3 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

3.18 Regional Growth

3.18.1 Introduction

PURPOSE

Regional Growth

Regional growth in the context of transportation projects reflects the relationship between the proposed project and future employment, population, and housing growth within the project area. Growth inducement may be direct or indirect with the impacts potentially adverse or beneficial as determined by the analysis.

Section 3.18, Regional Growth, of the Los Angeles to Anaheim Project Section (project section) Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) discusses the potential impacts on regional growth from the No Project Alternative and the high-speed rail (HSR) project alternatives (Shared Passenger Track Alternative A and Shared Passenger Track Alternative B) and describes impact avoidance and minimization features that will avoid, minimize, or reduce these impacts. Section 3.18 also defines the name of regional growth resources in the region and describes the affected environment in the resource study area (RSA).[1] Regional growth is measured in terms of increasing employment, population, and housing. These resources are further defined below in Section 3.18.1.1, Definition of Resources.

The following technical reports serve as the basis for the information in this section and are available on request:

- *Los Angeles to Anaheim Project Section Community Impact Assessment* (Authority 2025a)
- *Los Angeles to Anaheim Project Section Draft Relocation Impact Report* (Authority 2025b)
- *Los Angeles to Anaheim Project Section Transportation Technical Report* (Authority 2025c)

Additional details on regional growth are also provided in the following appendices in Volume 2 of this Draft EIR/EIS:

- Appendix 3.1-A, Regional and Local Policy Inventory and Consistency Analysis
- Appendix 3.18-A, Regional Input-Output Modeling System (RIMS) II Modeling Details for the Los Angeles to Anaheim Project Section

This section includes detailed analysis of environmental resources, affected environment, and environmental consequences, based on the guidance provided in the *Project Environmental Impact Report/Environmental Impact Statement Environmental Methodology Guidelines*, Versions 5.9 and 5.11 as amended (Authority 2017a, 2022). Seven resource sections and one chapter in this Draft EIR/EIS provide additional information related to impacts on regional growth:

- **Section 3.2, Transportation:** Construction and operational changes from the Shared Passenger Track Alternatives on the regional transportation system, including traffic impacts, transportation linkages and energy consumption, and greenhouse gas (GHG) emissions.
- **Section 3.3, Air Quality and Global Climate Change:** Construction and operational changes from the Shared Passenger Track Alternatives from dust and other air emissions.
- **Section 3.6, Public Utilities and Energy:** Construction and operational changes from the Shared Passenger Track Alternatives related to demand of public services.
- **Section 3.8, Hydrology and Water Resources:** Construction and operational changes from the Shared Passenger Track Alternatives related to surface water and groundwater supply.
- **Section 3.12, Socioeconomics and Communities:** Construction and operational changes from the Shared Passenger Track Alternatives related to population, employment, displacements and relocations, and sales and property tax revenues.

[1] The RSA consists of the two-county region of Los Angeles and Orange Counties.

- **Section 3.13, Station Planning, Land Use, and Development:** Construction and operational changes from the Shared Passenger Track Alternatives on existing and proposed land use and development patterns.
- **Section 3.19, Cumulative Impacts:** Construction and operational changes from the Shared Passenger Track Alternatives and other past, present, and reasonably foreseeable future projects.
- **Chapter 6, Project Costs and Operations:** Construction and operational assumptions and cost estimates about train operations, maintenance of infrastructure, station and train cleaning, and general and administrative activities.

3.18.1.1 Definition of Resources

The following are definitions for regional growth resources analyzed in this Draft EIR/EIS.

- **Employment:** Employment is the number of jobs in the RSA that may be held by residents or persons who may reside outside of the RSA and commute to jobs in the RSA. Increases in employment depend on increased demand for products and services from residents and businesses that may or may not be in the RSA. Construction and operation of both project alternatives would create direct, indirect, and induced employment. Employment growth refers to temporary and permanent jobs that would be created either directly or indirectly by the project.
- **Population:** Population refers to the number of residents living in the RSA. Population increase is based on births, in-migration, out-migration, and deaths occurring within the RSA. This population in the RSA is projected to 2040, and the analysis estimates the direct, indirect, and induced impact of the project on population growth during construction and operation.
- **Housing:** The housing analysis considers the available units of housing in the RSA under the No Project Alternative and the Shared Passenger Track Alternatives to determine if adequate housing is available to match projected population growth.

3.18.2 Laws, Regulations, and Orders

This section describes the federal, state, and local laws, regulations, orders, and plans that are applicable to regional growth. General National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements for assessment and disclosure of environmental impacts are described in Section 3.1, Introduction, and are therefore not restated in this resource section. NEPA and CEQA requirements specific to the evaluation of regional growth are, however, described in this section.

3.18.2.1 Federal

NEPA Requirements to Analyze Growth

NEPA and NEPA implementing procedures, regulations, and guidance require evaluation of the potential environmental consequences of all proposed federal activities and programs. The evaluation includes a requirement to examine both direct and indirect consequences that may occur in areas beyond the immediate influence of an action alternative and at some time in the future. Positive and negative growth (i.e., change) is a potential consequence of the Shared Passenger Track Alternatives.

Direct growth effects are those caused by the construction and operation of the Shared Passenger Track Alternatives, occurring at the same time and place. Direct growth effects include any permanent jobs directly associated with the Shared Passenger Track Alternatives as well as any displacement of housing related to the construction and operation of the proposed rail facilities. Indirect growth effects as a result of the Shared Passenger Track Alternatives typically occur later in time or farther in distance from the project. These include positive or negative growth in population numbers or patterns, in local or regional economic vitality, and associated

alterations in land use patterns that could occur with implementation of the HSR project. Removal of existing obstacles to growth would also be considered indirect growth effects. “Removal of obstacles to growth” would include the extension of public services and utilities to a previously undeveloped area where the provision of such services could cause a foreseeable increase in population or economic growth.

Federal Railroad Administration Procedures for Considering Environmental Impacts (64 *Federal Register* 28545)

On May 26, 1999, the Federal Railroad Administration (FRA) released *Procedures for Considering Environmental Impacts* (FRA 1999). These FRA procedures describe how the FRA assesses the environmental impacts of actions and legislation proposed by the agency and for the preparation of associated documents under NEPA (42 U.S. Code 4321 et seq.).

Section 14(n)(16) of the procedures states that an EIS should consider possible impacts on the socioeconomic environment (such as the number and kind of available jobs, the potential for community disruption or cohesion, the possibility of demographic shifts, impacts on local government services and revenues, the need for and availability of relocation housing, and impacts on commerce, including existing business districts, metropolitan areas, and the immediate area of the alternative).

Section 3.12 of this Draft EIR/EIS addresses federal policies relating to the socioeconomic environment. The discussion of regional growth in this section is closely related.

3.18.2.2 State

Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375)

The Sustainable Communities and Climate Protection Act of 2008 requires California’s 18 metropolitan planning organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) as part of their regional transportation plans (RTP). The purpose of the SCS or APS is to reduce GHG emissions from automobiles and light trucks in each region to meet emissions targets set by the California Air Resources Board.

The Southern California Association of Governments (SCAG) is the MPO that oversees the regional growth RSA. Emissions targets for the SCAG region include a reduction in emissions of 19 percent below 2005 per-capita emissions levels by 2035. On September 3, 2020, SCAG adopted the final *Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy* (SCAG 2020).

Pursuant to California Government Code 65080(b)(2)(B), the SCS or APS shall:

(i) Identify the general location of uses, residential densities, and building intensities within the region.

(ii) Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation, and employment growth.

(iii) Identify areas within the region sufficient to house an 8-year projection of the regional housing need for the region pursuant to Section 65584.

(iv) Identify a transportation network to service the transportation needs of the region.

(v) Gather and consider the best practically available scientific information regarding resource areas and farmland in the region, as defined in subdivisions (a) and (b) of Section 65080.01.

(vi) Consider the state housing goals specified in Sections 65580 and 65581.

(vii) Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve, if feasible, the GHG emission reduction targets approved by the California Air Resources Board.

(viii) Allow the RTP to comply with Section 176 of the federal Clean Air Act (42 U.S. Code Section 7506).

The RTP adopted by SCAG identifies the region's transportation needs, including specific projects to meet those needs, and it establishes the basis for distributing federal, state, and local funding to implement those projects. Senate Bill (SB) 375 is intended to require the MPOs such as SCAG to direct transportation funding toward investments that would reduce GHG emissions and away from investments that would not.

SB 375 grants no new land use powers to the MPOs. However, to meet the assigned emissions reduction targets, the SCS or APS would not call for more-compact development patterns than can be served by transit and other modes of transportation. These development patterns will be encouraged by the requirement that the SCS or APS both reduce GHG emissions (which are linked to vehicle miles traveled) and plan to accommodate regional housing needs (which would continue to increase). Pursuant to SB 375, MPOs are expected to work with city and county authorities responsible for adopting general plans to guide community development, including by adopting housing elements as described below.

The regional housing needs allocation is statutorily linked to the housing element that must be adopted by each city and county as part of its general plan. The housing element must provide opportunities for the housing need assigned to the city or county to be filled through new construction or rehabilitation of housing. The housing need includes specific allotments for very low- and low-income housing.

Preparation of the SCS is mandated by law and the ability of each SCS to meet the emissions reduction target for the planning area must be reviewed and approved by the California Air Resources Board. If implementation of the SCS would not meet the target, then the MPO must adopt an APS that would. However, the APS is not a required component of the RTP and therefore would be less likely to be implemented.

2015 State Environmental Goals and Policies

In November 2015, the State of California published *A Strategy for California @ 50 Million: the Governor's Environmental Goals and Policy Report* (EGPR) (OPR 2015). This report updates the 1978 *Urban Strategy for California* (OPR 1978), the last EGPR prepared and adopted. Assembly Bill 2070 (1970) directed the Governor's Office of Planning and Research to prepare and maintain an EGPR. The goals and objectives focus on land use, population growth and distribution, conservation of natural resources, and air and water quality. The 2015 EGPR broadens the scope of the goals and objectives to the state as a whole, not just to urban areas.

Achieving sustainable growth in California with 50 million residents requires a clear plan of action and sustained effort. The 2015 EGPR outlines five important goals:

- Increase the share of renewable energy in the state's energy mix to at least 50 percent by 2030.
- Reduce petroleum use by up to 50 percent by 2030.
- Increase the energy efficiency of existing buildings by 50 percent by 2030.
- Reduce emissions of short-lived climate pollutants.
- Steward natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits.

To achieve these long-term goals, California must implement effective growth management strategies that would require integrated actions that promote multiple benefits. The state planning

priorities identify infill development in previously developed areas as the top priority for new development. To meet this priority, the EGPR includes the following additional state actions needed to support infill development, including specific transportation actions:

- Develop a priority order for state transportation investment that includes investments in public transportation and other modes that are alternatives to single-occupant vehicles.
- Enhance support for infill development and transit-oriented development in communities along the HSR corridor. In particular, the State will prioritize investment in infill development and transit-oriented development in these communities and fund projects that promote HSR system ties to, and support for, local public transportation systems.

Executive Order N-79-20

Executive Order N-79-20, issued by California Governor Gavin Newsom in September 2020, sets ambitious goals for reducing GHG emissions and promoting zero-emission vehicles in the state (State of California 2020). The order aims to address the urgent climate crisis by targeting the transportation sector, which contributes over half of California's GHG emissions, by eliminating the purchase of new internal-combustion passenger vehicles in California by the year 2035. It also mandates that 100 percent of medium- and heavy-duty vehicles in California should be zero-emission by 2045 (where feasible) and by 2035 for drayage trucks (i.e., heavy-duty diesel trucks that transport containers or other goods between ports and nearby destinations such as rail facilities, distribution centers, or warehouses).

By promoting zero-emission vehicles and supporting infrastructure development, this policy accelerates California's transition to a cleaner, more sustainable future. By setting a course to end sales of internal-combustion passenger vehicles by 2035, the executive order aligns with the state's goal of achieving carbon neutrality by 2045. Importantly, existing vehicles owned by Californians are not affected by this order; it focuses on new vehicle sales for automakers.

3.18.2.3 Regional and Local

This section discusses relevant regional and local programs, policies, regulations, and permitting requirements. The project section would be within Los Angeles and Orange Counties and the cities of Los Angeles, Vernon, Commerce, Bell, Montebello, Pico Rivera, Santa Fe Springs, Norwalk, La Mirada, Buena Park, Fullerton, and Anaheim. Table 3.18-1 lists regional plans and policies that were identified and considered for analysis. Regional plans are reviewed in Section 3.12 and Section 3.13 for regional growth issues related to employment, housing, and population.

Table 3.18-1 Regional Plans and Policies

Policy Title	Summary
Southern California	
SCAG 2024–2050 Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (2024)	The RTP/SCS has the following major vision themes relevant to regional growth: ▪ Mobility ▪ Communities ▪ Environment ▪ Economy These vision themes are broken down into specific policies detailed below: ▪ Policy 07. Encourage and support the implementation of projects, both physical and digital, that facilitate multimodal connectivity, prioritize transit and shared mobility, and result in improved mobility, accessibility and safety

Policy Title	Summary
	▪ Policy 09. Encourage residential and employment development in areas surrounding existing and planned transit/rail stations ▪ Policy 14. Encourage the development of transportation projects that provide convenient, cost-effective and safe alternatives to single-occupancy vehicle travel (e.g., trips made by foot, on bikes, via transit, etc.) ▪ Policy 15. Encourage jurisdictions and TDM practitioners to develop and expand local plans and policies to promote alternatives to single occupancy vehicle travel for residents, workers and visitors ▪ Policy 17. Support the implementation of technology designed to provide equal access to mobility, employment, economic opportunity, education, health and other quality-of-life opportunities for all residents within the SCAG region ▪ Policy 22. Eliminate transportation-related fatalities and serious injuries (especially those involving vulnerable road users, such as people, especially older adults and children, walking and biking) on the regional multimodal transportation system ▪ Policy 33. Promote the growth of origins and destinations, in areas with a proclivity toward multimodal options like transit and active transportation, to reduce single occupant vehicle (SOV) dependency and vehicle miles traveled ▪ Policy 36. Encourage housing development in transit-supportive and walkable areas to create more interconnected and resilient communities ▪ Policy 43. Support communities across the region to realize 15-minute communities through incremental changes that improve equity, quality of life, public health, mobility, sustainability, resilience and economic vitality ▪ Policy 52. Support investments that reduce hazardous air pollutants and greenhouse gas emissions ▪ Policy 69. Leverage and prioritize investments, particularly where there are mutual co-benefits to both freight and passenger/commuter rail ▪ Policy 80. Encourage partnerships and policies to broaden safe and efficient access to a range of mobility services that improve connections to jobs, education and basic services ▪ Policy 82. Foster a positive business climate by promoting regional collaboration in workforce and economic development between cities, counties, educational institutions and employers ▪ Policy 88. Encourage the reduced use of cars by visitors to the region by working with state, county and local agencies (e.g., park services, transportation agencies) to highlight and increase access to alternative options, including transit, passenger rail and active transportation

Policy Title	Summary
Los Angeles County	
Los Angeles County 2035 General Plan (2025)	The *Los Angeles County 2035 General Plan* includes the following goal and policies applicable to regional growth: Land Use Element (2025) ▪ Policy LU 4.3: Encourage transit-oriented development in urban and suburban areas with the appropriate residential density along transit corridors and within station areas. ▪ Policy LU 5.2: Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs. Mobility Element (2015) ▪ Policy M 4.1: Expand transportation options that reduce automobile dependence. ▪ Policy M 4.10: Support the linkage of regional and community-level transportation systems, including multi-modal networks. Economic Development Element (2022) ▪ Policy ED 4.2: Support the development of community-level economic development strategies in line with the Los Angeles County Strategic Plan for Economic Development. ▪ Policy ED 6: Encourage a collaborative inter-agency and inter-jurisdictional environment to align economic development activities and promote information sharing on economic trends, business cycles, best practices, and resources.
Orange County	
County of Orange General Plan (2025)	The *County of Orange General Plan* was approved in July 2014 and last updated in May 2025. The general plan includes the following goals and policies applicable to regional growth: Land Use Element (2024) ▪ Land Use Policy 3: To encourage infill and transit-oriented development through incentives, concentrating development close to transit stops, and ensuring access by all travel modes. ▪ Land Use Policy 5: To plan an integrated land use and transportation system that accommodates travel demand for all modes of transit. Growth Management Element (2020) ▪ Growth Management Goal 1: Reduce traffic congestion. ▪ Growth Management Goal 2: Ensure that adequate transportation facilities, public facilities, equipment, and services are provided for existing and future residents. ▪ Growth Management Goal 3: Protect the natural environment of Orange County.

Policy Title	Summary
OCTA, Directions 2045: Long Range Transportation Plan (2023)	The plan contains the following goals and objectives: ▪ Goal 1: Deliver on commitments. Prioritize the voter-approved OC Go programs and fulfill OCTA's responsibility for providing safe and reliable transit service. ▪ Goal 2: Improve System Performance. Improve overall travel conditions with conventional and innovative solutions that respond to Orange County's growing travel demand. ▪ Goal 3: Expand System Choices. Provide travelers with convenient and equitable travel options and reduce the number of single occupant vehicle (SOV) trips. ▪ Goal 4: Support Sustainability. Include adaptation and resiliency strategies that reduce climate-related risks, while also supporting Orange County's economy, infrastructure maintenance, and environmental health.

Sources: County of Los Angeles 2025; County of Orange 2025; OCTA 2023; SCAG 2024
OCTA = Orange County Transportation Authority; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SCAG = Southern California Association of Governments; TDM = transportation demand management

3.18.3 Consistency with Plans and Laws

As indicated in Section 3.1.5.3, Consistency with Plans and Laws, CEQA and NEPA require a discussion of any inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. CEQA and FRA NEPA implementing procedures require the discussion of any inconsistency or conflict between a proposed action and federal, state, regional, or local plans and laws. Where inconsistencies or conflicts exist, the California High-Speed Rail Authority (Authority) must provide a description of the extent of reconciliation and the reason for proceeding if full reconciliation is not feasible under NEPA (64 *Federal Register* 28545, 14(n)(15)) and must discuss the inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans under CEQA (State CEQA Guidelines Section 15125(d)).

Several federal and state laws listed in Section 3.18.2.1, Federal, and Section 3.18.2.2, State, pertain to regional growth. The Authority, as the lead state agency proposing to build and operate the HSR system, is required to comply with federal and state laws and regulations and to secure applicable federal and state permits prior to initiating construction of the project. Pursuant to U.S. Code Title 23 Section 327, under the NEPA Memorandum of Understanding between the FRA and the State of California, effective July 22, 2024, the Authority is the federal lead agency for environmental reviews and approvals for all Authority Phase 1 and Phase 2 California HSR System projects.

The Authority is a state agency and is therefore not required to comply with local land use and zoning regulations. However, it has endeavored to design and build the HSR project so that it is consistent with land use and zoning regulations. The Shared Passenger Track Alternatives would be consistent with the government plans, policies, and ordinances reviewed as they relate to regional growth.

3.18.4 Methods for Evaluating Impacts

The evaluation of impacts on regional growth is a requirement of NEPA and CEQA. The following sections define the RSA and the methods used to analyze regional growth impacts. As summarized in Section 3.18.1, Introduction, several resource sections and one chapter of the Draft EIR/EIS provide additional information related to regional growth.

3.18.4.1 Definition of Resource Study Area

As defined in Section 3.1.5.4, Methods for Evaluating Impacts, RSAs are the geographic boundaries for which the Authority conducted environmental investigations specific to each

resource topic. The RSA for regional growth, as depicted on Figure 3.18-1, encompasses the multicounty region of Los Angeles and Orange Counties to capture the direct and indirect regional growth impacts from potential employment and population growth and growth-related land consumption that the project would induce.

Evaluating impacts on regional growth includes using employment, population, and housing information for the cities and counties to give both a detailed picture and a larger overview. Although some economic data sources provide information (such as total employment and the unemployment rate) for cities and communities, most describe the correlation between various economic sectors only at the county level.

Table 3.18-2 provides general definitions and boundary descriptions for the RSA for the Shared Passenger Track Alternatives.

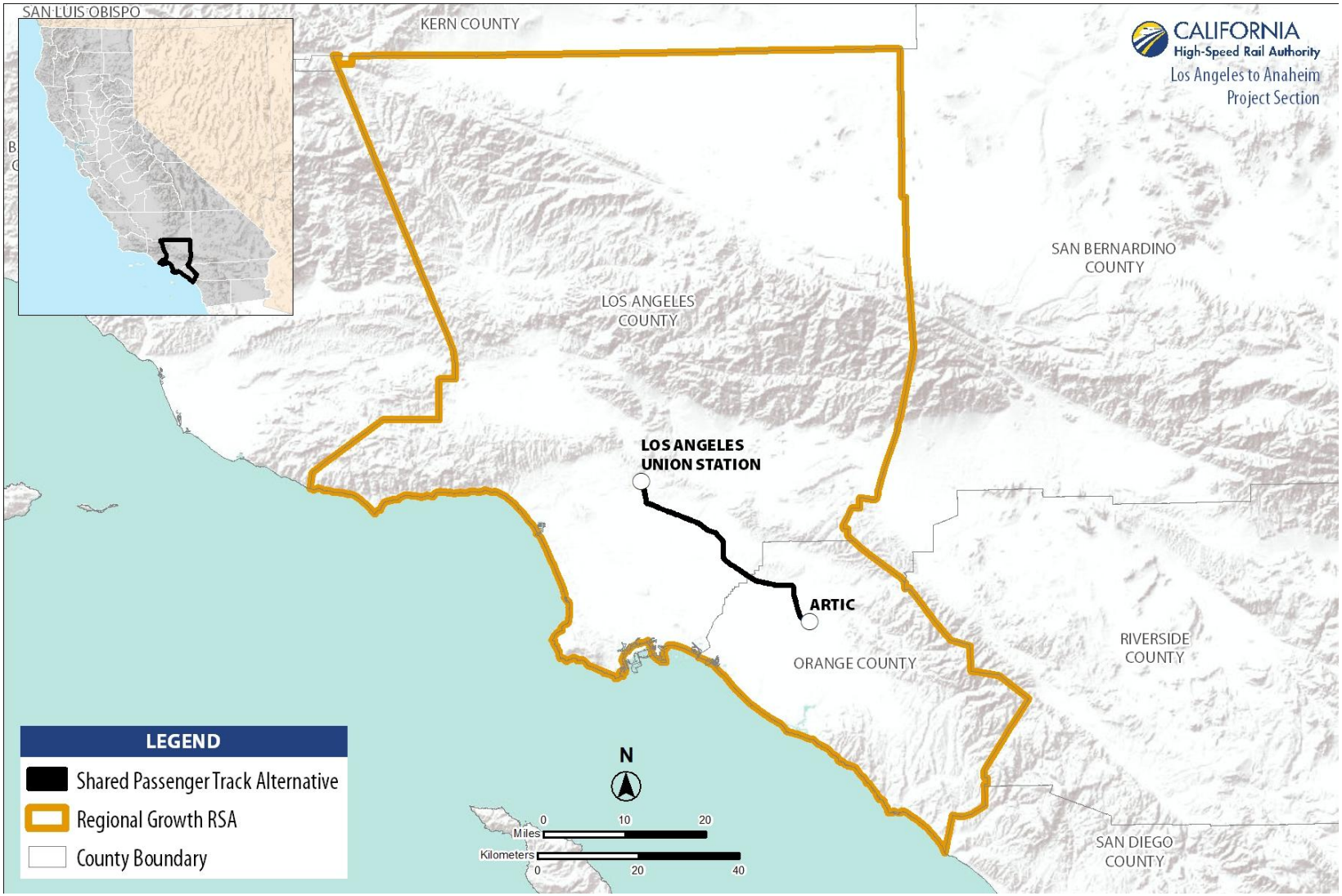
Table 3.18-2 Definition of Regional Growth Resource Study Area

General Definition	Resource Study Area Boundary
Regional Growth	
Regional Growth	The two-county region of Los Angeles and Orange Counties

3.18.4.2 Impact Avoidance and Minimization Features

The Shared Passenger Track Alternatives incorporate standardized HSR features to avoid and minimize impacts. These features are referred to as impact avoidance and minimization features. The Authority would incorporate impact avoidance and minimization features during project design and construction; therefore, the analysis of impacts of the project alternatives must factor in all applicable impact avoidance and minimization features.

Appendix 2-A, Impact Avoidance and Minimization Features, provides a detailed description of impact avoidance and minimization features that are included as part of the project design; however, there are no impact avoidance and minimization features applicable to the discussion of regional growth.



Source: ESRI 2024

Figure 3.18-1 Regional Growth Resource Study Area

3.18.4.3 Methods for Impact Analysis

This section describes the sources and methods used to analyze potential impacts on regional growth from implementing the Shared Passenger Track Alternatives. The project's employment growth impacts should be estimated based on the initial construction phase, the operations and maintenance (O&M) phase, and the potential economic growth effects associated with improvements to accessibility. The impact analysis focuses the discussion of most environmental impacts by geographic area (at a regional level) rather than by project alternative.

The support for additional workers in the region is an important consideration because a potential influx of workers could increase the demand for housing and public services and require new or altered government and public facilities. Direct, indirect, and induced employment is associated with construction of the project and with O&M of tracks, rolling stock, and facilities. Direct employment refers to the jobs primarily involved in the construction and transportation sectors. Indirect employment refers to the jobs created in existing businesses in the region (e.g., material and equipment suppliers) that supply goods and services to project construction, operations, or maintenance. Induced employment refers to jobs created in new or existing businesses (e.g., retail stores, gas stations, banks, restaurants, service companies) that supply goods and services to workers and their families.

The impact analysis methodology presented in this section is used to analyze the potential increase in population that would result from jobs supported during the construction (short-term) and operational (long-term) phases of the project, the potential increases in jobs and population in the RSA resulting from improved transportation accessibility provided by the HSR system, and the potential effects of these increases. Land consumption demands and patterns related to growth are also considered, as is the potential for induced population growth in exurban areas. Historical and projected population, employment, and housing data have been assembled from the U.S. Census Bureau; the California Department of Finance, Demographic Research Unit; the California Employment Development Department (EDD), Labor Market Information Division; the SCAG 2020–2045 RTP/SCS; and the California Department of Transportation Office of State Planning, Economic Analysis Branch.

The methodology presented in this section includes analysis guidelines for both NEPA and CEQA. The analysis focuses on employment and associated population growth resulting from construction and operations of the Shared Passenger Track Alternatives. Further information on NEPA requirements to analyze growth is presented in Section 3.18.2.1. Section 15126.2(e) of the State CEQA Guidelines (14 California Code of Regulations Section 15000–15387) mandates that an EIR evaluate the potential growth-inducing impacts of a proposed project. CEQA requires an EIR to discuss potential growth-inducing impacts of a proposed project. The primary focus under CEQA is whether a project would induce substantial growth beyond levels planned by local jurisdictions. CEQA also requires significance determinations for potential growth-inducing impacts on population and housing if the project would directly or indirectly induce either of the following:

- Substantial unplanned population growth in the region
- Substantial numbers of existing people or housing being displaced, necessitating the construction of replacement housing elsewhere

These CEQA thresholds regarding regional growth effects are addressed in Section 3.12 proximate to other related CEQA thresholds. Section 3.12 also summarizes the regional growth impacts evaluated in this section to provide a comprehensive analysis for determining significance under CEQA for potential socioeconomic and community impacts. Therefore, this section includes a summary of NEPA effects (Section 3.18.8, NEPA Impacts Summary) but does not include a summary of CEQA impacts.

The RIMS II modeling procedure, assumptions, and results are described in detail in Appendix 3.18-A.

Construction Impacts

The assessment of construction-related impacts focuses on construction employment impacts, the demand for construction workers, and the forecast availability of construction workers. The analysis also evaluates the likelihood that construction workers and their families would move to the region for employment opportunities, potentially resulting in population impacts. The impact analysis focuses on the regional impacts of the project. The following key steps summarize the analytical process:

- **Estimate project construction costs:** The Authority used the capital cost estimates for the project section to identify the overall construction costs anticipated to affect construction-related employment. The Authority relied on detailed capital cost estimates for project improvements—that is, track modifications (e.g., tracks, track structures, site work), stations, and maintenance facilities. These capital cost estimates were developed by the Authority and are detailed in the *Los Angeles to Anaheim Project Section: Preliminary Engineering for Project Definition Record Set Capital Cost Estimate Report* (Authority 2025d).[2]

  Capital costs used in the construction-related employment analysis exclude costs for HSR trains, right-of-way acquisition, land, final design, finance charges, and program implementation, because they either would not measurably affect employment in the RSA or are systemwide costs. Additional information related to the Shared Passenger Track Alternatives construction costs and their application in the analysis is provided in Appendix 3.18-A.

- **Estimate the location and pace of project construction spending:** The Authority estimated the anticipated portion of the total construction budget that would be expended within the RSA and allocated construction costs to the region. The rate of expenditure was estimated through the multiyear construction period. At the time the analysis was conducted, the construction period for the Shared Passenger Track Alternatives was anticipated as 2031 to 2037,[3] with the peak construction years in 2035 and 2036.

- **Estimate the number of jobs created by construction:** The Authority used the construction cost estimates and spending allocations by construction year to estimate the total and peak-year direct, indirect, and induced employment impacts. These construction-related employment estimates were calculated using the Bureau of Economic Analysis RIMS II (Appendix 3.18-A).

- **Compare construction-related jobs to the expected supply of workers:** The calculated construction-related employment demand was compared to the forecasted peak-year construction workforce in the RSA to assess whether the demand for skilled construction workers could be supplied by the local construction sector, or whether the project could attract construction workers and their households to the region for employment opportunities, leading to population growth.

Operational Impacts

The regional growth assessment for the HSR operational phase modeled direct, indirect, and induced employment impacts, as well as overall systemwide employment growth spurred by increased connectivity and accessibility, particularly between the Bay Area and the Los Angeles Basin. The Authority examined whether the forecast employment growth associated with the project would result in regional employment impacts compared to projected employment growth for the region without the project. The analytical process to estimate the growth inducement

[2] The capital costs presented in this EIR/EIS reflect the capital costs that were developed for the 2023 Supplemental Alternatives Analysis that was approved by the Authority Board in May 2024. The Authority is preparing updated capital costs, to be published with the 2026 Business Plan in early 2026.

[3] The construction schedule has since been revised. Refer to Section 2.10 in Chapter 2, Alternatives, of this Draft EIR/EIS for additional details on the revised construction schedule. Although the schedule has been updated, the analysis is still valid, as the equipment quantities and annual emission rates would remain unchanged irrespective of the start year for construction.

(employment and population) during project operations required extensive use of modeling tools and data. The following key steps summarize the process:

- **Define the analysis contexts:** The future baseline conditions of the No Project Alternative and the economic modeling process were used to forecast the incremental changes associated with the HSR system. For direct, indirect, and induced employment and population growth related to local operation in the project extent, the focus study region was the RSA. The potential additional employment and population growth related to improved connectivity and accessibility of the entire Phase I HSR system was also allocated to the region (Authority 2017b).
- **Estimate RSA employment growth impacts related to local operation of the project section:** The Authority modeled long-term direct, indirect, and induced employment from local operation of the project using projections of O&M costs (Authority 2017c) and RIMS II multipliers for the RSA (Appendix 3.18-A).
- **Estimate RSA employment growth impacts related to connectivity and accessibility changes during operation of the Phase I HSR system:** Operations of the Phase I HSR system would improve travel times and convenience between homes and job centers and induce employment growth in places where it would not occur under the No Project Alternative (Authority 2017b). The accessibility-related employment growth projections were included as potential effects of project operations. The Authority reallocated systemwide and county-level projections of accessibility-based employment growth to the RSA and the project, using centerline route miles by county and by project section as the basis of allocation. The estimated total employment in the RSA with the project was compared to employment projected for 2040 without the project to determine if employment impacts would occur.
- **Estimate RSA population growth related to employment changes during operation of the Phase I HSR system:** Applying locally prevalent household formation rates and sizes, the Authority estimated the population growth that would be expected in the RSA based on the number of jobs added from the direct, indirect, and induced economic activity derived from project operations. In addition, the analysis includes the population growth estimated by the Authority to result from the improved accessibility provided by the Phase I HSR system (Authority 2017b). The population growth estimates are then applied to the 2040 baseline forecast to estimate the total population. The analysis then determined if the estimated project-induced population from operations-related and accessibility-based employment and the demand for housing would result in an impact on planned population and housing growth in the RSA.
- **Compare RSA employment and population growth projections related to Phase I HSR system to the No Project Alternative:** Each county and city government general plan sets out goals and policies to accommodate anticipated employment and population growth for the coming decades. These county and city general plans are inputs to each of the MPOs, which produce longer-range regional growth projections for RTPs for the RSA, and to the state agencies producing comprehensive mid- and long-range employment and demographic forecasts for California: the California Department of Finance, Demographic Research Unit; the EDD Labor Market Information Division; and the California Department of Transportation Office of State Planning, Economic Analysis Branch. The RSA projected employment was compared to population growth resulting from Phase I HSR system operations and accessibility improvements to anticipated RSA growth under the No Project Alternative.
- **Assess RSA population growth impacts related to Phase I HSR system's potential to induce additional population growth in exurban counties:** In analyzing the potential population growth associated with direct, indirect, and induced employment growth, the Authority considered whether the HSR system could result in a redistribution of population unrelated to economic growth, such as households electing to relocate from more expensive

to less expensive housing markets while still having access to current job centers (Authority 2018).

- **Estimate RSA land consumption impacts related to potential population and employment growth:** The Authority estimated the extent to which the additional population and employment related to the Phase I HSR system operations and improved accessibility would alter the amount of land consumed for new development compared to existing urbanized areas and projections under the No Project Alternative.

3.18.5 Affected Environment

This section describes the affected environment for regional growth in the RSA including recent historical trends, existing, and projected employment and unemployment rates, population, and housing. This information provides the context for the environmental analysis and evaluation of potential regional growth impacts.

A summary of interested party issues and concerns from public outreach can be found in Chapter 9, Public and Agency Involvement.

3.18.5.1 Employment and Unemployment

Employment characteristics vary within the RSA between Los Angeles and Orange Counties (Table 3.18-3). The average annual unemployment rate in the RSA was lower than the state unemployment rate in 2010 but slightly higher in 2021. Since 2010 the unemployment rate for Los Angeles County has dropped drastically from 12.5 percent to 8.9 percent in 2021. This decrease is mirrored at both the county and city levels with the exception of Vernon. Civilian labor force is the sum of civilian employment and civilian unemployment. From 2010 to 2021, the civilian labor force throughout the RSA has slightly increased. All three cities within the RSA in Orange County had lower unemployment rates than the state average. In 2021, all cities within the RSA in Los Angeles County had higher unemployment rates than the state except West Whittier–Los Nietos Census-Designated Place (CDP), Santa Fe Springs, and South Whittier CDP.

Table 3.18-3 Labor Force Characteristics for Los Angeles and Orange Counties

Location	Indicator	2010	2021
Los Angeles County	**Civilian labor force**	**4,916,800**	**4,993,500**
	Percent unemployment rate	**12.5%**	**8.9%**
Los Angeles	Civilian labor force	1,970,000	2,050,200
	Percent unemployment rate	13.2%	8.9%
Vernon	Civilian labor force	100	100
	Percent unemployment rate	6.2%	10.5%
Bell	Civilian labor force	15,600	14,700
	Percent unemployment rate	16.6%	9.7%
Commerce	Civilian labor force	5,700	5,400
	Percent unemployment rate	17.8%	9.5%
Montebello	Civilian labor force	28,000	28,400
	Percent unemployment rate	10.8%	9.7%
Pico Rivera	Civilian labor force	29,700	29,600
	Percent unemployment rate	11.6%	9.7%

Location	Indicator	2010	2021
West Whittier–Los Nietos CDP	Civilian labor force	11,700	11,900
	Percent unemployment rate	15.2%	6.4%
Santa Fe Springs	Civilian labor force	7,400	8,700
	Percent unemployment rate	14.7%	6.0%
Norwalk	Civilian labor force	50,300	49,400
	Percent unemployment rate	12.8%	9.7%
South Whittier CDP	Civilian labor force	28,100	28,500
	Percent unemployment rate	11.6%	6.7%
La Mirada	Civilian labor force	23,100	23,300
	Percent unemployment rate	9.0%	8.0%
Orange County	**Civilian labor force**	**1,537,200**	**1,560,700**
	Percent unemployment rate	**9.7%**	**6.0%**
Buena Park	Civilian labor force	38,900	38,900
	Percent unemployment rate	8.4%	7.1%
Fullerton	Civilian labor force	69,200	68,600
	Percent unemployment rate	11.0%	6.4%
Anaheim	Civilian labor force	169,000	168,400
	Percent unemployment rate	12.2%	6.9%
Orange	Civilian labor force	70,700	69,200
	Percent unemployment rate	9.5%	5.6%
Resource Study Area	**Civilian labor force**	**6,454,000**	**6,554,200**
	Percent unemployment rate	**11.9%**	**8.2%**
State of California	**Civilian labor force**	**18,336,300**	**18,973,400**
	Percent unemployment rate	**12.2%**	**7.3%**

Sources: EDD 2016c, 2025
CDP = census-designated place

Table 3.18-4 provides California EDD data from 2010 to 2021 on employment by industry for Los Angeles and Orange Counties.

Between 2010 and 2021, total employment by industry increased by 827,200 in the RSA. Most sectors experienced growth throughout the RSA, but the construction sector had the highest growth rate at 46.0 percent. During this period, employment declined in the agriculture, forestry, fishing, hunting and mining; manufacturing; and public administration sectors throughout the RSA (Table 3.18-4).

Table 3.18-5 provides specific year EDD data on regional employment by industry, broken down by county, and includes projections of future employment. Total industry employment counts the number of jobs by the place of work. Recent long-term EDD projections for this analysis extend out to 2030.

Table 3.18-4 Regional Employment by Industry for Los Angeles and Orange Counties, 2010–2021

Employment Sector	Los Angeles County		Orange County		RSA			
	2010	2021	2010	2021	2010	2021	Numeric Change (2010–2021)	Annual Average Percent Change
Agriculture, forestry, fishing, hunting and mining	9,300	6,200	4,100	2,400	13,400	8,600	-4,800	-35.8
Construction	103,700	149,000	68,400	102,200	172,100	251,200	79,100	46.0
Manufacturing	380,500	313,100	151,100	149,800	531,600	462,900	-68,700	-12.9
Wholesale trade	201,900	202,600	75,900	75,600	277,800	278,200	400	0.1
Retail trade	386,200	396,100	141,300	143,400	527,500	539,500	12,000	2.3
Transportation, warehousing, and utilities	155,600	215,200	26,700	31,100	182,300	246,300	64,000	35.1
Information	192,300	208,800	21,700	24,000	214,000	232,800	18,800	8.8
Finance, insurance, and real estate rental and leasing	211,300	213,200	103,700	117,100	315,000	330,300	15,300	4.9
Professional, scientific, management, and administration[1]	519,300	630,100	250,700	321,700	770,000	951,800	181,800	23.6
Education, health care, and social assistance	671,800	844,400	169,400	237,300	841,200	1,081,700	240,500	28.6
Leisure and hospitality[2]	384,100	434,200	168,700	180,400	552,800	614,600	61,800	11.2
Other services	136,800	135,700	42,200	47,500	179,000	183,200	4,200	2.3
Public administration	579,600	560,200	152,300	155,700	731,900	715,900	-16,000	-2.2
Total employed	**3,932,400**	**4,547,600**	**1,376,200**	**1,588,200**	**5,308,600**	**6,135,800**	**827,200**	**15.6**

Source: EDD 2025

[1] Includes waste management services.

[2] Includes arts, entertainment, recreation, and accommodation and food services.

RSA = resource study area

Table 3.18-5 Los Angeles County, Orange County, and Regional Employment by Industry, 2021–2030[1,2]

Employment Sector	Los Angeles County		Orange County		RSA			
	2021	Projected 2030	2021	Projected 2030	2021	Projected 2030	Numeric Change (2021–2030)	Annual Average Percent Change
Agriculture, forestry, fishing, hunting, and mining	6,200	5,400	2,400	2,300	8,600	7,700	-900	-1.16%
Construction	149,000	165,300	102,200	118,100	251,200	283,400	32,200	1.42%
Manufacturing	313,100	296,300	149,800	153,400	462,900	449,700	-13,200	-0.32%
Wholesale trade	202,600	216,300	75,600	88,500	278,200	304,800	26,600	1.06%
Retail trade	396,100	424,900	143,400	154,500	539,500	579,400	39,900	0.82%
Transportation, warehousing, and utilities	215,200	246,200	31,100	36,000	246,300	282,200	35,900	1.62%
Information	208,800	231,200	24,000	27,800	232,800	259,000	26,200	1.25%
Finance, insurance, and real estate rental and leasing	213,200	225,100	117,100	129,100	330,300	354,200	23,900	0.80%
Professional, scientific, management, and administration[3]	630,100	707,200	321,700	373,800	951,800	1,081,000	129,200	1.51%
Education, health care, and social assistance	844,400	998,100	237,300	272,100	1,081,700	1,270,200	188,500	1.94%
Leisure and hospitality[4]	434,200	584,000	180,400	243,800	614,600	827,800	213,200	3.85%
Other services	135,700	161,300	47,500	55,500	183,200	216,800	33,600	2.04%
Public administration	560,200	595,200	155,700	169,000	715,900	764,200	48,300	0.75%
Total employed	**4,547,600**	**5,170,100**	**1,467,300**	**1,939,100**	**6,014,900**	**7,109,200**	**1,094,300**	**2.02%**

Source: EDD 2025

[1] This data set represents the total employed civilian population over the age of 16 by industry. Any person with more than one occupation is classified into their primary occupation and counted only once.

[2] Government jobs that were related to education were included in educational services. All other government jobs were assigned to the public administration sector.

[3] Includes waste management services.

[4] Includes arts, entertainment, recreation, and accommodation and food services.

RSA = resource study area

EDD projects the largest decline will occur in the agriculture, forestry, fishing, hunting, and mining sector, with the largest shift to jobs in leisure and hospitality; and education, health care, and social assistance sectors within the RSA. Table 3.18-6 lists the projected 2040 total employment in the RSA, Los Angeles and Orange Counties individually, and the state of California. The number of jobs projected for the state for 2040 is a little under three times the number of jobs projected in the RSA for 2040.

Table 3.18-6 Regional Long-Range Employment Projections

Area	Number Employed 2021	Projected Employment 2040	Percent Change (2021–2040)	Annual Average Percent Change
Los Angeles County	4,885,032	5,225,800	7.0	0.37
Orange County	1,596,831	1,898,900	18.9	0.99
RSA	**6,481,863**	**7,124,700**	**9.9**	**0.50**
California	**17,588,342**	**20,802,000**	**18.3**	**0.96**

Sources: EDD 2025; projected 2040 employment data are from SCAG 20200
Data may appear to not add up correctly because of rounding. The California Employment Development Department does not provide labor market data at the neighborhood level.
Note that city-level employment data are discussed more in detail in Section 3.12.
RSA = resource study area

3.18.5.2 Population

Table 3.18-7 and Table 3.18-8 present the population (2010 and 2021) and projections (2040) for the state; Los Angeles and Orange Counties; and the cities of Los Angeles, Vernon, Bell, Commerce, Montebello, Pico Rivera, Santa Fe Springs, Norwalk, La Mirada, Buena Park, Fullerton, and Anaheim and the West Whittier–Los Nietos CDP and South Whittier CDP. The average annual growth rate was 0.3 for the RSA, which is less than the state average annual growth rate of 0.5 percent from 2010 to 2021. Average annual growth rates in the RSA cities are also lower than the statewide average with the cities of Bell, Commerce, Pico Rivera, Norwalk, and La Mirada reporting negative growth between 2010 and 2021. Vernon was the outlier, experiencing an increase of 216 people or 10.3 percent and Santa Fe Springs with a small average annual increase of 1.4 percent from 2010 to 2021.

Table 3.18-7 Population Change in the Resource Study Area, 2010–2021

Location	2010 Total Population	2021 Total Population	Average Annual Percent Change, 2010–2021
Los Angeles County	**9,818,605**	**10,019,635**	**0.2**
Los Angeles	3,792,621	3,902,440	0.3
Vernon	112	328	10.3
Bell	35,477	33,915	-0.4
Commerce	12,823	12,459	-0.3
Montebello	62,500	62,828	0.0
Pico Rivera	62,942	62,383	-0.1
West Whittier–Los Nietos CDP	25,540	26,275	0.3
Santa Fe Springs	16,223	18,817	1.4
Norwalk	105,549	103,330	-0.2
South Whittier CDP	57,156	58,800	0.3

Location	2010 Total Population	2021 Total Population	Average Annual Percent Change, 2010–2021
La Mirada	48,500	47,900	-0.1
Orange County	**3,010,200**	**3,182,900**	**0.5**
Buena Park	80,500	84,000	0.4
Fullerton	135,200	143,000	0.5
Anaheim	336,300	348,200	0.3
Orange	136,400	139,200	0.2
RSA	**12,828,800**	**13,202,500**	**0.3**
California	**37,254,000**	**39,455,300**	**0.5**

Sources: U.S. Census Bureau 2000; California Department of Finance 2025
CDP = census-designated place; RSA = resource study area

The projections in Table 3.18-8 indicate that the populations for the RSA are expected to decline by approximately 612,000, whereas the projected population for the state from 2021 to 2040 is expected to increase by approximately 651,000. The city of Los Angeles is projected to experience population growth. As presented in Table 3.18-8, the city's population is expected to increase by 707,000 people from 2021 to 2040, with an average annual growth rate of 1.53 percent. Los Angeles County and the city of Vernon are projected to experience population decline as well as the RSA as a whole, whereas other cities in the RSA are expected to increase in population and experience growth in the cities of Los Angeles, Santa Fe Springs, Fullerton, and Anaheim with an annual percentage rate above 1 percent.

Table 3.18-8 Population Projections in the Resource Study Area, 2021–2040

Area	Population in 2021	Population in 2040	Change from 2021 to 2040	Average Annual Increase (percent)
Los Angeles County	**10,019,600**	**9,306,800**	**-712,800**	**-0.67**
Los Angeles	3,902,400	4,609,400	707,000	1.53
Vernon	330	300	-30	-0.86
Bell	33,900	36,900	3,000	0.77
Commerce	12,500	13,500	1,000	0.70
Montebello	62,800	67,300	4,500	0.63
Pico Rivera	62,400	69,100	6,700	0.93
West Whittier–Los Nietos CDP[1]	26,300	N/A	N/A	N/A
Santa Fe Springs	18,800	21,700	2,900	1.31
Norwalk	103,330	106,300	2,970	0.26
South Whittier CDP	58,800	N/A	N/A	N/A
La Mirada	48,000	52,100	4,100	0.75
Orange County	**3,183,000**	**3,283,800**	**100,800**	**0.28**
Buena Park	84,000	92,500	8,500	0.88
Fullerton	143,000	160,500	17,500	1.06
Anaheim	348,200	403,400	55,200	1.35

Area	Population in 2021	Population in 2040	Change from 2021 to 2040	Average Annual Increase (percent)
Orange	139,200	153,000	13,800	0.86
RSA	**13,202,600**	**12,590,600**	**-612,000**	**-0.43**
California	**39,455,400**	**40,106,400**	**651,000**	**0.15**

Sources: California Department of Finance 2025; U.S. Census Bureau 2010, 2021; SCAG 2020
[1] The Southern California Association of Governments does not provide population projections for the West Whittier–Los Nietos CDP or South Whittier CDP.
CDP = census-designated place; N/A = not available; RSA = resource study area

3.18.5.3 Housing Demand

Table 3.18-9 lists the number of existing and projected housing units in Los Angeles and Orange Counties, the RSA, and the state for 2021 and 2040. The predominant housing type across the RSA is single-family residential. For detailed information on existing housing characteristics in the region, refer to Section 3.12. Table 3.18-10 states that in 2021, approximately 300,400 housing units were vacant in the RSA, which represents a vacancy rate of 6.4 percent, with 6.6 percent and 5.7 percent of the available housing stock in Los Angeles and Orange Counties, respectively. Based on population projections, housing needs within the collective RSA will increase by approximately 423,800 housing units, with the highest annual rate in Bell. At the county level, housing needs in Los Angeles and Orange Counties represent an approximately 11 and 3 percent increase, respectively, between 2021 and 2040. The RSA increase is almost 4 percent less than the approximately 13 percent increase projected for the state.

Table 3.18-9 Existing and Projected Housing Units, 2021 and 2040

Location	2021	2040[1]	Change (2021–2040)	Percent Change	Annual Average Growth Rate (percent)
Los Angeles County	**3,578,800**	**3,970,600**	**391,800**	**10.9**	**0.6**
Los Angeles	1,503,900	1,646,200	142,300	9.5	0.5
Vernon	90	80	-10	-11.1	-0.6
Bell	3,500	10,200	6,700	191.4	5.79
Commerce	8,900	3,500	-5,400	-60.7	-4.8
Montebello	20,000	20,400	400	2.0	0.1
Pico Rivera	17,400	18,700	1,300	7.5	0.4
West Whittier–Los Nietos CDP	7,000	7,800	800	11.4	0.6
Santa Fe Springs	5,700	6,400	700	12.3	0.6
Norwalk	27,100	28,000	900	3.3	0.2
South Whittier CDP	15,900	17,700	1,800	11.3	0.6
La Mirada	15,000	16,800	1,800	12.0	0.6
Orange County	**1,121,800**	**1,153,800**	**32,000**	**2.9**	**0.2**
Buena Park	25,000	26,400	1,400	5.6	0.3
Fullerton	48,900	53,500	4,600	9.4	0.5
Anaheim	108,600	122,200	13,600	12.5	0.6
RSA	**4,700,600**	**5,124,400**	**423,800**	**9.0**	**0.5**

Location	2021	2040[1]	Change (2021–2040)	Percent Change	Annual Average Growth Rate (percent)
California	**14,328,500**	**16,175,800**	**1,847,300**	**12.9**	**0.6**

Sources: California Department of Finance 2016; U.S. Census Bureau 2021, Table DP04; SCAG 2020
[1] 2040 housing estimates are based on population projections contained in Table 3.18-7, divided by the average number of resident per housing unit in each jurisdiction, using the methodology described in Section 3.18.4, Methods for Evaluating Impacts. Projected estimates for 2040 for the West Whittier–Los Nietos CDP are based on the Los Angeles County average percent change of 11 percent.
CDP = census-designated place; RSA = resource study area

Los Angeles County has lower levels of home ownership and higher levels of renters than Orange County. In addition, the vacancy rate is slightly lower in Orange County compared to Los Angeles County, although both counties are generally similar in terms of occupancy rates, as presented in Table 3.18-10. For the state, 41 percent of housing units are renter-occupied and approximately 51 percent are owner-occupied. The occupancy rate in California is slightly lower than in Los Angeles and Orange Counties, at 92 percent. Higher occupancy rates generally indicate that the availability of relocation units in the same municipality is lower and the demand for housing is presumed to be higher.

Table 3.18-10 Regional Housing Unit Occupancy Characteristics, 2021

Location	Total Housing Units	Owner-Occupied Housing Units (percent)	Renter-Occupied Housing Units (percent)	Total Occupied Housing Units (percent)	Vacant Housing Units (percent)
Los Angeles County	3,578,800	1,545,900 (43.2)	1,796,900 (50.2)	3,342,800 (93.4)	236,000 (6.6)
Orange County	1,121,800	602,400 (53.7)	455,000 (40.6)	1,057,400 (94.3)	64,400 (5.7)
RSA	**4,700,600**	**2,148,300 (45.7)**	**2,251,900 (47.9)**	**4,400,200 (93.6)**	**300,400 (6.4)**
California	**14,328,500**	**7,335,200 (51.2)**	**5,882,300 (41.0)**	**13,217,500 (92.2)**	**1,111,000 (7.8)**

Source: U.S. Census Bureau 2021, Table DP04
RSA = resource study area

3.18.6 Environmental Consequences

3.18.6.1 Overview

This section discusses the potential impacts on regional growth from construction and operation of the project alternatives and station options. Each resource category addresses potential impacts from the No Project Alternative and the Shared Passenger Track Alternatives. For this resource topic, any differences in the impacts for the HSR station options are described in the analysis. Construction and operations of the Shared Passenger Track Alternatives would result in temporary and long-term impacts on regional growth, including direct job creation as well as indirect and induced employment, population growth, and land use consumption.

Details of anticipated regional growth under the No Project Alternative are presented in Section 3.18.5, Affected Environment. Impacts of the Shared Passenger Track Alternatives are organized as follows.

Construction Impacts

- Impact RG-1: Impact on Regional Growth from Short-Term Employment Impacts

Operational Impacts

- Impact RG-2: Impacts on Regional Growth from Long-Term Employment Related to Operations, Maintenance, and Increased Mobility and Accessibility
- Impact RG-3: Impact on Regional Growth from Induced Population Growth
- Impact RG-4: Impact on Long-Term Regional Growth from Land Use Consumption

3.18.6.2 No Project Alternative

Under the No Project Alternative, recent development trends are anticipated to continue, leading to impacts related to regional growth. Employment and population would increase within the RSA. Jurisdictions within the RSA are moving forward with implementation of transit-oriented and high-density development in urban areas including new housing and commercial development in accordance with plans and policies, which would accommodate projected population and employment growth.

Under the No Project Alternative, the 2020–2045 RTP/SCS adopted by SCAG is expected to encourage both compact development and greater investment in local transit modes as a means of reducing GHG emissions. These plans include provisions aimed at reducing GHG emissions and are considered by cities and counties during planning and zoning decisions to comply with the CEQA requirement to mitigate the impacts of planning and zoning decisions on GHG emissions.

The No Project Alternative assumes that currently known programmed and funded improvements to the intercity transportation system (highway, Amtrak, and regional rail) and reasonably foreseeable local land development projects (with funding sources identified) would be developed by 2040. The No Project Alternative includes many planned projects that would likely be implemented by the year 2040. Construction of planned development and transportation projects would generate temporary short-term construction employment in the RSA and long-term, permanent jobs to operate and maintain new and expanded facilities.

Chapter 2, Alternatives, describes the No Project Alternative in depth. For a list of planned and pending development and transportation projects that could have effects on regional growth, refer to Appendix 3.19-A, Cumulative Plans and Nontransportation Project List, and Appendix 3.19-B, Cumulative Transportation Projects List.

Under the No Project Alternative, currently known programmed, funded improvements and recent development trends in the project section are anticipated to continue, leading to a SCAG projection that between 2021 and 2040, employment would increase in Los Angeles and Orange Counties by approximately 7.0 and 18.9 percent, respectively (Table 3.18-6) and population would decrease in the RSA by 611,988 people, with Los Angeles County experiencing an annual percentage decrease of 0.67 percent. The population of Orange County would increase minimally over the nearly 20-year period at an average annual rate of 0.28 percent (Table 3.18-8).

Construction of planned development and transportation projects would generate short-term construction employment in the region and a small number of long-term, permanent jobs to maintain new and expanded facilities.

Land use elements of the county and city general plans within the RSA encourage infill and higher-density development in urban areas and concentration of uses around transit corridors to provide more transportation choices for residents and workers. Cities within the RSA are also implementing policies on developing population centers in defined areas of their jurisdictions in harmony with the 2020–2045 RTP/SCS adopted by SCAG.

3.18.6.3 Project Impacts

Construction, operations, and maintenance of the Shared Passenger Track Alternatives and HSR station options could result in regional growth impacts.

Construction Impacts

The Authority has adopted goals and policies to provide construction job opportunities and increase the number of construction workers residing within the RSA for the project. These include pre-apprenticeship and apprenticeship training programs. Community organizations have also implemented similar programs to get workers trained, retrained, and certified, reducing the need for workers from outside the RSA. (For more information, refer to https://hsr.ca.gov/business-opportunities/general-info/community-benefits-agreement/.)

The RSA also has a supply of trained workers with HSR construction experience through earlier construction packages awarded by the Authority that started in 2013. Even with a readily available construction workforce, there will likely be a marginal number of construction workers from outside the RSA. A small number of highly skilled workers may come to the region for short periods but would likely stay in area motels, mobile homes, recreational vehicles, or short-term rental units and not opt to permanently relocate for temporary employment. Therefore, the number of such workers is not expected to affect population and housing demand inside the RSA. Additionally, more California workers are commuting longer distances rather than choosing to relocate. In fact, California workers regularly commuting 90 minutes or more one way increased by 40.3 percent from 2010 to 2015, with the number of such workers surpassing 600,000 (Henderson 2017).

Impact RG-1: Impact on Regional Growth from Short-Term Employment Impacts

Shared Passenger Track Alternative A

Project construction would result in short-term direct, indirect, and induced jobs during each year of the construction period as a result of construction spending in the RSA. A general overview of the construction schedule is available in Chapter 2. For the analysis, construction activities were assumed to begin in 2031 and continue for 7 years, with an anticipated completion in the fall of 2037. Although the specific dates have changed, this estimate is representative of the expected 7-year duration of construction activities. The first 5 years of construction involve heavy construction activity with the construction of tracks, buildings, and facilities, while the last 2 to 3 years of the construction period involve testing and lower-intensity construction activity. The analysis estimates the number of short-term jobs that would be created based on construction cost estimates from Chapter 6, Project Costs and Operations, Table 6-1.

This analysis uses the RIMS II multipliers to estimate the local employment effect in terms of direct, indirect, and induced jobs. Construction-related expenditures in the RSA for labor and materials were estimated at approximately $3.84 billion in 2023 constant dollars. These expenditures were estimated to support approximately 31,950 job-years over the entire period.[4] From the start of construction in 2031 to the end of construction in 2037, a total of 15,300 direct job-years and 16,650 indirect and induced job-years were accounted for. Table 3.18-11 presents the employment impacts for each year of construction for Shared Passenger Track Alternative A. During the peak years of construction (2035 and 2036), project-related expenditures in the RSA were estimated to support 11,660 job-years, accounting for 5,580 direct jobs and 6,080 indirect and induced jobs.

Table 3.18-11 Employment Impacts During Construction[1] of Shared Passenger Track Alternative A (in Annual Job-Years[2])

Employment[3]	2031	2032	2033	2034	2035	2036	2037	Total
Direct	1,060	1,750	2,400	2,400	2,790	2,790	2,110	15,300
Indirect and induced	1,160	1,900	2,610	2,610	3,040	3,040	2,290	16,650
Total	**2,220**	**3,650**	**5,010**	**5,010**	**5,830**	**5,830**	**4,400**	**31,950**

Source: BEA 2015

[4] In the RIMS II model, 1 job-year is equivalent to one job held by one person over 1 year's duration. This metric can account for both full-time and part-time jobs.

[1] Regional Input-Output Modeling System II multipliers for the two-county resource study area were used in the analysis of employment gains.
[2] In the Regional Input-Output Modeling System II model, 1 annual job-year is equivalent to one job held by one person over 1 year's duration. This metric can account for both full-time and part-time jobs.
[3] Employment impacts are rounded up to the nearest 10 jobs. Totals may not sum because of rounding. Job estimates were scaled to reflect an estimate for savings that could be reasonably accrued from standard value engineering review. The savings estimate is based on actual California High-Speed Rail Authority engineering design review of the Los Angeles to Anaheim Project Section. More detail on the type of refinements considered as value engineering is found in the Preliminary Engineering for Project Definition General Notes.

The 5,580 direct job-years in the peak construction years represent 17.5 percent[5] of the total projected construction job-years (Table 3.18-11). The 2035 projected employment in the construction sector is 335,000 jobs, reflecting a 0.8 percent annual increase in construction jobs in the RSA (Table 3.18-5). It is expected that a percentage of the direct, indirect, and induced 11,660 job-years created during the peak construction years (2035 to 2036) would compose roughly 1.7 percent of forecast construction sector employment, which is not substantial enough to draw workers to the region because the construction workforce within the RSA would be large enough to meet the demand for construction workers adequately. The projected induced jobs during the construction period would be met by the supply of workers with matching skills who already reside in the RSA. However, some skilled workers with special expertise may come to the RSA to work for short periods.

The likelihood of a substantial number of construction workers competing for traditional owner-occupied or rental housing units for these short-term related jobs during project construction years is projected to be low. A limited number of workers with special skills who also may have an expectation of sustained work contracts at a single location may relocate temporarily. However, it is also likely that workers from outside the RSA would commute daily to the construction site and return home at the end of the day. Workers who travel to the RSA for short periods would likely stay in hotels, motels, or other temporary living quarters. "This frequent movement of workers from worksite to worksite and constant changing of the composition of workers at a construction site can create a form of 'temporariness' for the construction worker... The amount of time spent on a worksite is likely related to a number of different factors, including the phase of the project and the type of work needed at a given time, as well as overall project scheduling or budget, and even worker injury. Due to the inherently dynamic nature of construction, workers from different trades and levels of experience are needed at various times during the building process. In both practice and research, the construction site is frequently described as dynamic" (Sparer et al. 2015).

The projected project-induced jobs during the 2-year peak construction period would primarily be met by the supply of unemployed workers and those with matching skills in construction and manufacturing that already reside in the RSA. The number of construction workers forecast to be employed by Shared Passenger Track Alternative A represents less than 1 percent of the 6.5 million persons employed in the RSA in 2021. The relatively small demand for construction workers over the temporary construction period would not attract an influx of worker migration from outside of the RSA.

As stated above, the Authority is undertaking several efforts (such as apprenticeships and community benefit agreements) to increase the likelihood that construction workers come from within the RSA, thereby avoiding a substantial increase in demand for housing and public services.

Shared Passenger Track Alternative B

Because the light maintenance facility location would not affect capital cost estimates or construction-related employment estimates, impacts for Shared Passenger Track Alternative B on regional growth would be the same as those described for Shared Passenger Track Alternative A.

[5] The 2023 RSA construction employment was 247,141. Peak direct employment was 1.1 percent.

High-Speed Rail Station Options

High-Speed Rail Station Option: Norwalk/Santa Fe Springs

With inclusion of the Norwalk/Santa Fe Springs HSR Station Option, impacts on regional growth from construction-related employment would be similar to those of Shared Passenger Track Alternative A, but with higher capital costs and construction-related employment.

Construction-related expenditures in the RSA on labor and materials for the Norwalk/Santa Fe Springs HSR Station Option were estimated to add approximately $100.2 million in 2023 constant dollars. Construction of the Norwalk/Santa Fe Springs HSR Station Option would create an estimated 840 total annual job-years, with 400 direct job-years in construction (Table 3.18-12). During the peak years of construction (2035 and 2036), project-related expenditures in the RSA for the Norwalk/Santa Fe Springs HSR Station Option were estimated to support 300 job-years, accounting for 140 direct jobs and 160 indirect and induced jobs.

Table 3.18-12 Employment Impacts During Construction[1] of the Norwalk/Santa Fe Springs High-Speed Rail Station Option (in Annual Job-Years[2])

Impacts	2031	2032	2033	2034	2035	2036	2037	Total[3]
Direct	30	40	70	70	70	70	50	400
Indirect and induced	30	50	70	70	80	80	60	440
Total	**60**	**90**	**140**	**140**	**150**	**150**	**110**	**840**

Source: BEA 2015

[1] Regional Input-Output Modeling System II multipliers for the two-county resource study area were used in the analysis of employment gains.

[2] In the Regional Input-Output Modeling System II model, 1 annual job-year is equivalent to one job held by one person over 1 year's duration. This metric can account for both full-time and part-time jobs.

[3] Employment impacts are rounded up to the nearest 10 jobs. Totals may not sum because of rounding. Job estimates were scaled to reflect an estimate for savings that could be reasonably accrued from standard value engineering review. The savings estimate is based on actual California High-Speed Rail Authority engineering design review of the Los Angeles to Anaheim Project Section. More detail on the type of refinements considered as value engineering is found in the Preliminary Engineering for Project Definition General Notes.

High-Speed Rail Station Option: Fullerton

With inclusion of the Fullerton HSR Station Option, impacts on regional growth from construction-related employment would be similar to those of Shared Passenger Track Alternative A, but with higher capital costs and construction-related employment.

Construction-related expenditures in the RSA on labor and materials for the Fullerton HSR Station Option were estimated to add approximately $210.9 million in 2023 constant dollars. Construction of the Fullerton HSR Station Option would create an estimated 1,740 total job-years, with 820 direct job-years in construction (Table 3.18-13). During the peak years of construction (2035 and 2036), project-related expenditures in the RSA for the Fullerton HSR Station Option were estimated to support 620 job-years, accounting for 300 direct jobs and 320 indirect and induced jobs.

Table 3.18-13 Employment Impacts During Construction[1] of the Fullerton High-Speed Rail Station Option (in Annual Job-Years[2])

Impacts	2031	2032	2033	2034	2035	2036	2037	Total[3]
Direct	60	90	130	130	150	150	110	820
Indirect and induced	60	110	150	150	160	160	130	920
Total	**120**	**200**	**280**	**280**	**310**	**310**	**240**	**1,740**

Source: BEA 2015

[1] Regional Input-Output Modeling System II multipliers for the two-county resource study area were used in the analysis of employment gains.

[2] In the Regional Input-Output Modeling System II model, 1 annual job-year is equivalent to one job held by one person over 1 year's duration. This metric can account for both full-time and part-time jobs.

[3] Employment impacts are rounded up to the nearest 10 jobs. Totals may not sum because of rounding. Job estimates were scaled to reflect an estimate for savings that could be reasonably accrued from standard value engineering review. The savings estimate is based on actual California

High-Speed Rail Authority engineering design review of the Los Angeles to Anaheim Project Section. More detail on the type of refinements considered as value engineering is found in the Preliminary Engineering for Project Definition General Notes.

Operational Impacts

Operations of the Shared Passenger Track Alternatives would result in varying direct and indirect or induced impacts on employment and population increases, and in consumption of land associated with regional growth. The operating costs would be based on the number of stations, maintenance facilities, yard facilities, and track length. Other economic impacts from project operations are discussed in Section 3.12, including changes in tax revenues to local governments.

The direct O&M jobs would include train operations and dispatching, infrastructure and equipment maintenance, station and train cleaning, ticketing and other commercial activities, and administration. The indirect and induced jobs would include additional employment supporting, servicing, or supplying train operations, administration and dispatching, infrastructure and equipment maintenance, station and train cleaning, ticketing and other commercial activities, and other occupations such as security, operations of concessions, and provision of goods and services to riders entering and leaving the HSR system. O&M employment is not expected to be an adverse impact.

Impact RG-2: Impacts on Regional Growth from Long-Term Employment Related to Operations, Maintenance, and Increased Mobility and Accessibility

Shared Passenger Track Alternative A

Operations Employment Effects

O&M of Shared Passenger Track Alternative A would result in a projected 210 direct jobs working for HSR and 470 indirect and induced jobs at businesses supported by local expenditures by the HSR project and staff, for a total of 680 new jobs in the region by 2040 (Table 3.18-14). For a detailed discussion of the methodology used for this analysis, refer to Section 3.18-A.3.3, Estimation of Long-Term Employment Effects from Operations and Maintenance, in Appendix 3.18-A.

Table 3.18-14 Employment Impacts from Operations and Maintenance[1] of Shared Passenger Track Alternative A (in Annual Job-Years[2])

Region	Direct	Indirect and Induced	Total[3]
RSA – Los Angeles and Orange Counties	210	470	**680**

Source: BEA 2015

[1] Regional Input-Output Modeling System II multipliers for the two-county resource study area were used in the analysis of employment gains.

[2] In the Regional Input-Output Modeling System II model, 1 annual job-year is equivalent to one job held by one person over 1 year's duration. This metric can account for both full-time and part-time jobs.

[3] Employment impacts are rounded up to the nearest 10 jobs. Totals may not sum because of rounding.

RSA = resource study area

Most of these jobs would be in the economic sector of transit and ground passenger transportation, which includes jobs related to train operations, dispatching, maintenance of equipment, and maintenance of infrastructure. These jobs would represent 0.3 percent of forecast employment in the transportation, warehousing, and utilities sector in 2040 in the RSA.

In addition, it should be noted that Shared Passenger Track Alternative A is not anticipated to indirectly induce O&M jobs through unplanned increases in freight rail demand. Improvements to rail corridors have the potential to induce growth by improving overall operating efficiency and eliminating physical constraints to freight and rail growth. However, the project components, including, but not limited to, the new fourth mainline track and other freight and passenger rail improvements, have been designed to accommodate only existing operations and planned operations already anticipated by the Authority and other operators and agencies. The project would include removal of existing BNSF storage and support tracks throughout the project corridor, which would be replaced adjacent to the existing BNSF Los Angeles Intermodal Facility

(IMF) (also referred to as Hobart Yard in Chapter 2). To accommodate storage and support track replacement adjacent to the IMF, BNSF container parking storage facilities along the Hobart IMF's southern side would be relocated to newly acquired property along the IMF's northern side. Displaced storage and support tracks and container parking storage would be replaced at an approximate one-to-one ratio. Any additional track feet would be for the purposes of maintaining the functionality of the new storage and support yard.

The IMF's existing capacity is primarily determined by parking space for truck trailers and containers, as well as tracks for loading those containers onto trains. None of the proposed storage and support tracks would be used for loading or unloading at the IMF. The latter activities are conducted in a different part of the IMF, and the affected intermodal container parking is being replaced with a similar acreage for parking. Accordingly, additional intermodal freight activity is not anticipated because of these changes (STV 2025). Overall, indirect inducement of O&M jobs through unplanned increases in freight rail demand would not occur.

Employment Effects from Increased Mobility and Accessibility

Transportation projects may induce employment growth in a geographic area if they result in removing obstacles to employment growth (e.g., the establishment or expansion of an essential public service or the extension of a roadway to an area). The HSR system may induce employment growth in cities with stations by providing access to fast and efficient transportation that facilitates increased travel trips between areas. Section 3.12 provides a detailed analysis of potential socioeconomic and community impacts. The HSR service is expected to enhance access along cities between the Bay Area and the Los Angeles metropolitan region, resulting in "long-term dynamic economic effects such as enhanced labor market accessibility, increased business travel and transactions, direct transport cost savings, improved business and worker productivity, support of tourism and other important service sectors requiring patron accessibility, etc.," compared to the No Project Alternative (Authority 2022). The Authority conservatively estimates that the HSR system could support approximately 102,000 jobs statewide compared to the No Project Alternative through 2040 by improving connectivity between employment centers and residential areas. Approximately 4,900 of the resulting accessibility-based jobs would be in the RSA and can be allocated to the project.[6]

Operations Employment Growth

Table 3.18-15 provides impacts from both Shared Passenger Track Alternatives on employment growth in the RSA from operations and improved accessibility. The impacts from HSR-induced growth on the region would be the same for both alternatives. It is anticipated that the project would increase employment by roughly 0.07 percent compared to the No Project Alternative. Growth attributable to project O&M is estimated at 680 jobs, representing an increase of about 0.01 percent to 2040 conditions under the No Project Alternative. An additional 4,900 projected jobs associated with increased accessibility in the RSA represent an increase of about 0.06 percent above the No Project Alternative by 2040.

[6] Accessibility increase allocations to the region are based on mobility scores for Los Angeles County and Orange County per Authority 2022.

Table 3.18-15 Project Operations-Related Employment and Population Growth, Including Increased Accessibility Impacts

Region	Year 2021 Existing Conditions	No Project Alternative 2021–2040 Growth	No Project Alternative 2040 Baseline Forecasts[1]	Phase 1 O&M Direct, Indirect, and Induced Growth	2040 HSR Increased Accessibility Potential	Total HSR-Induced Growth	Total 2040 Projections with HSR[2]	2021–2040 Growth (HSR Projections)
Employment								
RSA	6,481,863	1,857,297	8,339,160	680	4,900	5,580	8,344,750	0.07%
Population								
RSA	13,202,558	1,773,742	14,976,300	1,560	11,060	12,620	14,998,920	0.08%

Sources: EDD 2016a, 2016b; U.S. Census Bureau 2021

[1] "No Project Alternative 2040 Baseline Forecasts" presents the total projection under the No Project Alternative from 2021 to 2040, while "Phase 1 O&M Direct, Indirect, and Induced Growth" presents the total additional growth attributable to the Shared Passenger Track Alternatives. "Growth" reflects total induced growth attributable to the Shared Passenger Track Alternatives indicated as a percentage of the 2040 baseline forecast.

[2] Employment effects are rounded up to the nearest 10 jobs, and totals may not add because of rounding.

HSR = high-speed rail; O&M = operations and maintenance; RSA = resource study area

Shared Passenger Track Alternative B

With the light maintenance facility at 15th Street, employment effects related to operations, maintenance, and increased mobility would be the same as those described for Shared Passenger Track Alternative A (refer to Table 3.18-14).

High-Speed Rail Station Options

High-Speed Rail Station Option: Norwalk/Santa Fe Springs

Effects on employment growth from O&M of the Norwalk/Santa Fe Springs HSR Station Option in the RSA were not modeled because of insufficient data and assumptions on how additional O&M jobs and activities will be distributed or allocated to each station versus the total O&M activity for the corridor. However, it is not anticipated that the HSR station options would drive population growth, given cost issues and workers commuting from exurban communities, the activities, and the similarity of the O&M-related jobs, because these positions would have similar salaries and use the same materials to perform work activities. Therefore, induced population growth from the station sites is not anticipated to be substantially different than that described for the Shared Passenger Track Alternatives.

The number of direct, indirect, and induced jobs created from station operations is expected to be minimal given the availability of a skilled workforce within the RSA to meet the resulting demand adequately. The number of additional jobs would likely not be attractive to workers from outside the project RSA because of competition from skilled local workers. Skilled workers may come to the project RSA to work for short periods and would likely stay in hotels, motels, or other temporary living quarters. The long-term relocation of workers and their families in large numbers is not anticipated for short-term employment opportunities. Additionally, relocation in such instances would be expensive and would disrupt established social networks and institutions.

The Norwalk/Santa Fe Springs HSR Station Option site area is already highly commercially developed and currently functions as a Metrolink Station. Therefore, employment growth from increased mobility and accessibility is anticipated to be minimal and is not expected to affect regional growth.

As stated under construction impacts, the Authority is undertaking several efforts to ensure that small businesses play a major role in building the HSR system, reducing the likelihood that workers outside of the RSA would relocate their families to inside the RSA for construction- and operations-related employment, thereby avoiding a significant increase in demand for housing and public services.

High-Speed Rail Station Option: Fullerton

Effects on employment growth in the RSA from O&M of the Fullerton HSR Station Option were not modeled because of insufficient data and assumptions on how additional O&M jobs and activities would be distributed or allocated to each station versus the total O&M activity for the corridor. However, these are expected to be the same as those described for the Shared Passenger Track Alternatives, given the activities, and the O&M-related jobs would be similar, because these positions would have similar salaries and use the same materials to perform work activities. As discussed above for the Norwalk/Santa Fe Springs HSR Station Option, the number of additional jobs as a relative percentage of the overall workforce would likely not be attractive to workers from outside the RSA. There would be no additional impacts on regional growth from employment related to operations, maintenance, and increased accessibility.

Impact RG-3: Impact on Regional Growth from Induced Population Growth

Shared Passenger Track Alternative A

Population Growth

Shared Passenger Track Alternative A would contribute a relatively small increase in the projected population growth in the RSA (Table 3.18-8). The induced long-term population growth in the RSA would be 12,620 people (Table 3.18-15), or 0.08 percent (12,620 divided by 15,000,000), in addition to the 2040 projection of an estimated 15.0 million people under the No Project Alternative in the RSA.

Project O&M would induce long-term population growth in the region. Additional long-term population growth would result from the increased accessibility and mobility that the project would bring to metropolitan areas within the RSA. In consideration of jobs induced by Shared Passenger Track Alternative A, it should first be noted that the percentage increase in population induced by Shared Passenger Track Alternative A would likely be lower than projected, because the labor force needed for the jobs created by Shared Passenger Track Alternative A is expected to be filled by local supply. Second, if population increases were to occur, they would occur slowly because they would be driven by growth in indirect employment, which is spread out over time. Third, although Shared Passenger Track Alternative A could attract some new residents to the region, it would not lead to a wholesale shift in residential locations from outside major metropolitan areas to Los Angeles and Anaheim, because relocation and housing choices are more complex and are driven by many factors beyond long-distance transportation accessibility. The area is already heavily urbanized and largely built out; therefore, high growth rates and substantial unplanned population growth are not anticipated. Developments in these urbanized areas are generally limited to infill and redevelopment projects because high housing costs in urban centers throughout California often lead workers to choose commuting longer distances or buying housing in suburban and exurban communities where housing is more affordable.

Exurban Growth

There is a possibility that Shared Passenger Track Alternative A could induce population growth in exurban counties by offering a faster and more efficient means for exurban commuters to travel to jobs in urban centers in Los Angeles and Orange Counties. Living in suburban and exurban communities may also require those workers to make long commutes to their place of employment under current conditions.

The planned HSR service with stations in suburban and exurban communities could provide a new, fast, and reliable transportation option for workers who live in outlying areas and commute to jobs in the metropolitan central cities. Some individuals and their households may choose to relocate to suburban and exurban communities to purchase more affordable housing because of convenient access to potentially affordable HSR commute services. The number, magnitude, and distribution of households that may make this decision are difficult to estimate because it involves many economic factors and individual preferences. Such households would likely relocate to these suburban and exurban communities over time, starting during construction, just prior to operation, or after HSR operations have proven to be fast, reliable, and affordable. Local governments may take steps to accommodate this potential population growth and increased demand for housing by updating their general plan policies, transit plans, and zoning and building codes. The increases in population in these suburban and exurban cities would not be stimulated by local economic growth but rather would be a shift of some population growth from expensive metropolitan central cities to suburban and exurban communities.

Shared Passenger Track Alternative B

Impacts for Shared Passenger Track Alternative B would be the same as those described for Shared Passenger Track Alternative A. The light maintenance facility location at 15th Street would not have different impacts related to long-term induced population growth.

High-Speed Rail Station Options

High-Speed Rail Station Option: Norwalk/Santa Fe Springs

With inclusion of the Norwalk/Santa Fe Springs HSR Station Option, impacts would be the same as those of the Shared Passenger Track Alternatives.

Including the Norwalk/Santa Fe Springs HSR Station Option may induce additional long-term population growth from the increased accessibility and mobility that the station would bring to metropolitan areas within the RSA. However, as mentioned above, the population growth induced by the Shared Passenger Track Alternatives would likely be lower than projected, because the labor force needed for the jobs created by the project is expected to be filled by local supply. It is unlikely that including the Norwalk/Santa Fe Springs HSR Station Option would attract a substantial number of new residents to the region because the area is already heavily urbanized and largely built out. Some new development could occur around station areas (refer to the

discussion in Impact RG-4 below), the level of infill growth is not expected to lead to a wholesale shift in residential locations from outside major metropolitan areas to the project corridor.

As discussed for Shared Passenger Track Alternative A, some individuals and their households may choose to relocate to suburban and exurban communities to purchase more affordable housing because of convenient access to potentially affordable HSR commute services. The number, magnitude, and distribution of households that may make this decision are difficult to estimate because it involves many economic factors and individual preferences. However, interregional shifts in residential locations would likely make up only a small portion of the growth in the region. Therefore, induced long-term population growth from increased accessibility and mobility of the additional station is anticipated to be minimal.

High-Speed Rail Station Option: Fullerton

With inclusion of the Fullerton HSR Station Option, impacts would be the same as those of the Shared Passenger Track Alternatives. Including the Fullerton HSR Station Option may induce additional long-term population growth from the increased accessibility and mobility that the station would bring to metropolitan areas within the RSA. However, as mentioned above for the Norwalk/Santa Fe Springs HSR Station Option, the population growth induced by the Shared Passenger Track Alternatives would likely be lower than projected, because the labor force needed for the jobs created by the project is expected to be filled by local supply. It is unlikely that including the Fullerton HSR Station Option would attract a substantial number of new residents to the region because the station area is already heavily urbanized and largely built out, similar to the Norwalk/Santa Fe Springs HSR Station Option. Therefore, induced long-term population growth from increased accessibility and mobility of the additional station is anticipated to be minimal.

Impact RG-4: Impact on Long-Term Regional Growth from Land Use Consumption

Shared Passenger Track Alternative A

As presented in Table 3.18-16, the projected housing increase within the RSA by 2040 attributable to the project is about 0.11 percent. For the RSA as a whole, this growth increment would not impose meaningful incremental demand on available land supply, given the No Project Alternative forecasts increases of 29 and 13 percent in jobs and persons, respectively, in the RSA by 2040, compared to 2021 existing conditions. However, the two counties (Los Angeles and Orange) in the RSA differ in size and development density, and residual development capacity is not homogenously distributed among the regions' individual jurisdictions. For example, as reflected in Table 3.18-7 and Table 3.18-8, Orange County would have higher population and employment growth compared to Los Angeles County under the No Project Alternative.

Accommodating this increase in population would require additional housing, which could result in the conversion of nonurban land to urban use. Based on the difference between the 2040 No Project Alternative projections and the 2040 HSR project projections, operation of the project section would result in the need for 5,640 additional housing units in the RSA by 2040 (Table 3.18-16).

Table 3.18-16 Regional Projected and Induced Housing Growth

Area	Existing Setting (2021)	2040 No Project Projections	HSR Project Induced Growth[1]	Total 2040 HSR Project Projections	HSR Project Growth Inducement
Resource study area	4,700,600	5,124,500	5,640	5,130,140	0.11%

Sources: California Department of Finance 2015; SCAG 2020; BEA 2015; Authority 2016; U.S. Census Bureau 2021

[1] The "2040 No Project Projections" presents the total growth in percentage terms from 2021 to 2040, while the "HSR Project Induced Growth" presents the total additional growth attributable to the Shared Passenger Track Alternatives as a percentage of the "2040 No Project Projections."

HSR = high-speed rail

The presence of HSR stations would help encourage growth, along with the additional HSR-induced growth, into high-density and sustainable development patterns. This concentration of

growth at transit hubs would be consistent with goals of the RTP/SCS adopted by SCAG pursuant to SB 375 and general plans for Los Angeles and Orange Counties and the cities of Los Angeles and Anaheim.

SCAG's 2020–2045 RTP/SCS includes discussion of the HSR system in the region's transportation infrastructure, specifically that the State of California will deliver HSR service from San Francisco to Los Angeles/Anaheim in the future. The project section, and the resulting concentration of population and employment growth the HSR system would encourage, would not only be consistent with SB 375-related plans and programs, but would also assist the region in implementing the goals of those plans.

Cities and counties in California are required to prepare housing elements to meet the State Housing Element Law, which requires jurisdictions to adequately plan for existing and projected housing needs. Housing elements are updated on a regular basis, generally for an 8-year period, a much shorter planning timeframe than the general plans addressed in Section 3.18.2.3, Regional and Local. Under SB 375, the future housing needs to be addressed in the housing elements must reflect the RTP/SCS adopted in each county. As population increases, cities and counties would encourage development to meet the housing need in the area. Therefore, jurisdictions in the RSA would be required to plan for and meet the housing need for the population as it increases.

Under current city and county general plans in the SCAG planning areas, communities in the region have adequate space to accommodate planned growth by 2040 (under the No Project Alternative) and HSR-induced growth in their current spheres of influence. The RTP/SCS plans and programs that apply to these areas encourage infill development, concentrating growth in urban areas, and provision of transit options and connections for regional residents and workers. The land use patterns described in SCAG's 2020–2045 RTP/SCS have the capacity to accommodate 3.7 million more residents and 1.6 million more households in the SCAG region by 2040 (SCAG 2020). Furthermore, the RTP/SCS assumes the presence of HSR. This capacity is beyond what would be required to support the increase of 715,000 and 100,000 residents in Los Angeles County and Orange County, respectively, between 2021 and 2040 when considering anticipated growth without Shared Passenger Track Alternative A. Therefore, there is adequate space available to accommodate planned growth by 2040, as well as HSR-induced growth in this county.

Shared Passenger Track Alternative B

Impacts for Shared Passenger Track Alternative B would be the same as those described for Shared Passenger Track Alternative A. The light maintenance facility location at 15th Street would not have different impacts on regional housing growth.

High-Speed Rail Station Options

High-Speed Rail Station Option: Norwalk/Santa Fe Springs

With inclusion of the Norwalk/Santa Fe Springs HSR Station Option, impacts on long-term growth from land use consumption would be the same as those of the Shared Passenger Track Alternatives. As discussed for Shared Passenger Track Alternative A, the presence of HSR stations would help encourage growth along with the additional HSR-induced growth into high-density and sustainable development patterns. This concentration of growth at transit hubs would be consistent with goals of the RTP/SCS adopted by SCAG pursuant to SB 375 and general plans for Los Angeles County and the cities of Norwalk and Santa Fe Springs.

The land use patterns prescribed in SCAG's 2020–2045 RTP/SCS assume the presence of the HSR and have the capacity to accommodate the increase of residents in Los Angeles County between 2021 and 2040 when considering anticipated HSR-induced growth from inclusion of the station.

High-Speed Rail Station Option: Fullerton

With inclusion of the Fullerton HSR Station Option, impacts on long-term growth from land use consumption would be the same as those of the Shared Passenger Track Alternatives. The presence of HSR stations would help encourage growth along with the additional HSR-induced

growth into high-density and sustainable development patterns. This concentration of growth at transit hubs would be consistent with goals of the RTP/SCS adopted by SCAG pursuant to SB 375 and general plans for Orange County and the city of Fullerton. The land use patterns prescribed in SCAG's 2020–2045 RTP/SCS assume the presence of the HSR and have the capacity to accommodate the projected increase of residents in Orange County when considering anticipated HSR-induced growth from inclusion of the station.

3.18.7 Mitigation Measures

Construction and operational impacts under the alternatives related to regional growth would not result in adverse effects. Therefore, no mitigation measures would be required.

3.18.7.1 Early Action Projects

Early action projects are not expected to affect regional growth. Refer to Chapter 2, Section 2.6.5, Early Action Projects, for more detail on early action projects.

This project section, with implementation of one of the Shared Passenger Track Alternatives, would provide a net benefit for the region in line with state and regional sustainability goals.

3.18.8 NEPA Impacts Summary

This section summarizes the impacts of the Shared Passenger Track Alternatives and compares them to the anticipated impacts of the No Project Alternative. Chapter 2 describes the No Project Alternative.

3.18.8.1 No Project Alternative

Construction Impacts

Under the No Project Alternative, construction of planned infrastructure and development projects detailed in Chapter 2 would continue and may result in growth-related impacts within the RSA. Each of these planned projects would require compliance with CEQA, and with NEPA for those that involve federal funding or approval. Construction of these planned development and transportation projects would generate some short-term construction employment in the RSA. Jurisdictions within the RSA will implement transit-oriented and high-density development in urban areas in accordance with their plans and policies, which include new housing and commercial development that would accommodate projected population and employment growth.

For a list of planned and pending development and transportation projects that could have effects on regional growth, refer to Appendix 3.19-A and Appendix 3.19-B. Refer to Section 3.13 for a detailed discussion of each project alternative.

As described in Section 3.18.5, employment characteristics vary within the RSA. Under the No Project Alternative, employment in the RSA totaled 6,554,200 jobs with an approximate 8.2 percent of individuals unemployed in 2021. Construction jobs in the two-county area will increase by 32,200 jobs in 2030, which is approximately a 1.4 percent increase. Although the exact labor needs of each of these projects under the No Project Alternative are not known at this time, individual projects would be spread out over many years and existing supply is expected to meet demand for skilled workers. Therefore, the regional construction labor force is anticipated to be adequate where workers from outside the RSA would not need to relocate to the RSA to meet demand for construction-related jobs.

Operational Impacts

Under the No Project Alternative, the 2020–2045 RTP/SCS adopted by SCAG encourages both compact development and greater investment in transit to reduce GHG emissions. The RTP/SCS includes provisions at the city and county levels that aim to comply with the CEQA requirement to mitigate the impacts of planning and zoning decisions on GHG emissions.

Under the No Project Alternative, employment in Los Angeles and Orange Counties is projected to increase from approximately 6,481,863 in 2021 to approximately 7,124,700 in 2040 (Table 3.18-5). That is an increase of 1,094,300 jobs over a 9-year period. Approximately 35,900

transportation, warehousing, and utilities jobs will be added during this time. The population is projected to decrease in the RSA from 13,202,558 in 2021 to approximately 12,590,570 in 2040 (Table 3.18-8). The population decrease under the No Project Alternative would result in accommodating for any employment-based relocation to the RSA.

3.18.8.2 Shared Passenger Track Alternatives

The Shared Passenger Track Alternatives and HSR station options would have the following impacts during construction and operation:

- **Impact RG-1:** During the peak period of construction (2035 and 2036), the Shared Passenger Track Alternatives would support an estimated 5,830 jobs per year, including 2,790 direct construction jobs (Table 3.18-11). Approximately 1.7 percent of the 11,660 direct, indirect, and induced job-years anticipated during the peak construction period (2035 to 2036) are expected to represent forecasted employment in the construction sector. This proportion is not substantial enough to attract additional workers to the region, because the existing construction workforce within the RSA is projected to be sufficient to meet this demand. Similarly, the induced jobs generated during construction are expected to be filled by workers with the necessary skills already residing in the RSA. Construction of either of the HSR station options would support additional annual job-years.
- **Impact RG-2:** Compared to employment growth under the No Project Alternative, induced job growth from O&M of the Shared Passenger Track Alternatives would be a total of 5,580 jobs in the region by 2040, including jobs related to O&M and jobs related to increased accessibility (Table 3.18-15). An additional 4,900 projected jobs associated with increased accessibility in the RSA represent an increase of about 0.06 percent above the No Project Alternative by 2040. Increased employment from operation of the Shared Passenger Track Alternatives would spur additional economic activity in the region and decrease unemployment levels, thereby providing a benefit to the region.
- **Impact RG-3:** The Shared Passenger Track Alternatives would induce population growth by 12,620 people (0.08 percent) beyond the 2040 projection of an estimated 15.0 million people under the No Project Alternative in the RSA (Table 3.18-15). The HSR station options could lead to additional long-term population growth because of improved accessibility and mobility in metropolitan areas in the RSA. However, as previously noted, this population growth is expected to be less than originally projected, because the jobs generated by the project are likely to be filled by the existing local labor force.
- **Impact RG-4:** HSR-induced regional growth would induce housing demand in the RSA, which would be met with available land supply and housing capacity in the short and long terms. The demand would be met given the existing and projected housing units. Operation of the project would result in the need for an additional 5,640 housing units in the RSA by 2040. Currently there are 4,700,600 housing units in the RSA, and an additional 423,800 housing units are projected by 2040 (Table 3.18-9). Existing and projected capacity of replacement properties would be adequate to support the increase in residents in the RSA that could occur as a result of the Shared Passenger Track Alternatives. It is not anticipated that growth associated with operations of the project would cause development in excess of what can be accommodated by the existing land use plans in effect.

Regional growth impacts are summarized in Table 3.18-17.

Table 3.18-17 Regional Growth Impacts

Impacts	Shared Passenger Track Alternatives
Construction	
Peak-year direct construction employment*	2,790

Impacts	Shared Passenger Track Alternatives
Percentage of 2035 construction employment	0.8 percent
Peak-year total employment impacts (direct, indirect, induced)[1]	5,830
Percentage of projected 2035 total employment in resource study area	0.07 percent
Total employment over 7 years of construction	31,950
Operations	
Operations-related 2040 direct employment	210
Operations-related 2040 employment (direct, indirect, induced)	470
Total employment from operations-related jobs	680 jobs
Population Impacts	
Operations-direct related population (percentage of 2040 population)	12,620 persons (0.08 percent)

[1] 2035 and 2036 have the same peak year construction impacts.

Project construction and operational employment and population effects are represented in Table 3.18-18. The Shared Passenger Track Alternatives would result in the same construction and operational impacts. Therefore, for Table 3.18-18, both alternatives are presented in one column; HSR station option impacts are represented separately.

Table 3.18-18 Construction and Operational Employment and Population Effects Changes for the Shared Passenger Track Alternatives and Station Options

Impact	Shared Passenger Track Alternative A or B	Including Norwalk/Santa Fe Springs HSR Station Option	Including Fullerton HSR Station Option
Construction			
Peak-year direct employment*	2,790	70	150
Peak-year total employment impacts (direct, indirect, induced)	5,830	150	310
Operations			
Operations-related 2040 direct employment	210	N/A	N/A
Operations-related 2040 employment (direct, indirect, induced)	680	N/A	N/A
Study Area Populations			
County/counties	Los Angeles & Orange	Los Angeles	Orange
Projected 2035 employed population	7,954,900	5,843,900	2,111,000
Projected Shared Passenger Track Alternatives 2035 employed construction population[1,2]	335,000	194,000	141,000
Projected 2040 employed population	8,490,600	6,237,500	2,253,100
Projected 2040 total population	14,976,300	11,514,800	3,461,500

Impact	Shared Passenger Track Alternative A or B	Including Norwalk/Santa Fe Springs HSR Station Option	Including Fullerton HSR Station Option
Construction Population Impacts			
Percentage of projected 2035 total employment in the resource study area	0.07%	0.002%	0.004%
Years of construction	7	7	7
Total employment over years of construction (total job-years)	31,950	840	1,740
Operational Population Impacts			
Operations-direct related population	12,620	N/A	N/A
Operations-direct related population as a percentage of 2040 population	0.08%	N/A	N/A

[1] Operational impacts were not estimated for the HSR station options, as discussed in Section 3.18.6.3, Project Impacts, Impact RG-2.
[2] 2035 and 2036 have the same peak year construction impacts. Job estimates were scaled to reflect an estimate for savings that could be reasonably accrued from standard value engineering review. The savings estimate is based on actual California High-Speed Rail Authority engineering design review of the Los Angeles to Anaheim Project Section. More detail on the type of refinements considered as value engineering is found in the Preliminary Engineering for Project Definition General Notes.
HSR = high-speed rail; N/A = not applicable

The RSA would experience minimal impacts from the Shared Passenger Track Alternatives. It would create a total of 31,950 job-years during construction from 2031 to 2037, which is only 0.07 percent of total employment in the RSA for 2035/2036, the peak years of construction. Operations-related employment growth for the Shared Passenger Track Alternatives is estimated at 5,580 by 2040, which represents only 0.07 percent of the total 2040 employment. Because the growth effects would be minimal, employment from construction is not anticipated to result in regional population growth impacts that would require the construction of new housing or provision of new public services in the RSA. As discussed in Section 3.18.6.3, Project Impacts, it is not possible to estimate the long-term job creation effects that would result from O&M of the HSR station options at Norwalk/Santa Fe Springs and Fullerton. Therefore, it is not possible to estimate population growth related to operations-related population growth for the station options; however, it is not anticipated that the station options would drive population growth given cost issues and workers commuting from exurban communities. Therefore, induced population growth from the station sites is not anticipated to be substantially different from that of the Shared Passenger Track Alternatives. Table 3.18-19 presents a comparison of the potential impacts of the project alternatives.

3.18.9 CEQA Significance Conclusions

CEQA thresholds related to regional growth effects are addressed in Section 3.12. Therefore, there are no CEQA significance conclusions discussed in this section.

Table 3.18-19 Comparison of Project Alternatives Impacts on Regional Growth

Impacts	Shared Passenger Track Alternative A	Shared Passenger Track Alternative B	With Inclusion of HSR Station Option		NEPA Conclusion Before Mitigation	Mitigation	NEPA Conclusion Post Mitigation			
			Norwalk/Santa Fe Springs	Fullerton			Shared Passenger Track Alternative A	Shared Passenger Track Alternative B	With Inclusion of HSR Station Option	
									Norwalk/Santa Fe Springs	Fullerton
Impact RG-1: Impact on Regional Growth from Short-Term Employment Impacts	Project construction has the potential to affect regional growth through materials procurement and the demand for labor that would lead to a temporary increase in employment for construction and jobs that support construction activities and workers. Because there is an existing sizable pool of construction workers within a reasonable commuting distance in and outside the RSA, the likelihood of a substantial number of construction workers competing for traditional owner-occupied or rental housing units for these short-term related jobs during construction years for the project is projected to be low, and impacts on regional growth from short-term employment are not anticipated.	Same as Shared Passenger Track Alternative A	Similar to the Shared Passenger Track Alternatives. There would be an additional increase in job-years, but the permanent relocation of a substantial number of construction workers from outside the RSA is unlikely.	Similar to the Shared Passenger Track Alternatives. There would be an additional increase in job-years, but the permanent relocation of a substantial number of construction workers from outside the RSA is unlikely.	No adverse effect (all alternatives and HSR station options)	No mitigation needed	N/A	N/A	N/A	N/A
Impact RG-2: Impacts on Regional Growth from Long-Term Employment Related to Operations, Maintenance, and Increased Mobility and Accessibility	Project operations and maintenance have the potential to affect regional growth with the increase in employment for the upkeep and repair of tracks, stations, and light maintenance facilities and for materials needed for operations and maintenance. Employment growth constitutes a minor increase to projected growth, and impacts on regional growth from long-term employment are not anticipated.	Same as Shared Passenger Track Alternative A	Same as the Shared Passenger Track Alternatives.	Same as the Shared Passenger Track Alternatives.	No adverse effect (all alternatives and HSR station options)	No mitigation needed	N/A	N/A	N/A	N/A
Impact RG-3: Impact on Regional Growth from Induced Population Growth	The project is expected to result in increased population and employment as a result of improved accessibility throughout the state and the enhanced attractiveness of station areas for development and investment. Workers are expected to come from within the RSA; therefore, substantial unplanned population growth is not anticipated. Although exurban growth can be reasonably expected as a result of HSR, it is not anticipated to represent a substantial shift in population growth than is otherwise anticipated. Impacts on regional growth from induced population growth are not anticipated.	Same as Shared Passenger Track Alternative A	Same as the Shared Passenger Track Alternatives.	Same as the Shared Passenger Track Alternatives.	No adverse effect (all alternatives and HSR station options)	No mitigation needed	N/A	N/A	N/A	N/A

Impacts	Shared Passenger Track Alternative A	Shared Passenger Track Alternative B	With Inclusion of HSR Station Option		NEPA Conclusion Before Mitigation	Mitigation	NEPA Conclusion Post Mitigation			
			Norwalk/Santa Fe Springs	Fullerton			Shared Passenger Track Alternative A	Shared Passenger Track Alternative B	With Inclusion of HSR Station Option	
									Norwalk/Santa Fe Springs	Fullerton
Impact RG-4: Impact on Long-Term Regional Growth from Land Use Consumption	As employment and population growth occur, new development would consume currently undeveloped or underutilized land, and impacts on regional growth from land use consumption are not anticipated.	Same as Shared Passenger Track Alternative A	Same as the Shared Passenger Track Alternatives.	Same as the Shared Passenger Track Alternatives.	No adverse effect (all alternatives and HSR station options)	No mitigation needed	N/A	N/A	N/A	N/A

HSR = high-speed rail; N/A = not applicable; NEPA = National Environmental Policy Act; RSA = resource study area