.318 and Appendix A to Part 450 "Linking Planning and NEPA" describe the steps for streamlining the project delivery process by providing environmental information in the RTP.

Vehicle-Miles Traveled and Induced Demand

On September 27, 2013, Governor Jerry Brown signed Senate Bill 743 into law and implementation went into effect starting on July 1, 2020. According to the legislative intent contained in SB 743, these changes to current practice were necessary to, "More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

The implementation of SB 743 reflects the State's changing priorities to pivot away from prioritizing vehicular travel toward encouraging multi-modal transportation solutions as part of California's efforts to reduce greenhouse gas emissions and discouraging sprawling development patterns. Per CARB Vision Model results, reductions in VMT growth and widespread transportation electrification are needed to achieve sufficient GHG emissions reduction for climate stabilization, as reflected in EOs on 2030 and 2050 GHG emission targets. VMT has been identified by the Governor's Office as the most appropriate metric to evaluate a project's transportation impacts.

For transportation impacts related to land use development the Governor's Office of Planning and Research (OPR) Technical Guidance recommended VMT as the new metric of significance. For transportation projects agencies were given flexibility in the determination of the metric for transportation improvements. Transportation projects depending on location and context may result in changes to travel patterns. A transportation project which leads to additional vehicle travel on the roadway network or vehicle miles traveled, commonly referred to as "induced vehicle travel," may quantify the amount of additional vehicle travel and consider potential impacts under CEQA.

The vast majority of research on the topic of Induced Demand has been conducted and focused on analysis of congested urban highways and interstates. In recognition of the lack of rural research OPR's *Technical Advisory on Evaluating Transportation Impacts Under CEQA* (2017) and *Caltrans Transportation Analysis Framework* (2020) acknowledge this issue and suggest different methodologies should be considered for analysis of induced demand in rural regions outside of Metropolitan Statistical Areas (MSAs). Seeking to provide additional clarity on the application of induced demand in different rural settings and context, including rural areas within MSAs, the California Rural Counties Task Force (RCTF) in July of 2022 funded and initiated a study on Rural Induced Demand to collect and analyze rural data to help further inform future updates of state guidance. The RCTF was formed in 1988 in partnership with the CTC and represents the 26 rural Regional Transportation Planning Agencies in California to provide a forum to engage and advise the CTC and Caltrans on state transportation funding and policy decisions. It is anticipated that the report and recommendations will be released in 2024.

For more information refer to SB 743 implementation resources, please see:
https://dot.ca.gov/programs/sustainability/sb-743/sb743-resources
https://opr.ca.gov/ceqa/sb-743/

5.5 Plan-and Project-Level Purpose and Need Statements

As part of the NEPA process, project sponsors must establish the "purpose and need" for a proposed project. Previous versions of the RTP Guidelines referred to "Project Intent Statements" which were defined as Plan Level Statements of Purpose and Need. A Plan Level Statement of Purpose and Need is a short statement, which serves as a justification for a project or a group of projects. These brief plan level justifications

would be contained in the RTP. An example of a Plan Level Statement of Purpose and Need would be the problem of reducing congestion on a specific route. The Plan Level Statements of Purpose and Need briefly identify the transportation needs or problems and describe the intended outcome of the project(s) that would meet these needs or solve the identified problems.

A more detailed, project specific **Project-Level Purpose and Need Statement** is written during the project delivery process and is contained in the Project Initiation Document (Project Study Report) and the subsequent environmental document.

RTPAs may wish to prepare Plan Level Statements of Purpose and Need during the development of the RTP for the following reasons:

1. To provide justification for the lead agency's projects in the RTIP
2. To justify expenditure of transportation funds to the public and the CTC
3. During project selection, to provide the rationale for selecting specific projects over other projects
4. To provide the foundation for Project Level Purpose and Need information in the environmental documents.
5. To provide consistent project justification from planning through project Implementation.

5.6 Air Quality and Transportation Conformity

Federal and State Clean Air Act

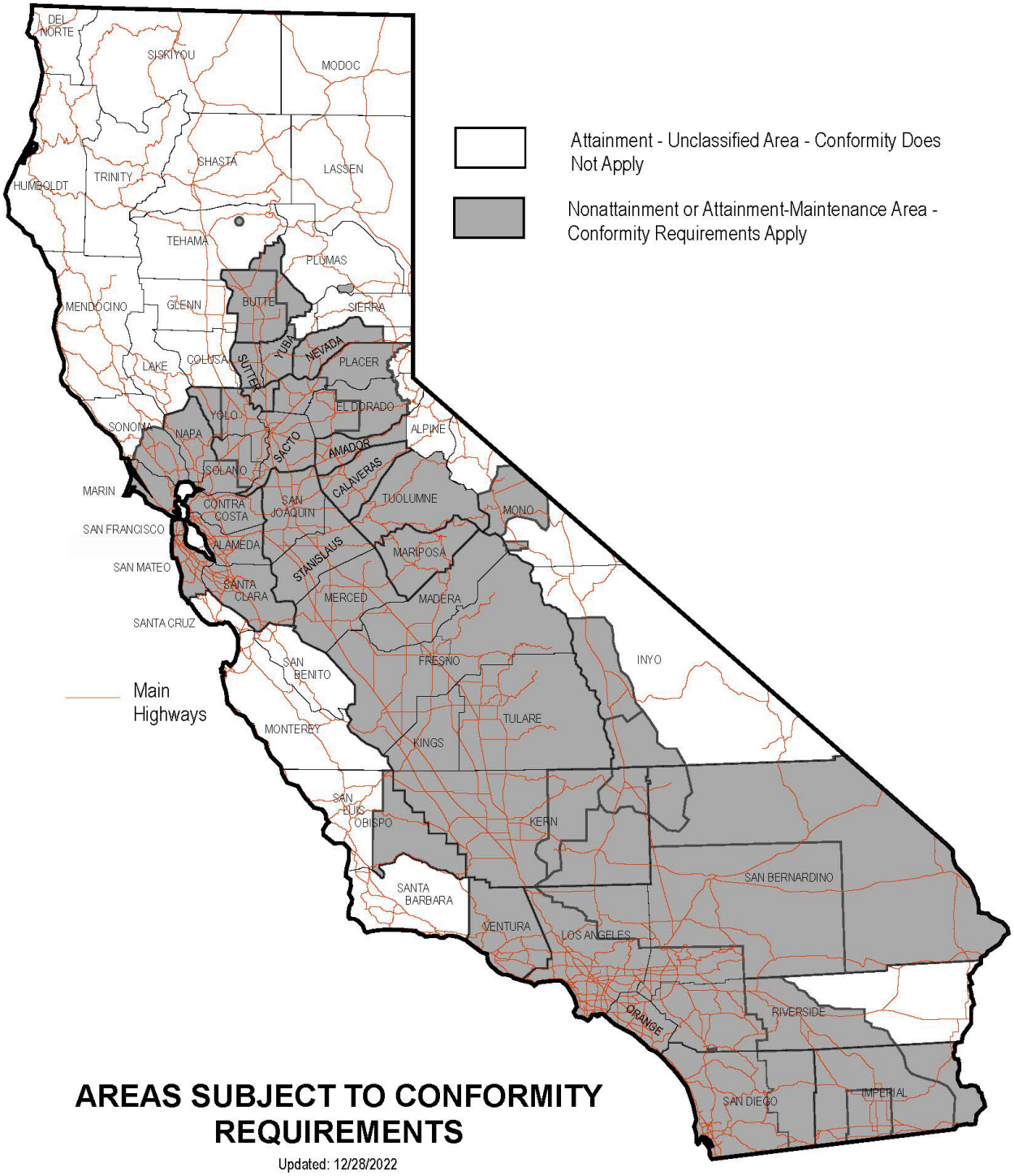
The Clean Air Act as amended in 1990 is the primary federal law that governs air quality conformity considerations. This law mandates the U.S. EPA to establish the standards for the concentrations of pollutants that can be in the air. The U.S. EPA must review the standards every five years and revise them as necessary to protect public health and welfare. These standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2). The SIP is the statewide plan for achieving the goals of the Clean Air Act and describes how the NAAQS will be met. The SIP has both statewide and regional components. The CARB is responsible for submitting the SIP to the U.S. EPA, and for developing and implementing statewide control measures such as those related to on-road mobile sources (vehicle emission controls). Local air pollution control and air quality management districts (APCD or AQMD) are responsible for regional control measures, which may also include measures that affect mobile sources (e.g., fleet rules, indirect source review requirements).

There is a California Clean Air Act in the Health and Safety Code that is generally similar in concept to the Federal Clean Air Act. Under the California Clean Air Act, CARB sets, and updates State air quality standards. The State air quality standards are usually

more stringent than the Federal, but the State air quality planning structure does not include the fixed attainment deadlines and conformity process found in the Federal program.

APCD or AQMD perform regional air quality planning in consultation with the RTPA, including development of on-road mobile source emission budgets that are part of the SIP required by the Federal Clean Air Act. APCDs and AQMDs are the main implementation agencies for stationary source emission control programs.

The U.S. EPA designates an area as "attainment" if the area meets the NAAQS mandated by the Clean Air Act. If the area does not meet the NAAQS, it is designated as a nonattainment area. The area must then submit an attainment plan showing how the area will meet the NAAQs. Once a nonattainment area attains a NAAQS, the area may develop a maintenance SIP and submit a re-designation request, the U.S. EPA can re-designate the area as a "maintenance" area. The shaded areas on the map below illustrate the areas of the State that have not attained, or have attained with a maintenance SIP, the NAAQS. All of California except Lake County fails to attain one or more of the State ambient air quality standards.


Attainment - Unclassified Area - Conformity Does Not Apply
Nonattainment or Attainment-Maintenance Area - Conformity Requirements Apply
Main Highways
DEL NORTE
SISKIYOU
MODOC
HUMBOLDT
TRINITY
SHASTA
LASSEN
TEHAMA
PLUMAS
MENDOCINO
GLENN
BUTTE
SIERRA
COLUSA
SUTTER
YUBA
NEVADA
PLACER
LAKE
YOLO
EL DORADO
SONOMA
NAPA
SACTO
AMADOR
ALPINE
SOLANO
CALAVERAS
MARIN
CONTRA COSTA
SAN JOAQUIN
TUOLUMNE
MONO
SAN FRANCISCO
ALAMEDA
STANISLAUS
MARIPOSA
SAN MATEO
SANTA CLARA
MERCED
MADERA
SANTA CRUZ
FRESNO
INYO
SAN BENITO
TULARE
MONTEREY
KINGS
SAN LUIS OBISPO
KERN
SAN BERNARDINO
SANTA BARBARA
VENTURA
LOS ANGELES
ORANGE
RIVERSIDE
SAN DIEGO
IMPERIAL
AREAS SUBJECT TO CONFORMITY REQUIREMENTS
Updated: 12/28/2022
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SIP Transportation Conformity Requirement

Transportation conformity is required by section 176(c) of the 1990 Federal Clean Air Act. Transportation conformity to a SIP means that on-road transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. In nonattainment and maintenance areas, federal regulations require that RTPs, FTIPs and Federally funded or approved highway and transit activities demonstrate transportation conformity. Under the 1990 Federal Clean Air Act Amendments, the U.S. DOT cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to the SIP (Clean Air Act Section 176 (c), codified in 42 U.S.C. 7506(c)). The U.S. EPA has issued extensive regulations covering how conformity is determined for transportation planning, programming, and projects in 40 CFR 93 Subpart A. Under the EPA regulations (40 CFR 93.101), the RTP's regional transportation conformity analysis must include all regionally significant transportation (road and transit) activities regardless of funding source.

RTP Conformity

Transportation conformity is intended to ensure that Federal funding and approval are given to those transportation activities that support the purpose and goals of the SIP. Conformity ensures that these transportation activities do not degrade air quality and that they support attainment of the NAAQS. For an RTPA within the boundary of an MPO, the MPO and the U.S. DOT (FHWA/FTA) have a responsibility to ensure that the RTP conforms to the SIP.

Transportation conformity requirements apply to all U.S. EPA designated non-attainment and maintenance areas. When areas are designated as non-attainment for the first time, or for a new NAAQS, a conformity determination must be made within one year of the effective date of the designation for non-attainment areas. This is done at the regional (RTP) level and at the project level, for federally funded non-exempt transportation projects. Some projects (e.g., safety projects) are exempt from conformity altogether, and some are exempt from regional emissions analyses (See 40 CFR 93.126 – 93.128).

Isolated rural nonattainment and maintenance areas (non-MPO) are not required to do a conformity analysis on the RTP; however, a project-level conformity determination must be done only when a non-exempt federal transportation project needs approval. Unlike MPO areas, there are no requirements to update conformity determinations for projects in isolated rural nonattainment and maintenance areas on a 4-year cycle, or to meet other conformity triggers as required in 40 CFR §93.104.

For more detailed information about transportation conformity please see the following key websites:

http://www.dot.ca.gov/hq/env/air/index.htm
http://www.epa.gov/otaq/stateresources/transconf/index.htm

Transportation Control Measures

The RTP shall discuss ways in which activities in the plan will conform to the SIP, including TCM implementation. To achieve consistency between the RTP and the SIP, all TCMs identified in the SIP and approved by U.S. EPA must be identified in the RTP by MPOs in areas subject to conformity requirements (Title 40 CFR Part 93.113).

The conformity analysis prepared for the RTP shall describe both completed TCMs and TCMs that are underway. TCMs that are included in the SIP must be implemented in a timely fashion. Implementation of the TCMs must be coordinated with the SIP implementation schedule. When there is a delay in TCM implementation, the conformity analysis document must describe the measure and the steps that the MPO is taking to address the delay. TCM projects must receive priority for funding.

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Chapter 6

RTP Contents

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Chapter 6 RTP Contents

6.1 Summary of RTP Components

The development of the RTP is based on state and federal statutory and regulatory requirements in addition to CTC policy direction. As per GC 65080, each RTPA shall prepare and adopt an RTP directed at achieving a coordinated and balanced regional transportation system including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation. In addition, the RTP shall be action oriented and pragmatic, considering both short-term (0-10 years) and long-term (10-20 years) periods. The RTP shall be an internally consistent document and shall include the following:

The Policy Element

The purpose of the Policy Element is to identify legislative, planning, financial and institutional issues, and requirements, as well as any areas of regional consensus. Consider referring to the CTP policy framework which provides goals and policies that can help with development of policies and strategies at the most regional level. The Policy Element presents guidance to decision-makers of the implications, impacts, opportunities, and foreclosed options that will result from implementation of the RTP. Moreover, the Policy Element is a resource for providing input and promoting consistency of action among state, regional and local agencies, including transit agencies, congestion management agencies, employment development departments, the California Highway Patrol, private and public groups, tribal governments, etc. California statutes state that each RTP shall (GC Section 65080 (b)) include a Policy Element that:

1. Describes the transportation issues in the region
2. Identifies and quantifies regional needs expressed within both short and long-range planning horizons (GC Section 65080 (b)(1)) and,
3. Maintains internal consistency with the Financial Element and fund estimates.

State law requires that the objectives shall (GC Section 65080 (b)(1)) be linked to short-range and long-range transportation implementation goals or horizons. Each objective should be consistent with the needs identified in the RTP as a means of strengthening the linkage between statewide system planning and ultimate project implementation. The RTP shall consider factors specified in Section 134 of Title 23 of the United States Code.

The Policy Element should clearly convey the region's transportation policies and supportive strategies and related land use forecast assumptions. These land-use assumptions consider the latest planning documents and associated policies of the local jurisdictions. As part of this Element, the discussion should: (1) relay how these policies were developed, (2) identify any significant changes in the policies from the previous plans and (3) provide the reason for any changes in policies from previous

plans. It should also explain implementation actions to support the Policy Element, and how the financial commitments are consistent with and support the land use pattern and goals of the RTP.

Although not required by law, RTPAs should identify a set of indicators that will be used to assess the performance of strategies in the RTP. In addition, the RTP should identify the criteria that the RTPA/County Transportation Commission used to select the transportation projects on the constrained and unconstrained project lists. More information for performance measurement is available in **Chapter 7**.

The Action Element

GC Section 65080 states that RTPs shall have an Action Element. The Action Element of the RTP must describe the programs and actions necessary to implement the RTP, including the SCS, and assigns implementation responsibilities. The action element may describe the transportation projects proposed to be completed during the RTP plan horizon and must consider congestion management activities within the region. All transportation modes (highways, local streets and roads, mass transportation, rail, maritime, bicycle, pedestrian and aviation facilities and services) are addressed. Additionally, the action element should highlight programs, policies, technical assistance, investments, or other actions to support strategies and goals in the plan. The action element is critical to providing clear direction about the roles and responsibilities of the RTPA and other agencies to follow through on the RTP's policies and projects. It consists of short and long-term actions that address regional transportation issues and needs. In addition, the Action Element should also identify investment strategies, alternatives, and project priorities beyond what is already programmed.

The Action Element is divided into two sections. The first section includes a discussion of the preparatory activities such as identification of existing needs, assumptions, and forecasting and potential alternative actions. The second section addresses the data and conclusions.

The Financial Element

The Financial Element is also statutorily required. The Financial Element is fundamental to the development and implementation of the RTP. It identifies the current and anticipated revenue sources and financing techniques available to fund the planned transportation investments described in the Action Element. The intent of the Financial Element is to define realistic financing constraints and opportunities. Finally, with this financing information, alternatives are developed and used by State and local decision-makers to determine which projects should be planned for funding.

There are six major components that constitute the Financial Element:

1. Summary of costs to operate and maintain the current transportation system

2. Estimate of costs and revenues to implement the strategies and projects identified in the Action Plan
3. Inventory of existing and potential transportation funding sources
4. List of candidate projects if funding becomes available
5. Potential funding shortfalls and,
6. Identification of alternative policy directions that affect the funding of projects.

GC Section 65080 (b)(4)(C) states that the RTPA or county transportation agency, whichever entity is appropriate, shall consider financial incentives for cities and counties that have resource areas or farmland, as defined in GC Section 65080.01, for the purposes of, for example, transportation investments for the preservation and safety of the city street or county road system and farm to market and interconnectivity transportation needs. The RTPA or county transportation agency, whichever entity is appropriate, shall also consider financial assistance for counties to address countywide service responsibilities in counties that contribute towards the GHG emission reduction targets by implementing policies for growth to occur within their cities.

It is very important that RTPs reflect the transportation needs of the specific region. There are State statutory content requirements for the Policy, Action, and Financial Elements of the RTP; however, there is flexibility in choosing a format for the presentation of this information. Most RTPAs use the categories of Policy, Action and Financial to organize their RTP.

Other RTP Contents

The RTP should also include the following:

1. Executive Summary – An Executive Summary of the RTP as an introductory chapter. The Executive Summary should provide a regional perspective and identify the challenges and transportation objectives to be achieved.
2. Reference to regional environmental issues and air quality documentation needs.
3. Discussion of types of potential environmental mitigation activities that might maintain or restore the environment that is affected by the RTP (refer to **Section 5.2** for Federal Environmental Requirements).

Requirements (Shall)
Federal: Title 23 CFR Part 450.324
State: California GC Section 65080

6.2 Financial Overview

Federal statute and regulations and California State statute requires RTPs to contain an estimate of funds available for the 20-year planning horizon. This discussion of financial information is fundamental to the development and implementation of the RTP. The

financial portions of the RTP identify the current and anticipated revenue sources and financing techniques available to fund the planned transportation investments described in other portions of the RTP. The intent is to define realistic financing constraints and opportunities. All projects, except illustrative projects i.e., unconstrained projects, must be fully funded in order to be included in the RTP. With this financing information, alternatives are developed and used by the MPO, local agencies and State decision-makers in funding transportation projects. During programming and project implementation the total cost of the project is refined and broken out by cost per phase.

Federal law requires each transportation plan and each TIP prepared by the RTPA to include a financial plan that demonstrates how the adopted Plan and TIP can be implemented. The Financial Plan should also indicate resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan and FTIP, identify innovative financing techniques to finance projects, programs, and strategies, and recommend any additional financing plans for needed projects and programs. The Federal statutory requirements are codified in Title 23 U.S.C. Section 134(i)(2)(C) and 134(j)(2)(B). Federal regulations pertaining to financial planning and constraint for statewide and metropolitan transportation plans and programs are codified in Title 23 CFR Part 450.

There are six major components that should be addressed in the financial portion of the RTP:

1. Projected Available Funds – The RTPA, public transit operators and the State shall cooperatively develop estimates of funds that will reasonably be available to support RTP implementation. All anticipated public and private financial resources available over the next 20 years, including estimated highway, local streets and roads, bicycle and pedestrian and transit funds, shall be identified. The financial plan shall include recommendations for additional financing strategies. Reasonably available new funding sources and strategies shall also be identified. All revenue estimates for the financial plan must use an inflation rate that reflects the "year of expenditure dollars" developed cooperatively by the RTPA, State and transit operators.

2. Projected Costs Takes into account all projects, programs, and strategies proposed for funding with Federal, State, local and private fund sources in developing the financial plan. Estimate of costs to implement the projects, programs, and strategies, identified in the RTP must be included. Both the revenue and construction cost estimates must use inflation rates to reflect "year of expenditure dollars" based on reasonable financial principles and information developed cooperatively by the RTPA, State and public transportation operators–.

3. Projected Operation and Maintenance Costs – The financial plan shall contain system level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways and public transportation. Planning practice examples in developing

the RTP financial plan would also include revenue sources for the operation and maintenance of local streets and roads as well as bicycle and pedestrian facilities. A summary of costs to operate and maintain the current transportation system should be included. This should be identified by mode and include the cumulative cost of deferred maintenance on the existing infrastructure. Financial plans that support the RTP process must assess capital investment and other measures necessary to ensure the preservation of:

A) The existing transportation system, including requirements for operational improvements
B) Resurfacing, restoration, and rehabilitation of existing and future major roadways, as well as operations, maintenance, modernization, and rehabilitation of existing and future transit facilities.

4. Fiscally Constrained List of Projects - Financially constrained list of candidate projects with the available funding (short and long-term). RTPAs are encouraged to provide the timing or year of construction for major investments, as practicable.

5. Fiscally Un-Constrained (Illustrative) List of Projects - Un-constrained (Illustrative) list of candidate projects if additional funding becomes available (short and long-term). The financial plan may include additional projects that would be included in the adopted transportation plan if additional resources were to become available.

6. Potential Funding Shortfall. The short and long-term needs for system operation, preservation, and maintenance can be enormous. Simply maintaining the existing system can demand a huge investment, while system expansion demands investments of a similar scale. At times, the combination of these competing demands can cause potential shortfalls to an RTPAs budget. To the extent there appear to be shortfalls, the RTPA must identify a strategy to address these gaps in funding prior to the adoption of a new RTP - or the amendment of an existing RTP. The strategy should include an action plan that describes the steps to be taken that will make funding available within the time frame shown in the financial plan and needed to implement the projects in the long-range transportation plan. There should be, among other things, a range of options to address projected shortfalls. The strategy may rely upon the RTPA's or transit operators' past record of obtaining funding. If it relies on new funding sources, the RTPA must demonstrate that these funds are reasonably expected to be available.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(f)(11)
State: California GC Section 65080(b)

6.3 Fiscal Constraint

Fiscal constraint is the demonstration of sufficient funding (Federal, State, local and private) to operate and maintain transportation facilities and services and to implement planned and programmed transportation system improvements. Fiscal constraint can also be thought of as the description of fully funded projects in the RTP based on the projected available revenues during the 20 plus year planning horizon.

Title 23 CFR Part 450.104 provides the following definition of fiscal constraint or fiscally constrained: "(it) means that the metropolitan transportation plan, TIP, and STIP includes sufficient financial information for demonstrating that projects in the metropolitan transportation plan, TIP and STIP can be implemented using committed, available or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained. For the TIP and the STIP, financial constraint/fiscal constraint applies to each programming year. Additionally, projects in air quality nonattainment and maintenance areas can be included in the first two years of the TIP or STIP only if funds are 'available' or 'committed'."

To support air quality planning under the 1990 Clean Air Act Amendments, a special requirement has been placed on air quality nonattainment and maintenance areas, as designated by the U.S. EPA. Specifically, projects in air quality nonattainment and maintenance areas can be included in the first two years of the FTIP only if funds are "available or committed" (Title 23 CFR Part 450.326(k)). Available funds include those derived from an existing source of funds dedicated to or historically used for transportation purposes.

For Federal funds, authorized and/or appropriated funds and the extrapolation of formula and discretionary funds at historic rates of increase are considered "available." Committed funds include funds that have been bound or obligated for transportation purposes. For State funds that are not dedicated to or historically used for transportation purposes, only those funds over which the Governor has control may be considered as "committed." For local and private sources not dedicated to or historically used for transportation purposes, a commitment in writing/letter of intent by the responsible official or body having control of the funds constitutes a "commitment." Additionally, EPA's transportation conformity regulations specify that an air quality conformity determination can only be made on a fiscally constrained RTP and FTIP (Title 40 CFR Part 93.108). New funding for RTP projects from a proposed gas tax increase, a proposed regional sales tax, or a major funding increase still under consideration would not qualify as "available or committed" until it has been enacted by legislation or referendum i.e., the period of time between the sunset date of the current regional sales tax and before the next legislative or referendum action to restore or increase funding. Therefore, nonattainment and maintenance areas may rely on existing revenue, newly approved tax revenue, or other newly approved revenue sources for the first two years of the FTIP.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(f)(11)

State: California GC Section 65080(b)

6.4 Listing of Constrained and Un-constrained Projects

In addition to the current list of financially constrained projects identified in the RTP, each Plan should contain a list of needed unconstrained projects (Illustrative projects). Illustrative projects are additional transportation projects that may (but is not required to) be included in the RTP if reasonable additional resources were to become available. This unconstrained list will identify projects that are recommended by the RTPA without a funding source identified. The list should be included separately from the financially constrained project list. It is also preferred that projects on the unconstrained list be identified by transportation corridor within the region.

The following is accomplished by including a list of regionally desired un-funded (Illustrative) transportation projects in the RTP:

1. Identifies projects that could be funded, should additional funding become available.
2. Allows for a more accurate determination of overall transportation needs.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(f)(11) Requires a fiscally constrained list of projects.

Recommendations (Should)
Federal: Title 23 CFR Part 450.324(f)(11)(vii) For illustrative purposes, the list of projects may include additional projects if an additional source of funds is located.

6.5 Revenue Identification and Forecasting

Revenue forecasts for RTPs can consider new funding sources that are "reasonably expected to be available." New funding sources are revenues that do not currently exist or that may require additional steps before the RTPA, or transit agency can commit such funding to transportation projects. As codified in federal regulations, strategies for ensuring the availability of these planned new revenue sources must be clearly identified. Future revenues may be projected based on historical trends, including consideration of past legislative or executive actions. The level of uncertainty in projections based on historical trends is generally greatest for revenues in the "outer years" (4 years or more) of an RTP (23 450.324(f)(11)(v)).

According to Title 23 CFR Part 450.324(f)(11)(iv), the RTPA shall consider all projects and strategies proposed for funding under Title 23 U.S.C.; Title 49 U.S.C. Chapter 53; other Federal funds; State transportation funds; local funding sources and private sources of

funds for transportation projects. Funding estimates contained in the RTP must use an inflation rate to reflect "year of expenditure dollars".

The estimated revenue by existing revenue source (local, State, Federal and private) available for transportation projects shall be determined and any shortfalls identified. Proposed new revenues and/or revenue sources to cover shortfalls shall be identified, including strategies for ensuring their availability for proposed investments. Existing and proposed revenues shall cover all forecasted capital, operating, and maintenance costs. All cost and revenue projections shall be based on the data reflecting the existing situation and historical trends. For nonattainment and maintenance areas, the financial plan element shall address the specific financial strategies required to ensure the implementation of projects and programs (TCMs) to reach air quality compliance

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(f)(11)
State: California GC Section 65080(b)

6.6 Estimating Future Transportation Costs

Federal regulations require that (Title 23 CFR Part 450.324(f)(11)(iv)), costs of future transportation projects must use "year of expenditure dollars" rather than "constant dollars" in cost and revenue estimates to better reflect the time-based value of money. This is an MPO requirement; however, RTPAs are encouraged to ensure project costs identified in the RTP are in year of expenditure dollars. This is particularly crucial for large-scale projects with construction/implementation dates stretching into the future.

Reporting the costs in year of expenditure dollars will provide the proper context to express a more realistic estimate of future construction costs. After cost estimates are prepared for the RTP and FTIP, the costs should be expressed in year of expenditure dollars. This can be done by assigning an inflation rate per year to the proposed midpoint of construction. Make certain that the selected year of expenditure reflects a realistic scenario, considering project planning and development durations, as well as construction. Inflation rates may be different for specific cost elements (e.g., construction vs. right-of-way). The RTP should clearly specify how inflation is considered in the estimate and clearly State that the estimate is expressed in year of expenditure dollars. Consider multiple sources for determining the inflation rate, including nationwide and local references. Include consideration of any locality-specific cost factors that may reflect a growth rate significantly in excess of the inflation rate, such as land acquisition costs in highly active markets. The inflation rate(s) should be based on sound, reasonable financial principles, and information, developed cooperatively by the RTPA and transit agencies. To ensure consistency, similar financial forecasting approaches ideally should be used for both the RTP and FTIP. In addition, the financial forecast approaches, assumptions, and results should be clear and well documented.

Revenues and related cost estimates for operations and maintenance should be based on a reasonable, documented process. Some accepted practices include:

Trend analysis - A functional analysis based on expenditures over a given duration, in which costs or revenues are increased by inflation, as well as a growth percentage based on historic levels. This analysis could be linear or exponential. When using this approach, however, it is important to be aware of new facilities or improvements to existing facilities. Transit operations and maintenance costs will vary with the average age of the bus or rail car fleet.

Cost per unit of service – Examples include lane-mile costs; centerline mile costs; traffic signal cost; transit peak vehicles by vehicle type; revenue hours; and vehicle-miles by vehicle type.

Regardless of the methodology employed, the assumptions should be adequately documented by the RTPA and transit agency. Estimating current and reasonably available new revenues and required operations and maintenance costs over a 20-year planning horizon is not an exact science. To provide discipline and rigor, RTPAs and transit operators should attempt to be as realistic as possible, as well as ensure that all costs assumptions are publicly documented.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(f)(11)
State: California GC Section 65080(b)(4)(B)

Recommendations (Should)
Federal: Title 23 CFR Part 450.324(f)(11)(v) authorizes the option to use aggregate cost ranges or bands in the outer years of the RTP.

6.7 Asset Management

Maintaining California's transportation infrastructure in a state of good repair is a continuous and on-going challenge. The goal of asset management is to minimize the life-cycle costs for managing and maintaining transportation assets, including roads, transit, bridges, tunnels, runways, rails, and roadside features.

The American Association of State Highway and Transportation Officials (AASHTO) define asset management as:

> "*A strategic and systematic process of operating, maintaining, upgrading, and expanding physical assets effectively through their life cycle. It focuses on business and engineering practices for resource allocation and utilization, with the objective of better decision making based upon quality information and well-defined objectives.*"

Through the use of asset management systems, engineering and economic analysis, and other tools, RTPAs and transit operators can more comprehensively view the big picture and evaluate collected data before making decisions as to how specific resources should be deployed. Asset management principles and techniques should be applied throughout the planning process, from initial goal setting and long-range planning to development of the TIP and then through operations, preservation, and maintenance.

RTPAs should ensure the transportation system is managed to meet both current and future condition and performance demands and that expenditures are optimal. Asset management principles and techniques are valuable tools that can be applied by an RTPA and result in more effective decision making. The RTPA role in a successful asset management program includes defining performance targets for assets through public involvement, serving as a repository for asset data, and promoting standard data collection technology applications, and making planning and programming decisions to make progress toward established goals.

RTPAs **are encouraged to support** progress toward the Transportation Performance Management goals established by the State by evaluating the proposed project outcomes relative to deterioration/degradation over a future time period. The following are the benefits of applying transportation asset management during the planning process:

1. Maximize transportation system performance.
2. Improve customer satisfaction.
3. Minimize life-cycle costs.
4. Mitigate system vulnerabilities.
5. Match service provided to public expectations.
6. Make more informed, cost-effective program decisions and
7. Better use of existing transportation assets.

Additional information is available from the FHWA at:

http://www.fhwa.dot.gov/infrastructure/asstmgmt/tpamb.cfm

Requirements (Shall)
Federal: 23 CFR Part 490 establishes limitations on federal funding flexibility if the aggregate bridge condition in California does not meet certain minimum conditions for National Highway System (NHS) bridges. Caltrans or the appropriate entity shall monitor the current structurally deficient bridge deck area and make the necessary investment decisions that result in less than 10% of the agencies' NHS bridge deck area being structurally deficient.

Recommendations (Should)
Federal: Title 23 CFR Part 450.306(e) - MPOs, States, and public transportation operators may apply asset management principles and techniques in establishing planning goals, defining TIP priorities, and assessing transportation investment decisions.
State: None

Multi-Modal Discussion

The RTP is the key document prepared by the RTPA that reflects future plans of the transportation system for the region. This future vision includes all modes of transportation and is one of the key functions of the RTP.

It is also important for RTPAs to integrate modal considerations to enable the development of a complete and connected multimodal transportation system. As modes often overlap (e.g., transit vehicles and private vehicles use the same modes, and people and goods use multiple modes), consider how all transportation modes interact with one another, and how improvements in one mode can benefit the entire transportation system.

Title 23 CFR Part 450.324(f)(2) requires that RTPs address both existing and proposed transportation facilities such as major roadways, transit lines (both rail and primary bus routes), multimodal and intermodal connector facilities, pedestrian walkways, and bicycle facilities.

California GC Section 65080(a) states that transportation planning agencies shall prepare and adopt an RTP directed at achieving a coordinated and balanced regional transportation system that includes mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation facilities.

6.8 State Highway System

The following should be considered when discussing the State Highway System in the RTP, as appropriate:

1. An overview of the primary highway system within the region
2. National and State highway system
3. Any corridor preservation processes for possible future transportation projects (i.e., historic or abandoned highways
4. Maintenance of State highways
5. Data collection and other infrastructure requirements for Intelligent Transportation Systems (ITS)
6. Unmet highway needs
7. Consider California Transportation Plan (CTP) policy suggesting strategic investing to optimize performance
8. Consider CTP policy suggesting the application of sustainable preventative maintenance and rehabilitation strategies
9. Consider investing in High Occupancy Vehicle/High Occupancy Toll (HOV/HOT)-related emerging technologies and promoting the use of zero-emission vehicles on the highway network to reduce GHG emissions
10. Consider investing strategically to advance widespread transportation electrification and the supporting charging infrastructure
11. Consider criteria pollutant emissions from highways, and their impact on adjacent communities

12. Infrastructure needs for Connected, Zero-Emission Autonomous Vehicles
13. Historical highway impacts on communities and potential for Reconnecting Communities projects
14. Transit service that operates on the State Highway System and opportunities for on-system infrastructure improvements to make transit more comfortable and reliable.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(b) requires short and long-range strategies for an integrated multimodal transportation system.
State: GC Section 65080(a) requires that the RTP shall be directed at achieving a coordinated and balanced regional transportation system.

6.9 Local Streets and Roads

Local streets and roads are critical to provide an interconnected, multi-modal transportation system where every trip begins and ends. Investment in local streets and roads is an investment in access to homes, jobs, and other key destinations, public safety, economic growth, goods movement, and farm to market needs. According to 2021 California Public Road Data compiled by Caltrans Division of Research, Innovation & System Information, counties, and cities maintain 86 percent of the maintained miles within the State of California and carry 45 percent of the total annual miles of vehicle travel. The condition of local streets and roads continue to deteriorate due to the funding shortfalls and will be further challenged by the escalating repair costs in future years. Adequately investing in the local system is critical to protect the public's current investment. The local system is important in supporting the goals of climate change resilience and mitigation and building sustainable communities, as local streets and roads serve as the right-of-way for transit, bicycle, and pedestrian travel.

The section of the RTP discussing local streets and roads should consider the following:

1. The preservation needs for the local road system, including but not limited to pavement and essential components to support travel by bicycle, bus, pedestrian, or automobile (including the unmet need for maintaining and preserving the existing local streets and road, public transit, biking and pedestrian transportation system)
2. Bi-annual Data collection and periodic collaborative efforts to update system-wide local streets and road preservation needs (including deferred maintenance)
3. Encouraging all agencies to utilize Pavement Management Software (PMS) in their data collection efforts
4. The benefits of achieving Best Management Practices (BMPs) for the local streets and roads and maintaining them at that level
5. The issue of declining local streets and roads maintenance revenues in connection with rising maintenance costs

6. System preservation assessments such as bridges, safety, traffic signals, transit stop, signage, lane and crosswalk striping, sidewalks, curb ramps, lighting, drainage, landscaping, and other elements within the road right-of-way to support a functioning, resilient, and integrated multi-modal system and,
7. The benefits of active transportation and how the RTP supports active transportation planning and achieving SB 375 goals.

References

1. 2021 California Public Road Data – Statistical Information derived from the Highway Performance Monitoring System. Prepared by Caltrans Division of Research, Innovation & System Information. Available online at: http://www.dot.ca.gov/hq/tsip/hpms/datalibrary.php

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(b) requires short and long-range strategies for an integrated multimodal transportation system.
State: GC Section 65080(a) requires that the RTP shall be directed at achieving a coordinated and balanced regional transportation system.

6.10 Transit

Public transit plays a key role in the regional effort to reduce traffic congestion, VMT and vehicle emissions particularly in urbanized areas. Transit systems also play an important role in the mobility for those who are unable to drive, including youth and older adults, as well as low-income individuals, and people with disabilities. Given these reasons, it is crucial for RTPAs to engage in a continual and comprehensive dialogue with the transit operators within their region. The California Transportation Plan 2050 and CARB's 2022 Scoping Plan highlight the positive impacts of public transportation and suggests the integration of multimodal transportation and land use development which can help establish areas within regions that can be possible locations for Transit Oriented Developments (TODs).

The section of the RTP addressing mass transportation issues (including regional transit services and rail systems) should address:

1. Identification of passenger transit modes within the region (bus, light and heavy rail, etc.)
2. Integration with transit, highway, street, and road projects (including identification of priorities)
3. Implementation plans, operational strategies, and schedule for future service (including construction and procurement)
4. Operational integration between transit fleets, and other modes (passenger rail, aviation, taxis, etc.)
5. Summation of the short- and long-range transit plans along with the capital finance plans for the 20-year period of the RT

6. Short and long-range transit plans and capital finance plans for the 20-year RTP period
7. Inventory of bus fleets by fuel type (diesel, natural gas, and other alternative fuels)
8. Unmet transit needs
9. Urban and commuter rail project priorities
10. ITS elements to increase efficiency, safety, and level of service
11. Integration with local land use plans that could increase ridership
12. A measure of transit capacity utilization for peak and off-peak service to evaluate service effectiveness; and
13. Integration with micro-mobility modes of transportation and other first and last mile considerations.

23 U.S.C. 135 requires RTPs to include transportation and transit enhancement activities, including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated, including transportation alternatives, as defined in 23 U.S.C. 101(a), and associated transit improvements, as described in 49 U.S.C. 5302(1), as appropriate. Since May 27, 2018, an RTPA may not adopt an RTP that has not been developed according to the provisions of 23 CFR § 450.340 as specified in the Planning Final Rule. RTPAs are encouraged to communicate with Caltrans and FHWA/FTA to discuss schedules for RTP adoption.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(b) requires short and long-range strategies for an integrated multimodal transportation system. 23 CFR 450.325(f)(8) is an added requirement for the RTP pursuant to 23 U.S.C. 135 to include consideration of the role that intercity buses play in reducing congestion, pollution, and energy consumption.
State: GC Section 65080(a) the RTP shall be directed at achieving a coordinated and balanced regional transportation system.

6.11 Bicycle and Pedestrian

Biking and walking promote a healthy lifestyle and reduces environmental impacts. The use of bicycles and walking is an important consideration during the planning process. Higher levels of physical activity are associated with well-connected transportation networks that are coordinated with land use development. The CTP acknowledges that viable and equitable multimodal choices are created through Complete Streets and high-quality transit access in communities. The CTP can be a helpful resource for RTPAs to refer to during their RTP development. Additional information regarding the Complete Streets planning process, which emphasizes bicycle and pedestrian accessibility to destinations and circulation, is available in

Section 2.7. The RTP section discussing bicycle and pedestrian issues should identify the following:

1. A well-connected transportation network within the region that includes routes with all types of bicycle and pedestrian facilities on local streets which provide trips to destinations
2. Policies, plans, and programs used to promote the usage of bikes and walking
3. Transit and rail interface with bicyclists and pedestrians
4. Unmet bicycle and pedestrian needs and,
5. And where appropriate, existing and potential California Coastal Trail (CCT) network segments and linkages, as well as gaps and related coastal access trail needs.

AB 1396 – California Coastal Trail (CCT)

GC Section 65080.1 requires transportation planning agencies whose jurisdictions include a portion of the CCT (or property appropriate or designated for the coastal trail) to coordinate with specified agencies regarding development of the coastal trail. The law also requires that RTPs include provisions for the CCT. As RTPs are updated, the CCT provisions from each respective certified Local Coastal Program Land Use Plan's policies, programs and maps should be integrated into the RTP update.

Provisions for the CCT should include identification of existing, interim, and potential trail network segments and linkages as well as gaps and related coastal access trail needs. Coastal access trail needs could include identification of accommodations for non-motorized transportation; critical linkages to parking, bicycle racks, restrooms, and other support facilities; and connections to CCT trailheads and other interconnected local and regional trail systems. While siting goals for the CCT are to locate it as close to the sight, sound, and scent of the ocean as possible, any interim or necessary trail alignment near motorized traffic should provide for adequate separation and transportation improvements providing crossings over streams and rivers that could connect gaps in the CCT should include safe bike and pedestrian features. Prioritization of projects within RTPs should ensure connection of the CCT across identified critical gaps in the Coastal Trail system.

Additional information and maps regarding the California Coastal Trail and coastal access points are available from the State Coastal Conservancy and the California Coastal Commission at:
http://scc.ca.gov/projects/california-coastal-trail/
www.coastal.ca.gov/access/ca-coastal-trail/coastal-trail.pdf
www.yourcoast.org
https://the-california-coastal-trail-1-coastalcomm.hub.arcgis.com/

Requirements (Shall)
State: GC Section 65080(a) requires that the RTP shall be directed at achieving a coordinated and balanced regional transportation system.
GC Section 65080.1 requires that transportation planning agencies along the coast whose boundaries include a portion of the California Coastal Trail (CCT) or property

appropriate or designated for the trail, coordinate with appropriate agencies including the State Coastal Conservancy, California Department of Parks and Recreation, the California Coastal Commission and Caltrans regarding development of the CCT, and clearly include provisions for the CCT Trail in their RTP. Caltrans expects these provisions to include mapping of the existing CCT, prioritizing gaps to be connected in the CCT system, and identifying funding resources available for the planning and construction of bridging the prioritized gaps.

6.12 Goods Movement (Maritime/Rail/Trucking/Aviation)

Developing, operating, and maintaining a robust goods movement transportation system is vital to California's economy. California's proximity on the Pacific coast and major maritime Port facilities are a key factor that makes the state a major national and international shipping center. With the wide range of goods being shipped, and the complexity of origins and destinations, the transportation system that supports goods movement within California must be multimodal. The goods movement system spans the entire state providing millions of jobs to California's workers. The needs for urban and rural goods movement infrastructure can differ between, and within, regions. However, throughout the state, goods movement has both positive and negative impacts. Through the regional planning process, RTPAs can create strategies for improving the regional goods movement transportation system so positive impacts (e.g., job creation, access to goods and product diversity, improvements to truck speed and reliability, freight bottleneck relief) are maximized and negative impacts (e.g., land use conflicts, air pollution, roadway congestion and delays, disproportionately high and adverse impact on low income or disadvantaged communities) are minimized.

RTPAs must plan for the goods movement infrastructure in the same way they plan the transportation infrastructure for the movement of people to support projected population growth and economic development. Goods movement planning is in the public interest because of the potential benefits to the regional economy, environment, public health, and community well-being. Improvements to the goods movement transportation system can result in co-benefits to the overall system when California's economic, equity, and environmental goals are simultaneously considered. For example, as a rail improvement project could ideally take trucks off the highway, congestion could be reduced and potentially reduce GHG emissions. The CTP 2050 recognizes the importance of enhancing freight mobility, reliability, efficiency, and global competitiveness, which is why RTPAs should consider deploying, as appropriate and feasible, cost-effective technologies that can help expedite goods movement and reduce congestion at our ports, including seaports, airports, and land ports of entry. A seamless, efficient, low-emitting, and well-maintained multi-modal transportation system is paramount to the state's economic strength and its residents' quality of life. Planning this system involves a broad base of stakeholders, including affected community representatives, local organizations, Native American tribal governments and tribal community leaders, agencies in charge of seaports and airports, trucking associations,

Class I and short line railroads, freight carriers and shippers, local air districts, electric and gas utilities, and multiple State agencies (e.g., CARB, California Energy Commission, Caltrans, California Public Utilities Commission).

The RTP section discussing goods movement should include the following:

1. A discussion of the role of goods movement within the region (the types and the magnitudes of goods moved through the region and their economic importance)
2. An inventory of all major highway and roadway routes consistent with the National Highway Freight Network, including critical urban and rural freight corridors
3. An inventory of seaport facilities, air cargo facilities, freight rail lines, and major warehouses and freight transfer facilities within the region
4. An analysis of the efficiency of the overall freight transportation system capacity, including existing land side freight transportation infrastructure (e.g., bottlenecks, gaps, etc.) and identification of expansion or improvement needs at seaport and airport facilities that handle cargo and issues regarding land side access to these facilities
5. Specific projections, by mode, of future freight demand
6. Identification of freight-related highway and roadway improvement needs, for example operational improvements, truck parking, zero emission/near zero emission vehicle infrastructure, and others
7. Identification of expansion or improvement needs for freight rail lines within the region
8. Identification of intermodal connection issues between different modes (e.g., freight, rail, and seaport facilities), as applicable
9. Identification of any existing and planned inland trade ports and any connectivity network issues for those ports, if applicable
10. Identification of U.S.A./Mexico border crossing issues, if applicable
11. Discussion of ITS and advanced technology opportunities for goods movement, with the aim of maximizing operational efficiencies and minimizing emissions
12. Identification of opportunities or innovations that improve freight efficiency and support the State's freight system efficiency target as established in the California Sustainable Freight Action Plan
13. Identification of opportunities or innovations that reduce GHG emissions and criteria air pollutant emissions associated with freight; and
14. Discuss current and future climate impacts on our goods movement facilities

California Freight Mobility Plan

The state's California Freight Mobility Plan (CFMP) is a policy and action document that supports the improvement of California's goods movement infrastructure. The California Freight Mobility Plan administers the immediate and long-range planning activities and capital investments by the state with respect to freight movement. The CFMP supports environmental stewardship strategies with goals to minimize, and where possible, eliminate toxic air contaminants, criteria pollutants and GHGs emitted from freight

vehicles, equipment, and operations. RTPAs are encouraged to review the CFMP for guidance and ensure consistency while addressing goods movement within their RTPs.

Requirements (Shall)
Federal: Title 23 CFR Part 450.324(b) requires short and long-range strategies for an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods. Title 23 CFR Part 450.324(f)(1) states that the RTP shall include the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan, and Title 23 CFR Part 450.324(f)(3) states that the RTP shall include operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
State: GC Section 65080(a) requires that the RTP shall be directed at achieving a coordinated and balanced regional transportation system.

Recommendations (Should)
Federal: The U.S. DOT established a National Multimodal Freight Network to:

- Assist States in strategically directing resources toward improved system performance for the efficient movement of freight on the Network
- Inform freight transportation planning
- Assist in the prioritization of Federal investment; and
- Assess and support Federal investments to achieve the goals of the National Multimodal Freight Policy established in 49 U.S.C. 70101 and of the National Highway Freight Program described in 23 U.S.C. 167.

The National Highway Freight Network (NHFN) includes the following subsystems of roadways:

- **Primary Highway Freight System (PHFS):** This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data. The network consists of 41,518 centerline miles, including 37,436 centerline miles of Interstate and 4,082 centerline miles of non-Interstate roads.
- **Other Interstate portions not on the PHFS:** These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities. These portions amount to an estimated 9,511 centerline miles of Interstate, nationwide, and will fluctuate with additions and deletions to the Interstate Highway System.
- **Identification and Designation of Critical Urban Freight Corridors (CUFCs):** These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.
- **Identification and Designation of Critical Rural Freight Corridors (CRFCs):** These are public roads not in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.

6.13 Aeronautics

Both commercial and general aviation are a key component of California's transportation infrastructure and play a key role in maintaining California's economic competitiveness. California's aviation system consists of 241 public-use airports made up of both commercial and general aviation airports, 62 special-use airports, 359 hospital and/or corporate, police, fire, or private heliports, 22 military/NASA bases, and one joint-use facility.

Aviation improves mobility options for work and pleasure travel, provides overnight freight options, generates tax revenue, saves lives through emergency response, medical, and firefighting services, produces air cargo revenues, and generates profits for the State's tourism industry.

RTPAs are encouraged to consult the appropriate airport land use planning document during RTP development. An Airport Land Use Compatibility Plan (ALUCP) provides for the orderly growth of an airport and the area surrounding the airport within the jurisdiction of the Airport Land Use Commission (ALUC), excluding existing land uses. Its primary function is to safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. This is generally accomplished by examining land uses within specific airport safety zones.

Requirements (Shall)
State: California GC Section 65080(a) states that "Each transportation planning agency…shall prepare and adopt a RTP directed at achieving a coordinated and balanced regional transportation system, including…aviation facilities and services." GC Section 65081.1(b) requires consideration of highway, rail, and mass transportation and states that, "The program shall address the development and extension of mass transit systems, including passenger rail service, major arterial, and highway widening and extension projects, and any other ground access improvement projects the planning agency deems appropriate."

Recommendations (Should)
State: RTPAs should consider the needs of public-use airports, special-use heliports and military airfields when planning transportation and infrastructure projects (i.e., by consulting with the sponsors) to further sustainable and compatible land use and circulation patterns.

Programming/Operations

6.14 Transportation Systems Management and Operations (TSMO)

The RTP should address TSMO to improve the performance of the existing regional transportation system through enhanced institutional, technical, and operational

solutions. TSMO utilizes system monitoring or data to evaluate options that maximize the safety and mobility of people and goods. Examples of TMSO activities can include:
(a) Traffic incident management,
(b) Multi-modal travel information services,
(c) Roadway weather information (RWIS),
(d) corridor management,
(e) Traffic control device timing or optimization, and (f) transportation demand management strategies.

Although operational and management strategies may be implemented on a sub-regional, area-wide, or project-specific basis, those strategies included in an RTP should typically be those that also have importance on a regional level.

RTPs shall include existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities and connectors) that should function as an integrated regional transportation system with emphasis on those facilities that serve important national and regional needs.

If applicable, the locally preferred alternative selected from an Alternative Analysis under the FTA's Capital Investment Grant Program (Section 5309) needs to be adopted as part of the RTP as a condition for funding under Title 49 U.S.C. Section 5309.

Requirements (Shall)
Federal: Title 23 U.S.C. Section 134 and Title 23 CFR Part 450.324(f)(5) requires strategies for improving the regional transportation system and reducing congestion.

6.15 Coordination with Programming Documents

The Federal Transportation Improvement Program (FTIP) is a four-year prioritized listing of federally funded and non-federally funded regionally significant transportation projects that is developed and formally adopted by an MPO as part of the metropolitan transportation planning process. MPOs work cooperatively with public transportation agencies as well as other local, state, and federal agencies to propose projects for inclusion in the FTIP. Each project or project phase in the FTIP must be consistent with the approved RTP. The FTIP must be updated at least every two years.

Projects included in the FTIP may include projects from two other State programming documents: (1) The purpose of the SHOPP program is to maintain safety, operational integrity and rehabilitation of the State Highway System. (2) The STIP is a five-year capital improvement program of transportation projects on and off the State Highway System funded with revenues from the State Highway Account and other sources. Caltrans manages the SHOPP program, while the CTC manages the STIP. The STIP is a five-year document and is updated every other year. The SHOPP is a ten-year document and is adopted by the CTC in August of each odd numbered year.

The Federal Statewide Transportation Improvement Program (FSTIP) is a compilation of the FTIPs prepared by the 18 MPOs. It also includes projects in rural areas of the state not represented by an MPO (the Department programs projects in the FSTIP for the rural areas). The FSTIP is prepared by Caltrans and submitted to the FHWA and FTA for approval. The FSTIP covers a four-year period and under state law, must be updated at least every two years. Federally funded projects or non-federally funded regionally significant projects cannot be added to the FSTIP unless they are included in the RTP. Specific requirements for the development and content of the FSTIP are contained in Title 23 CFR Part 450.218.

Requirements (Shall)
Federal: Title 23 CFR Part 450.218(k) states that each project or project phase included in the STIP shall be consistent with the long-range statewide transportation plan developed under Title 23 CFR Part 450.214.

6.16 Regionally Significant Projects

Title 40 CFR Part 93.101 defines regionally significant projects as follows:

> *"Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guide way transit facilities that offer an alternative to regional highway travel."*

All regionally significant projects must be included in an RTP air quality conformity determination by the RTPA in coordination with Caltrans and FHWA regardless of its funding source. These regionally significant projects shall be specifically identified and noted in the project-listing portion of RTP.

Requirements (Shall)
Federal: Title 23 CFR Part 450.326(f) requires all regionally significant projects be included in the TIP regardless of if the projects are to be funded with federal funds or not.

6.17 Regional ITS Architecture

Intelligent transportation systems (ITS) encompass a broad range of wireless and wire line communications-based information and electronics technologies. When integrated into the transportation system's infrastructure, and in vehicles themselves, these technologies relieve congestion and improve safety. ITS is one way to increase the efficiency, safety, and security of a transportation system. ITS involves the use of advanced computer, electronic and communications technologies and emphasizes *enhancing travel on existing infrastructure* (highways, streets, bridges, trains). Some examples of ITS technologies include advanced traffic signals, roadway and weather monitoring stations, bus and maintenance vehicle location systems, electronic roadside information signs and automated vehicle control systems.

The National ITS Program was established by ISTEA in 1991. Further federal regulations focused on extending ITS to regional planning efforts and training transportation professionals to deal with the range of issues associated with the adoption of advanced transportation technology. It provides a definitive and consistent framework to guide the planning and deployment of ITS. The program facilitates the ability of jurisdictions to operate collaboratively and to harness the benefits of a regional approach to transportation challenges. The vision for the National ITS Architecture program is to continue the evolution of the architecture to incorporate technological developments and evolving user needs with a particular focus on connected vehicle requirements. The program will also provide deployment support for public agencies to assist with development, maintenance, and improvement of their regional ITS architectures along with compliance with applicable FHWA regulations.

When updating RTPs, RTPAs should be sure to comply with current federal regulations. Title 23 CFR Part 450.306(g) states, "*The metropolitan transportation planning process shall, to the maximum extent practicable, be consistent with the development of applicable regional intelligent transportation systems (ITS) architectures, as defined in Title 23 CFR Part 940.*"

Title 23 CFR Part 940 establishes the protocol for developing a regional architecture plan that, in turn, conforms to national ITS architecture standards. The ITS regulations define the responsibilities for creating and maintaining Regional ITS Architecture (RA) frameworks. Architecture maintenance is the process of updating a regional architecture with references to new projects and activities, new stakeholders; additions, retirement, or replacement of equipment; and changes to standards and protocols. Maintenance is an ITS program responsibility under Title 23 CFR Part 940.

The intent of the federal ITS requirement is to encourage reciprocal consistency. Title 23 CFR Part 940.5, Intelligent transportation system architecture and standards, calls for the "development of the regional ITS architecture (to) be consistent with the (Metropolitan) transportation planning process…". It is important to coordinate the general RTP planning efforts with plans for specific projects that entail the use of ITS technology. These 'nested' plans should be developed in an open forum, and they should be

consistent. The resultant plans would reflect consideration of both documents during the planning process.

The National ITS Architecture and other related resources can be found at the U.S. DOT Architecture website:

https://www.its.dot.gov/index.htm

Requirements (Shall)
Federal: Title 23 CFR Part 450.306(g) states that the RTP shall (to the extent practicable) be consistent with the development of applicable regional ITS architectures as defined in Title 23 CFR Part 940.

6.18 Future of Transportation and New Technology

While maintaining the current transportation network is often a priority for RTPAs, RTPAs need to be planning for a future in which technology will transform the way that people move and live. This section provides a summary of federal and State legislation to prepare for new technologies and innovations for the future of transportation.

Connected Vehicle Program

There are several activities related to the national Connected Vehicle Program that will certainly impact regional and local transportation agencies, in addition to Caltrans. Since 90% of the roadways in California are owned and operated by local agencies, including the 58 counties and more than 500 incorporated cities, it is critically important for them to be aware of and to plan for the implementation of connected vehicles.

Connected vehicle technology has the potential to significantly prevent or reduce the impact of millions of accidents every year. The U.S. DOT's Connected Vehicle Program works with state and local transportation agencies, vehicle and device makers, and the public to test and evaluate technology that will enable cars, buses, trucks, trains, roads and other infrastructure, and our smartphones and other devices to "talk" to one another. Cars on the highway, for example, would use short-range radio signals to communicate with each other, so that every vehicle on the road is aware of where other nearby vehicles are located.

Transportation Automation

Vehicle technology is changing and connected and autonomous vehicles (AVs) are emerging. Autonomous vehicles are vehicles that include a combination of hardware and software, remote and/or on-board, that has the capability to drive without active physical control or monitoring by a person. Autonomous vehicles are continuing to be tested and deployed on public roads. This new technology is anticipated to rapidly

transform how people and goods can travel, but if unchecked, these technologies could increase auto travel, exacerbate inefficient land use, and pose risks to our safety and privacy. Ensuring that these emerging technologies help rather than hinder California's transportation vision is a priority of the California Transportation Plan 2050 and CARB's 2022 Scoping Plan. RTPAs are encouraged to pursue research, planning, and policies related to autonomous vehicles to support long-term goals of VMT and GHG emissions reductions, safety, equity, and accessibility. These include electrification, pooling, pricing, and the reduction of deadhead miles from autonomous vehicles.

In August 2022, the State of California released the "Autonomous Vehicle Strategic Framework." This planning document reflects the collaborative work of multiple state agencies and stakeholder input to create a statewide vision for how AVs could be best integrated into our daily lives and the transportation ecosystem.

https://calsta.ca.gov/-/media/calsta-media/documents/final_avsf_visionguidingprinciples-a11y.pdf
https://dot.ca.gov/programs/sustainability/zero-emission-vehicles

Zero Emission Vehicles (ZEVs) and Infrastructure

RTPAs are encouraged to promote the development of transportation electrification and the deployment of electric vehicles in their RTPs. California's transportation sector accounts for approximately 38% of all in-state GHG emissions. California cannot meet its climate goals without reducing emissions generated by the transportation sector. ZEVs are vehicles that do not produce exhaust emissions of any criteria pollutant under any and all possible operational modes and conditions. For this reason, widespread adoption of ZEVs is a key component to the state's strategy to meet emissions reduction targets and climate change goals. EO N-79-20 establishes commitments and timelines for transitioning vehicle sectors and equipment to zero-emission technologies by 2045 or earlier. This will require a whole of government approach to transition the state away from fossil fuels. A big part of ensuring the state has the infrastructure needed to serve a growing market of ZEVs is assessing the need for infrastructure, including the number of stations needed, their locations and timing. State agencies intend to coordinate these efforts to ensure they are complementary to one another and to private investments. CARB's Advanced Clean Cars II regulations are an effort to transition light-duty passenger cars, pickup trucks and SUVs to ZEVs starting with the 2026 model year through 2035.

The Regulations can be found at: https://ww2.arb.ca.gov/rulemaking/2022/advanced-clean-cars-ii

Transportation Electrification

Pursuant to PUC 740.12(a)(2), it is the policy of the state and the intent of the legislature to encourage transportation electrification as a means to achieve ambient air quality standards and the state's climate goals. Agencies designing and implementing

regulation, guidelines, plans, and funding programs to reduce GHG emissions shall take the findings described in paragraph (1) of PUC Section 740.12 into account.

RTPAs are encouraged to support widespread transportation electrification and partner with state agencies to advance California toward the standards and goals outlined in Public Utilities Code Section 740.12(a)(1). These include:

- Reducing emissions of GHGs to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.
- Achieving the goals of the Charge Ahead California Initiative (Chapter 8.5 (commencing with Section 44258) of Part 5 of Division 26 of the Health and Safety Code).
- Meeting air quality standards, reducing petroleum use, improving public health, and achieving GHG emission reduction goals.
- Attracting investments and high-quality jobs.

6.19 Transportation Safety

While Caltrans supports consideration of security as separate from safety as a planning area, it also recognizes that security and emergency responses efforts are often inextricably linked. Clearly both are linked to ensuring system security and availability of emergency response services in the event of a natural or human-caused disaster. Due to unexpected large-scale security incidents or natural disasters, the potential for the necessity of a wide scale evacuation exists in almost every area of California.

According to Title 23 CFR Part 450.306(b), these two planning factors are:

1. Increase the safety of the transportation system for all motorized and non-motorized users; and,
2. Increase the security of the transportation system for motorized and non-motorized users.

The public expects that the transportation system be safe and efficient for all users. Addressing the improvement of transportation safety can help alleviate a myriad of health, financial, and quality-of-life issues for travelers. Fatalities and injuries from motor vehicles crashes are a major public health problem. Historically, transportation safety has not been included as part of the transportation planning process. A clear need has developed for safety to be considered as part of planning process instead of as a reactionary consideration as it has been. To be adequately addressed, safety must be a key goal within the process. Improving the safety of the transportation network requires an active, conscious approach to monitoring the transportation system for safety problems and anticipating problems before they occur.

Strategic Highway Safety Plan

Each State must have a Strategic Highway Safety Plan (SHSP) in place to receive its full share of federal transportation funds.

RTPAs should review the California SHSP during the preparation of the portion of the RTP addressing safety. The SHSP:

1. Highlights challenges to roadway user safety on California's roads
2. Provides a descriptive account of fatalities experienced on California's roads
3. Proposes high-level strategies to reduce fatalities for each challenge and,
4. Includes a five-year guide for the implementation of specific projects and activities.

The California SHSP is available on the Caltrans website at:
https://dot.ca.gov/programs/safety-programs/shsp

Safety Performance Measures

23 CFR Part 490 established Safety Performance Management (PM) as part of the overall Transportation Performance Management (TPM) program, which FHWA defines as a strategic approach that uses system information to make investment and policy decision to achieve national performance goals. Refer to **Section 7.1** for more information.

Safe Systems Approach

California and the U.S. Department of Transportation (DOT) have adopted the Safe System Approach (SSA) as the guiding paradigm to address roadway safety. For the U.S. DOT, this new roadway safety framework is contained in the National Roadway Safety Strategy (NRSS). The NRSS outlines the Department's comprehensive approach to significantly reducing serious injuries and deaths on our nation's highways, roads, and streets. The SSA works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur.

Requirements (Shall)
Federal: Title 23 CFR Part 450.306(b)(2) states the planning process will address the safety of the transportation system for the public.
State: None

Recommendations (Should)
Federal: Title 23 CFR Part 450.306(d)(4) states that RTPs should be consistent with the California Strategic Highway Safety Plan (SHSP) and other transit safety and security planning and review processes. Title 23 CFR Part 450.324(h) states the RTP should include a safety element that incorporates or summarizes the priorities, goals, countermeasures, or projects for the RTPAs region contained in the SHSP.

6.20 Rural County Emergency Preparedness

Many rural areas are subject to numerous wide-spread disasters such as wildfires, earthquakes, flooding. Limited accessibility further impacts rural communities given their typically remote setting. For example, many rural communities have one access road in, and out of the community. This creates significant delays in evacuation out of the community, and access to the community by first responders. RTPAs are encouraged to incorporate disaster planning into the development of their RTP.

In developing the RTP, RTPAs are required to consult with agencies and officials responsible for other planning activities within the region including natural disaster risk reduction. The RTP should identify the primary agencies responsible for preparing the necessary plans should a wide scale evacuation be necessary. The RTPA should consult the appropriate emergency plan for the region to determine what evacuation plans are in place. Examples of strategies that could be addressed in regional mass evacuation plans could include:

1. Signaling – Allows traffic signals to extend for up to four minutes in either red or green to allow large amounts of vehicles or pedestrians to proceed in one direction
2. Traffic Control Guides – Deploy traffic control personnel to problem intersections to manually direct traffic
3. Roadblocks and Barricades – Deploy various methods such as portable signs, cones or barrels
4. Electronic Signage – Changeable message signs have been installed along a number of major routes that could be used to provide information to evacuees
5. Lane Expansion – Involves the use of using road shoulders to increase vehicle capacity of evacuation routes
6. Contra flow Lanes – Contra flow or lane reversal involves directing traffic to use lanes in both directions to move a large number of vehicles in one direction
7. Use of Mass Transit – Transit could be used to assist in the evacuation of the public should it become necessary
8. Airport Use – Airports can be used as staging areas for medical and food supplies as well as evacuation

Requirements (Shall)
Federal: Title 23 CFR Part 450.206(a)(3) states the planning process will address the security of the transportation system for the public. Title 23 CFR Part 450.216(c) states that the CTP shall reference, summarize, or contain any applicable emergency relief and disaster preparedness plans, strategies and policies that support homeland security and safeguard the personal security of all motorized and non-motorized users. RTPAs shall also comply.

Recommendations (Should)
Federal: Title 23 CFR 450.316(b) requires consultation with agencies and officials responsible for planning natural disaster risk reduction. RTPAs should also comply.

6.21 Assessment of Capital Investment and Other Strategies

RTPs are required to include an assessment of capital investment and other strategies to:

1. Preserve the existing and projected transportation infrastructure
2. Provide for multimodal capacity increases based on regional priorities and needs and,
3. Reduce the vulnerability of the existing transportation infrastructure to natural disasters.

The RTP may consider projects and strategies that address areas or corridors where current or projected **deficiencies** threatens the efficient functioning of key elements of the metropolitan area's transportation system.

Requirements (Shall)
Federal: 23 CFR 450.324(f)(7)

6.22 Congestion Management Process

In coordination with Caltrans, the RTP shall describe and identify the Transportation System Management (TSM) and operations strategies, actions, and improvements it will employ to manage and operate the freeway system, its corridors, and major local parallel arterials for highest or increased productivity. Increased productivity can include all modes, including transit, bicycles, and pedestrians. There may be many ways to increase mobility without increasing GHG emissions. One way may be to improve the efficiency and productivity of the corridor through operational, transit and highway projects. TSM and operations strategies, actions and improvements shall include at a minimum traffic detection, traffic control, incident response and traveler information. Transportation demand strategies shall also be identified and can include, but are not limited to: Pricing, Transportation Planning, and Investment Strategies. **Section 6.27** of the Guidelines contains additional information on strategies that can be used to manage congestion and reduce regional GHG emissions. The approach to TSM and operations shall be integrated into system planning documents.

Coordination of Project Programming

Programming of projects shall be scheduled so that project sequencing in a corridor achieves the most effective performance results. In State Highway System corridors, the system planning documents should identify the most effective project sequencing,

including projects identified for major local arterials. System planning strategies to address performance issues can include system evaluation and monitoring, maintenance and preservation, smart land use and demand management, Intelligent Transportation Systems, operational capacity strategies, multimodal and Complete Streets concepts.

Congestion Management Process in the RTP

The RTP should identify urban freeway corridors with current and projected recurrent daily vehicle hours of delay that are a priority for preparing corridor plans. The RTP should include by corridor all multimodal strategies, actions and improvements identified in the adopted corridor plan that are needed to provide for safe and effective integrated management and operation of the multimodal transportation system across jurisdictions and modes to improve corridor performance based upon performance measurement. Approaches to improving corridor performance can include new and existing facilities, improved maintenance, and operation of existing infrastructure, invest in and encouraging the use of alternative modes (such as transit, rail, biking and walking), encouraging smart land use, integrated corridor management strategies, among others.

Regional GHG Emissions Requirements & Climate Adaptation Considerations in the RTP

6.23 GHG Emissions and Targets Background

Better land use and transportation strategies will continue to be important to both MPOs and RTPAs in developing their RTPs to meet local, regional and statewide mobility and economic needs while meeting the requirements of AB 32 to reduce regional GHG (GHG) emissions. RTPAs and MPOs can encourage well-designed and sustainable local and regional projects that encourage reductions in GHG emissions by considering and implementing land use and transportation strategies.

Land use strategies can include, but are not limited to:

- Mixed use, infill, and higher density development projects
- Housing and jobs around public transit
- Job/housing balance
- Affordable housing construction and preservation
- Natural and working lands preservation
- Aging malls, offices, and brownfields and other underused property to be reused for neighborhoods
- Housing, jobs, and public facility placement such as school sites and other public uses that shorten trips

Transportation strategies can include, but are not limited to:

- Transit, bicycle, and pedestrian infrastructure and investments
- Carpooling and vanpooling programs
- Employer-sponsored shuttle services
- Car sharing, bike sharing, and micro-mobility programs
- First-last mile connections and park and ride facilities to public transit
- Mobility Hubs
- Complete streets infrastructure and investments
- Transportation Demand Management
- Transportation Systems Management
- Intelligent Transportation Systems
- Telework Programs
- Trip Reduction Programs
- Safe Routes to School Programs

Additional strategies include, but are not limited to:

- Pricing Strategies (can include Congestion Pricing, Road Tolling, HOT lanes and toll roads, Parking Pricing and Alternative Mode Programs)
- Transportation Planning and Investment Strategies in the Smart Mobility Framework
- Zero Emission vehicle (ZEV) charging infrastructure
- ZEV incentives
- Vehicle buyback programs
- Transportation Demand Management

As regions explore various land use and transportation strategies to reduce GHG emissions, RTPAs should consider identifying and to the extent possible, quantifying the co-benefits associated with GHG emissions reduction strategies throughout the RTP implementation processes. Co-benefits are positive externalities that result from reducing GHGs such as increased mobility, reduced air and water pollution, economic opportunities, and healthier, more equitable and sustainable communities.

The strategy suggestions listed above, and in more detail in Appendix H are applicable to both MPOs and RTPAs. Links to various planning practice examples are also available in Appendix H.

6.24 Non-MPO Rural RTPA Addressing GHG Emissions

Rural RTPAs have a unique set of challenges compared to urbanized areas to reduce regional transportation related GHG emissions. Lower land use densities, limited transit options, and higher VMT per household contribute to the challenges to reduce these emissions. More efficient vehicles and low-carbon fuels present the highest payoff for rural counties to reduce transportation related carbon dioxide emissions. Nonetheless

rural RTPAs should strive to incorporate strategies to reduce their GHG emissions during their planning process.

RTPAs that are not located within a boundary of an MPO are not subject to the provisions of SB 375, or the resultant requirements to address regional GHG targets in their RTPs. This includes the requirement to prepare a SCS to meet a regional GHG emissions reduction target.

It is suggested that in preparing the environmental document for their RTP, RTPAs ensure that any GHG emissions during either construction or, as a result of the project be addressed and mitigated, as appropriate.

Requirements (Shall)
State: Public Resources Code, Section 21000, et seq.

6.25 Climate Adaptation and Resilience Guidance for Regional Agencies

The Governor's Office of Planning and Research (OPR)'s Integrated Climate Adaptation and Resiliency Program (ICARP) defines adaptation to climate change as "an adjustment in natural or human systems to a new or changing environment in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities." This section provides background on climate adaptation planning guidance for MPOs to consider in the development of RTPs. There is no "one-size fits all" approach for MPOs to anticipate and plan for a changing climate. The impacts brought on by climate change such as sea level rise, increasing frequency and severity of wildfire, drought, and extreme weather events increase the likelihood of damage to transportation facilities, and increase costs for operation and maintenance. The potential for consequences to life, health and safety, the environment, economic well-being, and other values need to be assessed in terms of climate vulnerability and adaptative capacity, exposure to hazards, the likelihood of hazards occurring, and the anticipated negative consequences that would result if they did occur. Additional information can be found in **Appendix F** on executive orders, legislation, and policy, including a summary of coastal permitting requirements, as well as comprehensive list of climate adaptation tools and resources.

Climate Adaptation and Resilience Guidance for Regional Agencies:

The Governor's Office of Planning & Research

In 2015, former Governor Jerry Brown signed SB 246 (Wieckowski), which amended Public Resources Code 71350 and directed OPR to form ICARP. The Program is designed to develop a cohesive and coordinated response to the impacts of climate change across state, local, and regional levels. One main component of the Program is developing guidance and providing a centralized source of information and resources to assist decision-makers at the state, tribal, regional, and local levels when

planning for and implementing climate adaptation and resiliency efforts across California. To this end, ICARP and the California Governor's Office of Emergency Services (CalOES) have collaborated on the Adaptation Planning Guide (APG), which guides adaptation planning for local and regional agencies. MPOs should use this guidance as a starting point to begin adaptation planning and integration of climate risk into transportation projects. MPOs should use this guidance and the four-phase approach as a starting point to guide adaptation planning in RTPs. Additional information from the APG is provided in the Guidance and Tools subsection below.

ICARP is also currently developing a Vulnerable Communities platform (anticipated for public release in beta format in 2024) in partnership with a wide range of stakeholders focused on frontline communities. This platform builds on previous ICARP work to guide how communities define vulnerability (See: *Defining Vulnerable Communities in the Context of Climate Adaptation)*. The Vulnerable Communities platform will draw on existing tools and datasets, while ensuring the information offered is grounded in community lived experiences through a collaborative stakeholder development process.

Executive Order B-30-15 and Assembly Bill 2800

Also, in 2015, building off the foundation set in previous state efforts towards climate preparedness and GHG reductions, EO B-30-15 created a roadmap for progress in climate adaptation. AB 2800 (Quirk, 2016) established Public Resources Code 71155, which requires that State agencies consider the current and future impacts of climate change when planning, designing, building, operating, maintaining, and investing in state infrastructure. The EO and AB 2800 led to the creation of a Guidebook for State agencies, Planning & Investing for a Resilient California. This guidance includes overarching principles, reflected here, for adaptation planning that are suited to all agencies pursuing adaptation planning and projects.

MPOs are encouraged to address climate change adaptation in their long-range transportation plans in collaboration with State, regional, and local agencies, as transportation infrastructure projects that do not consider the impacts of climate may not be eligible or competitive to receive certain federal and state funds.

MPOs may work to align transportation adaptation planning with other State, local, and regional guidance, and plans. This can include consulting the State Climate Adaptation Strategy, the California Coastal Commission Sea Level Rise Policy Guidance and Critical Infrastructure Guidance, and where possible, local adaptation plans, General Plans (especially the safety, environmental justice, and circulation elements), and Hazard Mitigation Plans, as well as other relevant local, regional, and state plans, resources, and documents. The eight MPOs located in California's coastal zone or Legal Delta are subject to additional planning considerations that are unique to those tidally influenced areas. Due to the complexity surrounding sea level rise vulnerability and the transportation system, proactive regional planning, policymaking, and project initiation is necessary to successfully implement adaptation strategies and minimize service disruption.

Guiding principles MPOs should consider for alignment with best practices in adaptation planning and with state agency efforts include:

1. Take climate change into account in planning and investment decisions, including consideration of:
   - prioritizing integrated actions that enhance climate preparedness, reduce GHG emissions, and provide multiple benefits;
   - where possible, choosing flexible and adaptive approaches to prepare for uncertain climate impacts and time frames;
   - protecting the state's most vulnerable populations (see the OPR guide, Defining Vulnerable Communities in the Context of Climate Adaptation);
   - leveraging partnerships, collaborative approaches, robust and equitable community and tribal engagement, and equitable decision making and processes to identify and implement both risks and solutions;
   - prioritizing natural infrastructure solutions, as defined in Public Resources Code 71154(c)(3) (e.g., flood plain and wetlands restoration or preservation, combining levees with restored natural systems to reduce flood risk, and urban tree planning to reduce high heat days); and,
   - recovering from natural disaster impacts in a way that builds future resilience.
2. Employ full life-cycle cost accounting for infrastructure projects to evaluate and compare investments and alternatives for climate risk and adaptation needs.
3. Reevaluate design and planning standards to address future conditions.
   - Consider both time horizon-based planning, as well as trigger-based "phased" planning (for more information, see "Adaptation Pathways" section of the APG).

In addition to the APG, the State has developed data, tools, and guidance to inform and empower local decision-makers to incorporate consideration of climate impacts into their work. A full list of these tools and data sources is available in **Appendix F**.

Select Climate Adaptation and Resilience Resources

Federal

- FHWA's Venerability Assessment and Adaptation Framework (2017): https://www.fhwa.dot.gov/environment/sustainability/resilience/adaptation_framework/
- FHWA's Climate Resilience Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/index.cfm

State

- Local Transportation Climate Adaptation Program (LTCAP) – (GC Section 14564) Created by SB 198 (Committee on Budget and Fiscal Review. Transportation., Chapter 71, Statutes of 2022) provides funding to make the State's transportation infrastructure resilient to climate hazards.

- Caltrans District Vulnerability Assessments – Caltrans has prepared assessments for each of its twelve regional districts to help identify possible climate change related impacts to the State Highway System.
- https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/air-quality-and-climate-change/2020-adaptation-priorities-reports
- California Adaptation Planning Guide – (2020) the California Governor's Office of Emergency Services prepared this document to assist adaption planning for local and regional agencies.
- https://www.caloes.ca.gov/wp-content/uploads/Hazard-Mitigation/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf

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Chapter 7

Transportation Performance Management

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Chapter 7 Transportation Performance Management

7.0 Introduction

Performance management provides the opportunity to ensure efficient and effective investment of transportation funds by refocusing on established goals, increasing accountability and transparency, and improving project decision-making. This chapter is intended to provide an overview of Federal and State requirements and recommendations for performance management applications in the RTP. Federal law requires States and MPOs, in collaboration with RTPAs, to implement a performance-based approach in the scope of the statewide and nonmetropolitan *and* metropolitan transportation planning process. In addition to federal performance-based planning, the State of California has articulated through statute, regulation, Executive Orders, and legislative intent language, numerous state policies and goals for the transportation system, the environment, the economy, and social equity.

There are different applications of performance management: performance measures, performance targets, and performance monitoring indicators or metrics. Performance measures are used to monitor safety, physical asset condition, travel time reliability and air quality. Performance metrics include measured field data such as fatalities or injuries resulting from crashes, physical condition, travel times, and carbon dioxide (CO2) emissions.

7.1 Federal Performance Goals and Measures

The cornerstone of the federal highway program transformation is the transition to a performance and outcome-based program. The Moving Ahead for Progress in the 21st Century Act (MAP-21), signed into law in 2012, included several provisions that collectively are transforming the Federal surface transportation program to be focused on the achievement of performance outcomes. IIJA further integrated performance into many federal transportation programs. States in collaboration with RTPAs, and MPOs will invest resources in projects to achieve individual targets established in Caltrans' Transportation Asset Management Plan (TAMP) that collectively will make progress toward national goals. The national performance goals for the Federal highway programs as established in 23 U.S.C. Section 150(b) are as follows:

- **Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure Condition** - To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System.
- **System Reliability** - To improve the efficiency of the surface transportation system

- **Freight Movement and Economic Vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental Sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced Project Delivery Delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

The national performance measures will assess the progress toward the national goals listed above. National performance measures [23 U.S.C. Section 150(c) and 49 U.S.C. Section 5326(c) and Section 5329(d)] will address the following issues:

- For the National Highway Performance Program (NHPP):
    - Pavement conditions on the Interstate system and remainder of the National Highway System,
    - Bridge conditions on the NHS,
    - Performance of the Interstate system and remainder of the NHS
- For the Highway Safety Improvement Program (HSIP):
    - Number and rate per vehicle mile traveled of fatalities
    - Number and rate per vehicle mile traveled of serious injuries
- For the Congestion Mitigation and Air Quality Improvement Program (CMAQ):
    - Traffic congestion
    - On-road mobile source emissions
    - Freight movement on the Interstate system
- Public transportation:
    - State of good repair
    - Safety

The FHWA/FTA have developed final rules to implement the Transportation Management Program (TPM), as summarized below. **23 U.S.C. 150** identifies the national transportation goals and requires the U.S. DOT Secretary to promulgate a rule to establish performance measures in specified Federal-aid highway program areas listed above. The FHWA has issued three separate rules to meet this requirement: (1) Safety Performance Measures; (2) Pavement and Bridge Condition Measures; and (3) System Performance Measures. These three rules together establish a set of performance measures for Caltrans and MPOs to use. FTA is responsible for developing rules related to public transportation and transit asset management.

FHWA Performance Measures

The federal performance measures defined by FHWA are categorized into three performance management (PM) focus areas. Each focus area includes an associated set of metrics for which statewide and regional targets must be set. Each MPO, in collaboration with RTPAs, must incorporate these short-range performance targets into their planning and programming processes, including the RTP, as required by law.

PM1: Safety

Safety Performance (PM 1) federal ruling was published on March 15, 2016, with an effective date of April 14, 2016. The Highway Safety Improvement Program (HSIP) is a core Federal-aid program meant to achieve significant reduction in fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads and focuses on performance. The HSIP regulation under 23 CFR 924 establishes FHWA's HSIP policy, as well as program structure, planning, implementation, evaluation, and reporting requirements for states to successfully administer the HSIP. The overarching highway safety plan for the State of California is the Strategic Highway Safety Plan (SHSP). In January 2020, California updated its SHSP, which is a statewide, coordinated traffic safety plan that provides a comprehensive framework for reducing roadway fatalities and serious injuries on California's public roads.

PM 1 supports the data-driven performance focus of the HSIP and establishes five performance measures as the five-year rolling averages to include:

Motor Vehicles Collisions:

- Number of Fatalities
- Rate of Fatalities per 100 million VMT
- Number of Serious Injuries
- Rate of Serious Injuries per 100 million VMT

Non-Motorized Fatalities and Serious Injuries

- Number of Non-motorized Fatalities and Non-motorized Serious Injuries

These safety performance measures are applicable to all public roads regardless of ownership or functional classification. The Safety Performance final rule also established a common national definition for serious injuries.

States must establish statewide targets for each of the safety performance measures annually. For three of the five safety performance measures (number of fatalities, rate of fatalities and number of serious injuries), targets must be identical to the targets established for the National Highway Traffic Safety Administration (NHTSA) Highway Safety Grants Program. The State Departments of Transportation (DOT) must also coordinate with the MPOs in the state on establishment of targets, to the maximum extent practicable. Caltrans must report the safety targets to FHWA in the HSIP report due in August of each year. Since the safety targets are applicable to all public roads in California, regional jurisdictions are involved in the process of establishing safety targets. Toward this end, Caltrans holds annual coordination workshops with stakeholders.

A state is considered to have met or made significant progress toward meeting its safety targets when at least four of the five performance targets are met or the

outcome for the performance measure is better than the baseline performance the year prior to the target being set. States must also develop a HSIP Implementation Plan.

The California HSIP is available at:

https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program

PM 2: National Highway System (NHS) Pavement and Bridge Condition

The second final rule, Pavement & Bridge Condition was published on January 18, 2017, with an effective date of February 17, 2017, and established measures for Caltrans to use to carry out the NHPP and to assess the condition of the following: pavements on the NHS (excluding the Interstate System), bridges on the NHS, and pavements on the Interstate System. The NHPP is a core Federal-aid highway program that provides support for the condition and performance of the NHS and the construction of new facilities on the NHS and ensures that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. This rule provides regulations for the new performance aspects of the NHPP, which address measures, targets, and reporting. Caltrans shall coordinate with relevant MPOs on the selection of targets in accordance with 23 U.S.C. 135(d)(2)(B)(i)(II) to ensure consistency to maximum extent practicable.

The Pavement & Bridge Condition final rule establishes six performance measures:

NHS Pavement Condition

Four Measures of Pavement Condition:

Two Measures for Interstate System Pavement Condition:

1. Percentage of Pavements on the Interstate System in Good Condition
2. Percentage of Pavements on the Interstate System in Poor Condition

Two Measures for NHS Pavement Condition:

3. Percentage of Pavements on the NHS (excluding the Interstate System) in Good Condition
4. Percentage of Pavements on the NHS (excluding the Interstate System) in Poor Condition

Two Measures of Bridge Condition:

5. Percentage of NHS Bridges in Good Condition; and,
6. Percentage of NHS Bridges in Poor Condition.

PM 3: NHS Performance, Interstate System Freight Movement, and CMAQ Program Performance

The third in a series of three related rules, System Performance Measures, was published on January 18, 2017, with an effective date of February 17, 2017. Caltrans and MPOs will implement the regulation to assess the performance of the Interstate and non-Interstate NHS for the purpose of carrying out the NHPP; to assess freight movement on the Interstate System; and to assess traffic congestion and on-road mobile source

emissions for the purpose of carrying out the CMAQ Program. This third performance measure rule also includes a discussion that summarizes all three of the national performance management measures final rules and the comprehensive regulatory impact analysis to include all three final rules.

Caltrans will be expected to use the information and data generated as a result of the new regulations to make better informed transportation planning and programming decisions. The new performance aspects of the Federal-aid program will allow FHWA/FTA to better communicate a national performance story and more reliably assess the impacts of Federal funding investments. Caltrans shall coordinate with relevant MPOs on the selection of targets in accordance with 23 U.S.C. 135(d)(2)(B)(i)(II) to ensure consistency to maximum extent practicable.

The System Performance Measures final rule establishes seven performance measures:

NHS Performance

Three Measures of System Performance:

1. Percentage of Reliable Person-Miles Traveled on the Interstate
2. Percentage of Reliable Person-Miles Traveled on the non-Interstate NHS
3. Percent Change in CO2 emissions from **2022**, generated by on-road mobile sources on the NHS

Interstate Freight Movement

4. A measure that will evaluate truck travel time reliability on the Interstate system (average truck reliability index);

CMAQ Program Performance

Three measures that will assess the CMAQ Program:

5. Total emissions reductions for applicable criteria pollutants, for non-attainment and maintenance areas

Two measures to assess traffic congestion:

6. Annual Hours of Peak Hour Excessive Delay Per Capita; and,
7. Modal Share: Specifically, the percent of non-single occupancy vehicle travel, including travel avoided by telecommuting.

On December 7, 2023, FHWA/FTA published the final rule amending the regulations governing national performance management measures and establishing a method for the measurement and reporting GHG emissions. The rule does not mandate what the targets must be; Caltrans and MPOs have flexibility to set targets that are appropriate for their communities and that work for their respective climate change and other policy priorities, as long as the targets aim to reduce emissions over time. FHWA will assess whether significant progress toward achieving their targets has been made. By February 1, 2024, Caltrans will establish initial targets for the GHG measure. Caltrans will report their 4-year targets to FHWA in the State Initial GHG Report. The State Initial GHG Report shall include the basis for the target, a discussion of how the target relates to other longer-term performance expectations, and the metric information for the

reference year. FHWA will determine the calculation method for state GHG targets. MPOs will have an additional 180 days following Caltrans adoption to adopt their own targets or may default to Caltrans' targets. A future update to the RTP Guidelines will capture the new targets set forth by the rulemaking process. Please see 23 CFR 490.105(e) and 23 CFR 490.107(d) for more information.

Resources for Implementing Performance Based Planning

1. Performance-based planning and programming (PBPP) FHWA CA Resource Document- The purpose of this document is to assist Caltrans and the California MPOs in the implementation of performance-based planning and programming (PBPP), including the incorporation of transportation performance management (TPM).
2. Assessment on the Effectiveness of Performance-Based Planning and Programming - This report presents the findings of a study on how performance-based planning and programming influences transportation planning and programming decisions at 52 State departments of transportation and 85 MPOs. Research was conducted throughout 2020 using online reviews of planning and programming documents, interviews and peer exchanges with practitioners, and a survey of FHWA Division and FTA Region staff. This report documents current practices and identifies opportunities for enhancements.
3. Example Practices for Performance-Driven Programming - This report highlights how State Departments of Transportation (DOTs) and MPOs are implementing performance-driven programming processes and aligning transportation investment decisions with the Federal performance areas for safety, infrastructure condition, and system performance. The FHWA is sharing these examples to help advance the state of the practice for performance-driven programming. The research included review of planning documents from four State DOTs and five MPOs, and agency discussions, to examine how agencies are using performance-driven programming processes to guide resource allocation to achieve goals, objectives, and performance targets. The findings do not constitute an inventory; instead, this report aims to characterize the approaches and investment strategies agencies are applying in their planning and programming processes to make progress toward performance target achievement.

Additional resources can be located here: Implementation Resources for Transportation Performance Management (TPM) and Transportation Asset Management (TAM) (ca.gov).

7.2 Federal Performance-Based Approach and RTP Requirements

The Statewide and Nonmetropolitan Transportation Planning *and* Metropolitan Transportation Planning Final Rule was published May 27, 2016, with an effective date of June 27, 2016. This final rule requires States, in consultation with RTPAs, to implement the performance-based approach in the scope of the metropolitan transportation planning process. First, Caltrans, in coordination with MPOs/RTPAs and public

transportation providers, will establish, to the maximum extent practicable, an appropriate target setting framework. RTPAs are encouraged to participate in the State's target-setting process. RTPAs are also encouraged to align their performance monitoring indicators with the State's targets. Federal regulations define the implementation timeline for satisfying the new requirements for MPOs as two years from the effective date of each rule establishing performance measures under 23 U.S.C. 150(c), 49 U.S.C. 5326, and 49 U.S.C. 5329 FHWA/FTA.

This section is intended to provide a summary of the additional requirements specific to MPO RTP development. RTPAs are encouraged to add these components to their RTPs, as appropriate. The federally required performance-based approach specifically added two components to the RTP:

1. A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with 23 CFR 450.306(d); and,
2. A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in 23 CFR 450.306(d), including –
    a. Progress achieved by the RTPA in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data; and,
    b. For RTPAs that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.

It is important to note that failure to consider any factor specified in the Performance-Based Approach, 23 CFR 450.306 (d), shall not be reviewable by any court under Title 23 U.S.C., 49 U.S.C. Chapter 53, Subchapter II of Title 5 U.S.C. Chapter 5, or Title 5 U.S.C. Chapter 7 in any matter affecting an RTP, TIP, a project or strategy, or the certification of a metropolitan transportation planning process.

The FHWA maintains a Performance Based Planning and Programming Guidebook to help identify potential packages of strategies to achieve performance-based objectives, as well as the data and tools used to determine which strategies may be most effective, available at:

http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/page06.cfm

Requirements (Shall)
Federal: 23 CFR 450.306; 23 CFR 450.324(f)(3) & (4); 23 CFR 450.340(e) & (f)

7.3 State Goals and Performance Measures

Regional Transportation Plans are developed to reflect regional and local priorities and goals and they are also instruments that can be used by federal and state agencies to demonstrate how regional agency efforts contribute to those federal and state agencies meeting their own transportation system goals. A clear articulation of regional goals helps regions select projects in furtherance of their own goals, but also helps the federal and state government understand how the regional plans will contribute to statewide or nationwide goals. The RTP vision and goals are developed through a bottom-up process that involves input from stakeholders in the region, including the RTPA member jurisdictions and the public. The RTP, including goals, are formally adopted at the discretion of the RTPA governing board. The following are state policies and goals that RTPAs are encouraged to use in the development of their RTP goals. This is not an exclusive list, and RTPAs may establish additional RTP goals appropriate to the region.

- Preserve transportation infrastructure
- Improve mobility and accessibility
- Reduce GHG and improve air quality
- Improve public health, e.g., increase physical activity
- Conserve land and natural resources
- Encourage sustainable land use patterns
- Increase supply of affordable housing
- Improve jobs and housing balance
- Improve mobility and accessibility for low-income and disadvantaged communities
- Support economic development
- Increase safety and security of the transportation system for motorized and non-motorized users

If existing modeling and data are a limitation for some RTPAs, qualitative goals may be used instead of quantitative measures. The Policy element of the RTP would include the goals and objectives, and the Action element is what would provide the result/s. For example, the Action element would provide a comparison of what is being monitored, how it is monitored and the results and analysis of the eventual outcomes. In small urban areas, to support performance-based planning consistent with federal law, developing partnerships with neighboring jurisdictions, and collecting data and information is recommended.

The goals and objectives in the FTIP/RTIP and ITIP should be linked and consistent with the goals and objectives of the RTP. Performance measures in the RTP set the context for judging the effectiveness of the FTIP as a program, by furthering the RTP goals and objectives, whereas the STIP Guidelines address performance measures of specific projects. GC Section 14530.1 (b)(5) requires more detailed project specific "objective criteria for meeting system performance and cost effectiveness of candidate projects" in the STIP Guidelines (Section 19). For additional information on the STIP and the Fund Estimate (FE), please refer to Caltrans Division of Transportation Programming website at:

https://dot.ca.gov/programs/financial-programming/office-of-capital-improvement-programming-ocip

On highway projects, Caltrans considers system condition and performance measurements for interregional planning and the setting of State planning and programming activities. The State performance measures will focus on interregional trips between, into and through the regions. Caltrans coordinates its performance measure activity with RTPAs.

Requirements (Shall)
State: California GC Section 65080(b)(2) (SB 375 Targets)

7.4 Performance Monitoring

Regions should also consider using performance monitoring indicators to measure plan performance. The following table provides a summary of potential performance metrics for rural county RTPAs as outlined in the report, *Transportation Performance Measures for Rural Counties in California* (Rural Counties Task Force, 2015), at:

https://www.nctc.ca.gov/documents/Reports/RCTF/RCTF%20Performance%20Measures%20Fact%20Sheet%209-16-15%20from%20Kittelson.pdf

These metrics were developed according to the following criteria:

- Measurement-based rather than model-based;
- Alignment with California state transportation goals and objectives;
- Capability of informing current goals and objectives of each rural and small-urban RTPA;
- Applicability across all rural and small-urban regions;
- Capability of being linked to specific decisions on transportation investments; and
- Normalized for population to provide equitable comparisons to urban regions.

Metric	Source	Website
VMT Per Capita By Locality By Facility Ownership Local vs. Tourist	Mobility Reporting	https://dot.ca.gov/programs/traffic-operations/mpr
	California DOF	https://dof.ca.gov/reports/demographic-reports/
	HPMS	https://dot.ca.gov/programs/research-innovation-system-information/highway-performance-monitoring-system
Peak V/C Ratio or Thresholds	Traffic Counts: K and D Factors	https://dot.ca.gov/programs/traffic-operations/census

Journey to Work Mode Share	American Community Survey	http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
Total Accident Cost Per VMT Per Capita	Transportation Injury Mapping System	https://tims.berkeley.edu/
	SWITRS TASAS	https://www.chp.ca.gov/programs-services/services-information/switrs-internet-statewide-integrated-traffic-records-system
Transit Operating Cost per Revenue Mile	Local Transit Providers	
Distressed Lane Miles Total and % Total By Jurisdiction By Facility Type	FHWA	http://www.fhwa.dot.gov/tpm/rule/pmfactsheet.pdf
	Regional or local pavement management system	https://www.federalregister.gov/documents/2022/07/15/2022-14679/national-performance-management-measures-assessing-performance-of-the-national-highway-system
Pavement Condition Index (PCI) for Local Roads	Regional or local pavement management system	
Land Use Efficiency	Farmland Mapping and Monitoring Program (FMMP) DOF Annual population estimates	http://www.conservation.ca.gov/dlrp/fmmp

Recommendation (Should)
State: California GC Section 65080.

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APPENDICES

A. RTP Checklist (to be completed by RTPA prior to submitting the draft and final RTP to Caltrans and CTC)

B. Air Quality Conformity Checklist for Isolated Rural Non-Attainment/Maintenance Areas

C. RHNA and RTP Development Information

D. Glossary of Transportation Terms

E. Climate Adaptation Tools and Resources

F. Planning Practice Examples

G. Federal and State Laws for Travel Analysis Groupings

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Appendix A: RTP Checklist

Appendix A: RTP Checklist

Regional Transportation Plan Checklist for RTPAs
(Revised November 2023)

(To be completed electronically in Microsoft Word format by the RTPA and submitted along with the draft and final RTP to Caltrans)

Name of RTPA: _____

Date Draft RTP Completed: _____

RTP Adoption Date: _____

What is the Certification Date of the Environmental Document (ED)? _____

Is the ED located in the RTP or is it a separate document? _____

By completing this checklist, the RTPA verifies the RTP addresses all of the following required information within the RTP, where applicable.

Regional Transportation Plan Contents

General

		Yes/No/ N/A	Page #
1.	Does the RTP address no less than a 20-year planning horizon? (23 CFR 450.324(a))		
2.	Does the RTP include both long-range and short-range strategies/actions? (23 CFR 450.324(b) "Should" for RTPAs)		
3.	Does the RTP address issues specified in the policy, action and financial elements identified in California GC Section 65080?		
4.	Does the RTP include Project Intent i.e., Plan Level Purpose and Need Statements?		

Consultation/Cooperation

		Yes/No/ N/A	Page #
1.	Does the RTP contain a public involvement program that meets the requirements of Title 23, CFR 450.316(a)?		
2.	Does the documented public involvement process describe how the RTPA will seek out and consider the needs of those traditionally underserved by		

	the existing transportation system, such as low-income and minority households, who may face challenges accessing employment and other services? (23 CFR 450.210(a)(1)(viii))		
3.	Was a periodic review conducted of the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process? (23 CFR 450.210(a)(1)(ix))		
4.	Did the RTPA consult with the appropriate State and local representatives including representatives from environmental and economic communities; airport; transit; freight during the preparation of the RTP? (23 CFR 450.316(b) "Should" for RTPAs)		
5.	Did the RTPA who has federal lands within its jurisdictional boundary involve the federal land management agencies during the preparation of the RTP? (23 CFR 450.216(j))		
6.	Where does the RTP specify that the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation, and historic preservation consulted? (23 CFR part 450.216(j))		
7.	Did the RTP include a comparison with the California State Wildlife Action Plan and (if available) inventories of natural and historic resources? (23 CFR part 450.216(j))		
8.	Did the RTPA who has a federally recognized Native American Tribal Government(s) and/or historical and sacred sites or subsistence resources of these Tribal Governments within its jurisdictional boundary address tribal concerns in the RTP and develop the RTP in consultation with the Tribal Government(s)? (23 CFR part 450.216(i))		
9.	Does the RTP address how the public and various specified groups were given a reasonable opportunity to comment on the plan using the public involvement process developed under 23 CFR part 450.210(a)? (23 CFR 450.210(a)(1)(iii))		
10.	Does the RTP contain a discussion describing the private sector involvement efforts that were used during the development of the plan? (23 CFR part 450.210(a))		
11.	Is the RTP coordinated and consistent with the Public Transit-Human Services Transportation Plan? (23 CFR part 450.208(h))		
12.	Were the draft and adopted RTP posted on the Internet? (23 CFR part 450.216(o))		

13. If the RTPA made the election allowed by GC 65080(b)(2)(M) to change the RTP update schedule (from 5 to 4 years) and change the local government Housing Element update schedule (from 5 to 8 years), was the RTP adopted on the <u>estimated</u> date required to be provided in writing to State Department of Housing and Community Development pursuant to GC 65588(e)(5) to align the Regional Housing Need Allocation planning period established from the <u>estimated</u> RTP adoption date with the local government Housing Element planning period established from the <u>actual</u> RTP adoption date?		

<u>Modal Discussion</u>

	Yes/No/ N/A	Page #
1. Does the RTP discuss intermodal and connectivity issues?		
2. Does the RTP include a discussion of highways?		
3. Does the RTP include a discussion of mass transportation?		
4. Does the RTP include a discussion of the regional airport system?		
5. Does the RTP include a discussion of regional pedestrian needs?		
6. Does the RTP include a discussion of regional bicycle needs?		
7. Does the RTP address the California Coastal Trail? (GC 65080.1) (For RTPAs located along the coast only)		
8. Does the RTP include a discussion of rail transportation?		
9. Does the RTP include a discussion of maritime transportation (if		
10. Does the RTP include a discussion of goods movement?		

<u>Programming/Operations</u>

	Yes/No / N/A	Page #
1. Is the RTP consistent (to the maximum extent practicable) with the development of the regional ITS architecture? (23 CFR 450.208(g))		
2. Does the RTP identify the objective criteria used for measuring the performance of the transportation system?		
3. Does the RTP contain a list of un-constrained projects?		

Financial

1.	Does the RTP include a financial plan that meets the requirements identified in 23 CFR part 450.322(f)(11) ("Should" for RTPAs)?	
2.	Does the RTP contain a consistency statement between the first 4 years of the fund estimate and the 4-year STIP fund estimate? (GC 65080(b)(4)(A))	
3.	Do the projected revenues in the RTP reflect Fiscal Constraint? (GC 65080(b)(4)(A)	
4.	Does the RTP contain a list of financially constrained projects? Any regionally significant projects should be identified. (GC 65080(4)(A))	
5.	Do the cost estimates for implementing the projects identified in the RTP reflect "year of expenditure dollars" to reflect inflation rates? (23 CFR part 450.324(f)(11)(iv)) ("Should" for RTPAs)	
6.	After 12/11/07, Does the RTP contain estimates of costs and revenue sources that are reasonably expected to be available to operate and maintain the freeways, highway and transit within the region? (65080(b)(4)(A) (23 CFR 450.324(f)(11)(i))	
7.	Does the RTP contain a statement regarding consistency between the projects in the RTP and the ITIP? (2016 STIP Guidelines Section 33)	
8.	Does the RTP contain a statement regarding consistency between the projects in the RTP and the RTIP? (2016 STIP Guidelines Section 19)	

Environmental

		Yes/No / N/A	Page #
1.	Did the RTPA prepare an EIR or a program EIR for the RTP in accordance with CEQA guidelines?		
2.	Does the RTP contain a list of projects specifically identified as TCMs, if applicable?		
3.	Does the RTP specify mitigation activities? (23 CFR part 450.324(f)(10))		
4.	Where does the EIR address mitigation activities?		
5.	Did the RTPA prepare a Negative Declaration or a Mitigated Negative Declaration for the RTP in accordance with CEQA guidelines?		

6.	Does the RTP specify the TCMs to be implemented in the region? (federal nonattainment and maintenance areas only)	

I have reviewed the above information and certify that it is correct and complete.

(Must be signed by RTPA Executive Director or designated representative)	Date
Print Name	Title

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Appendix B: Air Quality Conformity Checklist for Isolated Rural Non-Attainment/ Maintenance Areas

Appendix B: Air Quality Conformity Checklist for Isolated Rural Non-Attainment/ Maintenance Areas

Conformity Analysis Documentation

FHWA/EPA Checklist for Isolated Rural Nonattainment Areas

(Caltrans update: November 2023)

This checklist can be used to ensure that all information needed for a regional conformity determination, for a regionally significant transportation project in an Isolated Rural area (nonattainment or attainment-maintenance area with no MPO(s)), is included in project documentation. This checklist would be used to structure regional conformity analysis associated with a NEPA document or other Federal action, and to assist reviewers in verifying that the necessary analysis has been done. Note that in Isolated Rural areas, since there is no MPO, there is no Regional Transportation Plan (RTP) subject to Federal conformity action; however, in California most areas have Regional Transportation Planning Agencies **(RTPAs)** that prepare a RTP based on State requirements whether or not an MPO exists, and such documents along with their CEQA analyses can provide a regional planning context for project actions.

DO NOT USE THIS CHECKLIST IN "DONUT" NON-MPO AREAS. Such areas have regional conformity analysis requirements related to TIP approval and must have a regional conformity determination approved by an adjacent MPO. Project-level conformity in those areas uses MPO-area procedures.

40 CFR	Criteria	Page	Comments
§**93.102**	Document the applicable pollutants and precursors for which EPA designates the area as nonattainment or maintenance. Describe the nonattainment or maintenance area and its boundaries.		
§**93.104 (d)**	Document whether a new conformity determination is required per this section: 1) a new project; 2) a significant change in design concept and scope; 3) three years since the most recent step to advance the project; 4) a supplemental EA/EIS was initiated for air quality purposes.		
§**93.109 (a, b)**	Document that the regional emissions analysis complies with any applicable conformity requirements of air quality implementation plans or court orders for the area which pertain specifically to conformity.		
§**93.109 (c)**	Provide a table that shows, for each pollutant and precursor, whether the interim emissions tests and/or the budget test apply for conformity. Indicate which emissions budgets have been deemed adequate and/or approved by EPA, and which budgets are currently applicable for what analysis years. Indicate what test is being used for analysis years after the attainment year (budget, interim, dispersion modeling) and if hot spot analyses are included.		

40 CFR	Criteria	Page	Comments
§**93.110 (a,b)**	Document the use of latest planning assumptions (source and year) "at the time the conformity analysis begins," including current and future population, employment, travel and congestion. Document the use of the most recent available estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates. Document the date upon which the conformity analysis was begun. Document the use of planning assumptions less than five years old. If unable, include written justification for the use of older data.		
§**93.110 (c,d,e,f)**	Document any changes in transit operating policies and assumed ridership levels since the previous conformity determination. Document the use of the latest transit fares and road and bridge tolls. Document the use of the latest information on the effectiveness of TCMs and other SIP measures that have been implemented. Document the key assumptions and show that they were agreed to through Interagency and public consultation required by §93.105		
§**93.111**	Document the use of the latest emissions model approved by EPA.		
§**93.112**	Document fulfillment of the interagency and public consultation requirements outlined in a specific implementation plan according to §51.390 or, if a Consultation (Conformity) SIP revision has not been completed, according to §93.105 and 23 CFR 450. Include documentation of consultation on conformity tests and methodologies as well as responses to written comments.		
§**93.113 (a,d)**	Document timely implementation of all TCMs in approved SIPs. Document that the project does not interfere with the implementation of TCMs. Document timely implementation of transportation related RACM measures that may not be formally TCMs.		
§**93.116(a)**	Document that the project does not cause or contribute to any new localized PM or CO violations.		
§**93.117**	Document that the project complies with any PM10 or PM2.5 control measures in the applicable attainment plan (approved SIP).		
§**93.118 (a, c, e)**	<u>For areas with SIP budgets:</u> Document that emissions from the transportation network, including projects in the isolated rural nonattainment area that are in the Statewide TIP and regionally significant non-Federal projects, are consistent with any adequate or approved motor vehicle emissions budget(s) for all pollutants and precursors in applicable SIP(s).		
§**93.118 (b)**	Document for which years consistency with motor vehicle emissions budgets must be shown.		
§**93.118 (d)**	Document the use of the appropriate analysis years in the regional emissions analysis for areas with SIP budgets, and the analysis results for these years. Document any interpolation performed to meet tests for years in which specific analysis is not required.		

40 CFR	Criteria	Page	Comments
§**93.119** [i]	For areas without applicable SIP budgets: Document that emissions from the transportation network for each applicable pollutant and precursor, including projects in the isolated rural nonattainment area that are in the Statewide TIP and regionally significant non-Federal projects, are consistent with the requirements of the "Action/Baseline" (baseline is usually 1990 for CO and PM10, 2002 for PM2.5; EPA may also designate some other baseline) interim emissions tests as applicable.		
§**93.119 (g)**	Document the use of the appropriate analysis years in the regional emissions analysis for areas without applicable SIP budgets.		
§**93.119 (h,i)**	Document how the baseline and action scenarios are defined for each analysis year.		
§**93.122 (a)(1)**	Document that all regionally significant Federal and non-Federal projects in the nonattainment/maintenance area are explicitly modeled in the regional emissions analysis. For each project, identify by which analysis year it will be open to traffic. Document that VMT for non-regionally significant Federal projects is accounted for in the regional emissions analysis.		
§**93.122 (a)(2, 3)**	Document that only emission reduction credits from TCMs on schedule have been included, or that partial credit has been taken for partially implemented TCMs. Document that the regional emissions analysis only includes emissions credit for projects, programs, or activities that require regulatory action if: the regulatory action has been adopted; the project, program, activity or a written commitment is included in the SIP; EPA has approved an opt-in to the program, EPA has promulgated the program, or the Clean Air Act requires the program (indicate applicable date). Discuss the implementation status of these programs and the associated emissions credit for each analysis year.		
§**93.122 (a)(4,5,6)**	For nonregulatory measures that are not included in the FSTIP and are needed to demonstrate conformity, include written commitments from appropriate agencies. Document that assumptions for measures outside the transportation system (e.g. fuels measures) are the same for baseline and action scenarios. Document that factors such as ambient temperature are consistent with those used in the SIP unless modified through interagency consultation.		
§**93.122 (d)**	Document the continued use of modeling techniques or the use of appropriate alternative techniques to estimate vehicle miles traveled.		
§**93.122** [3] **(e, f)**	Document, in areas where a SIP identifies construction related PM10 or PM 2.5 as contributing, the inclusion of PM10 and/or PM 2.5 construction emissions in the regional conformity analysis.		
§**93.123** [1]	Document how the required procedures were met for CO, PM10, and PM2.5 hot spot analyses. Document compliance with procedures for performing qualitative and quantitative analyses.		

40 CFR	Criteria	Page	Comments
§**93.125 (a,d)**	(a) Identify and make written commitment to implement all CO, PM10, and PM2.5 mitigation or control measures identified as conditions of NEPA approval. Identify and make written commitment to implement all project-level mitigation or control measures that are identified as conditions of the regional conformity determination and are included in the design concept and scope of the project. (d) If a mitigation or control measure was identified in a previous regional conformity analysis, may be applicable to the current regional conformity determination, and is no longer needed to demonstrate regional conformity, provide justification as described in this section.		
§**93.126,** §**93.127,** §**93.128**	Document all projects in the isolated rural nonattainment area that are in the Statewide TIP and exempt from conformity requirements or exempt from the regional emissions analysis. Indicate the reason for the exemption (Table 2, Table 3, signal synchronization) and that the interagency consultation process found these projects to have no potentially adverse emissions impacts.		

[*] **As of June 1, 2018, most CO areas in California are attainment-unclassified so 40 CFR 93.116(b) does not apply. The South Coast Air Basin remains in attainment-maintenance for CO.**
[1] **Applies for hot spot analyses in rural CO, PM10, and PM2.5 nonattainment and maintenance areas only.**
[2] **Applies for project-level conformity determinations in rural PM10 and PM2.5 nonattainment areas only.**
[3] **Note that some isolated rural areas are required to complete both interim emissions tests, depending on ozone classification if applicable.**

Disclaimers
This checklist is intended solely as an informational guideline to be used in reviewing Transportation Plans and Transportation Improvement Programs for adequacy of their conformity documentation. It does not replace or supersede the Transportation Conformity regulations of 40 CFR Parts 51 and 93, the Statewide and Metropolitan Planning Regulations of 23 CFR Part 450 or any other EPA, FHWA or FTA guidance pertaining to transportation conformity or statewide and metropolitan planning. This checklist is not intended for use in documenting transportation conformity for individual transportation projects nonattainment or maintenance areas that include an MPO. 40 CFR Parts 51 and 93 contain additional criteria for project-level conformity determinations.

11/8/2023 Caltrans update based on 2006 FHWA checklist.

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Appendix C: RHNA and RTP Development Information

The following table was prepared by the California Department of Housing and Community Development (HCD). Questions regarding the RHNA process should be directed to HCD using the contact information located at:

https://www.hcd.ca.gov/contact-us

Appendix C: RHNA and RTP Development Information

RHNA/Housing Element and RTP Statutory Process Timelines
(Does not apply to RTPAs outside of MPO boundaries)

Regional Housing Need Allocation (RHNA) *Government Code (GC) Sections 65584-65589*	**Regional Transportation Plan (RTP)** **(Sustainable Communities Strategy -SCS)**
A. REGIONAL CONSULTATION & DETERMINATION *1.* COG/MPO provides HCD written notice of estimated RTP adoption date: at least 12 months prior to estimated adoption date. GC 65588(e)(5). *NOTE: RTP adoption later than estimated date can cause (1) misalignment between RHNA projection period (based on "estimated" adoption date) & HE planning period & due date (18 months from "actual" adoption date) & (2) shortage of required housing unit allocation over period past "estimated" adoption date. GC 65588(e)(2)* 2. HCD & COG/MPO begin RHNA consultation: at least 26 months before due date of local government Housing Element (HE). GC 65584.01(c)(1). *(COG Subregion optional formation and notification: at least 28 months before HE due date. GC 65584.03.)* 3. HCD issues final RHNA**:** at least 24 months before HE due date. GC 65584(b). **B. COG/MPO RHNA DISTRIBUTION METHODOLOGY & PLAN** 4. COG/MPO begins developing distribution methodology: at least 24 months before HE due date *(allowing 60-day public comment period & public hearing)*. GC 65584.04(a). 5. COG/MPO adopts final distribution methodology for all income category RHNA consistent with development pattern of Regional Transportation Plan Sustainable Communities Strategy. GC 65584.04(h). **C. COG/MPO ISSUES DRAFT RHNA DISTRIBUTIONS** 6. COG/MPO distributes Draft RHNAs: at least 18 months before HE due date. GC 65584.05(a). 7. Jurisdictions may request draft RHNA revision: within 45 days from receipt of draft RHNA. GC 65585.05(b)-(c) **D. JURISDICTION APPEAL PROCESS & COG/MPO ACTION** 8. Jurisdictions may appeal draft RHNA: within 60 days from date COG/MPO establishes to hear appeals at public hearing. GC 65585.05(d)-(e) 9. COG/MPO reviews and responds to appeal requests and issues proposed Final RHNA (at least equal to HCD income category RHNA): within 45 days after appeal hearing. GC 65584.05(f)-(g). **10.** COG/MPO holds Public Hearing and adopts and submits Final RHNA Plan: Adopt Plan within 45 days from issuing proposed Final RHNA distribution Plan. Submit Plan within 3 days from adoption to HCD to review/approve	*(Regional variations exist for some MPOs in San Joaquin Valley, Bay Area, and Southern California and for congestion management agency-subregion processes)* 1. MPO gathers data, develops models, begins update of regional growth forecast 2. MPO adopts public participation plan for SCS and possibly an APS 3. Prior to public participation process, MPO submits proposed technical methodology for estimating GHG emission reduction from its SCS (and APS, if applicable) to CARB for review and comment 4. MPO conducts outreach & public workshops, at least 1-3 workshops per county 5. MPO conducts inter-agency consultation pursuant to federal conformity requirements 6. MPO prepares draft SCS which must accommodate HCD's RHNA determination 7. Draft EIR/RTP is prepared & reviewed by public and agencies for comment *MPO must issue Draft SCS not less than 55 days before RTP adoption; must hold SCS public hearing (for single-county at least 2 public hearings& for multi-county at least 3 hearings)* 8. MPO makes any revisions to Draft SCS/responds to DEIR comments 9. MPO Certifies EIR & Adopts RTP within either 4 years of its prior conformity date, or 5 years. of its prior adoption date, if attainment MPO 10. MPO submits RTP to FHWA/FTA for conformity 11. After adoption, MPO submits SCS for review to CARB. CARB has 60 days to accept or reject the MPO's determination that the

within 60 days from receipt. GC 65584.05(h). **E. HCD REVIEW & APPROVAL OF COG/MPO RHNA PLAN** 11. Review of Final RHNA by HCD: within 60 days of receipt of COG's Final RHNA Plan (*HCD may revise COG's RHNA* *Plan if not consistent with initial regional determination)* GC 65584.05(h)	SCS, if implemented, will achieve the region's GHG emissions target ********** *For non-attainment regions, subsequent SCS (4 yrs. hence) must integrate with prior RHNA as RHNA determinations are made for 8-yr intervals (every other 4-yr RTP update).*
JURISDICTION 8-YEAR HOUSING ELEMENT DUE DATE: within 18 months from *actual* RTP adoption date. *NOTE: consequence for late adoption past 120 days from due date is interruption of 8-year HE cycle and 4-yr update by due date for at least two consecutive 4-year intervals.* GC 65588(e)(4)	*If approved by FHWA, FTA & EPA, federal approval starts RTP update timetable for non-attainment MPOs: RTP must be updated within 4 years*

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Appendix D: Glossary of Transportation Terms

Appendix D: Glossary of Transportation Terms

AGAIP — Airport Ground Access Improvement Program, shall address the development and extension of mass transit systems and any other ground access improvement projects the planning agency deems appropriate.

ALUC — Airport Land Use Commission, conducts airport land use compatibility planning to protect public health, safety, and welfare by ensuring the orderly expansion of airports.

APCD — Air Pollution Control District, a county agency that adopts regulations to meet State and Federal air quality standards.

AQMD — Air Quality Management District, a regional agency formed by 2 or more counties, which adopts regulations to meet State and Federal air quality standards.

ATTAINMENT AREA — Attainment Area, is any geographic area in which levels of a given criteria air pollutant (e.g., ozone, carbon monoxide, PM10, PM2.5, and nitrogen dioxide) meet the health-based National Ambient Air Quality Standards (NAAQS) for that pollutant. An area may be an attainment area for one pollutant and a nonattainment area for others. A "maintenance area" (see definition below) is not considered an attainment area for transportation planning purposes.

BIL/IIJA — Bipartisan Infrastructure Law also known as the Infrastructure Investment and Jobs Act (IIJA) was signed into law on November 15, 2021. This bill provides $550 billion over fiscal years 2022-2026 in new Federal Infrastructure investment.

CAPACITY — Capacity is a transportation facility's ability to accommodate a moving stream of people or vehicles in a given time period.

CARB — California Air Resources Board, the State agency responsible for implementation of the Federal and State Clean Air Acts. Provides technical assistance to

air districts preparing attainment plans; reviews local attainment plans and combines portions of them with State measures for submittal of the State Implementation Plan (SIP) to U.S. EPA.

CASP California Aviation System Plan, prepared by Caltrans Division of Aeronautics every five years as required by PUC Section 21701. The CASP integrates regional aviation system planning on a Statewide basis.

CEQA California Environmental Quality Act, State law that requires the environmental impacts associated with proposed plans, programs, and projects to be fully disclosed.

CFMP California Freight Mobility Plan, provides a long-term vision for California's freight future. This is a comprehensive plan that governs the immediate and long-range planning activities along with capital investments.

CMA Congestion Management Agency, the county agency responsible for developing, coordinating and monitoring the Congestion Management Program.

CMP Congestion Management Program is a countywide integrated program that addresses congestion in a coordinated and cooperative manner. The program contains 5 elements: a Level of Service element, a transit standards element, a TDM and trip reduction element, a land use analysis element, and a capital improvement program element. To effectively address this goal, the appropriate land use, transportation and air quality agencies need to integrate their planning processes, share information and respond to congestion using a coordinated approach. In 1996 AB 2419 amended government code section 65088.3 to allow counties to opt out of this previously mandatory program.

COMMUNITY ENGAGEMENT The processes, methods, and activities whereby the agency shares transportation planning information and actively solicits, considers, and incorporates input from a wide range of stakeholders and constituents. Early and continuous public engagement to potentially affected parties and engaging public citizens, communities, agencies, businesses, industries, Native American tribes, organizations, advocates,

and other stakeholders are essential for a wide variety of transportation programs, plans, and projects which provide meaningful opportunities for stakeholder participation in State transportation planning processes and for influencing transportation decision making while identify perspectives, potential issues, alternatives, and suggestions for improvement.

COMMUNITY RESILIENCE A measure of the sustained ability of a community to utilize available resources to respond to, withstand, and recover from adverse situations.

CORRIDOR PLANNING Corridor planning is a multimodal planning approach that recognizes that transportation needs are based on the complex geographic, demographic, economic, and social characteristics of communities.

CTC California Transportation Commission, a decision-making body established by AB 402(Alquist / Ingalls) of 1977 to advise and assist the Secretary of Transportation and the legislature in formulating and evaluating State policies and plans for transportation programs.

CTP California Transportation Plan, The CTP is a long-range transportation policy plan that is submitted to the Governor. The CTP is developed in collaboration with partners, presents a vision for California's future transportation system, and defines goals, policies, and strategies to reach the vision. It is developed in consultation with the State's regional transportation planning agencies, is influenced by the regional planning process, and provides guidance for developing future RTPs. RTPs should be consistent with and implement the vision and goals of the CTP. As defined by State statute, the CTP is not project specific.

FAA Federal Aviation Administration, the agency of the U.S. Department of Transportation charged with regulating air commerce to promote its safety and development, encouraging and developing civil aviation, air traffic control and air navigation, and promoting the development of the national airport system.

DISADVANTAGED COMMUNITY

Disadvantaged Community refers to communities that are currently experiencing or have experienced historic disadvantage due to income, race, ethnicity, language, residency status, environment, education, or other indicators of social status. Today in California, the categorization of Disadvantaged Communities is being used by state, regional, and some local agencies to allocate funding.

SB 535 DISADVANTAGED COMMUNITY

Senate Bill 535 (De Leon, Chapter 830, Statutes of 2012) added Section 39711 of the Health and Safety Code which specifies that Disadvantaged Communities are identified based on geographic, socioeconomic, public health, and environmental hazard criteria, and may include, but are not limited to, either of the following:
(a) Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation.
(b) Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment.

DISPLACEMENT

Displacement manifests itself in many forms from physical (i.e., demolition, evictions or service disruption) to economic (i.e., rent increases). Displacement can result from gentrification when neighborhoods become out of reach for people or can occur at earlier stages through disinvestment, increasing vacancies and facilitating demographic turnover. The detrimental effects of displacement include relocation costs, longer commutes, disruptions to health care, loss of community support networks, and homelessness. All of this impacts mental and psychological well-being.

ENVIRONMENTAL JUSTICE

Under EO 140965, environmental justice (EJ) means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people are fully protected from disproportionate and

adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices

EQUITY

Under EO 13985, equity is defined as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

EMISSIONS BUDGET

Emissions Budget, is the part of the State Implementation Plan (SIP) that identifies the allowable emissions levels, mandated by the National Ambient Air Quality Standards (NAAQS), for certain pollutants from mobile, stationary, and area sources. The emissions levels are used for meeting emission reduction milestones.

FHWA

Federal Highway Administration, a component of the U.S. Department of Transportation, established to ensure development of an effective national road and highway transportation system. FHWA and FTA, in consultation with US EPA, make Federal Clean Air Act Conformity findings for Regional Transportation Plans, Transportation Improvement Programs, and Federally funded projects.

FISCAL CONSTRAINT

Fiscal constraint, the metropolitan transportation plan, TIP, and STIP includes sufficient financial information for demonstrating that projects in the metropolitan transportation plan, TIP, and STIP can be implemented using committed, available, or reasonably available revenue sources, with

reasonable assurance that the Federally supported transportation system is being adequately operated and maintained. For the TIP and the STIP, financial constraint/fiscal constraint applies to each program year. Additionally, projects in air quality nonattainment and maintenance areas can be included in the first two years of the TIP and STIP only if funds are ''available'' or ''committed.''

FTA Federal Transit Administration, a component of the U.S. Department of Transportation, responsible for administering the Federal transit program under the Federal Transit Act, as amended, and SAFETEA-LU.

FSTIP Federal State Transportation Improvement Program is a transportation improvement program developed by a MPO that contains projects consistent with the current RTP; reflects the investment priorities established in the current RTP; and, once implemented, is designed to make progress toward achieving the federally required transportation performance targets established by each MPO.

FTIP Federal Transportation Improvement Program is a constrained 4-year prioritized list of all transportation projects that are proposed for *Federal and local* funding. The FTIP is developed and adopted by the MPO/RTPA and is updated every 4 years. It is consistent with the RTP, and it is required as a prerequisite for Federal funding.

GENTRIFICATION Gentrification is generally described as that which happens in neighborhoods that are seeing decreases in the number of low-income people and people of color due to an influx of high-income individuals and families who are willing and able to pay higher rents.

HEALTH EQUITY/INEQUITY Efforts to ensure that all people have full and equal access to opportunities that enable them to lead healthy lives. Disparities in health that are not only unnecessary and avoidable but, in addition, are considered unfair and unjust. Health inequities are rooted in social and environmental injustices that make some population groups more vulnerable to poor health than other groups.

HSIP Highway Safety Improvement Program is a core Federal aid program with the purpose of achieving significant reductions in fatalities and serious injuries on all public roads.

IIP Interregional Improvement Program is one of two component funding source programs that ultimately make up the State Transportation Improvement program. The IIP receives 25% of the funds from the State Highway account. The IIP is the source of funding for the ITIP.

ILLUSTRATIVE PROJECT An illustrative project means an additional transportation project that may (but is not required to) be included in a financial plan for the RTP or FTIP if reasonable additional resources were to become available.

INTERMODAL Intermodal refers to the connections between modes of transportation.

ITIP Interregional Transportation Improvement Program is a Statewide program of projects, developed by Caltrans for interregional projects that are primarily located outside of urbanized areas. The ITIP has a 4-year planning horizon and is updated every two years. It is submitted to the CTC along with the FTIP and taken together they are known as the STIP.

ITS Intelligent Transportation Systems are electronics, photonics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

ITSP Interregional Transportation Strategic Plan describes the framework in which the State will carry out its responsibilities for the Interregional Transportation Improvement Program (ITIP).

MIS Major Investment Study was a Federally mandated study required for major transportation improvements under ISTEA. An MIS was a planning analysis done on a corridor or sub-regional area that included social, economic and environmental considerations early in the planning process and integrated these considerations into the project development stage. Although SAFETEA-LU has deleted this requirement,

Section 450.318(a) and Appendix A retains the option to link early environmental considerations in the RTP to the subsequent project specific environmental review that takes place during the project delivery process.

MODE — Mode is a specific form of transportation, such as automobiles, buses, trains or planes.

MPO — Metropolitan Planning Organization, a planning organization created by Federal legislation charged with conducting regional transportation planning to meet Federal mandates.

NAAQS — National Ambient Air Quality Standards are the acceptable limits that are set for various pollutants by the US EPA. Air quality standards have been established for the following six criteria pollutants: ozone, carbon monoxide, particulate matter, nitrogen dioxide, lead and sulfur dioxide.

NEPA — National Environmental Policy Act is Federal legislation that created a national policy and procedures that require Federal agencies to consider the environmental effects of their actions and to inform the public that their decisions reflect this environmental consideration. NEPA applies to most transportation projects because they are jointly funded with a combination of Federal, State and sometimes local money.

NONATTAINMENT — Nonattainment, any geographic region of the United States that has been designated by the EPA as a nonattainment area under section 107 of the Clean Air Act for any pollutants for which a NAAQS exists.

PERFORMANCE MEASURES — Performance measures are used to model travel demand and allow the long-range forecasting of transportation network and system-level performance (e.g., Walk, bike, transit, and carpool mode share, corridor travel times by mode, percentage of population within 0.5 mile of a high frequency transit stop).

PERFORMANCE MONITORING INDICATORS/METRICS — Performance monitoring indicators or metrics include field data such as vehicle miles traveled, mode share,

	fatalities/injuries, transit access, change in agricultural land, and GHG emissions.
PERFORMANCE TARGETS	Performance targets are numeric goals established to enable the quantifiable assessment of performance measures.
PEL	Planning and Environmental Linkages is a process that allows information, analysis and decisions made during planning to be used or relied upon during environmental review.
PUBLIC HEALTH	All organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases.
RHNA	Regional Housing Needs Allocation, an estimate of the projected and existing housing need that is required to be conducted every 8 years. The objectives of the RHNA process are to increase the housing supply in an equitable manner, promote infill development, the protection of environmental resources, and the achievement of the region's GHG emission reduction goals, improve jobs housing balance, especially jobs housing fit, balance household income distribution, and affirmatively further fair housing.
RIP	Regional Improvement Program is one of two component funding source programs that ultimately make up the State Transportation Improvement program. The RIP receives 75% of the funds from the State Highway account. This 75% is then distributed to the MPOs and RTPAs by a formula. The RIP is the source of funding for the FTIP.
RTIP	Regional Transportation Improvement Program, is a program proposal of projects prepared by the regions in coordination with Caltrans for inclusion in the STIP.
RTP	Regional Transportation Plan, a Federal and State mandated planning document prepared by MPOs and RTPAs. The plan describes existing and projected

	transportation needs, conditions and financing affecting all modes within a 20-year horizon.
RTPA	Regional Transportation Planning Agency, a State designated single or multi-county agency responsible for regional transportation planning. RTPAs are also known as Local Transportation Commissions or Councils of Governments and are usually located in rural or exurban areas.
SCS	Sustainable Communities Strategy, demonstrates how an MPO will meet its GHG reduction targets through integrated land use, housing, and transportation planning.
SFAP	Sustainable Freight Action Plan, looks to integrate investments, policies, and programs across several State agencies to realize a singular vision for Freight transport.
SHA	State Highway Account, the SHA account is the State's primary source of funding for transportation improvements. The SHA account is composed of revenues from the State's gasoline and diesel fuel tax, truck weight fees and Federal highway funds. The SHA is primarily used for STIP, SHOPP and local assistance projects as well as non-capital projects such as maintenance, operations, and support.
SHOPP	State Highway Operations and Protection Program is a legislatively created program to maintain the integrity of the State highway system. It is tapped for safety and rehabilitation projects. SHOPP is a multi-year program of projects approved by the Legislature and Governor. It is separate from the STIP.
SHSP	Strategic Highway Safety Plan, is the overarching highway safety plan for the State of California.
SIP	State Implementation Plan, as defined in section 302(q) of the Clean Air Act (CAA), the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under section 110 of the CAA, or promulgated under section 110(c) of the CAA, or promulgated or approved pursuant to regulations promulgated under section 301(d) of the CAA and which implements the relevant requirements of the CAA.

SMART GROWTH	Smart Growth, is a set of policies designed by local governments to protect, preserve and economically develop established communities as well as natural and cultural resources. Smart growth encompasses a holistic view of development.
SMF	Smart Mobility Framework, is a starting point for those working to implement multimodal and sustainable transportation strategies in California.
SOCIAL DETERMINANTS OF HEALTH	The non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, and political systems.
SPRAWL	Sprawl is an urban form based on the movement of people from the central city to the suburbs. Concerns associated with sprawl include loss of farmland and open space due to low-density land development, increased public service costs including transportation, and environmental degradation.
STIP	State Transportation Improvement Program, a Statewide or bundled prioritized list of transportation projects covering a period of four years that is consistent with the long-range Statewide transportation plan, metropolitan transportation plans and FTIPs, and required for projects to be eligible for funding under Title 23 U.S.C. and title 49 U.S.C. Chapter 53.
TCM	Transportation Control Measures, any measure that is specifically identified and committed to in the applicable SIP that is either one of the types listed in section 108 of the Clean Air Act or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the above, vehicle technology-based, fuel-based, and maintenance-based measures that control the emissions from vehicles under fixed traffic conditions are not TCMs.

TIERING	Section 15385 of the CEQA guidelines defines tiering as the coverage of general matters in broader EIRs with subsequent narrower EIRs incorporating by reference the general discussions and concentrating solely on the issue specific to the EIR that is being subsequently prepared. Tiering allows agencies to deal with broad environmental issues in EIRs at the planning stage and then to provide a more detailed examination of specific effects in EIRs for later development projects that are consistent with or that implement the plan.
TITLE VI	Title VI of the Civil Rights Act of 1964, prohibits discrimination in any program or project receiving Federal financial assistance.
TDM	Transportation Demand Management refers to policies, programs and actions that encourage the use of transportation alternatives to driving alone and reduce vehicle miles traveled. TDM can include ridesharing, telecommuting, park-and-ride programs, and alternative work schedules.
TSM	Transportation System Management refers to the use of relatively inexpensive transportation improvements that are used to increase the efficiency of transportation facilities. TSM can include traffic signals, ramp meters, and other traffic flow improvements.
UNDERSERVED COMMUNITY	Under EO 13985, the term underserved community refers to those populations as well as geographic communities that have been systematically denied the opportunity to participate fully in aspects of economic, social, and civic life, as defined in Executive Orders 13985 and 14020.
US EPA	United States Environmental Protection Agency is the Federal agency that approves the SIP and the emissions budgets that are the basis of the RTP conformity assessments.

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Appendix E: Climate Adaptation Tools and Resources

Appendix E: Climate Adaptation Tools and Resources

PROTECT Program and Local Transportation Climate Adaptation Program

With the passage of IIJA in 2021, the FHWA is now administering a first of its kind federal aid program dedicated to improving surface transportation resilience to natural hazards, including climate change, known as the Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program. The State Legislature responded to IIJA and PROTECT with the passage of trailer bill SB 198 (Chapter 71, Statutes of 2022), setting requirements for the administration of PROTECT formula funds in California to align with existing state policy and guidance, including the Adaptation Planning Guide (APG) and State Climate Adaptation Strategy.

The CTC is overseeing the Local Transportation Climate Adaptation Program (LTCAP) to fund resilience improvements, created by SB 198. Eligible applicants include transportation planning agencies, amongst other Tribal, local, and regional governments and transportation authorities.

The PROTECT Program invites state DOTs to create a Resilience Improvement Plan, an optional component that can reduce the state and local cost-share of identified PROTECT projects. The State Climate Resilience Improvement Plan for Transportation (SCRIPT) is California's response to this optional component. The SCRIPT summarizes and highlights the breadth of existing climate adaptation policies, tools, guidance, and activities that have positioned Caltrans and its partners to take a systemic approach to making immediate and long-range investments to improve the resilience of the multi-modal transportation system. The SCRIPT includes an unconstrained Project Priority List to be periodically updated to reflect state, regional, and local-led projects pursuing PROTECT competitive grant opportunities.

Climate Adaptation and Resilience Guidance and Tools

As mentioned above, ICARP and CalOES have collaborated on the Adaptation Planning Guide (APG) for local and regional agencies, intended to guide adaptation planning. MPOs should use this guidance and the four-phase approach as a starting point to begin adaptation planning and integrate climate risk into transportation projects.

Cal-Adapt is an online platform created by the State of California to synthesize the best available climate science, generate spatially explicit visualizations, and provide downloadable data for local policymakers and the general public. Planners can find sophisticated locality-specific projections for many temperature metrics, wind and precipitation patterns, wildfire risk, snowpack, and sea-level rise.

The State Adaptation Clearinghouse, established by SB 246 as part of ICARP, is an online, searchable library of California-specific adaptation resources curated

to support adaptation planning and decision-making. In addition to interactive tools and resources such as the APG and Climate Resilience Plan Alignment Toolkit, the Clearinghouse displays regularly updated funding and financing resources, case studies and example projects, tools, data, and scientific studies, example plans, and other resources. For transportation-specific adaptation resources, explore the site's Transportation Topic page.

The following table summarizes various other tools and guidance regarding sea level rise (SLR), equity, and the safety element of the general plan guidelines:

Title	Type	Year	Owner	Description
2020 Adaptation Planning Guide	Guidance	2020	CalOES	Provides guidance to cities, counties, tribal, and regional governments on local adaptation and resiliency planning.
CCC SLR Policy Guidance	Guidance	2018	CCC	Provides an overview of the best available science on SLR for California and recommended methodology for addressing SLR in Coastal Commission planning and regulatory actions.
SLR Coastal Adaptation Planning Guidance for Critical Infrastructure	Guidance	2021	CCC	Recommendations on how to plan effectively for the impacts of SLR on coastal infrastructure, focusing on transportation and water.
Ocean Protection Council (OPC) Sea Level Rise Guidance*	Guidance	2018	OPC	Assists decision makers at state and local levels in planning for, and making decisions about, SLR and related coastal hazards in light of the current state of the science.
Cal-Adapt 4.0	Tools	2019	Multiple	Provides high-quality, peer-reviewed climate data and tools related to CA's climate change assessments including SLR, wildfires, droughts, storms, and extreme heat.
CalEnviroScreen 4.0	Tool	2022	CA Office of Environmental Health Hazard Assessment	Mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people

				are often especially vulnerable to pollution's effects.
Healthy Places Index 3.0	Tool	2022	Public Health Alliance of Southern California	Open and accessible data and policy platform created to advance health equity for various governmental and non-governmental users.
Caltrans Transportation Equity Index	Tool	TBD	Caltrans	A Census block scale, transportation-focused tool to help address and mitigate inequities in the transportation system.
Federal Climate and Economic Justice Screening Tool	Tool	2022	Council of Environmental Quality	Mapping tool that identifies disadvantaged and partially disadvantaged communities by census tract, including tribal nations.
General Plan Guidelines Required Elements	Guidelines	2017	OPR	See Safety Element for how climate change is considered in general plans, as well as Chapter 8 (Climate Change) of the overall guidelines.
California Emissions Estimator Model	Tool	2022	California Air Pollution Control Officers Association	Quantifies ozone precursors, criteria pollutants, and greenhouse gas emissions from the construction and operation of new land use development and linear projects in California. Measures to reduce emissions, climate risks, and environmental burdens are available for user selection and analysis.
CDPH Climate Change and Health Vulnerability Indicators for California (CCHVIs)	Tool	2023	California Department of Public Health	*The CCHVIs and CCHVIz tool are developed to help stakeholders better understand the people and places that are more susceptible to adverse health impacts associated with climate change. They are a suite of indicators of climate exposure, population sensitivity, and adaptive capacity to the impacts of climate change. These indicators are being used by local and state programs to plan to meet*

				the needs of the communities most at risk of harm from climate change.

Snapshot of Applicable Coastal Act Policies and Background Information

MPOs throughout the state have conducted vulnerability assessments and adaptation plans for transportation infrastructure to develop a regional assessment that ties into existing and planned future local efforts. For example, SANDAG staff coordinated with Commission staff to discuss the need to identify medium- and long-term adaptation planning strategies in response to emergency bluff stabilization measures undertaken in 2019. Goals and potential implementation pathways to address railway vulnerability were included in SANDAG's 2021 Regional Transportation Plan. Likewise, MTC conducted extensive collaboration with the Bay Conservation and Development Commission (BCDC) to integrate SLR considerations into Plan Bay Area 2050 (see also Adapting to Rising Tides (ART) Bay Area webpage). For more planning practice examples, see **Appendix F**.

Title	Type	Owner	Description
Section 30001.5	Coastal Act Policy	Coastal Commission	This policy calls for the maximization of public access, sea level rise considerations, and the need for coordinated planning.
Section 30106	Coastal Act Policy	Coastal Commission	Provides the Coastal Act definition of development, which is broadly defined.
Section 30235	Coastal Act Policy	Coastal Commission	This policy states that shoreline protection devices shall be permitted only when they "...serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply."
Section 30241	Coastal Act Policy	Coastal Commission	Requires state and regional agencies to "identify, assess, and, to the extent feasible and consistent with their statutory authorities, avoid, minimize, and mitigate the impacts of sea level rise.
Section 30252	Coastal Act Policy	Coastal Commission	Requires new development to facilitate public transportation, support parking needs, and allow for non-motorized transportation modes.
Section 30253	Coastal Act Policy	Coastal Commission	Requires new development to minimize adverse impacts to coastal resources, including risks to life and property. Also requires new development to ensure structural stability in a way that does not rely on shoreline protection devices. In addition, this policy calls for VMT reduction efforts for all new development.

Additional State Resources and Tools

Title	Type	Year	Owner	Description
Planning and Investing for a Resilient California	Guidance	2018	OPR	Product of the Technical Advisory Group formed under EO B-30-15, lays out a universal process for state agencies to address resilience in planning and investing.
Caltrans Statewide Vulnerability Assessments (VAs)	Tool	2019	Caltrans	Projections for six climate stressors and identified sections by post mile of the State Highway System (SHS) exposed to that event or condition. Products include a summary report, technical report, and interactive map for each Caltrans District.
Caltrans Statewide Adaptation Priority Reports (APRs)	Tool	2020	Caltrans	Systematic prioritization of exposed bridges, culverts, and roadways on the SHS identified in the 2019 VAs based on various weighted metrics, and associated scores.
Caltrans Climate Change Adaptation Strategy Report	Strategy	2020	Caltrans	A "how-to" guide for integrating climate change adaptation into agency activities and decision-making across functional areas.
Corridor Planning Guidance: Climate Change Emphasis Area Guide	Guidance	2022	Caltrans	An eight-step guide for integrating climate adaptation principles into the corridor planning process on the SHS.
Climate Change Communication Guide	Guidance	2020	Caltrans	Articulates best practices that Caltrans can use to educate, inform, and strengthen collaboration within Caltrans, among external partners, and with the public on the topic of climate change.
Guidance on Incorporating Sea Level Rise	Guidance	2011	Caltrans	2011 version focuses on PID phase. Pending update will apply latest available science and external SLR guidance to all phases of Caltrans project delivery.
Caltrans Highway Design Manual Chapter 880 – Sea Level Rise	Manual	2020	Caltrans	Technical design manual for accounting for impacts of SLR on the SHS.
Design Manual for Hybrid Coastal Protection Strategies	Manual	2022	Caltrans	Complementary resource to Section 880 of the Highway Design Manual; provides design guidance focused on nature-based adaptation strategies which rely on ecological and physical processes that offer protection to the built, inland, or backshore environment while providing benefits to coastal resources.

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Appendix F: Planning Practice Examples

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Introduction

This appendix aggregates planning practice examples and resource information into a single location organized by topic area. The examples contained in this appendix are intended to highlight exemplary, state of the art planning practices that Regional Transportation Planning Agencies (RTPAs) can seek to emulate in their planning processes as financial and technical resources allow. Efforts have been made to highlight planning practices that are being undertaken by large, medium, and small Agencies in both rural and urban areas throughout the state. This appendix represents a snapshot of available resources and planning practices representative of the time at which these guidelines were prepared.

The RTP Process

Complete Streets

The term "Complete Street" refers to a transportation network that is planned, designed, constructed, operated, and maintained to provide safe mobility for all users including: bicyclists, pedestrians, transit and rail riders, as well as commercial vehicles and motorists appropriate to the function and context of the facility. Complete Streets policies and practices are best implemented with a comprehensive and integrated approach of all agencies involved, taking advantage of opportunities for synergies and cost savings such as restriping when repaving.

General Complete Streets background, resources, and practice information at the state and national level:

Smart Growth America offers an interactive resources data base which offers information and case studies on a variety of mobility topics including Complete Streets:
http://www.completestreets.org/

The National Complete Streets Coalition provides a map with states and local jurisdictions that have adopted complete streets policies:
https://smartgrowthamerica.org/program/national-complete-streets-coalition/

Safe Routes to Schools National Partnership Complete Streets resources are available here:
http://saferoutespartnership.org/state/bestpractices/completestreets

Accommodating Bicycle and Pedestrian Travel: A Recommended Approach is a policy statement adopted by the United States Department of Transportation (USDOT). USDOT hopes that public agencies, professional associations, advocacy groups, and others will also adopt this approach as a way to promote the integration of biking and walking into the transportation mainstream:

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design.cfm

State-Level Plans addressing Complete Streets:

California Transportation Plan (2021)
https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf

California Bicycle and Pedestrian Plan (May 2017)
https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/f0020350-activeca-final-plan-2017-05-18-a11y.pdf

Regional Planning Practice Examples of Complete Streets Policies:

Large/Urban MPO Examples:

Active Transportation

SCAG's "Go Human" is a community engagement program with the goals of reducing traffic collisions in Southern California and encouraging people to walk and bike more. As part of this program, grants are available to support street-level community resiliency and increase the safety of people most harmed by traffic injuries and fatalities, including Black, Indigenous and People of Color; people with disabilities; and frontline workers, particularly those walking and biking.

The Community Hubs Program aims to fund projects that leverage new or existing community gathering and resource sites to implement traffic safety strategies including, but not limited to, messaging, education, engagement activities, leadership development, community assessment, or resource distribution.

https://scag.ca.gov/go-human

Micromobility

Within the boundaries of SCAG, the South Bay Cities COG was formed to assist its 16 member cites in Southern Los Angeles County on a number of wide-ranging issues. One of its current projects is the "South Bay Local Travel Network" or "LTN". The LTN will support the growing local use of "micromobility." The term is a mode of travel defined by use of zero-emission, slow speed vehicles. Such devices include neighborhood electric vehicles (NEVs)—which appear similar to golf carts, e-bikes, non-motorized pedal bikes, e-scooters, e-bikes.

https://southbaycities.org/programs/local-travel-network/

The following links contains planning practice examples of integrating Complete Streets Policies in the Metropolitan Transportation Commission (MTC) and the San Diego Regions:

https://mtc.ca.gov/planning/transportation/complete-streets
https://www.sandag.org/regional-plan/5-big-moves/complete-corridors

Small/Medium and Rural MPO Examples:

Tahoe Regional Planning Agency developed the following Complete Street Resource Guide:
http://tahoempo.org/activetransportationplan/docs/appendices/Appendix%20A_Complete%20Street%20Resource%20Guide.pdf

Local Planning Guidance for Complete Streets

Governor's Office of Planning and Research General Plan Guidelines:
https://opr.ca.gov/planning/general-plan/guidelines.html

RTP Consultation and Coordination

Public Participation Plan

Exemplary planning practice examples of MPO Public Participation plans and processes include incorporating public participation strategies in the RTP that ensure members of the public are engaged throughout the development of the RTP. Given the complex nature of transportation planning, MPOs can use public participation as a way to ensure local residents and community-based organizations are active participants at each step of the process. Open-invite roundtables and/or on-going advisory committees are one way that MPOs can seek public input throughout the process. Various MPOs have developed on-going advisory committees that included a wide range of interests including representation from historically underserved communities and rural areas. These advisory committees met regularly throughout the development of the RTP to ensure the document reflected the goals of the community. Other MPOs used on-line educational survey tools and games in addition to workshops, roundtables, and phone surveys, to allow the public to balance their priorities for the region. Additional information and specific examples are provided below:

Large/Urban MPO Examples:
Metropolitan Transportation Commission Public Participation Plan
https://mtc.ca.gov/about-mtc/public-participation/public-participation-plan

Sacramento Area Council of Governments Public Participation Plan
https://www.sacog.org/sites/main/files/file-attachments/draft_ppp_2021_pi.pdf?1636476072

Small/Medium/Rural MPO Example:
Kern Council of Governments 2023 Quality of Life Survey
https://www.kerncog.org/wp-content/uploads/2023/05/community_survey_2023.pdf

Title VI, Environmental Justice, and Social Equity Considerations in the RTP

MPOs are called upon to identify which populations and communities are low income or **communities of color**, and to determine what metrics they will use to measure the benefits and burdens to those populations and communities. They are then called up to conduct an appropriate social equity analysis, and a public participation is required to ensure that the RTP planning process succeeds in "seeking out and considering the needs of low-income households **and people of color**." Planning practices relevant to each of these requirements are collected here:

FTA Circular 4703.1 emphasizes the importance of understanding a community when addressing environmental justice, both in identifying low income communities **and communities of color** through the use of Census data and in engaging with potentially impacted residents and community-based organizations. https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/environmental-justice-policy-guidance-federal-transit

Practices for Engaging Communities

As part of the development of the 2025 Blueprint (MTP/SCS) and implementing SACOG's Racial Equity Action Plan, SACOG created a Public Outreach and Engagement Grant Program to partner with community-based organizations (CBOs) to strengthen outreach and engagement efforts within the six-county region. A primary goal of the Racial Equity Action Plan is to increase engagement with Black, Indigenous, Asian, Pacific Islander, Hispanic/Latino, and communities of color, along with low-income rural, urban, and other underrepresented communities to help shape SACOG's projects and programs. Under the grant program, community partners conducted outreach efforts during the 2025 Blueprint Survey period, with the goal of encouraging diverse survey participation and providing tailored engagement methods to communities that have been historically underrepresented in past outreach. The program offered grant awards ranging from $1,000 to $5,000, depending on the level of effort proposed by the applicant. Just over $50,000 was allocated to support outreach and engagement initiatives, awarded to 12 CBOs from throughout the region. The feedback and insights shared by CBO partners in the grant program have provided SACOG with key lessons learned that will continue to shape the agency's ability to cultivate impactful partnerships in future initiatives.

RTP/SCS Public Engagement Efforts & Community Based Mini-Grants
Fresno COG

Robust opportunities for public input on the development of the RTP/SCS and transportation projects within it is encouraged.

Fresno COG conducts a mini-grant program, which receives proposals from community-based organizations, schools, etc. to help solicit public input into key activities associated with the preparation of their RTP/SCS. The intent is to provide mini grants ranging from $3,000 to $5,000 each to organizations with existing community contacts to reach out to residents, to include them in the RTP/ SCS planning process, understand community needs, obtain input on the plan scenarios, and collect input on transportation project recommendations. https://www.planfresno.com/planfresno/uploads/2022/06/Chapter-7-Environmental-Justice-Final-Draft.pdf

Public Engagement and Education on RTP Project Selection

Public Participation Plans detail how the public can be involved in the RTP/SCS planning process, but these documents do not clearly present an overview of how to be involved in the project selection process for the RTP project list.

Participatory Grantmaking & Equity Investments
MTC

Participatory grantmaking invites community-based organizations and the public to help prioritize where funds should be spent, to help determine the priorities for transportation and mobility within local communities. These stakeholders help set priorities, develop strategies and are directly involved in how funding decisions are made. The approach shifts power in grantmaking decisions to the people most affected by the issues.

MTC's Community Action Resource and Empowerment (CARE) Program is a funding program to develop equity-based partnerships and provide resources and support in the Bay Area, especially with and for the underserved and Equity Priority Communities. The funding will target community-based transportation projects that have been identified as high-priority by local communities as part of participatory grantmaking. CARE will also support technical assistance for community-based organizations and local governments.

https://mtc.ca.gov/planning/transportation/access-equity-mobility/community-action-resource-empowerment-care-program

Exemplary planning practice examples of MPO efforts to address Title VI, Environmental Justice, and Social Equity Considerations in the RTP are provided below:

Large/Urban MPO Examples:
https://www.planbayarea.org/sites/default/files/documents/PBA50_Equity_Analysis_Report_Oct2021%281%29.pdf.

https://scag.ca.gov/sites/main/files/file-attachments/toolbox_environmentaljustice_final.pdf?1621573326

https://www.sandag.org/-/media/SANDAG/Documents/PDF/regional-plan/social-equity-in-planning/2021-regional-plan-appendix-h-2021-12-01.pdf

Additional statewide examples of stakeholder engagement strategies are also compiled in the following report developed by ClimatePlan:
Leading the Way: Policies and Practices for Sustainable Communities

Private Sector Involvement

Exemplary planning practice examples of MPO efforts to engage the private sector in RTP development are provided below:

The National Highway Institute offers training on engaging the Private Sector in Freight Planning: https://ops.fhwa.dot.gov/freight/fpd/training/index.htm

Native American Tribal Government Consultation and Coordination

It is recommended that federally and non-federally recognized Tribal Governments be consulted when historic, sacred sites, subsistence resources or traditional collecting properties are present in the MPOs jurisdiction.

US DOT Order 5301.1 ensures that programs, policies and procedures administered by the US DOT are responsive to the needs and concerns of Native Americans. https://www.transportation.gov/sites/dot.gov/files/2022-04/DOT_Order_5301.1A_04-27-2022.pdf

An exemplary planning practice example of MPO Tribal Consultation efforts is provided below:
https://www.sandag.org/projects-and-programs/borders-and-interregional-collaboration/tribal-consultation

Consultation with Resource Agencies

Current federal regulations require MPOs to consult with resource agencies, State and local agencies responsible for land use management, environmental protection, conservation, and historic preservation concerning the development of the RTP. Transportation agencies and resource agencies have developed methods to better incorporate resource issues into transportation planning processes to benefit both transportation planning and project delivery as well as ecological outcomes. Two examples of processes are:

1) FHWA's *Eco-logical Approach* organizes current methods for addressing natural resource identification, avoidance, minimization and mitigation into a systematic, step-wise process that starts at the beginning of the

transportation planning process and concludes with establishing programmatic approaches to recurring natural resource issues that are implemented at the project level. FHWA has developed an implementation approach called Integrated Eco-logical Framework (IEF), a nine-step, voluntary framework for partners to collaborate, share data, and prioritize areas of ecological significance. Implementing IEF at a regional scale during RTP development would allow for early coordination with resource agencies and other key stakeholders to establish a Regional Ecosystem Framework.

https://www.environment.fhwa.dot.gov/ecological/ImplementingEcoLogicalApproach/default.asp

Exemplary planning practice examples of Resource Agency consultation efforts and resulting planning products are provided below:

Large/Urban MPO Examples:

The San Diego Association of Governments' *TransNet* Environmental Mitigation Program (EMP), funded by local sales tax dollars, is unique in that it goes beyond traditional mitigation for transportation projects by including a funding allocation for habitat acquisition, management, and monitoring activities as needed to help implement the Multiple Species Conservation Program (MSCP) and the Multiple Habitat Conservation Program (MHCP) which are developed through extensive consultation with resource agencies. Information regarding the *TransNet* EMP is available at:
https://www.sandag.org/funding/grant-programs/environmental-mitigation

Small/Medium and Rural MPO Examples:
Butte County Association of Government's (BCAG) RTP/SCS and Regional Conservation Plan. BCAG adopted the Butte County Regional Conservation Plan (Plan), a regional Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), to streamline the development and mitigation associated with public and private development in the planning area. BCAG's RTP/SCS is built around a set of general plans designed to be consistent with the Regional Conservation Plan. Preparation and adoption of the Regional Conservation Plan required extensive resource agency coordination with the planning signatories upon issuance of federal and state permits along with the Plan.

RTP Environmental Considerations

This section discusses regionally important natural resources such as farmlands and habitat corridors that should be identified during the development and update process of RTPs, in order to implement transportation projects more effectively during the environmental review and permitting processes.

Policies and Regulations

The following is a list of national and state policies that support and enable regional conservation planning efforts in California:

National

- Department of the Interior, Order No. 3330 "Improving Mitigation Policies and Practices of the Department of the Interior (Secretary Sally Jewell, 2013);" and
- Presidential Memorandum "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment" (Nov 2015).
- FHWA policies to encourage integration of natural resources in the planning process: https://www.environment.fhwa.dot.gov/integ/index.asp

State

- California Endangered Species Act and Natural Community Conservation Planning Act (NCCP Act): https://wildlife.ca.gov/Conservation/Planning/NCCP

Tahoe Regional Planning Agency

Transfer of development rights (TDR) program offers regions a unique market mechanism to preserve open space and create compact and diverse neighborhoods that put residents and destinations closer together helping to shorten trips.

Tahoe Regional Planning Agency's RTP/SCS is the only SCS to endorse shrinking its region's current development footprint, which it proposes to do through a TDR program. The TDR program can help to shift existing development on sensitive land or outside communities toward more compact development within existing small town centers around the lake through incentives that include bonus units and enhanced transfer ratios. An online portal, TDR Marketplace was developed to help make transfers easier to find and implement.
https://www.trpa.gov/development-rights/

Tools and Frameworks

The **Natural Community Conservation Planning (NCCP)** program is administered by the California Department of Fish and Wildlife and is an unprecedented effort by the State of California, and numerous private and public partners, that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program began in 1991 as a cooperative effort to protect habitats and species.

https://www.wildlife.ca.gov/Conservation/Planning/NCCP/Plans;

- USFWS Endangered Species Habitat Conservation Planning Information https://www.fws.gov/endangered/what-we-do/hcp-overview.html
- Information regarding City and County Zoning Ordinances - https://www.opr.ca.gov/docs/PZD2012.pdf

- Information regarding Farmland Mapping and Williamson Act www.conservation.ca.gov/dlrp/fmmp;

RTP Contents

RTP Financial Overview

Federal statute and regulations and California State statute requires RTPs to contain an estimate of funds available for the 20-year planning horizon. This discussion of financial information is fundamental to the development and implementation of the RTP. The financial portions of the RTP identify the current and anticipated revenue sources and financing techniques available to fund the planned transportation investments described in other portions of the RTP. The intent is to define realistic financing constraints and opportunities. All projects, except illustrative projects i.e., unconstrained projects, must be fully funded in order to be included in the RTP.

Listing of Constrained and Un-constrained Projects

https://planbayarea.org/2050-plan/final-plan-bay-area-2050/final-supplemental-reports/interactive-transportation-project-list

Revenue Identification and Forecasting

https://www.ambag.org/sites/default/files/2023-04/REVISED2_AMBAG_MTP-SCS_Final_EntireDocument_PDFA_Updated041923.pdf

Transit

Los Angeles Metro Strategic Plan 2028 identified strategies and potential funding sources for improving the areas surrounding transit stations to make it easier and safer for people to access them.
https://www.metro.net/about/plans/metro-strategic-plan/

Bicycle & Pedestrian

The use of bicycles and walking as a means of transportation has increased dramatically in California over the last 20 years. Both modes of transportation promote a healthy lifestyle and reduce environmental impacts.

"Urban Bikeway Design Guide" (National Association of City Transportation Officials, 2014) http://nacto.org/publication/urban-bikeway-design-guide/

Local and Regional plans for bicycle and pedestrian trails and related facilities, including the California Coastal Trail should be supported by RTPs. Additional planning practice information regarding the California Coastal Trail is available at the following links:

Completing the California Coastal Trail Plan – California Coastal Conservancy

http://www.coastal.ca.gov/access/coastal-trail-report.pdf

Information regarding California Coastal Trail Definition and Design and Siting Standards is available at:
http://www.scc.ca.gov/webmaster/pdfs/CCT_Siting_Design.pdf

Goods Movement (Maritime/Rail/Trucking/Aviation)

MPOs are encouraged to consider developing or updating freight plans for their region, as these plans can help MPOs improve the efficiency and sustainability of goods movement in their regions.

https://scag.ca.gov/freightworks

https://www.alamedactc.org/planning/goodsmovement

https://ops.fhwa.dot.gov/Freight/infrastructure/nfn/index.htm

https://www.sandag.org/projects-and-programs/goods-movement-planning/san-diego-and-imperial-counties-sustainable-freight-strategy

California Sustainable Freight Action Plan

It is suggested that regional transportation agencies consult the California Sustainable Freight Action Plan when developing the freight-related strategies in their respective RTPs. https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/strategic-freight-planning/csfap

California Freight Mobility Plan

The state's California Freight Mobility Plan (CFMP) is a policy and action agenda document that supports the improvement of California's goods movement infrastructure while preserving the environment. MPOs are encouraged to review the CFMP for guidance and ensure consistency while addressing goods movement within their RTPs. https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/strategic-freight-planning/cfmp-2023

Regional Aviation System

MPOs should consider aviation planning practice information and case studies can be found at:
https://www.faa.gov/airports/planning_capacity
http://www.gao.gov/products/GAO-10-120
http://www.gao.gov/products/GAO-13-261

For questions and additional information regarding the state aviation program and its airport planning activities for a specific region, please visit: https://dot.ca.gov/programs/aeronautics

For additional information regarding land use compatibility concerns affecting airports, please visit the Caltrans Division of Aeronautics website: https://dot.ca.gov/programs/aeronautics/airport-land-use-planning

Programming/Operations

Rural County Emergency Planning

Nevada County Transportation Commission (NCTC) developed an Extreme Climate Event Mobility and Adaptation Plan to identify the climate-related weaknesses of the transportation system in Nevada County and provide actionable strategies for integration into transportation plans, transportation improvement programs, and emergency response plans for the region during extreme climate events. The Plan takes a proactive approach to improving the resiliency of Nevada County's transportation infrastructure in the face of increasing climate fueled threats. Through adaptation planning, the Nevada County Transportation Commission (NCTC) can identify how climate change is likely to impact NCTC's ability to achieve its mission, operate efficiently, and meet its policy and program objectives. By integrating climate change adaptation strategies into planning, NCTC ensures that resources are invested wisely, operations remain effective in current and future climate conditions, and the region is well positioned for any forthcoming regulations or incentives related to climate change.
https://www.nctc.ca.gov/documents/Projects/Ready%20Nevada%20County/Ready-NC-Extreme-Climate-Event-Mobility-Adaptation-Plan.pdf

Transportation System Management and Operations

A US DOT document titled; "A Guidebook for Creating an Objectives-Driven, Performance-Based Approach" provides a very good overview on how to integrate transportation system management and operations into the planning process. https://ops.fhwa.dot.gov/publications/fhwahop10026/chap_2.htm

The US DOT document titled, "Traffic Signal Operations and Maintenance Staffing Guidelines," provides guidelines to estimate the staffing and resource needs required to effectively operate and maintain traffic signal systems. Chapter 1.3.1 provides a suggestion on the level of maintenance that is necessary.
http://ops.fhwa.dot.gov/publications/fhwahop09006/fhwahop09006.pdf

Connected Vehicle Program

The U.S. Department of Transportation's (USDOT's) Connected Vehicle Program works with state and local transportation agencies, vehicle and device makers,

and the public to test and evaluate technology that will enable cars, buses, trucks, trains, roads and other infrastructure, and our smartphones and other devices to "talk" to one another.
https://www.its.dot.gov/research_archives/connected_vehicle/connected_vehicle.htm

Guidance for Zero-Emission Vehicles Readiness Planning Statewide

California's Zero Emission Vehicle Action Plan
(California Air Resources Board & California Department of Economic and Business Development:
https://business.ca.gov/wp-content/uploads/2021/06/EVS33-Final-3-27-20.pdf

Zero-Emission Vehicles in CA: Community Readiness Guidebook
(Governor's Office of Planning and Research, OPR):
https://www.opr.ca.gov/docs/ZEV_Guidebook.pdf

Examples of Regional Readiness Plans (Zero-Emission Vehicles and Alternative Fuels)

Upstate Plug-In Electric Vehicle Readiness Project (Prepared for: California Energy Commission by Shasta, Siskiyou & Tehama Counties)
https://www.energy.ca.gov/sites/default/files/2023-03/CEC-600-2023-020.pdf

AMBAG Electric Vehicle Infrastructure Plan for the Monterey Bay Area (2013)
https://www.ambag.org/sites/default/files/2019-12/Electric%20Vehicle%20Infrastructure%20for%20the%20Monterey%20Bay%20AreaFNL%20DELIVERABL.pdf

San Joaquin Valley Plug-In Electric Vehicle Readiness Plan (2014)
https://energycenter.org/sites/default/files/docs/nav/programs/pev-planning/san-joaquin/san_joaquin_valley_pev_readiness_plan-web.pdf

SCAG RTP/SCS Mobility Innovations Appendix (2022):
https://scag.ca.gov/sites/main/files/file-attachments/scag-mobility-innovations-and-pricing-report-final.pdf?1648504727

Southern California PEV Readiness Plan
https://scag.ca.gov/southern-california-pev-readiness-plan

San Diego Regional Alternative Fuel Readiness Plan (Prepared for: California Energy Commission by SANDAG) (2019)
https://www.energy.ca.gov/sites/default/files/2021-05/CEC-600-2019-002.pdf

Regional GHG Emissions Requirements & Considerations in the RTP

Transportation Demand Management (TDM)

The Victoria Transport Policy Institute at http://www.vtpi.org/tdm/index.php contains an Encyclopedia that is a comprehensive source of information about innovative management solutions to transportation problems. It provides detailed information on various demand management strategies, plus general information on TDM planning and evaluation techniques. It is produced by the Victoria Transport Policy Institute to increase understanding and implementation of TDM.

Adaptation of the Regional Transportation System to Climate Change

MPOs should make use of models that predict climate impacts like sea level rise, and that estimate changes in carbon stocks from alternative project or land management activities. Research shows that changes in land use and management can generate GHG benefits by avoiding and reducing emissions, and by increasing carbon storage. MPOs are encouraged to refer to the Climate Action through Conservation Project:
https://www.scienceforconservation.org/assets/downloads/CATC_Final_Jan2016.pdf
MPOs should make use of models that predict climate impacts like sea level rise, and that estimate changes in carbon stocks from alternative project or land management activities. Research shows that changes in land use and management can generate GHG benefits by avoiding and reducing emissions, and by increasing carbon storage. MPOs are encouraged to refer to the Climate Action through Conservation Project:
https://www.scienceforconservation.org/assets/downloads/CATC_Final_Jan2016.pdf

The model, method and tool presented in this report is usable at the county or regional scale and can help MPOs to provide a more comprehensive account of their progress toward meeting the state's GHG reduction goals.

Large/Urban Planning Practice Example:

SCAG developed the Regional Climate Adaptation Framework (Framework) to assist local and regional jurisdictions in managing the negative impacts of climate change. The Framework provides an overview of how the Southern California region can work together to plan and prepare for the impacts of sea level rise, extreme heat, increasingly frequent and damaging wildfires, and other climate-related issues.
https://scag.ca.gov/climate-change-regional-adaptation-framework

Transportation Performance Measurement

Kern COG completed a case study titled: "Balancing an Integrated State/Federal Transportation Performance Measure Process with Public Participation". This effort developed performance measures that reported the effects of transportation expenditures in the RTP. The region engaged the disadvantaged communities and other local stakeholders in developing an integrated performance measures system that balanced public input and state and federal requirements. Over time, Kern COG incorporated other requirements such as Federal, Title VI, Caltrans Smart Mobility Framework, Sustainable Communities Strategy, and federal PMs into an integrated report format included as an appendix to the RTP. The integrated report eases review of performance measures by local decision makers and the public while avoiding staff silos around each performance measure requirement.

https://www.kerncog.org/?s=+performance+measures

The following documents contain resources for performance-based planning:

- FHWA Performance-Based Planning and Programming Guidebook: https://www.transit.dot.gov/sites/fta.dot.gov/files/Performance_Based_Planning_and_Programming_Guidebook.pdf
- FHWA Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning (2023): https://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/fhwahep23018.pdf?v=2
- US DOT: Management & Operations in the Metropolitan Transportation Plan: A Guidebook for Creating an Objectives-Driven, Performance-Based Approach https://ops.fhwa.dot.gov/publications/moguidebook/index.htm

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Appendix G: Federal and State Laws for Travel Analysis Groupings

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DISCLAIMER
The State of California (State) and the California Department of Transportation (Department) make no representation or warranty regarding the accuracy of the data shown on this map.Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental, or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

Group A1: Isolated Rural Attainment Areas -- Federal Requirements (Shall)
None

Group A1: Isolated Rural Attainment Areas -- State Requirements (Shall)
California GC §65080(a) Each transportation planning agency designated under Section 29532 or 29532.1 shall prepare and adopt a regional transportation plan directed at achieving a coordinated and balanced regional transportation system, including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation facilities and services. The plan shall be action-oriented and pragmatic, considering both the short-term and long-term future, and shall present clear, concise policy guidance to local and state officials. The regional transportation plan shall consider factors specified in Section 134 of Title 23 of the United States Code. Each transportation planning agency shall consider and incorporate, as appropriate, the transportation plans of cities, counties, districts, private organizations, and state and federal agencies.

Group A1: Isolated Rural Attainment Areas -- Federal Recommendations (Should)
None

Group A1: Isolated Rural Attainment Areas -- State Recommendations *(Should)*
California GC §14522.2(b) Transportation planning agencies other than those identified in paragraph (1) of subdivision (a) of Section 14522.1, cities, and counties are encouraged, but not required, to utilize travel demand models that are consistent with the guidelines in the development of their regional transportation plans.

Group A1: Isolated Rural Attainment Areas -- Federal Recommendations (Should)
None

Group A1: Isolated Rural Attainment Areas -- State Recommendations *(Should)*
California GC §14522.2(b) Transportation planning agencies other than those identified in paragraph (1) of subdivision (a) of Section 14522.1, cities, and counties are encouraged, but not required, to utilize travel demand models that are consistent with the guidelines in the development of their regional transportation plans.

California GC §65080(c) Each transportation planning agency may also include other factors of local significance as an element of the regional transportation plan, including, but not limited to, issues of mobility for specific sectors of the community, including, but not limited to, senior citizens.

Group A2: Isolated Rural Nonattainment or Maintenance Areas -- Federal Requirements *(Shall)*
Regional Transportation Planning Agencies are not required to perform federal air quality conformity analysis as part of their RTP development. Caltrans is the

responsible agency for performing the project level air quality analysis requirements and recommendations listed in this grouping.

40 CFR §93.109 Criteria and procedures for determining conformity of transportation plans, programs, and projects: General.

(g) Isolated rural nonattainment and maintenance areas. This paragraph applies to any nonattainment or maintenance area (or portion thereof) which does not have a metropolitan transportation plan or TIP and whose projects are not part of the emissions analysis of any MPO's metropolitan transportation plan or TIP. This paragraph does not apply to "donut" areas which are outside the metropolitan planning boundary and inside the nonattainment/maintenance area boundary.

(1) FHWA/FTA projects in all isolated rural nonattainment and maintenance areas must satisfy the requirements of §§93.110, 93.111, 93.112, 93.113(d), 93.116, and 93.117. Until EPA approves the control strategy implementation plan or maintenance plan for a rural CO nonattainment or maintenance area, FHWA/FTA projects must also satisfy the requirements of §93.116(b) ("Localized CO, PM10, and PM2.5 violations (hot spots)").

(2) Isolated rural nonattainment and maintenance areas are subject to the budget and/or interim emissions tests as described in paragraph (c) of this section, with the following modifications:

(i) When the requirements of §§93.106(d), 93.116, 93.118, and 93.119 apply to isolated rural nonattainment and maintenance areas, references to "transportation plan" or "TIP" should be taken to mean those projects in the statewide transportation plan or statewide TIP which are in the rural nonattainment or maintenance area. When the requirements of §93.106(d) apply to isolated rural nonattainment and maintenance areas, references to "MPO" should be taken to mean the state department of transportation.

(ii) In isolated rural nonattainment and maintenance areas that are subject to §93.118, FHWA/FTA projects must be consistent with motor vehicle emissions budget(s) for the years in the timeframe of the attainment demonstration or maintenance plan. For years after the attainment year (if a maintenance plan has not been submitted) or after the last year of the maintenance plan, FHWA/FTA projects must satisfy one of the following requirements:

(A) §93.118;

(B) §93.119 (including regional emissions analysis for NOX in all ozone nonattainment and maintenance areas, notwithstanding §93.119(f)(2)); or

(C) As demonstrated by the air quality dispersion model or other air quality modeling technique used in the attainment demonstration or maintenance plan, the FHWA/FTA project, in combination with all other regionally significant projects expected in the area in the timeframe of the statewide transportation plan, must not cause or contribute to any new violation of any standard in any areas; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. Control measures assumed in the analysis must be enforceable.

(iii) The choice of requirements in paragraph (g)(2)(ii) of this section and the methodology used to meet the requirements of paragraph (g)(2)(ii)(C) of this section must be determined through the interagency consultation process

required in §93.105(c)(1)(vi) through which the relevant recipients of title 23 U.S.C. or Federal Transit Laws funds, the local air quality agency, the State air quality agency, and the State department of transportation should reach consensus about the option and methodology selected. EPA and DOT must be consulted through this process as well. In the event of unresolved disputes, conflicts may be escalated to the Governor consistent with the procedure in §93.105(d), which applies for any State air agency comments on a conformity determination.

Group A2: Isolated Rural Nonattainment or Maintenance Areas -- State Requirements *(Shall)*
California GC §65080(d) Except as otherwise provided in this subdivision, each transportation planning agency shall adopt and submit, every four years, an updated regional transportation plan to the California Transportation Commission and the Department of Transportation. A transportation planning agency located in a federally designated air quality attainment area or that does not contain an urbanized area may at its option adopt and submit a regional transportation plan every five years. When applicable, the plan shall be consistent with federal planning and programming requirements and shall conform to the regional transportation plan guidelines adopted by the California Transportation Commission. Prior to the adoption of the regional transportation plan, a public hearing shall be held after the giving of notice of the hearing by publication in the affected county or counties pursuant to Section 6061.

Group A2: Isolated Rural Nonattainment or Maintenance Areas -- Federal Recommendations *(Should)*
None

Group A2: Isolated Rural Nonattainment or Maintenance Areas -- State Recommendations *(Should)*
None