2 PROJECT DESCRIPTION

2.1 INTRODUCTION

The proposed project is a long-range regional plan for the nine-county San Francisco Bay Area (Bay Area or region), encompassing housing, economic, transportation, and environmental strategies designed to make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. Known as Plan Bay Area 2050, referred to herein as the "proposed Plan," it serves as the region's 2021 RTP/SCS.

An RTP, also sometimes referred to as a Metropolitan Transportation Plan or Long-Range Transportation Plan, is the mechanism used in California by both Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs) to conduct required long-range (minimum 20-year) planning for the region's multimodal transportation system. The SCS is a land use plan for the region that, in combination with the RTP, would accommodate future regional growth at all income levels while achieving State greenhouse gas (GHG) emissions reduction targets if implemented.

The draft Plan, supplementary reports, and other technical documents on the planning process can be found at the Plan Bay Area 2050 website: www.planbayarea.org.

This chapter describes the proposed Plan and the project objectives and includes a discussion on planning assumptions and the Plan's strategies and resulting forecasted changes.

2.2 PROPOSED PLAN

The most recent RTP/SCS for the Bay Area region—Plan Bay Area 2040—was adopted in 2017. As the Bay Area's second RTP to include an SCS, the 2017 plan was considered a "limited and focused" update of the original Plan Bay Area, adopted in 2013. The proposed Plan serves as the third RTP/SCS for the Bay Area and is a major update to Plan Bay Area 2040 while accompanying a current Regional Housing Needs Allocation (RHNA) cycle. The proposed Plan expands in scope, relative to prior plans, by examining the themes of economic development and environmental resilience. As a result, the proposed Plan focuses on 4 interrelated elements—housing, the economy, transportation, and the environment. The proposed Plan is composed of 35 integrated strategies across the 4 elements that provide a blueprint for how the Bay Area can accommodate future growth and make the region more equitable and resilient in the face of unexpected challenges and achieve regional GHG emissions reduction targets established by the California Air Resources Board (CARB) pursuant to SB 375. Strategies in the context of the proposed Plan are defined as either a public policy or a set of investments that can be implemented in the Bay Area over the next 30 years.

The proposed Plan's 14 housing and economic strategies detail how the region can accommodate the region's forecasted growth in population, households, housing units, and jobs within the region (see Section 2.3.1, "Regional Growth Forecast") and shape the ensuing forecasted development pattern. The land use strategies along with specific geographic areas—known as growth geographies—work in tandem to focus housing and job growth into existing communities well served by the transportation network, as well as communities with well-resourced schools and easy access to jobs, parks, and other amenities. This core strategy is known as the "focused growth" strategy. Key to implementing the "focused growth" strategy are the locally nominated growth geographies, including priority

development areas (PDAs) and priority production areas (PPAs). The proposed Plan also includes the designation of new growth geographies for both housing and jobs. These growth geographies are explained in more detail in Section 2.3.4 in this chapter and depicted in **Figure 2-5**.

The proposed Plan's 12 transportation strategies build upon the region's long-standing commitment to a "fix-it-first" strategy to maintain and optimize the existing transportation system and establish project and program priorities that allow project sponsors to qualify for federal funding for public transit, streets and roads, and bicycle and pedestrian facilities. Undergirding the transportation strategies is the fiscally constrained transportation project list, constrained by expected transportation revenues is fundamental to the RTP and required per federal and State regulations.

The proposed Plan's 9 environmental strategies promote conservation, adaptation, and climate resilience, including a specific strategy (EN01, "Adapt to Sea Level Rise,") to protect shoreline communities affected by sea level rise by identifying a series of adaptation infrastructure strategies (see Section 2.2.2, "Proposed Plan Strategies"). As part of the proposed Plan, archetype adaptation infrastructure was identified for regularly inundated shoreline areas. Archetypes include elevated roadways, a variety of levees, seawalls, tidal gates, and marsh restoration. The sea level rise adaptation infrastructure archetypes are described below under Section 2.2.2.

In summary, the proposed Plan:

- details housing and economic strategies ("land use") to invest $702 billion in expected revenues to accommodate 2.7 million new persons, 1.4 million new households, 1.5 new forecasted housing units, and 1.4 million new jobs between 2015 and 2050;
- details transportation strategies to invest $579 billion in expected revenues from federal, State, regional, and local sources over the next 30 years;
- details environmental strategies to invest $102 billion in expected revenues to protect the region from at least two feet of future permanent sea level rise inundation, reduce climate emissions, and maintain and expand the region's parks and open space system; and
- complies with Senate Bill (SB) 375, the State's SCS law, which requires integration of land use and transportation planning to reduce per-capita passenger vehicle GHG emissions by 2035 and provide adequate housing for the region's forecast of 2.7 million new persons and 1.4 million new households.

The proposed Plan area covers the entire Bay Area, which includes the nine counties and the 101 cities that make up the region. The proposed Plan is constrained by expected transportation revenues and the forecasted population and job growth discussed in Section 2.3, "Planning Assumptions." The proposed Plan does not change local land use policies; individual jurisdictions retain all local land use authority. The proposed Plan facilitates subsequent streamlined CEQA analysis pursuant to SB 375, SB 743, and other methods described in Section 1.9, "CEQA Streamlining Opportunities," in Chapter 1, "Introduction." The proposed Plan includes a fiscally constrained list of transportation projects and programs that are eligible for future federal and State funding but does not allocate funds to any specific transportation project or program.

2.2.1 Project Objectives

The proposed Plan's adopted vision is to "ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy, and vibrant for all." As part of the planning process, MTC and ABAG developed guiding principles and associated performance measures for the proposed Plan in

conjunction with members of the public, partners, and elected officials. In addition, SB 375 mandates two performance targets related to housing the population and achieving GHG emission reduction targets. Together, the guiding principles and performance metrics serve as the basis for the following CEQA objectives:

1. Address climate change by reducing carbon dioxide emissions pursuant to targets established in consultation with the California Air Resources Board; specifically, meet or exceed a 19-percent reduction in per-capita emissions from cars and light-duty trucks by 2035 relative to 2005 levels.

2. House 100 percent of the region's projected growth by income level, and with no increase in in-commuters over the proposed Plan baseline year.

3. Ensure that all current and future Bay Area residents and workers have sufficient housing options they can afford by reducing how much residents spend on housing and transportation and by producing and preserving more affordable housing.

4. Support an expanded, well-functioning, safe and multimodal transportation system that connects the Bay Area by improving access to destinations and by ensuring residents and workers have a transportation system they can rely on.

5. Support an inclusive region where people from all backgrounds, abilities, and ages can remain in place with full access to the region's assets and resources by creating more inclusive communities and reducing the risk that Bay Area residents are displaced.

6. Conserve the region's natural resources, open space, clean water, and clean air with the intent of improving health of Bay Area residents and workers and improving the health of the environment locally and globally.

7. Support the creation of quality job opportunities for all and ample fiscal resources for communities by more evenly distributing jobs and housing in the Bay Area and by enabling the regional economy to thrive.

2.2.2 Proposed Plan Strategies

Plan Bay Area 2050 is defined by four **elements**: housing, economy, transportation, and environment. Within each, there are two or three central **themes** (totaling 11 across the entire Plan) under which several **strategies** (totaling 35 across the entire Plan) are nested. Equity and resilience—the cross-cutting themes of Plan Bay Area 2050—are integrated into each element, theme, and strategy. As part of the Implementation Plan currently under development, MTC and ABAG are identifying one or more **implementation actions** for each strategy, currently totaling just under 70 implementation actions across the entire Plan. Whereas the strategies described below are envisioned to be implemented over the next three decades by local, regional, or State government, the Implementation Plan specifies MTC's and ABAG's role in advancing each strategy through specific implementation actions over the next 5 years.

The strategies detailed below are the proposed Plan's 35 integrated strategies that will enable the Bay Area to accommodate future growth and make the region more equitable and resilient in the face of unexpected challenges, such as the uncertainties posed by rising sea levels, economic cycles, and new technologies. Strategies, in the context of the proposed Plan, are defined as either a public policy or a set of investments that can be implemented in the Bay Area over the next 30 years.

HOUSING

The proposed Plan's 8 housing strategies detail how the region can accommodate the region's forecasted 1.5 million new housing units over the next 30 years. The housing strategies continue the region's commitment to "focused growth" but also are intended to protect current residents from displacement, preserve existing affordable housing, and produce new housing to secure long-term affordability to address the Bay Area's housing crisis (the "three Ps").

The strategies were selected to move the region toward its adopted vision of a more affordable, connected, diverse, healthy, and vibrant Bay Area for all, and to exceed the State-mandated target for GHG emissions reductions. This is generally accomplished by some of the strategies' ability to shape the region's forecasted land use development pattern and focus new housing in TRAs and HRAs.

Protect and Preserve Affordable Housing | $239 Billion | 51%

The depth of the Bay Area's housing crisis is so great that it is unlikely that increased housing construction alone will be sufficient to ensure every Bay Area resident has access to a safe and affordable home. Protecting and preserving existing affordable housing is critical to advancing the proposed Plan's vision for a more affordable region. Policies and investments that ensure today's affordable housing is not converted into market-rate housing are a key component. Additionally, action will be needed to reverse the decades-long trend of displacement—affecting both renters and owners in the Bay Area—including legal protections and prohibition of exploitative landlord behaviors.

Final Blueprint strategies build upon existing State and local legislation to protect renters from discriminatory action from landlords or untenable rent increases, creating a standard of tenant protections and services available regionwide to limit displacement. Furthermore, the Final Blueprint includes an investment to ensure that today's affordable housing remains affordable into the future.

Below are the proposed Plan strategies to protect and preserve affordable housing:

- H01. Further Strengthen Renter Protections Beyond State Legislation | $2 Billion | Building upon recent tenant protection laws, limit annual rent increases to the rate of inflation while exempting units less than 10 years old.
- H02. Preserve Existing Affordable Housing | $237 Billion | Acquire homes currently affordable to low- and middle-income residents for preservation as permanently deed-restricted affordable housing.

Spur Housing Production at All Income Levels | $219 Billion | 47%

The third prong of the three Ps (protection, preservation, and production) framework is to produce more housing at every affordability level. The Bay Area has historically fallen short of producing housing for all income levels, particularly for low- and moderate-income households. Many factors feed into this lagging production, including overly restrictive zoning that places a cap on the number of new units that can be built on a site, rising construction costs and land values, a long permitting process for units of all affordability levels, and a lack of financing and subsidies for homes affordable to households with low-and moderate incomes.

Spurring housing production at all income levels will likely require a mix of land use reforms, new requirements for housing developers, and financial incentives to make it more easily financially viable to produce housing affordable to low- and moderate-Income families. The proposed Plan includes strategies for each of these areas, implemented regionwide to ensure that the region produces enough housing to accommodate all future population growth, as required by law.

Below are the proposed Plan strategies to spur housing production at all income levels:

- **H03. Allow a Greater Mix of Housing Densities and Types in Growth Geographies | Negligible Cost |** Allow a variety of housing types at a range of densities to be built in PDAs, select TRAs, and select HRAs.

- **H04. Build Adequate Affordable Housing to Ensure Homes for All | $219 Billion |** Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.

- **H05. Integrate Affordable Housing into All Major Housing Projects | Negligible Cost |** Require a baseline of 10–20 percent of new market-rate housing developments of five units or more to be affordable to low-income households.

- **H06. Transform Aging Malls and Office Parks into Neighborhoods | Negligible Cost |** Permit and promote the reuse of shopping malls and office parks with limited commercial viability as neighborhoods with housing for residents at all income levels.

Create Inclusive Communities | $10 Billion | 2%

In addition to strategies related to housing supply and stability, an additional suite of strategies works to move the Bay Area toward higher degrees of inclusivity and equity for all residents. The 3 Ps of protection, preservation, and production alone are not sufficient to reverse centuries of exclusionary race-based policies that have affected everything from access to wealth-building opportunities like homeownership to where people of color still live today. Strategies that increase access to wealth-building opportunities like home ownership or owning a personal business, as well as strategic leveraging of public and community-owned land for housing and service provision, are intended to directly improve conditions for Black, indigenous, and Latinx people who have been historically excluded from such opportunities.

Below are the proposed Plan strategies to create inclusive communities:

- **H07. Provide Targeted Mortgage, Rental, and Small Business Assistance to Communities of Concern | $10 Billion |** Provide assistance to low-income communities and communities of color to address the legacy of exclusion and predatory lending, while helping to grow locally owned businesses.

- **H08. Accelerate Reuse of Public and Community-Owned Land for Mixed-Income Housing and Essential Services | Negligible Cost |** Help public agencies, community land trusts and other nonprofit landowners accelerate development of mixed-income affordable housing.

ECONOMY

The proposed Plan's 6 economic strategies detail how the region can accommodate the region's forecasted 1.4 million new jobs over the next 30 years. The economic strategies continue the region's commitment to "focused growth," concentrating development of new employment centers within the existing urban development footprint ("developed" land) and close to housing and transit stations.

The strategies were selected to move the region toward its adopted vision of a more affordable, connected, diverse, healthy, and vibrant Bay Area for all, and to exceed the State-mandated target for GHG emissions reductions. This is generally accomplished by the strategies' ability to shape the regional forecasted development pattern and focus new jobs in TRAs and PPAs.

Improve Economic Mobility | $220 Billion | 94%

As the types of jobs available to Bay Area residents continue to shift, fewer and fewer middle-wage jobs become available. Over the past few decades, the traditional path to middle class through a blue-

collar industry like manufacturing has become ever more elusive as automation grows and wages sharply diverge. Over the same period, the cost of living in the Bay Area has risen substantially, buoyed by a self-reinforcing cycle of higher-wage job growth and rising housing costs.

A stronger safety net, coupled with a concerted effort to open more pathways to middle-wage jobs, is critical to ensuring that no one is priced out of the Bay Area. Improving economic mobility is a complex undertaking beyond MTC's and ABAG's jurisdictional sphere that will require a coordinated, multipronged approach, as well as further growing key partnerships.

Below are the proposed Plan strategies to Improve economic mobility:

- **EC01. Implement a Statewide Universal Basic Income | $205 Billion |** Provide an average $500 per month payment to all Bay Area households to improve family stability, promote economic mobility, and increase consumer spending.
- **EC02. Expand Job Training and Incubator Programs | $5 Billion |** Fund assistance programs for establishing new businesses, as well as job training programs, primarily in historically disinvested communities.
- **EC03. Invest in High-Speed Internet in Underserved Low-Income Communities | $10 Billion |** Provide direct subsidies and construct public infrastructure to ensure all communities have affordable access to high-speed internet.

Shift the Location of Jobs | $14 Billion | 6%

The Bay Area must also address its imbalance of the location of jobs and housing in order to support continued economic growth. The region's jobs-to-housing imbalance is decades in the making, a result of land use policies focusing on local needs and a transportation system that was historically able to grow just enough to meet increased peak period demand. It is also a product of the power of economic agglomeration, where like industries locate together (for example, information sector jobs clustered in the West Bay and South Bay). The Bay Area has reached a point where transportation can no longer address this imbalance, requiring strategies to shift the location of jobs.

Below are the proposed Plan strategies to shift the location of jobs:

- **EC04. Allow Greater Commercial Densities in Growth Geographies | Negligible Cost** | Allow greater densities for new commercial development in select PDAs and select TRAs to encourage more jobs to locate near public transit.
- **EC05. Provide Incentives to Employers to Shift Jobs to HRAs Well Served by Transit | $10 Billion |** Provide subsidies to encourage employers to relocate offices to housing-rich areas near regional rail stations.
- **EC06. Retain and Invest in Key Industrial Lands | $4 Billion |** Implement local land use policies to protect key industrial lands identified as PPAs, while funding key infrastructure improvements in these areas.

TRANSPORTATION

The proposed Plan's 12 transportation strategies detail how the region intends to invest the region's $579 billion in committed and forecasted transportation revenues over the next 30 years. The transportation strategies continue the region's long-standing commitment to a "fix-it-first" strategy to maintain, optimize, and restore the existing transportation system. Additionally, the transportation strategies are designed to create healthy and safe streets for pedestrians, cyclists, car drivers, and

transit users and to build a next-generation transit network that is coordinated, consistent, and convenient across the region.

The strategies were selected to move the region toward its adopted vision of a more affordable, connected, diverse, healthy, and vibrant Bay Area for all and to exceed the State-mandated target for GHG emissions reductions. This is generally accomplished by the strategies' ability to increase travel mode choices and accessibility while reducing travel times and costs.

Maintain and Optimize the Existing System | $441 Billion | 78%

Over three-fourths of the proposed Plan's transportation revenues are reinvested toward maintaining and optimizing the existing transportation system. Nearly two-thirds of the forecasted revenues are dedicated to maintaining existing roads, bridges, and transit vehicles and providing transit service. The proposed Plan is designed to promote a seamless mobility experience, meaning that travel options are convenient and easy to understand. The proposed Plan includes standardizing transit fares across the region's 27 transit operators, with one local fare across all operators and free transfers between local routes. The proposed Plan includes implementing per-mile tolling on select congested freeways where parallel transit options exist. To support equity goals and reduce the regressive impact of this pricing measure, the strategy would be means-based; households earning below the median income would receive a 50-percent discount. The generated revenue would be directly reinvested in improving transit alternatives. An estimated $25 billion in funding for transportation projects could be generated between 2030 and 2050, helping to fund transit investments proposed for the latter years of the proposed Plan. The proposed Plan proposes addressing highway bottlenecks and improving interchanges through a limited selection of roadway widenings, local road extensions to serve new developments, and interchange redesigns that improve safety and operations.

Below are the proposed Plan strategies to maintain and optimize the Bay Area's existing transportation system:

- **T01. Restore, Operate, and Maintain the Existing System | $390 Billion |** Commit to operate and maintain the Bay Area's roads and transit infrastructure while restoring transit service hours to 2019 levels.
- **T02. Support Community-Led Transportation Enhancements in Equity Priority Communities | $8 Billion |** Provide direct funding to historically marginalized communities for locally identified transportation needs.
- **T03. Enable a Seamless Mobility Experience | $3 Billion |** Eliminate barriers to multi-operator transit trips by streamlining fare payment and trip planning while requiring schedule coordination at timed transfer hubs.
- **T04. Reform Regional Transit Fare Policy | $10 Billion |** Streamline fare payment and replace existing operator-specific discounted fare programs with an integrated fare structure across all transit operators.
- **T05. Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives | $1 Billion |** Apply a per-mile charge on auto travel on select congested freeway corridors where transit alternatives exist, with discounts for carpoolers, low-income residents, and off-peak travel, and reinvest excess revenues into transit alternatives in the corridor.
- **T06. Improve Interchanges and Address Highway Bottlenecks | $11 Billion |** Rebuild interchanges and widen key highway bottlenecks to achieve short- to-medium term congestion relief.

- **T07. Advance Other Regional Programs and Local Priorities | $18 Billion |** Fund regional programs like 511 while supporting local transportation investments on arterials and local streets.

Create Healthy and Safe Streets | $17 Billion | 3%

The second major theme of the transportation strategies is the creation of healthy and safe streets. Active modes are particularly important for local trips like shopping at nearby businesses and for recreation, as well as for accessing transit for longer-distance trips. Active transportation benefits both public health, through increased physical activity, and the environment, through zero-emissions travel.

Below are the proposed Plan strategies to create healthy and safe Bay Area streets:

- **T08. Build a Complete Streets Network | $13 Billion |** Enhance streets to promote walking, biking, and other micromobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.

- **T09. Advance Regional Vision Zero Policy through Street Design and Reduced Speeds | $4 Billion |** Reduce speed limits to 20–35 miles per hour on local streets and 55 miles per hour on freeways, relying on design elements on local streets and automated speed enforcement on freeways.

Build a Next Generation Transit Network | $121 Billion | 19%

The proposed Plan dedicates over $30 billion over the next 30 years to expanding local transit, increasing its frequency, and installing infrastructure that enables local transit to operate faster, more reliably, and under less crowded conditions. The proposed Plan also envisions an enhanced regional rail network, with a set of investments totaling over $80 billion that put the Bay Area on the path toward a world-class rail system. The anchor of a plan for rail in the Bay Area, looking out to 2050, is a new transbay rail crossing connecting downtown Oakland and San Francisco.

The proposed Plan responds to the challenge of in-commuters, or people who live outside of the nine-county Bay Area but commute in each day to work. For those commuting into the region from the south, the proposed Plan includes investments that lay the foundation for the arrival of California High-Speed Rail into the region.

The proposed Plan recognizes the need for a flexible, multimodal transportation system and plans for a robust regional express bus service plan that complements regional rail and local transit. Investments in express buses total $9 billion, which is paired with an investment to build out the Bay Area Express Lane Network, to ensure that express bus service is time-competitive with driving while also providing drivers with an option to bypass congestion by paying an added toll.

Below are the proposed Plan strategies to build the Bay Area's next generation transit network:

- **T10. Enhance Local Transit Frequency, Capacity, and Reliability | $31 Billion |** Improve the quality and availability of local bus and light rail service, with new bus rapid transit lines, South Bay light rail extensions, and frequency increases focused in lower-income communities.

- **T11. Expand and Modernize the Regional Rail Network | $81 Billion |** Better connect communities while increasing frequencies by advancing the Link21 new transbay rail crossing, BART to Silicon Valley Phase 2, Valley Link, Caltrain Downtown Rail Extension, and Caltrain/High-Speed Rail grade separations, among other projects.

- **T12. Build an Integrated Regional Express Lane and Express Bus Network | $9 Billion |** Complete the buildout of the regional express lanes network to provide uncongested freeway lanes for new and improved express bus services, carpools, and toll-paying solo drivers.

ENVIRONMENT

The proposed Plan's 9 environmental strategies promote conservation, adaptation, and climate mitigation. Strategies that fall under the three themes of reducing risks from hazards, expanding access to parks and open space, and reducing climate emissions are crucial to ensuring that the Bay Area is environmentally—and equitably—thriving in 2050.

The strategies were selected to move the region toward its adopted vision of a more affordable, connected, diverse, healthy, and vibrant Bay Area for all, and to exceed the State-mandated target for GHG emissions reductions. This is generally accomplished by the strategies' ability to protect from sea level rise, shape the region's forecasted land pattern and focus growth (housing and jobs) away from hazards, and reduce GHG emissions.

Reduce Risks from Hazards | $52 Billion | 51%

By 2050, according to many climate scientists, major U.S. cities, including San Francisco, will have unprecedented weather events. Wildfires that destroy hundreds of homes in a single night are becoming an annual occurrence, and traffic is currently routinely rerouted on several low-lying roads because of flooding from heavy rains. The threat of a major earthquake has always existed in the Bay Area, and with the last major seismic event in the region occurring in 1989 with the Loma Prieta earthquake, the region is due for another major event, based on scientific forecasts.

There is considerable uncertainty as to how natural hazards will shape life in the Bay Area over the next 30 years and beyond. The proposed Plan takes these risks into account, discouraging growth in high-risk wildfire areas; planning to protect homes, businesses, and transportation infrastructure from flooding; and considering avenues to minimize damage from a major earthquake.

Below are the proposed Plan strategies to reduce risks from hazards:

- **EN01. Adapt to Sea Level Rise | $19 Billion |** Protect shoreline communities affected by sea level rise, prioritizing low-cost, high-benefit solutions and providing additional support to vulnerable populations.
- **EN02. Provide Means-Based Financial Support to Retrofit Existing Residential Buildings | $15 Billion |** Adopt building ordinances and incentivize retrofits to existing buildings to meet higher seismic, wildfire, water, and energy standards, providing means-based subsidies to offset associated costs.
- **EN03. Fund Energy Upgrades to Enable Carbon-Neutrality in All Existing Commercial and Public Buildings | $18 Billion |** Support electrification and resilient power system upgrades in all public and commercial buildings.

Expand Access to Parks and Open Space | $45 Billion | 44%

The proposed Plan's environmental strategies chart the course for a future Bay Area where development is focused within the existing urban development footprint, ringed by natural lands that are well-maintained and dotted with parks and trails that provide easy access to open space, regardless of where a person lives. Support for locally adopted land use policies that limit new construction outside of the existing footprint, combined with investments in natural lands that serve vital ecological purposes and parks and recreation facilities essential to population health and well-being are packaged together to advance this vision, with a specific emphasis on improving access to parks and open space and promoting a sustainable development pattern.

Below are the proposed Plan strategies to expand access to parks and open space:

- **EN04. Maintain Urban Growth Boundaries | Negligible Cost |** Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.
- **EN05. Protect and Manage High-Value Conservation Lands | $15 Billion |** Provide strategic matching funds to help conserve and maintain high-priority natural and agricultural lands, including but not limited to PCAs and wildland-urban interface lands.
- **EN06. Modernize and Expand Parks, Trails, and Recreation Facilities | $30 Billion |** Invest in quality parks, trails, and open spaces that provide inclusive recreation opportunities for people from all backgrounds, abilities, and ages to enjoy.

Reduce Climate Emissions | $5 Billion | 5%

The importance of addressing climate change in the face of ever-worsening climate events like fires, drought, extreme heat, and flooding calls for a swift and sustained reduction in GHG emissions across multiple sectors. SB 375, a State mandate to reduce GHG emissions from transportation, codified this importance in 2008, calling on regions across the State to work together toward the goal of reducing global warming and combating climate change.

Strategies recognize that action is needed at a variety of scales and on different timelines. For individuals, policies that encourage more sustainable transportation choices and promote access to zero-emissions vehicles are critical. Employers contribute by compelling their employees to commute sustainably through a menu of incentives and disincentives. Outside of the realm of transportation, buildings are retrofit to be more efficient and emit less pollution. Together, these strategies reduce the Bay Area's climate emissions, exceeding State-mandated targets without sacrificing equitable outcomes.

While many proposed Plan strategies across the transportation, housing, and economy chapters help to reduce climate emissions, below are the proposed Plan strategies to reduce climate emissions included in the environment chapter:

- **EN07. Expand Commute Trip Reduction Programs at Major Employers | Negligible Cost** | Set a sustainable commute target for major employers as part of an expanded Bay Area Commuter Benefits Program, with employers responsible for funding incentives and disincentives to shift auto commuters to any combination of telecommuting, transit, walking, and/or bicycling.
- **EN08. Expand Clean Vehicle Initiatives | $4 Billion |** Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.
- **EN09. Expand Transportation Demand Management Initiatives | $1 Billion |** Expand investments in programs like vanpools, bikeshare, carshare, and parking fees to discourage solo driving.

2.2.3 Conditions Under the Proposed Plan

This section details outcomes of implementation of the proposed Plan's 35 integrated strategies.

LAND USE DEVELOPMENT

Building upon past iterations of Plan Bay Area, the proposed Plan's core strategy remains "focused growth" in existing communities along the existing transportation network, as well as communities with well-resourced schools and easy access to jobs, parks, and other amenities. This strategy helps to

achieve key regional economic, environmental, and equity goals by building upon existing community characteristics and leveraging existing infrastructure while reducing effects on areas with less development. To plan for future growth and meet the GHG emissions reduction target established by CARB pursuant to SB 375, the proposed Plan designates specific geographic areas—known as growth geographies (see Section 2.3.4, "Proposed Plan Growth Geographies")—as areas prioritized to accommodate the regional growth forecast (see Section 2.3.1, "Regional Growth Forecast").

The proposed Plan prioritizes these designated growth geographies to accommodate the regional growth forecast by applying a series of land use strategies (a subset of the housing, economic, and environmental strategies discussed in Section 2.2.2, "Proposed Plan Strategies") to these select geographies to make individual parcels of land more attractive for both development and redevelopment. The proposed Plan uses the growth geographies and land use strategies to influence the forecasted development pattern by affecting the location, use, intensity, and density of forecasted development. Many of the land use strategies are aimed at achieving the proposed Plan's focused growth strategy to comply with SB 375's GHG emissions reduction mandate, whereas other land use strategies are aimed at the affordability of the region's housing to take on SB 375's other mandate to ensure that a mix of housing types are available to households of all income types across the region.

The proposed Plan's forecasted development pattern, also referred to as the "land use growth footprint," represents the development or redevelopment of parcels of land simulated to accommodate the region's forecasted growth of households and jobs from 2015 through 2050 through the development of new building(s). The forecasted development pattern is a result of existing zoning and other land use policies, the regional growth forecast, and the proposed Plan's growth geographies and 35 integrated strategies. The forecasted development pattern is simulated from the Bay Area UrbanSim 2.0 land use model (see Section 2.3.3, "Analysis Tools") by forecasting future land use changes (e.g., development or redevelopment) in 5-year increments starting from base year conditions.

The forecasted development pattern of households and employment is provided in **Table 2-1**. Overall, the regional development pattern in 2050 is not substantially different from the pattern observed in 2015. The South Bay (Santa Clara County) is projected to see substantial growth—73-percent growth in households and 46-percent growth in employment relative to 2015—leading to an increased share of the region's households and employment. While the South Bay increases its share, the North Bay (Marin, Napa, Solano, and Sonoma Counties) decreases its collective share of the region's households and employment. The East and West Bay maintain their respective shares of the region's households and employment. **Figure 2-1** and **Figure 2-2**, on the following pages, depict the general locations and intensity of household and employment growth.

Table 2-1: Forecasted Household and Employment Growth, 2015-2050, by County

County	Households			Employment		
	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050
Alameda	552,000	847,000	+295,000	867,000	1,182,000	+315,000
Contra Costa	383,000	551,000	+169,000	404,000	534,000	+130,000
Marin	109,000	146,000	+37,000	135,000	116,000	-19,000
Napa	50,000	56,000	+5,000	72,000	87,000	+15,000
San Francisco	366,000	578,000	+213,000	682,000	918,000	+236,000
San Mateo	265,000	394,000	+129,000	393,000	507,000	+114,000
Santa Clara	623,000	1,075,000	+453,000	1,099,000	1,610,000	+511,000
Solano	142,000	177,000	+35,000	132,000	201,000	+69,000
Sonoma	188,000	220,000	+32,000	221,000	251,000	+30,000
Regional Total	2,677,000	4,043,000	+1,367,000	4,005,000	5,408,000	+1,403,000

Notes: Whole numbers have been rounded (between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum because of independent rounding.

Source: Data compiled by MTC and ABAG in 2021

Forecasted changes in potential jobs-housing ratios are summarized in Table 2-2. In this context, the potential jobs-housing ratio is measured as the ratio of jobs ("workers") to households. This measure gives some insight to potential effects on worker travel patterns. The regional jobs-housing ratio is expected to decrease from 1.50 to 1.34 between 2015 and 2050, meaning that households are anticipated to grow more than jobs, resulting in less workers per household in the future. A county jobs-housing ratio of 1.34 would suggest that workers would not have to leave their county of residence to access a job, whereas a county ratio of less than 1.34 would suggest the county exports workers, and a county ratio greater than 1.34 would suggest the county imports workers. This ratio is referred to as "potential" because it does not incorporate the complex decisions people make when choosing where to live and work. Some of the proposed Plan's 35 integrated strategies alter the potential jobs-housing ratios across counties. Overall, the proposed Plan results in regional subareas and subarea counties converging toward the regional jobs-housing ratio of 1.34. The north and east bay subareas, while still below the regional average, are both moving closer to regional average. Similarly, the traditional job-rich peninsula and south bay subareas remain job-rich, but are moving closer to the regional jobs-housing ratio.

Table 2-2: Potential Jobs-Housing Ratio

County	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	
			Numerical	Percent
Alameda	1.58	1.40	-0.18	-11%
Contra Costa	1.06	0.97	-0.09	-8%
Marin	1.25	0.80	-0.45	-36%
Napa	1.42	1.56	+0.14	+10%
San Francisco	1.86	1.59	-0.27	-15%
San Mateo	1.47	1.28	-0.19	-13%
Santa Clara	1.78	1.51	-0.27	-15%
Solano	0.93	1.14	+0.21	+23%
Sonoma	1.18	1.14	-0.04	-3%
Regional Total	1.50	1.34	-0.16	-11%

Source: Data compiled by MTC and ABAG in 2021

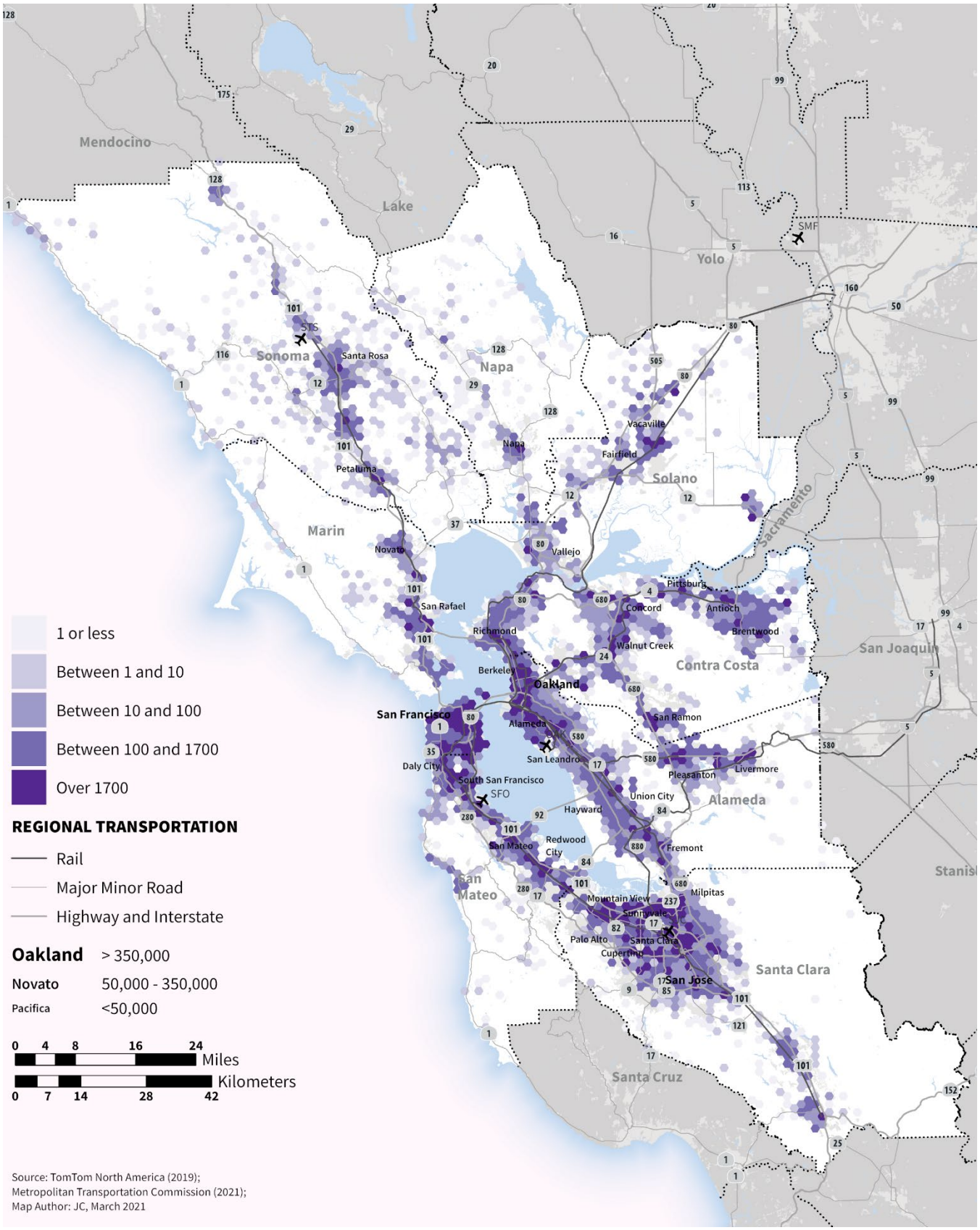

Figure 2-1: Change in Households, 2015 through 2050

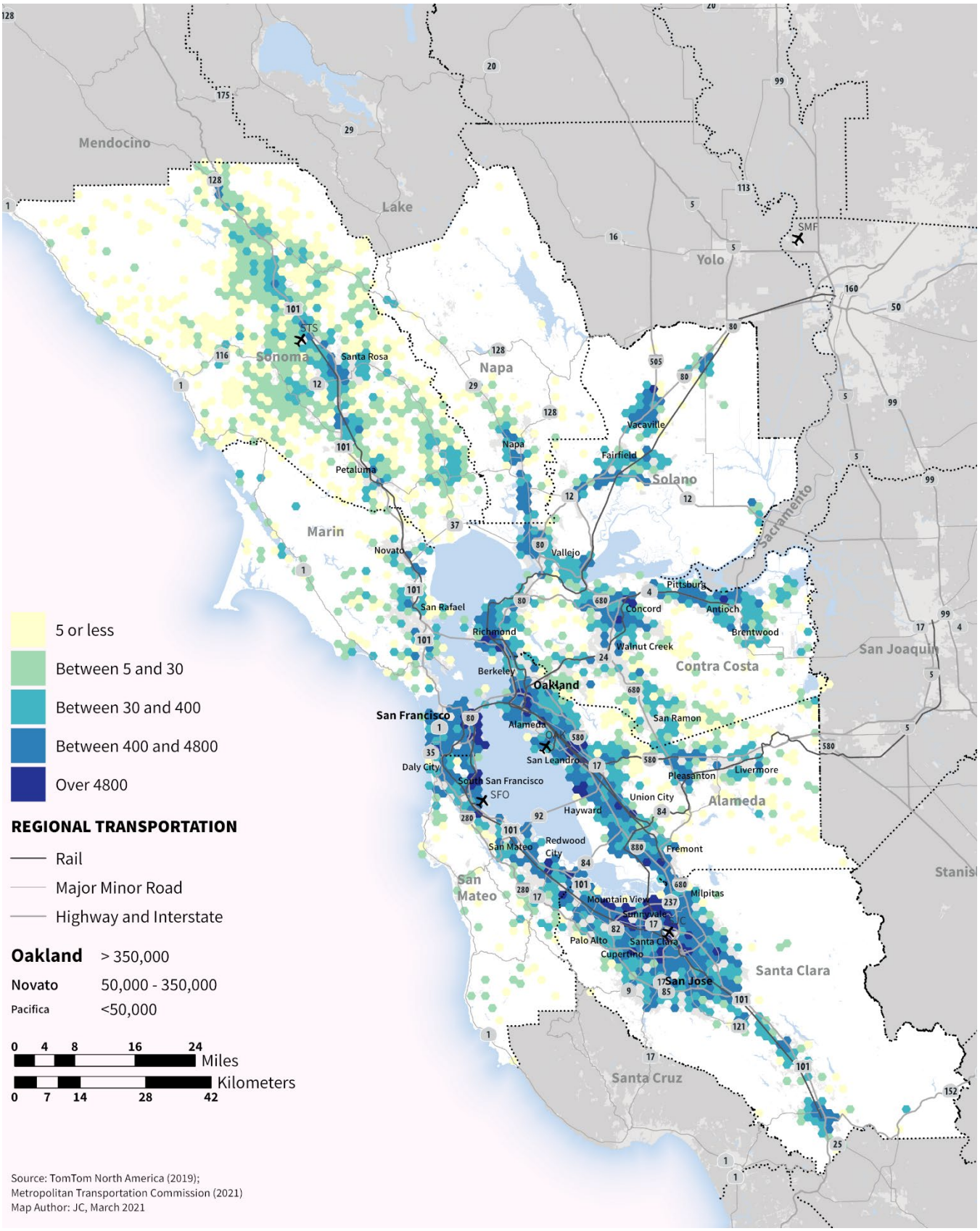

Figure 2-2: Change in Employment, 2015 through 2050

The forecasted shares of housing units by type and nonresidential square feet by type are broken down by county and provided in Table 2-3, below. The majority (88 percent) of regional housing unit growth is forecasted as multifamily housing units. All counties, apart from San Francisco County, are forecasted to see growth in both single-family and multifamily housing units, whereas San Francisco County is forecasted to see multifamily units replace some single-family units. Similarly, most (75 percent) of the region's growth in nonresidential square feet is related to adding new office space to accommodate the forecasted growth in Bay Area employment. Commercial space is forecasted to see an overall decline as some commercial spaces make way for new housing units.

Table 2-3: Shares of New Housing Units and New Nonresidential Square Foot Growth by County

County	Share of New Housing Units (2015 to 2050)		Share of Nonresidential Square Feet (2015 to 2050)			
	Single-Family	Multifamily	Office	Retail	Industrial	Commercial
Alameda	7%	93%	91%	-26%	36%	-1%
Contra Costa	41%	59%	-36%	0%	137%	-2%
Marin	38%	62%	41%	31%	23%	5%
Napa	65%	35%	0%	-29%	130%	-2%
San Francisco	-3%	103%	25%	50%	20%	5%
San Mateo	2%	98%	119%	1%	-11%	-8%
Santa Clara	4%	96%	72%	34%	-6%	0%
Solano	83%	17%	14%	7%	79%	0%
Sonoma	26%	74%	32%	18%	52%	-1%
Regional Total	12%	88%	75%	6%	22%	-3%

Source: Data compiled by MTC and ABAG in 2021

The land use growth footprint can include both new development and redevelopment sites. As shown in Table 2-4, the land use growth footprint covers 39,400 acres of land in the Bay Area. The proposed Plan's focused growth strategy results in less than 1 percent of the region's total land area being affected by the land use growth footprint. While the greatest growth in households and employment is forecasted to occur in Santa Clara County, as reflected in Table 2-1, the county anticipated to have the greatest amount of land acres affected by growth is Contra Costa County, followed by Santa Clara, Alameda, Solano, San Francisco, San Mateo, Sonoma, Marin, and Napa Counties.

Table 2-4: Land Use Growth Footprint by County and Growth Geography Designation

County	Total Land (acres)	Within Designated Plan Bay Area 2050 Growth Geography					
		Priority Development Area (acres)	Priority Production Area (acres)	High-Resource Area (acres)	High-Resource Area and Transit-Rich Area (acres)	Transit-Rich Area (acres)	Subtotal (acres)
Alameda	7,100	3,600	960	120	570	450	5,700
Contra Costa	9,700	3,000	970	470	30	280	4,700
Marin	1,300	460	0	150	210	170	990
Napa	790	150	270	0	0	0	420
San Francisco	3,400	3,200	240	0	8	1	3,400
San Mateo	2,700	1,300	6	110	260	210	1,900
Santa Clara	8,500	4,600	530	370	380	380	6,200

County	Total Land (acres)	Within Designated Plan Bay Area 2050 Growth Geography					
		Priority Development Area (acres)	Priority Production Area (acres)	High-Resource Area (acres)	High-Resource Area and Transit-Rich Area (acres)	Transit-Rich Area (acres)	Subtotal (acres)
Solano	4,100	1,300	970	0	0	<1	2,300
Sonoma	1,900	780	20	5	0	20	820
Regional Total	39,400	18,300	4,000	1,200	1,400	1,500	26,500

Notes: Numbers less than 1 are shown as "<1"; whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum because of independent rounding.
Source: Data compiled by MTC and ABAG in 2021

Table 2-4 also details that 67 percent (26,500 acres out of 39,400 acres) of the land use growth footprint would be in one of the proposed Plan's designated growth geographies, described in Section 2.3.4. Growth in Priority Development Areas (PDAs), one of the proposed Plan's designated growth geography classifications, represents 46 percent of the land use growth footprint, followed by growth in Priority Production Areas (PPAs), Transit-Rich Areas (TRAs), and High-Resource Areas (HRAs).

Urbanization—growth on land not designated as urban built-up land as defined by California's Department of Conservation through the Farmland Mapping and Monitoring Program (FMMP)—is forecasted to occur on approximately 12,300 acres, or 31 percent of the land use growth footprint (Table 2-5). The remaining 69 percent of the land use growth footprint would be within land designated as urban built-up—which FMMP defines as "land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel"—reflective of the proposed Plan's core focused growth strategy to leverage existing infrastructure. The greatest amount of urbanization is forecasted to occur in Contra Costa County (5,300 acres), followed by Solano and Alameda Counties. Regionally, the share of land forecasted to be urban built-up in 2050 (18 percent) is the same as the observed conditions in 2018 (18 percent).

Table 2-5: Acreages of Urban Built-Up Land by County, Region, and TPA

County	Total (acres)	2018 Urban Built-Up (acres)	2018 Urban Built-Up (%)	Forecasted Development on Land not Designated as Urban Built-Up (acres)		Proposed Plan 2050 Potential Urban Built-Up (acres)	Proposed Plan 2050 Potential Urban Built-Up (%)
Alameda	470,500	147,500	31%	County Total	1,500	149,000	32%
				Within TPAs	350		
Contra Costa	459,600	151,400	33%	County Total	5,300	156,700	34%
				Within TPAs	370		
Marin	331,800	41,100	12%	County Total	130	41,200	12%
				Within TPAs	50		
Napa	483,600	23,400	5%	County Total	490	23,900	5%
				Within TPAs	5		
San Francisco	29,800	29,200	98%	County Total-	<1	29,200	98%
				Within TPAs	<1		
San Mateo	287,500	74,200	26%	County Total	360	74,600	26%
				Within TPAs	70		
Santa Clara	817,300	189,000	23%	County Total	920	189,900	23%
				Within TPAs	230		

County	Total (acres)	2018 Urban Built-Up (acres)	2018 Urban Built-Up (%)	Forecasted Development on Land not Designated as Urban Built-Up (acres)		Proposed Plan 2050 Potential Urban Built-Up (acres)	Proposed Plan 2050 Potential Urban Built-Up (%)
Solano	529,300	60,400	11%	County Total	3,100	63,500	12%
				Within TPAs	90		
Sonoma	1,009,000	75,300	7%	County Total	510	75,800	8%
				Within TPAs	1		
Regional Total	4,419,000	791,400	18%	County Total	12,300	803,700	18%
				Within TPAs	1,200		

Notes: Numbers less than 1 are shown as "<1"; whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum because of independent rounding.

Sources: Data compiled by MTC and ABAG in 2021 based on data from California Department of Conservation 2018

SEA LEVEL RISE ADAPTATION INFRASTRUCTURE

The proposed Plan has integrated the issue of sea level rise inundation and identifies a strategy to adapt the shoreline of the San Francisco Bay. Environmental strategy EN1, "Adapt to Sea Level Rise," was included to protect shoreline communities affected by sea level rise by identifying a series of adaptation infrastructure strategies (see Section 2.2.2, "Proposed Plan Strategies"). The adaptation infrastructure was informed by conclusions in the Plan Bay Area 2040 EIR that found significant and unavoidable impacts as a result of land use development or transportation projects being regularly inundated by 24 inches of sea level rise at mean higher high-water conditions. The Plan Bay Area 2040 EIR concluded that a range of adaptation strategies could be appropriate to reduce the impact associated with sea level rise inundation to a less-than-significant level. As a result, archetypes adaptation infrastructure was identified for regularly inundated shoreline areas. Archetypes included elevated roadways, a variety of levees, seawalls, tidal gates, and marsh restoration. These archetypes include both green (i.e., natural systems) and gray (i.e., human-made systems) infrastructure.

The sea level rise adaptation infrastructure archetypes are described below. See **Table 2-6** and **Figure 2-3** for a summary of the following sea level rise adaptation infrastructure archetypes:

- **Elevated Highway/Roadways**—reconstruction of roadways or rail infrastructure to elevate higher than the projected inundation level, potentially allowing for ecosystem connections under the structure.
- **Levees:**
  - **Horizontal**—also known as an "ecotone" levee, this archetype is proposed as a greener alternative to a traditional levee. The horizontal levee's gentle slope can attenuate waves and provide a wetland-upland transition zone for marshland and species to migrate upslope.
  - **Traditional**—construction of a physical barrier with natural materials to deter inundation. Natural materials allow for potential vegetation, and a wider footprint can support other features for public access to the shoreline, such as paths or roadways.
- **Seawalls**—construction of a physical barrier with human-made materials, typically steel sheet pile, to deter erosion and inundation, often used on highly developed shorelines because of its narrow footprint.
- **Tidal Gates**—human-made gates that span tidal sloughs and stormwater discharge channels to control the flow of tides and storm surges upstream.

- **Marsh Restoration**—rehabilitation or reestablishment of marsh areas to return to their natural functions and to restore wetland habitat.

Table 2-6: Sea Level Rise Adaptation Footprint by Archetype and County

County	Total (acres)	Sea Level Rise Adaptation Footprint Archetypes				
		Elevated Highway/Roadway	Levee – Horizontal	Levee – Traditional	Sea Wall	Tidal Gate
Alameda	1,300	<1%	17%	4%	<1%	<1%
Contra Costa	300	<1%	3%	2%	<1%	<1%
Marin	910	1%	7%	7%	1%	<1%
Napa	<1	<1%	0%	0%	0%	0%
San Francisco	80	0%	0%	<1%	1%	0%
San Mateo	870	0%	8%	4%	1%	<1%
Santa Clara	1,100	<1%	18%	1%	0%	<1%
Solano	760	3%	1%	8%	<1%	0%
Sonoma	180	1%	0%	2%	0%	0%
Regional Total	5,500	5%	58%	30%	6%	<1%

Notes: Numbers less than 1 are shown as "<1"; whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum because of independent rounding.
Source: Data compiled by MTC and ABAG in 2021

Not all the proposed Plan's sea level rise adaptation infrastructure would be expected to require earthmoving activities and/or have a footprint associated with implementation. For example, marsh restoration was not included in the sea level rise adaptation footprint, whereas elevated highway/roadways, levees, sea walls, and tidal gates have been included in the footprint. The actual footprint and other design details of sea level rise adaptation infrastructure is not known because it is in the early stages of planning. The proposed Plan's sea level rise adaptation footprint was developed by adding buffer areas around the proposed sea level rise adaptation infrastructure. See Section 3.1, "Approach to the Analysis," for more discussion on the development of the sea level rise adaptation footprint. As shown in **Table 2-6**, the total footprint associated with sea level rise adaptation infrastructure is approximately 5,500 acres. Horizontal levees considered a greener ("natural") infrastructure strategy, account for 58 percent of the sea level rise adaptation footprint, followed by traditional levees, elevated highway/roadways, and sea walls. Tidal gates are anticipated to make up a small portion of the footprint. As summarized in **Table 2-6** and depicted in **Figure 2-3**, sea level rise adaptation infrastructure is clustered in Alameda County, followed by Marin, Santa Clara, San Mateo, and Solano Counties. The sea level rise adaptation footprint is relatively small in Contra Costa, Sonoma, San Francisco, and Napa Counties.

While the Plan has incorporated sea level rise adaptation infrastructure as a Plan component, it is important to note the effects of the environment on a project are generally outside the scope of CEQA unless the project would exacerbate these conditions, as concluded by the California Supreme Court (see ***California Building Industry Association v. Bay Area Air Quality Management District*** [2015] 62 Cal.4th 369, 377 ["we conclude that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users."]). Changes to the State CEQA Guidelines to reflect this decision were adopted on December 28, 2018. Accordingly, while the proposed Plan contains elements that would reduce the effects of sea level rise, the EIR analysis generally does not address the impacts of existing environmental conditions on a project's future users or residents. However, when a proposed project risks exacerbating environmental hazards or conditions that already exist, the EIR analyzes the potential impact of such hazards on future residents or users.

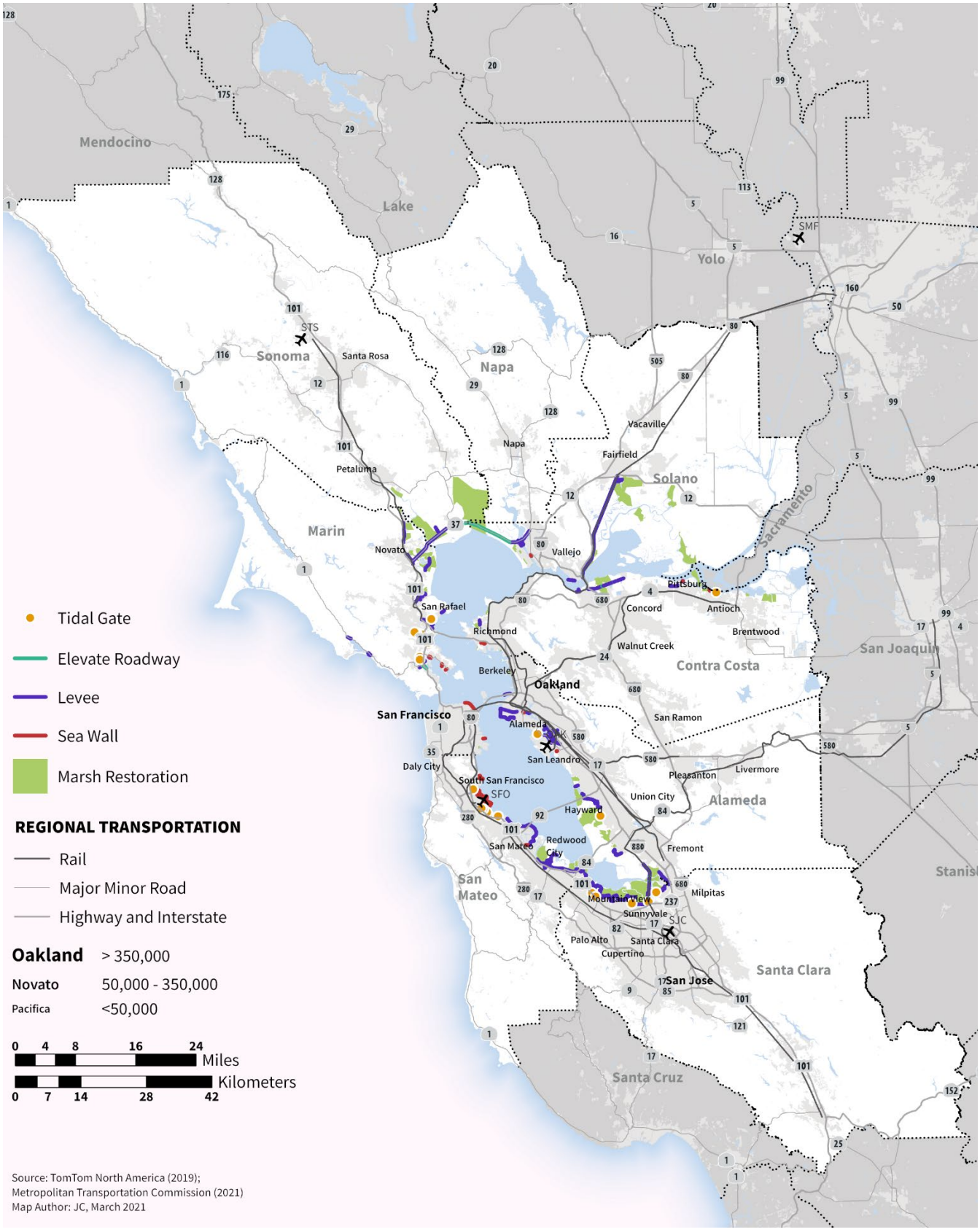

Figure 2-3: Sea Level Rise Adaptation Infrastructure Archetypes

TRANSPORTATION SYSTEM

Projects and Programs

The transportation strategies discussed in Section 2.2.2, "Proposed Plan Strategies," generally consist of strategies intended to alter the demand on the transportation system or alter the supply of the transportation system. The transportation strategies and a subset of the environmental strategies intended to alter the demand require little to no capital projects and include policies such as user fees (e.g., tolls and transit fares). The strategies aimed at altering the supply include capital projects listed in the proposed Plan's fiscally constrained transportation project list. These major projects can alter the supply or "capacity" of the transportation system by adding new travel lanes or new transit services. The transportation project list, constrained by expected transportation revenues discussed in Section 2.3.2, "Financial Forecasts," is fundamental to the RTP and required per federal and State regulations.

The project list can be grouped into two general investment categories: (1) group listings of projects exempt from regional air quality conformity analysis (i.e., programmatic categories) and (2) nonexempt, capacity-increasing projects (i.e., major transportation projects). Generally, major transportation projects are those that add travel lanes to freeways, expressways, and highways or add new routes to fixed guideway transit facilities (e.g., rail, ferry, bus rapid transit), whereas group listings or programmatic categories do not alter capacity and include investments such as general operations and maintenance, replacement or preservation of system assets (e.g., pavement and transit vehicles), bicycle/pedestrian facilities, and intersection improvements. See **Table 2-7** for a list of the proposed Plan's major transportation investments. A complete list of the proposed Plan's investments can be found at the Plan Bay Area 2050 website: planbayarea.org/reports.

Table 2-7: Major Investments by Strategy (Greater Than $250 Million in Cost)

Strategy	System	Title	Location
T04	Public Transit	Regional Transit Fare Policy	REG
T05	Roadway	Per-Mile Tolling | Region	REG
T06	Roadway	Corridor & Interchange Improvements | I-80	SF, SOL
	Roadway	Corridor & Interchange Improvements | I-280	SCL
	Roadway	Corridor & Interchange Improvements | I-580	ALA
	Roadway	Corridor & Interchange Improvements | I-680	CC
	Roadway	Corridor & Interchange Improvements | I-880	ALA
	Roadway	Corridor & Interchange Improvements | US-101	MRN, SM, SCL, SON
	Roadway	Corridor & Interchange Improvements | SR-4	CC
	Roadway	Corridor & Interchange Improvements | SR-29	NAP
	Roadway	Corridor & Interchange Improvements | SR-37	NAP, SOL, SON
	Roadway	Corridor & Interchange Improvements | SR-84	ALA
	Roadway	Corridor & Interchange Improvements | SR-237	SCL
	Roadway	Corridor & Interchange Improvements | SR-262	ALA
	Roadway	Corridor & Interchange Improvements | New Freeway	CC
	Roadway	Other Investments to Improve Interchanges & Address Highway Bottlenecks	REG
	Roadway	Bay Area Forward Program	REG
T07	Other	Minor Freight Improvements	REG
	Roadway	Minor Roadway Improvements	REG
	Other	Technology Improvements	REG

Strategy	System	Title	Location
T08	Bike/Ped	Complete Streets Network	REG
T09	Bike/Ped	Regional Vision Zero Policy through Street Design and Reduced Speeds	REG
T10	Public Transit	Multimodal Transportation Enhancements | AC Transit and WETA | Alameda Point	ALA
	Public Transit	Multimodal Transportation Enhancements | SFMTA | Southeast San Francisco	SF
	Public Transit	Local Bus | Modernization | VTA | Systemwide	SCL
	Public Transit	Local Bus | Service Frequency Boost | AC Transit | Systemwide	ALA, CC
	Public Transit	Local Bus | Service Frequency Boost | NVTA	NAP
	Public Transit	Local Bus | Service Frequency Boost | SFMTA | Systemwide	SF
	Public Transit	Local Bus | Service Frequency Boost | VTA | Systemwide	SCL
	Public Transit	Local Bus | Service Frequency Boost | PDAs	REG
	Public Transit	Local Bus | Service Frequency Boost | Sonoma County	SON
	Public Transit	Rapid Bus | Modernization | AC Transit | E 14th St/Mission St/Fremont Blvd	ALA
	Public Transit	Rapid Bus | AC Transit | Modernization	ALA, CC
	Public Transit	Rapid Bus | Contra Costa Co | Service Expansion | Antioch-Brentwood	CC
	Public Transit	BRT | Modernization | AC Transit | 23rd St	CC
	Public Transit	BRT | Modernization | AC Transit | San Pablo Ave	ALA, CC
	Public Transit	BRT | Modernization | SamTrans | El Camino Real	SM
	Public Transit	BRT | Modernization | SFMTA | Geary Blvd	SF
	Public Transit	Light Rail | Service Expansion | SFMTA | to Chinatown ("Central Subway")	SF
	Public Transit	Light Rail | Grade Separations & Modernization | VTA | Downtown San Jose	SCL
	Public Transit	Light Rail | Grade Separations & Modernization | VTA | North San Jose	SCL
	Public Transit	Light Rail | Service Expansion | VTA | Eastridge	SCL
	Public Transit	Light Rail | Service Expansion | VTA | Stevens Creek Blvd	SCL
	Public Transit	Light Rail | Service Expansion | VTA | Vasona	SCL
	Public Transit	Automated People Mover | Service Expansion | VTA | Mineta San Jose International Airport Connector	SCL
	Public Transit	Congestion Pricing | Downtown San Francisco	SF
	Public Transit	Congestion Pricing | Treasure Island	SF
	Public Transit	Other Investments to Enhance Local Transit Frequency, Capacity & Reliability	REG
T11	Public Transit	Ferry | Service Frequency Boost | GGBHTD | Larkspur-San Francisco	MRN, SF
	Public Transit	Ferry | Service Frequency Boost | WETA	REG
	Public Transit	Ferry | Service Expansion | WETA | Berkeley-San Francisco	ALA, SF
	Public Transit	Ferry | Service Expansion | WETA | San Francisco-Alameda-Richmond-Vallejo	ALA, CC, SF
	Public Transit	Ferry | Service Expansion | WETA | Redwood City-San Francisco-Oakland	ALA, SF, SM
	Public Transit	Rail | Modernization & Electrification | Caltrain/High Speed Rail | San Francisco to San Jose	SF, SM, SCL
	Public Transit	Rail | Service Frequency Boost | ACE | System	ALA, SCL
	Public Transit	Rail | Service Frequency Boost | BART | System ("Core Capacity")	ALA, CC, SF, SM, SCL
	Public Transit	Rail | Service Frequency Boost | Caltrain | System	SF, SM, SCL
	Public Transit	Group Rapid Transit | Service Expansion | Redwood City-Newark ("Dumbarton Rail")	ALA, SM
	Public Transit	Rail | Service Expansion | BART | to Santa Clara ("Silicon Valley Phase II")	SCL

Strategy	System	Title	Location
	Public Transit	Rail | Service Expansion | Caltrain/High Speed Rail | to Downtown San Francisco ("DTX")	SF
	Public Transit	Rail | Service Expansion | Capitol Corridor | to Coast Subdivision ("South Bay Connect")	ALA, SCL
	Public Transit	Rail | Service Expansion | Oakland-San Francisco ("Link21")	ALA, SF
	Public Transit	Rail | Service Expansion | San Joaquin County-Dublin/ Pleasanton ("Valley Link")	ALA
	Public Transit	Other Investments to Expand & Modernize the Regional Rail Network | Regional	REG
T12	Roadway	Express Lanes	ALA, CC, SF, SM, SCL, SOL
	Public Transit	Express Bus | Service Expansion | GGBHTD	MRN, SF
	Public Transit	Express Bus | Service Expansion | SamTrans	SM
	Public Transit	Express Bus | Service Expansion | I-80	CC
	Public Transit	Express Bus | Service Expansion | I-680	ALA, CC, SCL
	Public Transit	Express Bus | Service Expansion | ReX (Basic) | Blue Line (San Francisco to San Jose)	SF, SM, SCL
	Public Transit	Express Bus | Service Expansion | ReX (Basic) | Red Line (Oakland to Redwood City)	ALA, SM
	Public Transit	Express Bus | Service Expansion | ReX (Premium) | Green Line (Vallejo to SFO Airport)	CC, SOL, SF, SM

Notes: ALA = Alameda; CC = Contra Costa; MAR = Marin; NAP = Napa; SF = San Francisco; SM = San Mateo; SCL = Santa Clara; SOL = Solano; SON = Sonoma; REG = regional.
Source: Data compiled by MTC and ABAG in 2020

System Capacity

The implementation of major transportation projects, discussed above, would add new travel lanes and transit services, resulting in changes to the Bay Area's transportation system capacity. As shown in Table 2-8, implementing the proposed Plan would result in a net increase in travel lane-miles and daily transit seat miles to accommodate future travelers.

Table 2-8: Transportation System Capacity (2015–2050)

Facility Type	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	
			Numerical	Percent
Freeway Lane-Miles	5,440	5,880	+440	+8%
Expressway Lane-Miles	1,080	1,120	+40	+4%
Arterial Lane-Miles	8,670	8,640	-30	-< 1%
Collector Lane-Miles	5,690	5,690	0	0%
Total Roadway Lane-Miles	20,880	21,340	+460	+2%
Daily Local Bus Seat-Miles	9,124,000	13,213,000	+4,089,000	+45%
Daily Express Bus Seat-Miles	1,987,000	4,759,000	+2,772,000	+140%
Daily Light Rail Seat-Miles	2,065,000	3,304,000	+1,239,000	+60%
Daily Heavy Rail Seat-Miles	12,113,000	21,343,000	+9,230,000	+76%
Daily Commuter Rail Seat-Miles	4,995,000	19,593,000	+14,598,000	+292%
Daily Ferry Seat-Miles	688,000	2,884,000	+2,196,000	+319%
Total Daily Transit Seat-Miles	30,972,000	65,097,000	+34,125,000	+110%

Notes: Numbers less than 1 are shown as "<1"; whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum because of independent rounding.
Source: Data compiled by MTC and ABAG in 2021

Roadway Network: The region's base year roadway network (2015 conditions) is composed of about 20,900 lane-miles, with approximately one third of the lane-miles designated as freeways and expressways and two thirds as arterials and collectors. Compared to 2015 conditions, implementing the proposed Plan would add approximately 460 lane-miles, an increase of 2 percent to the region's total roadway lane-miles. New freeway lane-miles would account for about 96 percent of the 460 new lane-miles. A major component of these new lane-miles is related to Transportation Strategy T12, "Build an Integrated Regional Express Land and Express Bus Network." Implementing the proposed Plan would result in a net decrease of arterial lane-miles, in part the result of a Transportation Strategy T09, "Advance Regional Vision Zero Policy through Street Design and Reduced Speeds," through actions such as the removal of travel lanes.

Public Transit Systems: Transit seat-miles, a measure of transit capacity, are the miles that transit vehicles travel multiplied by the number of seats in each vehicle. The base year transit network (2015 conditions) consists of three dominant modes: heavy rail (e.g., 39 percent of seat-miles), local bus (29 percent of seat-miles), and commuter rail (e.g., 16 percent of seat-miles). Daily transit seat-miles would increase by 110 percent from 2015 conditions as a result of the transportation strategies:

- T10. Enhance Local Transit Frequency, Capacity, and Reliability;
- T11. Expand and Modernize the Regional Rail Network; and
- T12. Build an Integrated Regional Express Lane and Bus Network.

The largest increase in seat-miles would be for commuter rail transit, which would add 14,598,000 seat-miles from 2015 conditions (a 292-percent increase), and for heavy rail transit, which would add 9,230,000 seat-miles from 2015 conditions (a 76-percent increase). These increases would be a result of major rail expansion projects (Transportation Strategy T11), including system improvements and extensions to the Altamont Corridor Express (ACE), Bay Area Rapid Transit (BART), Caltrain, and Sonoma-Marin Area Rail Transit (SMART), and new services, such as a New Transbay Rail link between San Francisco and Oakland, Valley Link, and Dumbarton Rail.

Bicycle and Pedestrian Network: A goal of the proposed Plan is to enhance the region's bicycle and pedestrian network and promote growth and land use that maximize the potential for shorter trips, which are more likely to be made by nonmotorized modes. To support this goal, the proposed Plan includes Strategy T08, "Build a Complete Streets Network," which would fund the implementation of 10,000 miles of new bike lanes and/or multiuse paths to promote walking, biking, and other micromobility through sidewalk improvements and car-free slow streets, and also includes Strategy T09, "Advance Regional Vision Zero Policy through Street Design and Reduced Speeds."

Transportation Projects Footprint

Not all the proposed Plan's transportation strategies would be expected to require earthmoving activities and/or have a footprint associated with implementation. The transportation projects footprint includes proposed major transportation projects that have the greatest potential for physical impacts, generally limited to capacity increasing projects that add travel lanes to freeways, expressways, and highways or add new rail, ferry, or bus rapid transit routes and stations. Projects that are included in the transportation projects footprint are major transportation projects associated with Strategy T06, "Improve Interchanges and Address Highway Bottlenecks"; Strategy T07, "Advance Other Regional Programs and Local Priorities": Strategy T10, "Enhance Local Transit Frequency, Capacity and Reliability"; Strategy T11, "Expand and Modernize the Regional Rail Network"; and Strategy T12, "Build an Integrated Regional Express Land and Express Bus Network."

The actual footprints and other design details of most proposed transportation projects are not known because the projects are in the early stages of planning. The proposed Plan's transportation projects footprint was developed by adding buffer areas around the center line of proposed roadway and

public transit projects. See Section 3.1, "Approach to the Analysis," for more discussion on the development of the transportation projects footprint. As shown in **Table 2-9**, the total footprint associated with these major transportation projects is approximately 14,300 acres. Acreages by county and strategy are provided in **Table 2-9**, below.

Table 2-9: Major Transportation Projects Footprint by County and Strategy

County	Total (acres)	Transportation Projects Footprint by Strategy				
		Strategy T06, Improve Interchanges & Address Highway Bottlenecks	Strategy T07, Advance Other Regional Programs & Local Priorities	Strategy T10, Enhance Local Transit Frequency, Capacity & Reliability	Strategy T11, Expand & Modernize the Regional Rail Network	Strategy T12, Build an Integrated Regional Express Land & Express Bus Network
Alameda	3,000	4%	2%	2%	7%	6%
Contra Costa	2,000	6%	2%	2%	< 1%	3%
Marin	180	1%	< 1%	< 1%	0%	0%
Napa	160	1%	< 1%	< 1%	0%	0%
San Francisco	750	< 1%	0%	1%	2%	2%
San Mateo	1,600	2%	< 1%	1%	3%	7%
Santa Clara	4,900	5%	2%	5%	10%	12%
Solano	1,500	3%	1%	< 1%	0%	5%
Sonoma	130	1%	0%	0%	< 1%	0%
Regional Total	14,300	22%	8%	12%	24%	35%

Notes: Numbers less than 1 are shown as "<1"; whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum because of independent rounding.
Source: Data compiled by MTC and ABAG in 2021

As summarized in **Table 2-9** and depicted in **Figure 2-4**, the transportation projects footprint is clustered in Santa Clara County, followed by Alameda, Contra Costa, San Mateo, and Solano Counties. The transportation projects footprint is relatively small in Sonoma, Napa, and Marin Counties.

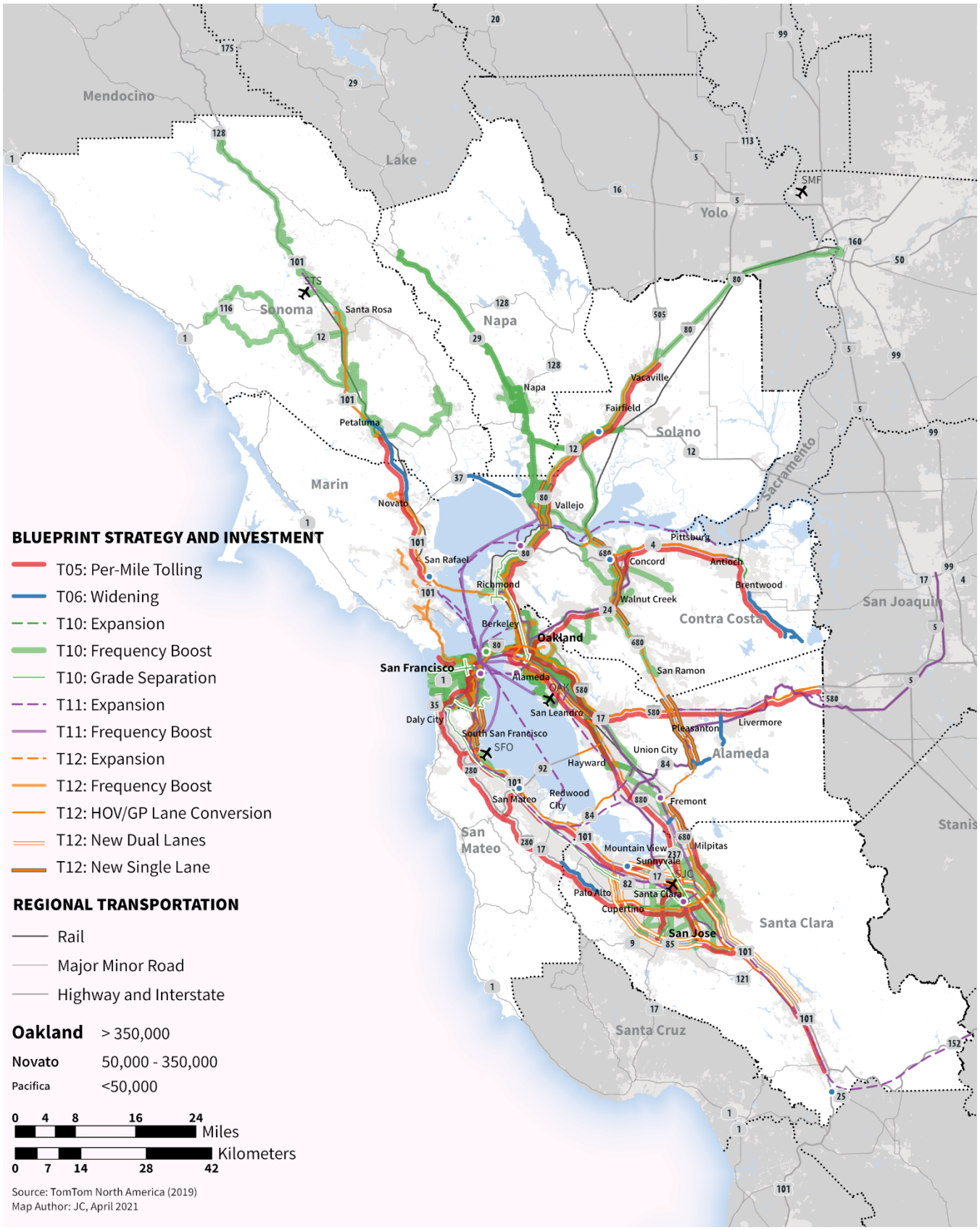

Figure 2-4: Transportation Projects Footprint by Strategy

Regional Travel Forecasts

The regional growth forecast has the most significant effect on transportation trends and impacts over the Plan horizon. The 1.4 million new households and 1.4 million new jobs forecasted between 2015 and 2050 would inevitably lead to more demand on the region's transportation systems. As previously discussed, some of the proposed Plan's transportation and environmental strategies are intended to alter this demand. These strategies include T3, "Enable a Seamless Mobility Experience"; T4, "Reform Regional Transit Fare Policy"; T5, "Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives"; EN07, "Expand Commute Trip Reduction Programs at Major Employers"; and EN09, "Expand Transportation Demand Management Strategies." See Section 2.2.2, "Proposed Plan Strategies," for more detail. The MTC travel demand model, Travel Model 1.5, simulates travel forecasts for the Bay Area (see Section 2.3.3, "Analysis Tools"). Travel Model 1.5 simulates that the regional growth forecast, coupled with the proposed Plan's forecasted development pattern and strategies, would lead to a shift from automobile travel to public transit and nonmotorized modes over the Plan horizon (2050) in order to achieve SB 375's mandate to reduce GHG emissions.

Travel Model 1.5 is not sensitive to the full range of strategies in the proposed Plan, specifically Strategy EN09, "Expand Travel Demand Management Strategies." Consequently, implementation of Strategy EN09 is not reflected in travel model outputs due to the modeling limitation. For limited metrics (i.e., VMT and GHG emissions) an "off-model" approach was used to quantify the effects of implementation of Strategy EN09.

Demographic Trends

The region's population is expected to grow by 37 percent from 2015 to 2050 conditions, while the number of employed residents is forecasted to increase by 42 percent over the same period, meaning there would be more workers per capita in 2050 than in 2015. The expected growth of population and employed residents would lead to an increase in commute and non-commute trips over the Plan horizon. The proposed Plan's forecasted development pattern and strategies have some effect on household auto ownership, as summarized in **Table 2-10**. The type and location of forecasted household growth results in households shedding vehicles. The share of households with one car or less is forecasted to increase between 2015 and 2050, from 40 percent to 47 percent, and overall average auto ownership per household is expected to decline by 4 percent.

Table 2-10: Summary of Population, Employed Residents, and Auto Ownership

	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	
			Numerical	Percent
Total Population	7,581,000	10,368,000	+2,786,000	+37%
Total Employed Residents	2,841,000	4,027,000	+1,186,000	+42%
Share of Households with Zero Autos	9%	13%	+4%	+44%
Share of Households with One Auto	31%	34%	+3%	+10%
Share of Households with Multiple Autos	59%	53%	-7%	-10%
Average Number of Vehicles by Household	1.54	1.48	-0.06	-4%

Notes: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 1,000 and 1,000,000 to the nearest 100).
Population statistics reflect the total Bay Area population able to travel on the region's transport network; it does not include immobile, involuntary populations, such as prison inmates.
Source: Data compiled by MTC and ABAG in 2021

Regional Travel

Table 2-11 summarizes the changes in average daily travel metrics from 2015 to proposed Plan conditions. As previously noted, according to the regional growth forecast, demand on the transportation systems would increase. Total trips are forecasted to grow by 27 percent, which is a smaller amount of growth than that forecasted for population growth, meaning there would be fewer trips per capita in the 2050. Furthermore, commute trips are forecasted to grow by 12 percent, which is less than the growth in employed residents noted in Table 2-11.

The daily number of vehicle trips and vehicle miles traveled (VMT)—a key metric for this program EIR and discussed in more detail in Section 3.15, "Transportation"—are forecasted to increase from 2015, albeit at a rate slower than forecasted population growth. As a result, daily VMT per capita is forecasted to decrease over time, meaning that in 2050, people and workers are forecasted to drive less, either by reducing the length of their trips and/or by making less auto trips by using alternative modes, such as transit, walking, or biking. Transit boardings and transit passenger miles are forecasted to increase by 133 and 168 percent, respectively, in part because of the proposed Plan's integrated strategies that change land use activity (forecasted development pattern) and invest in transit systems. Finally, minimal changes to roadway capacity, discussed in the prior section, coupled with a growing region, would lead to more hours of vehicle delay forecasted on the region's roadway systems.

Table 2-11: Summary of Daily Travel Metrics

	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	
			Numerical	Percent
Daily Commute Trips	8,360,000	9,324,000	+964,000	+12%
Daily Non-commute Trips	17,939,000	24,197,000	+6,258,000	+35%
Daily Trips Subtotal	26,299,000	33,521,000	+7,222,000	+27%
Daily Vehicle Trips	20,896,000	23,487,000	+2,591,000	+12%
Daily Vehicle Trips with Strategy EN09	20,896,000	23,222,000	+2,326,000	+11%
Daily VMT	155,006,000	181,917,000	+26,911,000	+17%
Daily VMT with Strategy EN09	155,006,000	175,497,000	+20,491,000	+13%
Daily VMT per Capita	20.4	17.5	-2.9	-14%
Daily VMT per Capita with Strategy EN09	20.4	16.9	-3.5	-17%
Daily Vehicle Hours of Recurring Delay	264,500	644,200	+379,800	+144%
Daily Transit Boardings	1,703,000	3,964,000	+2,261,000	+133%
Daily Transit Passenger Miles	11,292,000	30,245,000	+18,953,000	+168%

Notes: Whole numbers have been rounded (between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000).
Unless specified, daily travel metrics do not account for effects from the implementation of Strategy EN09 because of modeling limitations.
Source: Data compiled by MTC and ABAG in 2021

Table 2-12 compares average trip characteristics for commute and non-commute trips between 2015 and proposed Plan 2050 conditions. Implementation of the proposed Plan's integrated strategies results in a more compact forecasted development pattern, where regional subareas (e.g., North Bay) and subarea counties converge toward the regional jobs-housing ratio. Changes to the forecasted development pattern result in an 8-percent reduction in average trip lengths, for both commute and non-commute trips.

Table 2-12: Average Trip Length (Miles) by Purpose

	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	
			Numerical	Percent
Commute	9.8	9.6	-0.3	-3%
Non-commute	4.7	4.3	-0.3	-7%
Regional Total	6.3	5.8	-0.5	-8%

Source: Data compiled by MTC and ABAG in 2021

Conversely, the average trip time is forecasted to increase by 11 percent between 2015 and proposed Plan 2050 conditions. This increase is not uniform across modes, as summarized in Table 2-13. The average auto trip time is forecasted to increase by 10% over the baseline, whereas walk and bike trip times are forecasted to decrease by 3 and 4 percent, respectively. Transit trip times, which have trip times more than double the regional average, are also forecasted to increase, but at a rate less than for auto trips.

Table 2-13: Average Trip Time (Minutes) by Mode

	Base Year, 2015	Proposed Plan, 2050	Change, 2015 to 2050	
			Numerical	Percent
Auto ("Vehicle")	13.5	14.9	+1.4	+10%
Transit	36.1	36.5	+0.5	+1%
Bike	11.0	10.5	-0.5	-4%
Walk	17.0	16.5	-0.4	-3%
Regional Total	15.2	16.8	+1.7	+11%

Notes: Average trip times do not account for effects from the implementation of Strategy EN09 because of modeling limitations.
Source: Data compiled by MTC and ABAG in 2021

Daily Trips by Mode

The transportation strategies discussed in Section 2.2.2, "Proposed Plan Strategies," generally consist of strategies intended to alter the demand on the transportation system or alter the supply of the transportation system. Collectively, these strategies, along with changes from the forecasted development pattern, have the potential to influence mode choice decisions. Implementation of the proposed Plan's integrated strategies facilitate a 300-percent growth in bike trips and a 110-percent growth in transit trips by 2050. Table 2-14 compares the number and share of trips by mode in 2015and under proposed Plan 2050 conditions. While the forecasted shares of the various travel modes remain similar to 2015 conditions, an increase in transit and bike share modes is evident. Transit mode share is forecasted to increase from 6 percent to 9 percent of total trips by 2050, while bike mode share is forecasted to increase from 2 percent to 7 percent by 2050. The auto mode shares—drive alone, carpool and ride hail—are forecasted to decrease their collective share over time, from 79 percent in the baseline to 70 percent in 2050.

Table 2-14: Summary of All Trips by Mode

	Base Year 2015		Proposed Plan, 2050		Change, 2015 to 2050	
	Trips	% of Total	Trips	% of Total	Numerical	Percent
Drive Alone	12,030,000	46%	13,417,000	40%	+1,387,000	+12%
Carpool	8,318,000	32%	9,190,000	27%	+872,800	+10%
Ride Hail	548,100	2%	879,300	3%	+331,200	+60%
Auto ("Vehicle") Subtotal	20,896,000	79%	23,487,000	70%	+2,591,000	+12%
Transit	1,472,000	6%	3,087,000	9%	+1,615,000	+110%
Bike	583,800	2%	2,336,000	7%	+1,753,000	+300%
Walk	3,348,000	13%	4,611,000	14%	+1,263,000	+38%
Regional Total	26,299,000	100%	33,521,000	100%	+7,222,000	+27%

Notes: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum because of independent rounding. Trips and mode share do not account for the effect from the implementation of Strategy EN09 because of modeling limitations.
Source: Data compiled by MTC and ABAG in 2021

Under the proposed Plan, commute trips represent approximately 28 percent of all regional trips (see **Table 2-11**), yet the average distance of commute trips is double the average distance of non-commute trips (see **Table 2-12**). **Table 2-15** summarizes how Bay Area workers get to their place of work and includes those workers who work from home ("telecommute"). Overall, workers are forecasted to rely less on autos to get to their places of employment. The proposed Plan would result in a net reduction in auto modes, from 71 percent to 53 percent of all commute trips. The number of commuters driving alone is forecasted to fall by 15 percent as a share of all commute trips. Telecommuting is forecasted to see the greatest growth from baseline conditions, followed by workers using transit. The increase in telecommuting, both in absolute terms and as a share of total trips, is a direct result of Strategy EN07, "Expand Commute Trip Reduction Programs at Major Employers." Similar to the findings summarized in **Table 2-15**, implementation of the proposed Plan's integrated strategies would lead to fewer workers relying on autos to access their places of work and would facilitate an increase in trips across alternative modes with bike and transit modes forecasted to experience the most growth.

Table 2-15: Summary of Journey to Work by Mode

	2015 Baseline	2050 Proposed Plan	Change, 2015 to 2050
	% of Total	% of Total	Percent
Drive Alone	51%	36%	-15%
Carpool	19%	17%	-2%
Ride Hail	1%	< 1%	< -1%
Auto ("Vehicle") Subtotal	71%	53%	-18%
Transit	13%	20%	+7%
Bike	3%	7%	+4%
Walk	2%	3%	+1%
Telecommute	10%	17%	+7%

Notes: Workers and mode share do not account for the effect from the implementation of Strategy EN09 because of modeling limitations.
Source: Data compiled by MTC and ABAG in 2021

2.3 PLANNING ASSUMPTIONS

Economic, demographic, and financial planning assumptions are central to the proposed Plan and serve as constraints during the Plan's development. These assumptions are described in detail below. As noted in Chapter 1, "Introduction," the proposed Plan development process was composed of several key phases: Horizon was a predecessor initiative to the proposed Plan; the draft Blueprint integrated the recommendations from Horizon and served as a "first draft" of the proposed Plan; and the Final Blueprint refined and expanded strategies producing the final 35 strategies of the proposed Plan.

2.3.1 Regional Growth Forecast

The regional growth forecast identifies how much the Bay Area might grow between 2015 and the proposed Plan's horizon year (2050), including population, jobs, households, and associated housing units. During the Blueprint planning phase from fall 2019 to summer 2020, the Draft Blueprint served as a "first draft" of the proposed Plan. At that time, the regional growth forecast was used to identify the total amount of growth for the region. The draft regional growth forecast was released in spring 2020 and subsequently revised to integrate the effects of the coronavirus pandemic and 2020 recession on the first decade of the planning period. In September 2020, MTC and ABAG approved the regional growth forecast.

The regional growth forecast projects the region's employment to grow by 1.4 million to just over 5.4 million total jobs between 2015 and 2050. Population is forecasted to grow by 2.7 million people to 10.3 million. This population will comprise over 4.0 million households, for an increase of nearly 1.4 million households from 2015. Total population, employment, households, and associated housing units are included in **Table 2-16**. The number of housing units reflects a plan for no net growth in the in-commute into the region, consistent with State law and MTC's and ABAG's legal settlement with the Building Industry Association. The projection includes housing for all projected households plus the number of units that would be needed to house the increased number of workers estimated to otherwise commute into the region. For more information, see the Plan Bay Area 2050 website: wwwplanbayarea.org.

Table 2-16: Regional Growth Forecast of Population, Employment, Households and Housing Units

	2015	Regional Growth Forecast								
		2020	2025	2030	2035	2040	2045	2050	Change 2015 to 2050	Change 2015 to 2050 (%)
Population	7,660,000	7,930,000	8,230,000	8,550,000	9,000,000	9,490,000	9,930,000	10,330,000	2,670,000	35%
Employment	4,010,000	4,080,000	4,150,000	4,640,000	4,830,000	5,050,000	5,230,000	5,410,000	1,400,000	35%
Households	2,680,000	2,760,000	2,950,000	3,210,000	3,500,000	3,710,000	3,890,000	4,040,000	1,360,000	51%
Housing Units	2,710,000	2,840,000	3,060,000	3,370,000	3,670,000	3,900,000	4,080,000	4,250,000	1,540,000	57%

Notes: Whole numbers have been rounded to the nearest 1,000.
Source: Data compiled by MTC and ABAG in 2021

2.3.2 Financial Forecasts

The proposed Plan includes a financially constrained transportation investment strategy pursuant to RTP/SCS requirements as defined by State and federal planning regulations. It includes transportation projects and programs that would be funded through existing and future revenues that are projected to be reasonably available to the region over the 30-year Plan horizon (2021–2050). A total of $463 billion is forecasted to be available for the financially constrained transportation investment strategy from existing revenue sources, $19 billion from already secured project specific funding, and at least $110 billion in new revenues have also been identified.

Although not required by State and federal RTP/SCS requirements, the proposed Plan has also identified funding needs and revenues for affordable housing, as well as revenues to support select economic development and environmental resilience strategies as follows:

- **Housing Element**: $122 billion in existing funding and $346 billion in new revenues
- **Economy Element**: $234 billion in new revenues
- **Environment Element**: $15 billion in existing funding and $87 billion in new revenues

For more information, see the Draft Technical Assumptions Report found at the Plan Bay Area 2050 website: www.planbayarea.org/reports.

Whereas the revenues and strategy costs for the housing and economy elements of the proposed Plan are self-contained (e.g., housing revenues pay for housing strategies) there is a connection between the transportation and environment elements. This is because a handful of transportation investments are nested within environment strategies.

Included in the $591 billion are $13 billion in revenues forecasted to be generated from increased parking pricing, brought about through implementation of Strategy EN09, "Expand Transportation Demand Management Initiatives." The bulk of these parking pricing revenues are transferred to the transportation element and fund transportation strategies in the latter half of the proposed Plan.

In turn, $12 billion in forecasted transportation revenues are directed toward environmental strategies. These revenues fund strategies that increase adoption of electric vehicles and support expanded transportation demand management initiatives, two high-impact strategies for GHG emissions reductions. Additionally, some transportation revenues are expected to support Strategy EN01, "Adapt to Sea Level Rise."

TRANSPORTATION ELEMENT REVENUE FORECAST

MTC worked with partner agencies and used financial models to estimate how much revenue will be available to fund transportation investments across the 30-year Plan horizon (2021–2050). Like other metropolitan regions, the Bay Area receives transportation funding from multiple federal, State, regional, and local sources. As shown in **Table 2-17**, below, the total funding envelope for the proposed Plan's transportation project list is $591 billion. Approximately two-thirds of forecasted revenues are from regional and local sources, such as transit fares, dedicated sales tax programs, and bridge tolls. The remainder of the total are State and federal revenues (mainly derived from fuel taxes) and "anticipated" revenues (unspecified revenues from various sources that can reasonably be expected to become available within the Plan horizon). New revenues are forecasted to be generated from a variety or regional and local sources, including a regional funding measure and user fee revenues from new transit fares, tolls, and parking fees.

Table 2-17: Forecasted Transportation Revenue Envelope

	Billions of Dollars
Federal	$51
State	$103
Regional	$58
Local	$230
Anticipated	$21
Existing Revenues Subtotal	$463
New Revenues	$110
Secured and Other Local Revenues	$19
Regional Total	$591

Source: Data compiled by MTC and ABAG in 2021

Near-term revenue estimates were updated in June 2020 to reflect a decrease in projected revenue related to the coronavirus pandemic (COVID-19). While the extent of the unprecedented impact of COVID-19 cannot yet be known for certain, the near-term revenue forecasts were revised, estimating $11 billion in transportation revenue loss primarily over the next 5 years.

TRANSPORTATION ELEMENT SYSTEM NEEDS

MTC worked with local jurisdictions, transit operators, and the California Department of Transportation (Caltrans) to develop cost estimates for operating and maintaining the Bay Area's transit system, local street and road network, the State highway system, and local and regional bridges. The costs to operate and maintain the highway system also reflect a growing need to maintain the hardware required for traffic management projects like ramp meters and dynamic signs. As shown in **Table 2-18**, below, to reach a state of good repair—meaning that roads are maintained at their optimum levels, transit assets are replaced at the end of their useful lives, and existing service levels for public transit are maintained—the Bay Area will need to spend an estimated total of $381 billion over the Plan horizon (2021–2050).

Table 2-18: Costs to Operate and Maintain Existing System (in Billions)

	Cost to Maintain Existing Asset Condition	Cost to Achieve Ideal Asset Condition
Transit Operating	$211	$211
Transit Capital	$59	$82
State Highways	$24	$24
Local Streets and Roads	$62	$68
Regional ("Toll") Bridges	$22	$22
Local Bridges	$3	$3
Total	$381	$410

Notes: Costs associated with maintaining existing conditions are not available for highways and bridges. Transit operating costs are only for maintaining existing conditions.
Source: Data compiled by MTC and ABAG in 2021

2.3.3 Analysis Tools

The California Transportation Commission's (CTC's) 2017 RTP Guidelines recommend that the largest metropolitan areas integrate regional economic and land use models and activity-based travel demand models into a single modeling system. The integrated model framework allows planners to analyze the complex interactions between land use and the transportation strategies. For more information, see the Draft Forecasting and Modeling Report found at the Plan Bay Area 2050 website: www.planbayarea.org/reports.

As required under SB 375, MTC must submit to CARB a description of its proposed technical methodology to estimate GHG emissions resulting from implementation of the proposed Plan. The initial methodology was submitted May 6, 2019, and reviewed by CARB staff. After CARB staff's review, ongoing consultation between MTC and CARB staff led to revisions to the technical methodology. Consultation will be ongoing until the adoption of the RTP/SCS by MTC and ABAG and its official submittal of the adopted RTP/SCS to CARB.

BAY AREA URBANSIM 2.0

Bay Area UrbanSim 2.0, MTC's regional land use forecasting model, is a spatially explicit economic model that forecasts future business ("employment") and household locations. MTC and ABAG used a version of the Bay Area UrbanSim 1.0 model to inform the EIR for Plan Bay Area and the EIR for Bay Area 2040. An updated version of Bay Area UrbanSim (Version 1.5) was also used for the Horizon initiative.

Bay Area UrbanSim 2.0 forecasts future land use change (e.g., development or redevelopment) starting from an integrated (across different source data) base year (2010) database containing information on the buildings, households, businesses, and land use policies within the region. Running in 5-year steps, the model predicts that some households will relocate and that a number of new households will be formed or enter the region (as determined by the adopted regional growth forecasts). The model system microsimulates the behavior of both these types of currently unplaced households and assigns each of them to a currently empty housing unit. A similar process is undertaken for businesses. During the simulation, Bay Area UrbanSim 2.0 microsimulates the choices real estate developers make on how much, what, and where to build. This adds additional housing units and commercial space in profitable locations (i.e., land use policies at the site allow the construction of a building that is profitable under forecast demand).

In this way, the preferences of households, businesses, and real estate developers are combined with the existing landscape of building and policies to generate a forecast of the overall land use pattern in future years. The land use policies in place in the base year can be changed (e.g., allowable zoned residential density could be increased), and Bay Area UrbanSim 2.0 responds by forecasting a different land use pattern consistent with the constraints or opportunities resulting from the change. After each 5-year step, the model produces a zonal output file for the transportation model that contains household counts and employee counts by sector. This provides the travel model with information on land use intensity in different locations and the spatial distribution of potential origins and destinations within the region.

UrbanSim 2.0 produced all the key outputs used in assessing the significance of the forecasted land use development pattern. The parcel-level simulations were also aggregated to generate land use data at the Traffic Analysis Zone, subcounty, and county level.

TRAVEL MODEL 1.5

The MTC travel demand model, Travel Model 1.5, is a regional activity–based travel model for the Bay Area. This model is composed of a set of individual models that perform different functions, leading to projections of future Bay Area travel. Travel Model 1.5, released in 2020, updates Travel Model One with the inclusion of ride-hailing, taxis, and autonomous vehicles. Travel Model 1.5 has been extensively reviewed by federal and State agencies. Vehicle activity forecasts are correlated to changes in land use data and transportation strategies. Travel Model 1.5 divides the region into 1,454 Traffic Analysis Zones, which contain key land use data (from UrbanSim 2.0) to inform travel patterns. Various transportation strategies were analyzed using this model. To analyze the proposed Plan, strategies (made up of both capital projects and policies) were implemented in the model on top of the region's existing transportation infrastructure. By adding these strategies into the model framework, it is possible to forecast the impacts of strategies on regional travel patterns. Travel Model 1.5 produces key outputs for assessing the significance of the transportation, air quality, GHG, and noise chapters. Key model outputs include total daily vehicle trips, VMT, and distribution of VMT by speed.

Travel Model 1.5 is not sensitive to the full range of strategies in the proposed Plan. Marketing and education campaigns, as well as non-capacity-increasing transportation investments like bikeshare programs (i.e., Strategy EN09, "Expand Travel Demand Management Strategies"), are examples of strategies with the potential to change behavior in ways that result in reduced vehicle emissions. Travel Model 1.5 and EMFAC do not estimate reductions in emissions in response to these types of changes in traveler behavior. As such, an "off-model" approach was used to quantify the VMT and GHG reduction benefits of these important programs.

2.3.4 Proposed Plan Growth Geographies

The proposed Plan designates specific geographic areas—known as growth geographies—in order to guide where future household and job growth would be focused under the proposed Plan's strategies over the next 30 years. The growth geographies are a mix of a) Areas designated by local jurisdictions—Priority Development Areas (PDAs) and Priority Production Areas (PPAs); and b) areas defined by criteria related to transit service and access to opportunity—Transit-Rich Areas (TRAs) and High-Resource Areas (HRAs). The proposed Plan's core strategy remains "focused growth" in existing communities along the existing transportation network, as evidenced by the descriptions and general locations of the growth geographies described below. This focused growth strategy helps to achieve key regional economic, environmental, and equity goals by building upon existing community characteristics and leveraging existing infrastructure while reducing effects on areas with less development.

The proposed Plan includes the designation of new growth geographies for both housing and jobs. For housing, growth geographies include PDAs and the newly added HRAs and TRAs. For jobs, growth geographies include PDAs and newly added PPAs and TRAs. HRAs identified by the State of California were included as a new housing growth geography to counterbalance housing policies that have historically led to limited housing development, particularly housing affordable to low-income households. TRAs, areas close to rail, ferry, or frequent bus service, were also included as growth geographies to support climate emissions goals, with more housing near transit allowing more people to have access to sustainable transportation options. These growth geographies build on local and regional planning efforts and include 216 locally designated PDAs and 36 locally designated PPAs within the nine-county Bay Area.

Some growth geographies are a combination of categories. Most locally designated PDAs also meet the TRA criteria, and many meet the HRA criteria. A smaller number of PDAs are served by less frequent bus service that does not meet the TRA criteria but is above the minimum transit service requirement for PDAs. PPAs, meanwhile, do not overlap with TRAs served by regional rail, but may

overlap with bus-served TRAs, and may also overlap with HRAs. The mix of growth geographies in each local jurisdiction is determined by whether or not the jurisdiction designated PDAs on at least 50 percent of the land in its boundaries eligible for PDA designation. In jurisdictions that designated at least 50 percent of this land as a PDA, the growth geographies are limited to PDAs and PPAs. As a result, in these jurisdictions TRAs and HRAs within PDAs and PPAs are included as growth geographies, while TRAs and HRAs outside of PDAs and PPAs are not. In jurisdictions that designated PDAs on less than 50 percent of eligible land, growth geographies include: 1) any locally nominated PDAs and PPAs; 2) TRAs outside PDAs and PPAs; and 3) HRAs that are outside PDAs and PPAs, and either within a TRA or within a quarter mile of a bus stop served by one or more route with peak headways of 30 minutes or less.

The following growth geography criteria were adopted by MTC and ABAG (see **Table 2-19** and **Figure 2-5** for more detail):

- Growth geographies designated by local jurisdictions:
  - **Priority Development Areas (PDAs)**—Areas generally near existing job centers or frequent transit that are local identified (i.e., identified by towns, cities, or counties) for housing and job growth.
  - **Priority Production Areas (PPAs)**—Locally identified places for job growth in middle-wage industries like manufacturing, logistics or other trades. An area must be zoned for industrial use or have a predominantly industrial use to be a PPA.
- Growth geographies in local jurisdictions that have designated less than 50 percent of the PDA eligible areas as PDAs:
  - **Transit-Rich Areas (TRAs)**—Areas near rail, ferry, or frequent bus service that were not already identified as a PDA. Specifically, these are areas where at least 50 percent of the area is within ½ mile of either an existing rail station or ferry terminal (with bus or rail service), a bus stop with peak service frequency of 15 minutes or less, or a planned rail station or planner ferry terminal (with bus rail service).
  - **High-Resource Areas (HRAs)**—State identified places with well-resourced schools and access to jobs and open space, among other advantages, that have historically rejected more housing growth. This designation only includes places that meet a baseline transit service threshold of bus service with peak headways of 30 minutes or better. Some HRAs also meet the designation of TRAs, meaning they are both well-resourced and transit-rich.
- Exceptions and Exclusions:
  - Areas within ½ mile of a rail station, regardless of whether the local jurisdiction nominated more than 50 percent of the PDA eligible areas as PDA, are **included** in the TRA growth geography.
  - Very High and High Fire Hazard Severity Areas identified by the California Department of Forestry and Fire Protection or locations within a county-adopted wildland-urban interface area are **excluded** from growth geographies.
  - Areas of sea level rise inundation (i.e., areas at risk from sea level rise through year 2050 that lack adaptation strategies in the proposed Plan's Environment Element) are **excluded** from growth geographies.
  - Areas outside locally adopted urban growth boundaries are **excluded** from growth geographies.

Table 2-19: Growth Geography Designations by County and Class

County	Total Land (acres)	Designated Growth Geography					
		PDA (acres)	PPA (acres)	HRA (acres)	HRA and TRA (acres)	TRA (acres)	Subtotal (acres)
Alameda	470,500	29,400	16,300	2,600	6,500	7,800	62,500
Contra Costa	459,600	15,800	8,000	7,700	650	4,600	36,800
Marin	331,800	2,100	0	1,400	1,800	1,400	6,600
Napa	483,600	930	1,100	0	0	<1	2,000
San Francisco	29,800	18,400	960	<1	140	30	19,500
San Mateo	287,500	9,700	9	3,700	4,100	2,300	19,800
Santa Clara	817,300	27,700	2,800	10,500	11,500	4,800	57,400
Solano	529,300	8,300	5,100	0	0	140	13,600
Sonoma	1,009,000	11,200	140	490	0	570	12,400
Regional Total	4,419,000	123,600	34,500	26,400	24,600	21,700	230,600

Notes: Numbers less than 1 are shown as "<1"; whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum because of independent rounding.
Source: Data compiled by MTC and ABAG in 2021

In total, the proposed Plan designates 5 percent of the region's land area to a growth geography. Alameda County has the most land designated as a growth geography, followed by Santa Clara and Contra Costa Counties. San Francisco County has the highest percentage of its land area (65 percent) designated as a growth geography. Alternatively, Napa County has the fewest land acres designated as a growth geography. Locally designated PDAs make up the majority (54 percent) of the growth geography designation acres. The newly created PPAs account for 15 percent of the growth geography area and generally occur in Alameda County. There are two types of HRAs: those that are transit-rich and those with basic transit service. Collectively, HRAs account for 22 percent of the growth geography area and are predominately found in Santa Clara County. TRAs account for 20 percent of the growth geography area. The majority of TRA designations occur in Alameda and Santa Clara Counties.

The proposed Plan also includes 184 locally nominated Priority Conservation Areas (PCAs). Although not a designated growth geography, PCAs are areas of regional significance that have broad community support for conservation and need environmental protection. They provide important agricultural, natural resource, scenic, cultural, recreational, and/or ecological values, and ecosystem functions.

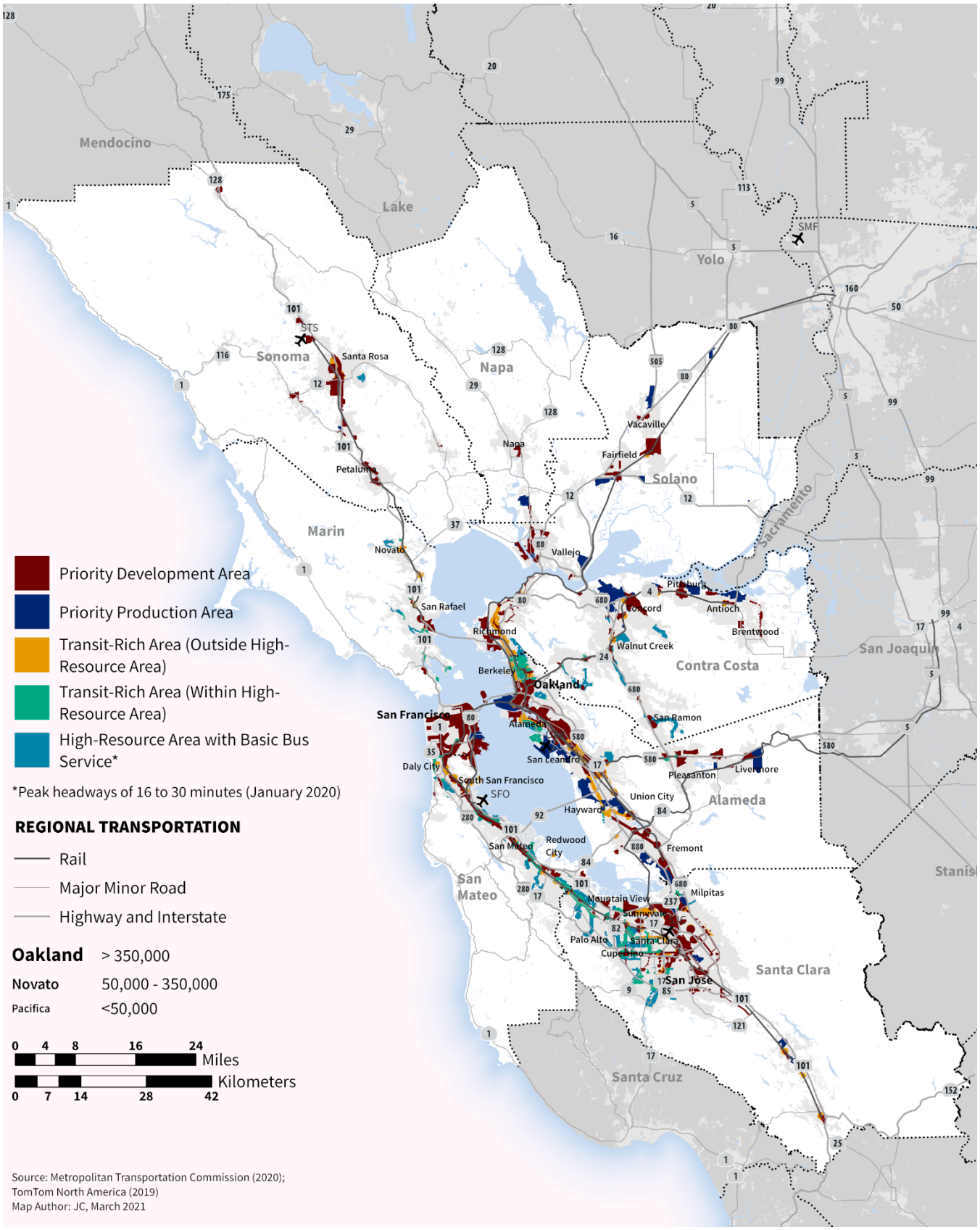

Figure 2-5: Growth Geography Designations by Type

TRANSIT PRIORITY AREAS

Approval of an adopted SCS by CARB allows for CEQA streamlining benefits for transit priority projects (TPPs). Please see Section 1.9, "CEQA Streamlining Opportunities," for more information regarding CEQA streamlining opportunities. A TPP is defined by statute, based on consistency with the following requirements:

- consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in the SCS;
- located within a half-mile of a major transit stop or high-quality transit corridor;
- made up of at least 50-percent residential use based on total building square footage or as little as 26-percent residential use if the project has a floor area ratio of not less than 0.75; and
- built out with a minimum of 20 dwelling units per acre (PRC Section 21155).

For the purposes of this EIR, geographic areas eligible to meet the TPP requirements are referred to as TPAs.

RELATIONSHIP BETWEEN GROWTH GEOGRAPHIES AND TPAS

The proposed Plan's growth geographies promote compact development in established communities with high-quality transportation access while placing less development pressure on the region's vast and varied open spaces and agricultural lands. The major difference between TPAs and the proposed Plan's growth geographies is how they are designated. As discussed above, a PDA and PPA are identified by a local agency for adoption by ABAG, while HRAs are defined by the State of California. TPAs are akin to TRAs, in that they are areas that meet specific considerations; however, TPAs are more narrowly defined than TRAs by the series of requirements described above. The growth geographies and TPAs are similar in that they emphasize access to transit service and are appropriately planned for growth.

Within the Bay Area, TPAs and the proposed Plan's designated growth geographies cover approximately 144,100 and 230,600 acres, respectively. Approximately 98,800 acres of land is designated as both a TPA and a growth geography. **Figure 2-6** shows the general locations of designated TPAs and growth geographies within the region. **Table 2-20** shows county-by-county total acreage of TPAs and the proposed Plan's growth geographies, and the extent to which they do and do not overlap. As noted in Section 1.4.2, "Level of Analysis," because of potential future CEQA streamlining benefits, only TPAs are reported separately in the EIR impact analyses, where feasible, rather than reporting separately by all the growth geographies.

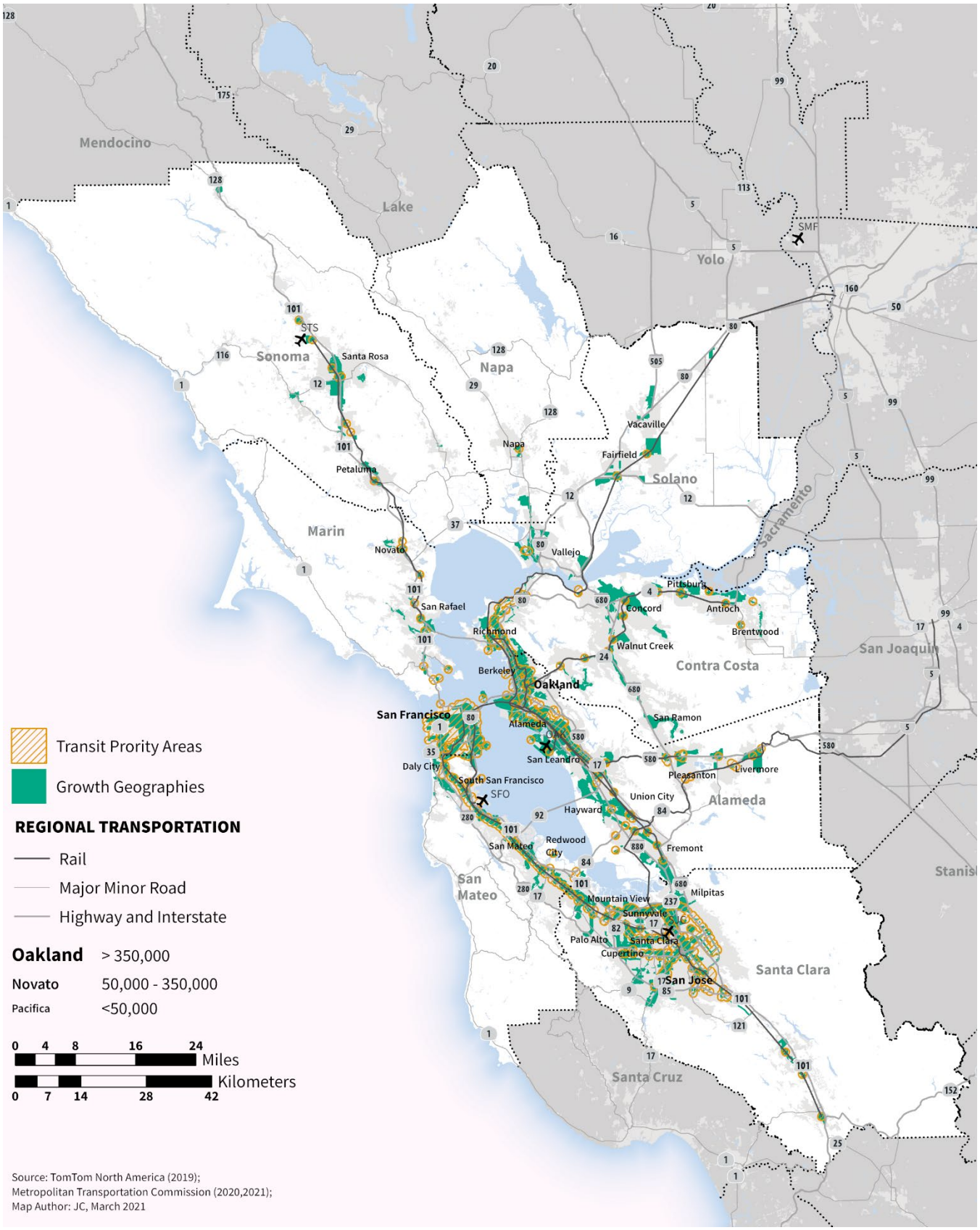

Figure 2-6: Growth Geography Designations and TPAs

Table 2-20: Distribution of Growth Geographies and TPAs by County

County	Total Land (acres)	Designated TPA (acres)	Designated Growth Geography (acres)	Designated both TPA and Growth Geography (acres)	Designated TPA but Not Growth Geography (acres)	Designated Growth Geography but Not TPA (acres)	Designated Neither TPA nor Growth Geography (acres)
Alameda	470,500	31,900	62,500	23,800	8,200	38,800	399,700
Contra Costa	459,600	9,500	36,800	7,000	2,500	29,800	420,400
Marin	331,800	4,700	6,600	2,900	1,800	3,800	323,300
Napa	483,600	460	2,000	300	160	1,700	481,500
San Francisco	29,800	25,300	19,500	17,800	7,500	1,700	2,700
San Mateo	287,500	14,900	19,800	9,700	5,100	10,100	262,600
Santa Clara	817,300	52,000	57,400	33,200	18,800	24,100	741,200
Solano	529,300	1,600	13,600	1,400	230	12,100	515,500
Sonoma	1,009,000	3,800	12,400	2,600	1,100	9,700	996,000
Regional Total	4,419,000	144,100	230,600	98,800	45,300	131,800	4,143,000

Notes: Whole numbers have been rounded (between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum because of independent rounding.
Source: Data compiled by MTC and ABAG in 2021

2.4 PLAN BAY AREA 2050 DOCUMENT

2.4.1 Document Framework

The proposed Plan document is organized into six chapters, plus a stand-alone Implementation Plan, which are listed and briefly summarized as follows:

- **Introduction:** This chapter provides an overview of current challenges facing the Bay Area and summarizes the historical policy and planning context that laid the groundwork for these challenges to emerge and intensify. Additionally, the Introduction chapter recaps the role of the long-range Plan, introduces the reader to the present and future demographics of the Bay Area, and highlights relevant local and regional planning initiatives as appropriate.

- **Housing:** This chapter summarizes recommended strategies, including a set of geographies identified for intensified housing development at the local level and policies that seek to support housing affordability and access. The strategies are grouped into three themes: protect and preserve affordable housing, spur housing production at all income levels, and create inclusive communities.

- **Economy:** This chapter summarizes the recommended strategies, including a set of geographies identified for intensified job site development and strategies aimed at creating a more equitable economy and addressing the entrenched geographic imbalances between housing and jobs. The strategies are grouped into two themes: improve economic mobility and shift the location of jobs.

- **Transportation:** This chapter summarizes recommended strategies, including transportation policies and bundles of investments, that seek to improve transportation conditions in the Bay Area. The strategies are grouped into three themes: maintain and optimize the existing system, create healthy and safe streets, and build a next-generation transit network.

- **Environment:** This chapter summarizes the recommended strategies, including policies and bundles of investments, that seek to advance sustainability and resilience to earthquakes, sea level rise, and other natural hazards. The strategies are grouped into three themes: reduce risks from hazards, expand access to parks and open space, and reduce climate emissions.

- **Outcomes:** This chapter summarizes the performance of the entire suite of 35 integrated strategies included in the proposed Plan, organized around the five guiding principles.

- **Implementation Plan:** This plan identifies implementation actions for MTC, ABAG, and other stakeholders to make meaningful progress toward implementing each of the proposed Plan's 35 strategies over the next 5 years.

- **Supplemental Reports:** In addition to this EIR, the proposed Plan also includes the following supplementary documents that will be made available at planbayarea.org/reports.

  - Air Quality Conformity and Consistency Report,
  - Equity Analysis Report,
  - Forecasting and Modeling Report,
  - Implementation Plan Briefs,
  - Native American Tribal Engagement and Government-to-Government Consultation Report,
  - Performance Report,
  - Public Engagement Report,
  - Technical Assumptions Report,
  - Transportation Project List, and
  - Statutorily Required Plan Maps.

  As noted in Section 1.7.3, "Federal and State Requirements," the RTP must comply with Section 65080 of the California Government Code. The State requirements largely mirror the federal requirements and require each transportation planning agency in urban areas to adopt and submit an updated RTP to CTC and Caltrans every 4 years. To ensure a degree of Statewide consistency in the development of RTPs, CTC adopted RTP Guidelines pursuant to Government Code Section 14522.The RTP Guidelines are intended to assist MPOs and RTPAs with developing RTPs that are consistent with federal and State planning requirements. The RTP Guidelines include a requirement for program-level performance measures, which include objective criteria that reflect the goals and objectives of the RTP. These goals and objectives are featured in the Draft Performance supplemental report to Plan Bay Area 2050. The proposed Plan follows the 2017 RTP Guidelines, which were adopted on January 18, 2017.

The 2017 RTP guidelines identify four elements that should be included in an RTP/SCS and have been included as part of the proposed Plan:

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 objectives and policy statements. This element is included in the Plan Bay Area 2050 document, specifically in the Introduction chapter and the Transportation chapter.

2. **Sustainable Communities Strategy (SCS)** that identifies a forecasted development pattern that, when integrated with the transportation network, and other transportation measures and policies, will reduce regional GHG emissions from automobiles and light trucks, if there is a feasible way to do so. This information is included in the Plan Bay Area 2050 document through components of each of the four element chapters.

3. **Action Element** that describes the programs and actions necessary to implement the Plan and assigns implementation responsibilities. This information is included in the Implementation Plan chapter of the Plan Bay Area 2050 document, with further information included in the Implementation Plan Briefs supplemental report.

4. **Financial Element** that summarizes the cost of Plan implementation constrained by a realistic projection of available revenues. This information is included in the Financial Assumptions Report, with a summary featured in the Implementation Plan chapter of the Plan Bay Area 2050 document.

2.4.2 Intended Uses of This EIR

The CEQA Guidelines (Section 15124[d]) require EIRs to identify the agencies that are expected to use the EIR in their decision making and the approvals for which the EIR will be used. This EIR will inform MTC and ABAG, in addition to other responsible agencies, persons, and the general public, of the potential environmental effects of the proposed Plan and the identified alternatives. MTC and ABAG will use this EIR for the purposes of review and approval of the proposed Plan.

This program EIR is a first-tier document that addresses the environmental impacts that may affect the nine-county Bay Area as a result of adoption and implementation of Plan Bay Area 2050. Therefore, future programs or projects may "tier" from this program EIR, as stipulated in CEQA. "Tiering" refers to the coverage of general environmental analysis in broad, program-level EIRs, with subsequent focused environmental documents for individual projects that implement the program. If the potential environmental effects of consistent subsequent actions are adequately addressed by a certified program EIR, additional environmental analysis may be unnecessary. This finding can be substantiated using an initial study that evaluates whether the environmental effects of the subsequent project have already been adequately covered.

The lead agencies for projects analyzed in this program EIR may use it as the basis for cumulative analysis of specific project impacts, together with the projected growth in the region. Cities and counties may use information in this EIR in their future housing elements. Bay Area congestion management agencies may incorporate information provided in this EIR into future county transportation plans, such as congestion management programs, countywide transportation plans, and county bike and pedestrian plans. Other agencies expected to use this EIR include the California Department of Transportation, county transportation authorities, transit providers in the region (such as Muni, BART, AC Transit, SamTrans, Caltrain, SolTrans, WestCAT, Altamont Corridor Express, and Water Emergency Transit Authority), the Bay Conservation and Development Commission, the Bay Area Air Quality Management District, and cities and counties.

Mitigation measures described in this EIR may be incorporated into project-level environmental impact analyses by project sponsors or local agencies as appropriate to mitigate identified project-level impacts.

This EIR is also intended to help activate the CEQA streamlining benefits of SB 375 for local jurisdictions and private development, described in Section 1.9.1, "Streamlining under SB 375."

2.4.3 Actions to Adopt and Implement the Proposed Plan

MTC and ABAG are the lead agencies for approval of the proposed Plan and the associated environmental review (this EIR). Approval consists of three actions among MTC and ABAG:

- **Final Air Quality Conformity Determination for Plan Bay Area 2050 | MTC:** As the first action, MTC must make a conformity determination under federal Clean Air Act Section 176(c). The Federal Highway Administration and the Federal Transit Administration make the final determination of conformity determination implementation.
- **Final Program Environmental Impact Report for Plan Bay Area 2050 | MTC and ABAG:** The second action requires MTC and ABAG, as lead agencies, to certify the EIR is adequate under CEQA.
- **Final Plan Bay Area 2050 | MTC and ABAG:** As the third and final action, the proposed Plan requires joint approval by the MTC Commission and the ABAG Board.

Following adoption by MTC and ABAG, MTC and ABAG must submit the Plan to CARB. CARB must review the adopted SCS ("Plan Bay Area 2050") to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG emissions reduction target. If the combination of strategies in the SCS would not meet the regional targets, MTC and ABAG must prepare an "alternative planning strategy" to meet the regional GHG emissions reduction target.

Once adopted by MTC and ABAG, Plan Bay Area 2050 will guide regional housing, economic, transportation, and environmental strategies and investments for the region.

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