3.13 Station Planning, Land Use, and Development

3.13.1 Introduction

This section describes the regulatory setting and affected environment for land use, and identifies the potential effects of the project, both beneficial and adverse, on land use associated with the high-speed train (HST) alternative alignments, stations and station areas, and the HMFs. The National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) require evaluation of impacts on land use. This analysis focuses on how the project construction and operation would affect adjacent land uses, and the effects on the downtowns of Fresno and Bakersfield as a result of the proposed stations. The HST stations in these two cities would provide opportunities for infill development and would revitalize the downtown areas, as well as reduce pressures to continue development outward.

The alternative sites for the Kings/Tulare Regional Station are on the western and eastern sides of Hanford in Kings County. Therefore, land use and development in the areas of Kings County surrounding these alternative sites are also discussed.

This section also addresses whether the project would be consistent with regional and local goals and policies. The Fresno to Bakersfield Section of the California HST System includes rural areas in unincorporated Fresno, Kings, Tulare, and Kern counties, and urban areas in Fresno, Hanford, Corcoran, Wasco, Shafter, and Bakersfield. In urban areas, land uses primarily are residential (single-family and multifamily), industrial, commercial, community facility, and parks and recreational. In rural areas, agriculture is the primary land use.

The development of the HST project involves collaboration with the Fresno and Bakersfield jurisdictions on upcoming updates to local general plans and land use planning processes to establish opportunities for enhanced transit-oriented development (TOD) around stations (Transit Cooperative Research Program 2004). The Authority is funding station area planning efforts in Fresno. Through this process, the Authority will minimize incompatibility issues with adjacent land uses and help foster a mutually beneficial transportation and land use plan. By following existing transportation corridors as much as possible, the design of the HST project reduces land use conflicts. In some locations, the HST project incorporates an elevated guideway into its design, which reduces right-of-way impacts and minimizes traffic impacts that could affect land use.

What is Transit-Oriented Development?

A transit-oriented development (TOD) is a pattern of dense, diverse, pedestrian-friendly land uses located near transit nodes, which under the right conditions, translates into higher transit patronage (Transit Cooperative Research Program 2004).

The following sections provide additional information related to land use and development:

- Section 3.2, Transportation, provides information regarding parking.
- Section 3.12, Socioeconomics, Communities, and Environmental Justice, includes information regarding demographics, property, economic factors, communities and neighborhoods, and minority and low-income population effects.
- Section 3.14, Agricultural Lands, provides information regarding impacts on agricultural land.
- Section 3.15, Parks, Recreation, and Open Space, provides information regarding park impacts.

- Section 3.18, Regional Growth, provides information regarding regional growth, construction and operation employment, and the project's potential to induce growth related to population and employment.

The following sections discuss mitigation measures that would minimize project impacts on adjacent land uses: Sections 3.2 (subsection 3.2.7), Transportation; 3.3, Air Quality and Global Climate Change (subsection 3.3.7); 3.4, Noise and Vibration (subsection 3.4.7); 3.12, Socioeconomics, Communities, and Environmental Justice (subsection 3.12.7); and 3.15, Parks, Recreation, and Open Space (subsection 3.15.7).

As discussed in Section 3.1.5 and the Executive Summary, the analysis in this chapter includes revisions based on design refinements and analytical refinements. Gray shading is used as a guide to help the reader navigate the revisions.

3.13.2 Laws, Regulations, and Orders

The following sections outline key regulations for local development and growth, station planning, and land use most relevant to the HST project. The project would comply with applicable federal and state laws and regulations regarding land use. The consistency of the project with regional and other plans is also considered in this evaluation to identify potential environmental impacts on land use flowing from inconsistencies.

3.13.2.1 Federal

Farmland Protection Policy Act [7 U.S.C. Sections 4201 to 4209 and 7 C.F.R. 658]

The Farmland Protection Policy Act requires that, before taking or approving any federal action that would result in conversion of farmland, the agency of project jurisdiction must examine the effects of the action using the criteria set forth in the Act, and, if there are adverse effects, must consider alternatives to lessen them in coordination with the Natural Resources Conservation Service.

3.13.2.2 State

California Land Conservation Act (Williamson Act) [California Government Code Sections 51200 to 51295]

This voluntary program provides preferential tax incentives to qualifying property owners to discourage the conversion of agricultural and open-space lands to other uses.

Sustainable Communities and Climate Protection Act of 2008

This statute requires regional planning agencies (i.e., Fresno Council of Governments, Kings County Association of Governments [KCAG], Kern Council of Governments [Kern COG]) to include a "Sustainable Community Strategy" or "Alternative Planning Strategy" in the next version of their Regional Transportation Plans (RTPs). The Sustainable Communities Strategy (SCS) will coordinate land use, housing needs, and transportation/transit planning to meet the regional target for the reduction of greenhouse gas emissions from automobiles and light trucks established by CARB. Coordination is enforced by requiring transportation projects identified in the RTP to comply with the SCS in order to receive state and federal funding through the regional housing needs allocation. The requirements of Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008, will be reflected in the 2014 RTPs adopted by the Fresno Council of Governments, KCAG, and Kern COG.

California State Planning and Zoning Law [California Government Code Sections 65000 to 66037]

This law delegates most local land use and development decisions to cities and counties. The code describes laws pertaining to land use regulations by local governments, including the general plan requirement, specific plans, subdivisions, and zoning.

3.13.2.3 Regional and local

The following regional and local plans and policies were identified and considered in the preparation of this analysis. A full listing of policies and the project's consistency is included in Appendix 3.13-A, Land Use Plans, Goals, and Policies.

San Joaquin Valley Blueprint

The San Joaquin Valley Blueprint (SJVCOGS 2010) is a broad set of growth principles for the San Joaquin Valley adopted by its seven regional governments after an intensive community involvement program. The San Joaquin Valley Blueprint lays out a preferred scenario for the future of the San Joaquin Valley and may be used to guide growth over the next 50 years (SJVCOGS 2010). Compliance is entirely voluntary, and the Blueprint imposes no new requirements on either the regional governments or cities and counties of the San Joaquin Valley. The planning process involved seven councils of government and one regional transportation planning agency:

- Council of Fresno County Governments
- Kern Council of Governments
- Kings County Association of Governments
- Madera County Transportation Commission
- Merced County Association of Governments
- San Joaquin Council of Governments
- Stanislaus Council of Governments
- Tulare County Association of Governments

The Blueprint promotes using less land for development, more resources for preservation and enhancing distinctive communities, and greater availability of more travel choices. The San Joaquin Valley Blueprint identified and evaluated growth scenarios, including one growth scenario that assumes an HST system. On April 1, 2009, the San Joaquin Valley Regional Policy Council adopted the preferred growth scenario and a list of Smart Growth Principles to be used as the basis of Blueprint planning in the San Joaquin Valley. The preferred scenario includes an HST system. These 12 principles represent the core values of the San Joaquin Valley and reflect the regional outlook.

1. Create a range of housing opportunities and choices.
2. Create walkable neighborhoods.
3. Encourage community and stakeholder collaboration.
4. Foster distinctive, attractive communities with a strong sense of place.
5. Make development decisions predictable, fair, and cost-effective.
6. Mix land uses.
7. Preserve open space, farmland, natural beauty, and critical environmental areas.
8. Provide a variety of transportation choices.
9. Strengthen and direct development towards existing communities.
10. Take advantage of compact building design.
11. Enhance the economic vitality of the region.
12. Support actions that encourage environmental resource management.

The subsequent steps in implementing the San Joaquin Valley Blueprint have included developing an implementation program, preparing a schedule and set of milestones, preparing the Valley Blueprint Roadmap, and preparing an online Planners Toolkit to provide the Valley's cities and counties with the strategies and tools allowing them to incorporate the Smart Growth Principles and move toward the preferred scenario.

2011 Fresno County Regional Transportation Plan (Adopted)

The *2011 Regional Transportation Plan* (Council of Fresno County Governments 2010) provides a comprehensive, long-range plan and identifies the needs for travel and movement of goods until the year 2035. The RTP includes four elements: the Policy Element provides information on the transportation goals, policies, and objectives; the Action Element identifies how to achieve the goals; the Air Quality Element addresses air quality issues (a new element in the 2011 RTP); and the Financial Element provides information regarding funding for the actions identified in the Action Element. The following plan components are directly related to the project:

- Goal: Develop a safe, efficient, and convenient rail system that serves the passenger and freight needs of the region, and is integrated with and complementary to the total transportation system.
- Objective: Promote the growth of rail passenger and freight usage.
- Policy: Support the planning and construction of a high-speed rail system in the San Joaquin Valley that directly connects the major population centers within the valley.

The next version of the RTP will incorporate an SCS, or the Fresno Council of Governments will adopt an Alternative Planning Strategy, as required by SB 375.

2011 Kings County Association of Governments RTP (Adopted)

The current KCAG RTP was adopted in 2010 (KCAG 2010). The 2011 Kings County RTP serves as the basis for the county's transportation decisions and provides policy direction for local plans. The RTP includes the implementation of a high-speed rail facility in the region among its stated objectives. The RTP supports state efforts to implement a high-speed rail corridor in the San Joaquin Valley, and the development of strategies that further the goals of reduced traffic congestion through development of alternative transportation modes. The RTP supports an HST station in Hanford to better serve Kings and Tulare counties. The following public transportation policy from the RTP is directly related to the project:

- Policy: IV. B. Intercity Rail and Bus Policy. Supports state efforts to implement a high-speed rail corridor in the San Joaquin Valley.

The next version of the RTP will incorporate an SCS, or KCAG will adopt an Alternative Planning Strategy, as required by SB 375.

2011 Tulare County Association of Governments RTP (Adopted)

The Tulare County Association of Governments (TCAG) adopted the 2011 RTP on April 30, 2010 (TCAG 2010). The RTP addresses transportation needs through 2035. Implementation of the RTP would result in improvements to existing regional transportation and circulation systems. The plan anticipates construction of a high-speed train corridor that would connect the county to the Bay Area, Southern California, and other areas in the San Joaquin Valley. The RTP includes several policies supporting the extension of continuous rail passenger service, including the HST; encouraging participation in the planning effort for HST; and supporting the CHSRA in connecting

the Bay Area with Southern California. The RTP also includes policies supporting an HST station in Tulare or Kings counties.

The following goals, objectives, and policies are related to the project or help support the project's goals:

- Goal: Promote safe, economical, convenient rail systems and schedules that meet the needs of passenger and freight services.
- Objective: Support the growth of rail passenger and freight usage by identifying available funding and programming in the Federal Transportation Improvement Program (4-year programming document).
- Policies:

    1. Support the extension of continuous rail passenger service, Cross Valley Rail, High-Speed Rail, and light-rail along select corridors.

Other policies under this goal include:

    1. Support the High-Speed Rail Commission in connecting the Bay Area and Southern California with high-speed rail.

    2. Support a high-speed rail alignment that would accommodate a station stop in Tulare or Kings County.

- Goal: Improve goods movement within the region to increase economic vitality, meet the growing needs of freight and passenger services, and improve traffic safety, air quality, and overall mobility.
- Objective: Coordinate with regional transportation systems across county borders to ensure an efficient flow of people and goods along key trade and interregional commuting corridors.
- Policies:

    1. Improve safety and capacity of vital east-west corridors.

    2. Ensure that the high-speed rail system, if implemented, supports Tulare County in achieving its economic, environmental, land use, and mobility goals.

The next version of the RTP will incorporate an SCS, or TCAG will adopt an Alternative Planning Strategy, as required by SB 375.

Kern Council of Governments 2011 Final RTP (Adopted)

The Kern Council of Governments' (Kern COG's) RTP is a multimodal plan representing Kern COG's vision to maintain, manage, and improve Kern's transportation system through the planning horizon of 2035 (Kern COG 2010). The RTP identifies the HST as a future transit option in the region, and supports state and federal actions that would increase accessibility to passenger rail service. The RTP does not contain any specific policies related to the HST.

The next version of the RTP will incorporate an SCS, or Kern COG will adopt an Alternative Planning Strategy, as required by SB 375.

Fresno County General Plan (Adopted)

The goals, policies, and implementation programs under the Fresno County General Plan reflect a commitment to preserve the existing rural character of the county and its natural and managed resources (Fresno County 2000). The policies also recognize the need to maintain economic productivity and allow for urban growth. The intent of the policies is not to preclude intensive development, but to direct it to minimize loss of agriculture and open space. The BNSF Alternative and the Fresno Works–Fresno HMF Site alternative would be located on lands designated primarily as industrial and agricultural.

The following are brief summaries of policies and programs that help support the project's goals:

Policy TR-E.5. The County shall support multimodal stations at appropriate locations to integrate rail transportation with other transportation modes.

Program TR-E.A. The County shall work with other agencies to plan line-designated railroad corridors to facilitate the preservation of important railroad rights-of–way for future rail expansion or other appropriate transportation facilities.

Program TR-E.B. The County shall use appropriate zoning in designated rail corridors to ensure preservation of rail facilities for future local rail use.

Program TR-E.C. The County shall participate in the Council of Fresno County Governments Rail Committee to support improvement, development, and expansion of rail service in Fresno County.

Laton Community Plan (Adopted)

Hanford West Bypass 1 and Hanford West Bypass 2 alternatives would be located to the west of the approximately 479-acre Laton Community Plan Planning Area. Fresno County prepared the *Laton Community Plan Update* (Fresno County 2011) to make the 1976 Laton Community Plan consistent with the Fresno County 2000 General Plan. The revision included updates to the Land Use, Transportation, and Public Facilities and Services Elements. Additionally, new goals, policies, and implementation programs were developed to address community needs, such as low income housing, development of diverse retail/commercial uses, more recreational areas, increased public services, and infill development. The plan also designates agricultural lands that are to be converted to more intensive development in the future. However, there are no specific policies that relate to the HST in the Laton Community Plan.

2025 City of Fresno General Plan (Adopted)

The 2025 Fresno General Plan (City of Fresno Planning & Development Department 2002) guides development and investment of public infrastructure. Goals, policies, and objectives specific to land use that help support the project's goals include the following:

- Goal 6: Coordinate land uses and circulation systems to promote a viable and integrated multimodal transportation network.
- Goal 9: Provide activity centers and intensity corridors within plan areas to create a mix of land uses and amenities to foster community identity and reduce travel.
- Policy C-3-b: Conduct a comprehensive update of the zoning ordinance to facilitate the implementation of intensity corridors. These zoning ordinance amendments should address mixed uses, expedited administrative zoning procedures, shared parking, underground and

multistory parking structures incorporated into buildings, transit facilities, open space, and aesthetic considerations.

- Objective C-8: Facilitate the development of mixed uses to blend residential, commercial, and public land uses on one site.
- Policy C-16-a: The City shall review its planning principles, development regulations, and public service, transit and infrastructure policies and programs to incorporate "Transit Oriented Development" and "Traditional Neighborhood Development" approaches.
- Objective C-17: Encourage and facilitate urban infill by building and upgrading community and neighborhood public infrastructure and services that will enhance public health and convenience and the overall experience and quality of city living.
- Policy C-17-b: The City shall identify and pursue measures to lower auto dependence and encourage public transit (including pursuit of fixed guideway systems such as a monorail or people mover), bicycle use, and walking consistent with other transit-oriented development concepts and principles.
- Objective E-5: Promote continued growth of rail passenger and freight travel through a safe, efficient, and convenient rail system that is integrated with, rather than conflicts with, other modes of travel.
- Objective E-7: Serve future population concentrations with feasible alternative transportation modes that are efficient and safe, and that minimize adverse environmental impacts.
- Policy E-7-c: Pursuant to resolution of the City Council of December 18, 2001, support the planning and construction of HST in the San Joaquin Valley using the UPRR Railway alignment, which would directly connect the major population centers within the valley and include a station stop in Downtown Fresno.
- Policy E-7-d: Support the development of a multimodal transportation terminal facility in or in close proximity to the central area.
- Policy E-9-aa: Support the HST corridor in the vicinity of the UPRR Railway corridor connecting Los Angeles and the San Francisco Bay Area.

Fresno Central Area Community Plan (Adopted)

The Fresno Station is located in an area included in the *Central Area Community Plan.* The planning area for the *Central Area Community Plan* encompasses the downtown core of the city of Fresno and is bounded by SR 41, SR 99, and SR 180 (City of Fresno 1989). The focus of the *Central Area Community Plan* is to restore and revitalize the city's central core. Priorities of the plan include developing new housing and rehabilitating existing residential homes, encouraging mixed-use development, and protecting and expanding the convention center businesses. The *Central Area Community Plan* was developed to help direct the revitalization of Fresno's Central Area and restore the area as the urban center of Fresno. The policies and goals encourage a mix of residential densities that are compatible with an urban living environment. The transportation goals of the *Central Area Community Plan* include identifying, maintaining, and improving major "gateway" routes and intersections serving the central area. The plan also calls for development of a comprehensive transportation center in the central area. The plan promotes the mixed-use concept to encourage diversity of development, which further supports the project's goals.

City of Fresno Fulton Corridor Specific Plan and Downtown Neighborhoods Community Plan (Drafts)

In early 2010, Fresno initiated the preparation of two new plans: the Fulton Corridor Specific Plan and the Downtown Neighborhoods Community Plan. These plans are in progress and are planned to be adopted in 2014 (Balch 2014, personal communication). The Authority has coordinated and will continue to coordinate with the City of Fresno on the development of these plans as they relate to the proposed station. The plans will incorporate extensive outreach and will focus on revitalization, aesthetics, infrastructure, incorporation of a high-speed rail station, and attraction and expansion of businesses (City of Fresno 2011a). The Authority will identify ways for the HST station to stimulate downtown development. The City of Fresno's application for funding is supported by existing planning efforts to address sustainability and livable communities, and to encourage public-private partnership investments through the development of the Fulton Corridor Specific Plan (City of Fresno 2010).

Fresno Roosevelt Community Plan (Adopted)

The Fresno HMF facility would be partially located in the *Roosevelt Community Plan* area (City of Fresno 1992). The *Roosevelt Community Plan* was prepared to identify and address growth and vitality, to anticipate the need for new public facilities, and to stimulate the development of well-balanced, quality neighborhoods. The *Roosevelt Community Plan* encourages a variety of land use types and balance among the different land uses, including providing sufficient and viable locations for light and heavy industrial development. However, there are no specific policies that relate to the HST in the *Roosevelt Community Plan*.

2035 Kings County General Plan (Adopted)

The *2035 Kings County General Plan* land use designations and policies have two aspects (Kings County Community Development Agency 2010). First, they are designed to encourage compact and community-centered development patterns that lower public-service costs, make more efficient use of land, and encourage alternative regional modes of transportation. Second, it discourages premature conversion of farmland to other uses. The General Plan states that because the county has the highest future growth rate in the Central Valley, the existing vehicular transportation system has insufficient capacity to meet current and expected future travel demand. This lack of transportation choices and capacity can potentially be fulfilled by the HST System. The General Plan also states the need for improved intercity transportation to improve air quality, travel reliability, and reduce travel congestion and travel times. The HST System would achieve all these objectives by reducing regional dependence on the automobile.

The following policies and programs are related to the project:

- Regional Transportation System C GOAL C1: Integrate through the County's regional transportation system, an efficient and coordinated goods and people-moving network of highways, railroads, public transit, and non-motorized options that reduce overall fuel consumption and associated air emissions.

- Objective C1.2: Ensure the continued operational effectiveness of rail lines throughout the County, and ensure the preservation of rail right-of-way for future transportation alternative use.

- Policy C1.2.4: Coordinate with the California High-Speed Rail Authority and Caltrans if a high-speed rail corridor is to be established within the County, and plan for the establishment of transportation linkages to the nearest high-speed rail station.

Armona Community Plan

Kings County developed the Armona Community Plan (Chapter 11 of the *2035 Kings County General Plan*) to guide short- and long-range decisions that enhance and improve the community's existing conditions and future sustainability (Kings County Community Development Agency 2010). The Armona Community Plan focuses on new compact residential growth with more emphasis on community walkability, increased housing diversification, and revitalization of the Downtown Commercial Core. Portions of the Hanford West Bypass 1 and Hanford West Bypass 2 alternatives and the Kings/Tulare Regional Station–West Alternative would be situated in the Armona Community Planning Area of Kings County on lands designated primarily as agricultural and industrial.

The following policies and programs help support the project's goals:

- ACP Objective 2B.1 Establish the Downtown Area of Armona as designated for mixed commercial and residential uses to revitalize the Community core and enhance the visual distinction of Armona as having a small community downtown.
- ACP Objective 6A.4 Redesign circulation patterns along Hanford-Armona Road and 13th Avenue to enhance traffic flow and safety at this key community interchange with Highway 198 to serve the future growth needs of Armona and the city of Hanford.

City of Hanford General Plan (Adopted)

A portion of the study area surrounding the Kings/Tulare Regional Station–East Alternative and Kings/Tulare Regional Station–West Alternative would be located in the city of Hanford. The Hanford General Plan (City of Hanford 2002) does not contain any policies specific to the HST or a Kings/Tulare Station. However, it does contain policies supporting the coordination of local transportation plans with the Kings County Congestion Management Program, to ensure eligibility for state and federal funding, and supporting varying modes of public transportation.

The following policies and programs help support the project's goals:

- Objective LU 20: To provide a location for traveler oriented commercial uses near the intersection of major state highways that have adequate access and visibility and is located on land that is not designated as agricultural land.
- Objective CI 10 (AQ): Contribute towards improving the air quality of the region through more efficient use of private vehicles and increased use of alternative transportation modes.
- Objective CI 3: Achieve a coordinated regional and local transportation system that minimizes traffic congestion and efficiently serves users.
- Policy CI 3.4 (AQ): Transportation projects shall be prioritized with emphasis on reducing traffic congestion and improving traffic circulation.
- Objective CI 7 (AQ): Develop a public transit system addressing both local and regional travel demand.

Live Oak Master Plan

Hanford West Bypass 1, Hanford West Bypass 1 Modified, Hanford West Bypass 2, and Hanford West Bypass 2 Modified would be located in the westerly portion of the approximately 390-acre *Live Oak Master Plan* (City of Hanford 2009). The Master Plan allows for the development of 1,560 dwelling units, parks, and open-space areas, and construction of supporting infrastructure,

including streets, water, sewer, drainage facilities, and other public utilities. However, there are no specific policies that relate to the HST in the *Live Oak Master Plan*.

City of Corcoran General Plan (Adopted)

The City of Corcoran General Plan (City of Corcoran 2007) seeks to maintain a fully integrated local network that provides for safe and convenient circulation using a variety of transportation modes. The General Plan also includes policies that would support the improvement of mass transit in the city, and enhance the current status of the existing rail system, including connections to rail passenger service. The HST would be located in areas designated as High Density Residential, High Density Commercial, and Industrial.

The following policies and programs help support the project's goals:

- Objective B: Enhance the availability and accessibility of alternative modes of transportation, such as walking, bicycling, carpools, buses, and rail.
- Policy 2.72: Ensure choices among modes of travel and give priority to each mode when and where it is most appropriate.
- Policy 2.74: Improve the speed and efficiency of mass transit in the City and enhance the current status of the existing rail system including connections to rail passenger service.
- Policy 2.75: The transportation facilities are interdependent, and efforts shall be made to ensure an efficient system by coordination of local and regional efforts. The regional and local transit links must be closely related and synchronized to provide maximum efficiency and transfers.

Tulare County General Plan (Draft)

The Tulare County *General Plan 2030 Update* includes policies stating that the county will work with cities to support improvement, development, and expansion of passenger rail service in the county, and will coordinate with the Tulare County Association of Governments and the Authority in efforts to locate the HST corridor in Tulare County, with a passenger stop and maintenance facility (Tulare County 2012). The HST would pass through areas designated by the Tulare County General Plan as Rural Valley Lands Plan (RVLP) area. The RVLP area includes a goal to sustain the viability of Tulare County's agriculture by "restraining division and use of land which is harmful to continued agricultural use of non-replaceable resources." To meet this goal, the county limits nonagricultural development and maintains several exclusive agricultural zones.

The following policies and programs help support the project's goals:

- **ED-2.14 Railways.** The County shall encourage improvements to rail lines and services for cargo and passenger services in support of existing and future industrial and commercial development.
- **ED-3.5 High-Speed Rail.** The County shall support development of high-speed rail through the Central Valley with service to Tulare County.

- **SL-4.3 Railroads and Rail Transit.** The County shall encourage rail infrastructure for freight and passenger service to be planned and designed to limit visual impacts on scenic landscapes by:

  - Concentrating infrastructure in existing railroad rights-of-way.
  - Avoiding additional grade-separated crossings in viewshed locations.
  - Using new transit stations supporting rail transit as design features in existing and future core community areas.

- **TC-1.6 Intermodal Connectivity.** The County shall ensure that, whenever possible, roadway, highway, and public transit systems will interconnect with other modes of transportation. Specifically, the County shall encourage the interaction of truck, rail, and air-freight/passenger movements.

- **TC-2.** To improve and enhance current rail services that stimulate economic growth and meet the needs of freight and human transportation.

- **TC-2.1 Rail Service.** The County shall support improvements to freight and expanding passenger rail service throughout the County.

- **TC-2.2 Rail Improvements.** The County shall work with cities to support improvement, development, and expansion of passenger rail service in Tulare County.

- **TC-2.4 High-Speed Rail (HSR).** The County shall coordinate with TCAG and the California High-Speed Rail Authority in efforts to locate the HSR corridor with a passenger stop and maintenance facility in Tulare County.

- **TC-2.5 Railroad Corridor Preservation.** The County shall work with other agencies to plan railroad corridors to facilitate the preservation of important railroad rights-of–way for future rail expansion or other appropriate transportation facilities.

- **AQ-2.3 Transportation and Air Quality.** When developing the regional transportation system, the County shall work with TCAG to comprehensively study methods of transportation that may contribute to a reduction in air pollution in Tulare County. Some possible alternatives that should be studied are:

  - Commuter trains (Light Rail, Amtrak, or High-Speed Rail) connecting with Sacramento and San Francisco, with attractive services scheduled up and down the valley.

City of Visalia General Plan (Adopted)

The City of Visalia is in the process of updating their General Plan. Although new General Plan Elements have been drafted, the General Plan has not been adopted and is still in-progress (Smith 2014, personal communication).The update will address all the elements of their General Plan because in the past, the city has chosen to update the elements of their General Plan individually as deemed needed. The current *City of Visalia General Plan* (City of Visalia 1991) Land Use Element was revised in June 1996. The Circulation Element was updated in April 2001. The current General Plan does not contain any specific policies directly related to the HST.

The following policies and programs help support the project's goals:

- Objective 1.2: Promote the development of inter- and intra-regional transportation facilities, including railroad passenger and freight usage.

- Implementing Policy 1.2.2: Support regional and statewide efforts to extend passenger rail service to Los Angeles and Sacramento.

- Objective 2.1: Development and maintain a coordinated mass transportation system which will encourage increased transit use through convenient, safe, efficient, and cost-effective services.

- Policy 2.1.7: Promote all modes of transportation, including passenger rail, bus, bicycling, walking, ridesharing, etc. for the development of alternatives to the single occupant vehicle. The role of the Transit Advisory Committee should be modified to promote and advocate alternative ides.

City of Tulare General Plan (Adopted)

The City of Tulare initiated an update to the General Plan in 2005 (City of Tulare 2012). The City Council approved the 2030 General Plan in August 2012. The city of Tulare prepared a Climate Action Plan (CAP) to expand the General Plan to address air quality and climate change among other resource issues (City of Tulare 2011). This document is currently in draft form and has not been adopted. However, the CAP includes the following policies and programs that help support the project's goals:

- Goal 3: Shift single-occupancy vehicle trips to alternative modes.
- TM 3.6: Support regional transportation management programs to shift single-occupancy vehicle trips to other modes.

Kern County General Plan (Adopted)

The Kern County General Plan's Land Use, Conservation, and Open-Space Element provides for a variety of land uses for future economic growth while also ensuring the conservation of Kern County's agricultural, natural, and resource attributes (Kern County Planning Department 2009). The Circulation Element of the General Plan does not contain any specific policies related to the HST, but does include the goal of making certain that transportation facilities needed to support development are available. The HST would extend through a variety of land use designations, including agricultural, commercial, industrial, residential, and open space. The Wasco HMF site would be located on land designated as limited agricultural. The Shafter HMF site would be located on land designated as agricultural.

City of Wasco General Plan (Adopted)

The *City of Wasco General Plan* encourages the reduction of vehicle miles traveled by providing transit and rail options (City of Wasco [2002] 2010). The plan also promotes choices among modes of travel and encourages use of the Wasco Amtrak Multi-Modal Transit Station. The General Plan does not contain any policies specific to the HST. Land uses along the HST include light and heavy industrial, commercial, and retail.

City of Shafter General Plan (Adopted)

The *City of Shafter General Plan* supports and encourages the use of transportation modes that provide an alternative to travel by private automobile (City of Shafter 2005). The General Plan also calls for the coordination of city transportation plans with those of the City of Bakersfield, Kern County, and the state. The General Plan does not contain any policies specific to the HST. Land uses near the HST include industrial, commercial, and residential. Land uses near the proposed Shafter HMF are primarily industrial and agricultural.

Shafter Orchard Park Final Specific Plan (Adopted)

The *Orchard Park Final Specific Plan* area is located in the northeastern quadrant of the city of Shafter in an area traversed by the Wasco-Shafter Bypass (City of Shafter 2006). The Specific

Plan proposes development with a mix of residential housing, park areas, and neighborhood linkages, along with an oil production island and improvement of street and infrastructure components. The Specific Plan was adopted by the city in 2006 to facilitate the development of a planned community on the eastern edge of Shafter. Subdivision and tentative maps have been filed for the Specific Plan, but no construction approvals or plans have been issued at this point.

Metropolitan Bakersfield General Plan (Adopted)

The area covered by the *Metropolitan Bakersfield General Plan* coincides with the Bakersfield Metropolitan Priority Area of the Kern County General Plan (City of Bakersfield and County of Kern 2007). The *Metropolitan Bakersfield General Plan* includes policies to enhance rail service capacities and use in the planning area, and to support efforts to develop high-speed rail facilities to serve the city. In addition, it encourages the cooperation and support of local agencies to pursue the establishment of high-speed rail service for the plan area, including potential routes and terminal locations. The HST would be located on lands designated as high- and low-density commercial, and industrial.

The *Metropolitan Bakersfield General Plan* contains the following goal, policy, and implementation measure related to the HST:

- Goal 5: Enhances rail service capacities and usage in the planning area.
- Policy 12: Supports efforts to develop high-speed rail facilities to serve the plan area (I-11).
- Implementation Measure 10: Local agencies should cooperate in studies to pursue the establishment of high-speed rail service for the plan area, including consensus on potential routes and terminal locations.

Kern County Western Rosedale Specific Plan (Adopted)

The BNSF Alternative would extend through a portion of the *Western Rosedale Specific Plan* in Kern County. The Specific Plan includes standards for developing industrial, commercial, and residential uses and for supporting utility infrastructure (Kern County Planning Department 1994). The Specific Plan was intended to support growth in the area in a sustainable manner by pacing growth to match available infrastructure. The Specific Plan further refines land use designations of the *Metropolitan Bakersfield General Plan*. The Specific Plan does not include any policies related to the HST or to the accommodation of a transportation project of this type.

3.13.2.4 Consistency with Local and Regional Plans

The HST project is an undertaking of the Authority and FRA, in their capacities as state and federal agencies. As such, it is not required to be consistent with local plans. However, the HST project's consistency with local plans is described here, by alternative, in order to provide a context for the project. See Appendix 3.13-A for further details on the local and regional plans reviewed for this analysis.

BNSF Alternative

There are no federal or state plans that are applicable to land use for the HST. The San Joaquin Valley Blueprint is the only regional planning scenario for the Fresno to Bakersfield HST study area. At this point in time, no adopted regional policy document addressing land use for the HST exists nor is the Blueprint binding on land use policy. However, the San Joaquin Valley Regional Policy Council has adopted 12 Smart-Growth Principles, a recommended residential density standard, and maps. The HST project is generally consistent with the 12 Smart-Growth Principles.

The BNSF Alternative would be consistent with relevant San Joaquin Valley Blueprint Principles 8 and 11 by increasing the variety of transportation choices in the San Joaquin Valley and assisting

with the enhancement of the region's economic vitality. In addition, the BNSF Alternative would be consistent with San Joaquin Valley Blueprint Principles 7 and 12 inasmuch as the BNSF Alternative follows the existing rail right-of-way to the greatest extent feasible.

RTPs for Fresno, Kings, and Tulare counties identify the need to improve mobility in the Central Valley and to reduce dependency on automobile travel by improving transit accessibility and encouraging the use of alternative transportation modes. General Plans for the cities of Fresno and Bakersfield and for Tulare County include policies that specifically support the implementation of a high-speed rail system. Therefore, the project is consistent with the General Plans for the cities of Fresno and Bakersfield and Tulare County.

Hanford West Bypass 1 and 2 Alternatives

The Hanford West Bypass 1 and Hanford West Bypass 2 alternatives would extend through areas of agricultural land uses in a new right-of-way. This conversion would not be consistent with San Joaquin Valley Blueprint Principles 7 and 8, nor with the *2035 Kings County General Plan* policies (Kings County Community Development Agency 2010).

Hanford West Bypass 1 and 2 Modified Alternatives

The Hanford West Bypass 1 Modified and Hanford West Bypass 2 Modified alternatives would extend through areas of agricultural land uses in a new right-of-way. This conversion would not be consistent with San Joaquin Valley Blueprint Principles 7 and 8, nor with the *2035 Kings County General Plan* policies (Kings County Community Development Agency 2010).

Corcoran Bypass Alternative

The Corcoran Bypass Alternative would extend through areas of agricultural land uses in a new right-of-way. This conversion would not be consistent with San Joaquin Valley Blueprint Principles 7 and 8, nor with the *2035 Kings County General Plan* policies (Kings County Community Development Agency 2010).

Corcoran Elevated Alternative

The Corcoran Elevated Alternative would be located parallel to and to the east of the BNSF Alternative through Corcoran. This conversion would not be consistent with the *2035 Kings County General Plan* policies (Kings County Community Development Agency 2010).

Allensworth Bypass Alternative

The Allensworth Bypass Alternative would extend through areas of agricultural land uses in a new right-of-way. This conversion would not be consistent with San Joaquin Valley Blueprint Principles 7 and 8, nor with the Tulare County and *Kern County General Plan* policies.

Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass Alternative would primarily be located in a new right-of-way through agricultural lands. This conversion would not be consistent with San Joaquin Valley Blueprint Principles 7 and 8, nor with the *Kern County General Plan* policies.

Bakersfield South Alternative

Similar to the BNSF Alternative in the same area, the Bakersfield South Alternative would extend through areas of industrial uses and would be consistent with San Joaquin Valley Blueprint Principles.

Bakersfield Hybrid Alternative

Similar to the BNSF Alternative in the same area, the Bakersfield Hybrid Alternative would extend through areas of industrial uses and would be consistent with San Joaquin Valley Blueprint Principles.

Fresno Station Alternatives

Local plans and zoning focus on permitted land uses and on development scale, density, and intensity within land use zones. The City of Fresno is in the process of updating plans that will specifically address higher development density (including medium- and high-density mixed-use consisting of multifamily residential, commercial, and office development) in the HST station area, which will result in beneficial effects for the city. Fresno has begun to define land use opportunities for TOD planning by using land use overlay zones and by identifying supporting services for transit passengers (i.e., restaurants and retail). In general, the HST station would be consistent with the plans and policies for Downtown Fresno redevelopment.

Bakersfield Station Alternatives

The Bakersfield Station would be located in an area subject to revitalization efforts. Similar to Fresno, the adoption of goals and polices in Bakersfield related to the HST station would provide additional incentives for infill development to encourage the higher densities that would help to protect agricultural lands in the area, if the City adopted policies to that effect. In general, the HST station would be consistent with policies for Downtown Bakersfield development.

Kings/Tulare Station Alternatives

The Kings/Tulare Regional Station–East Alternative is in Kings County, in an area adjacent to the City of Hanford Planning Area within the city's Secondary Sphere of Influence (SOI). The station area is zoned as light industrial by Kings County and the station would be compatible with this zoning; however, the adjacent land is zoned as agriculture and would be under pressure to develop. The Authority intends to facilitate the annexation of the station area by the City of Hanford for a reasonable extension of municipal services to comply with the *2035 Kings County General Plan* objectives promoting adequate supply of basic services to all new development projects (Kings County Community Development Agency 2010). Land uses surrounding the HST station are also zoned as commercial and industrial, and development of those lands as a result of the station would be compatible with current land use plans and policies.

The Kings/Tulare Regional Station–West Alternative is in Kings County, in an area adjacent to the Armona Community Plan and within the City of Hanford Primary SOI Planning Area F. Kings County has zoned the station site and parcels to the west and north as agricultural. Land uses and zoning immediately south and east of the HST station are commercial, industrial, and residential. The existing transportation corridor of the SJVR, which is contiguous to the south boundary of the proposed station site, includes primarily commercial and industrial uses. The consistency determination for the Kings/Tulare Regional Station–West Alternative with local plans and policies would be the same as the Kings/Tulare Regional Station–East Alternative.

Heavy Maintenance Facility Alternatives

Fresno Works – Fresno HMF Site

The Fresno HMF site is within the Fresno County General Plan, and is predominately zoned for industrial development, although some parcels are zoned for agriculture or light manufacturing. The Fresno HMF Site would be consistent with the Fresno County General Plan.

Kings County – Hanford HMF Site

The Hanford HMF site is in unincorporated Kings County on the site that is designated light industrial in the *2035 Kings County General Plan* (Kings County Community Development Agency 2010). The Hanford HMF Site would be consistent with the Kings County General Plan.

Kern Council of Governments – Wasco HMF Site

The Wasco HMF site is located partially within the city of Wasco and partially within Kern County, and is therefore located in both the *City of Wasco General Plan* and the *Kern County General Plan*. The City of Wasco designates the site as heavy industry and Kern County designates it agriculture. The Wasco HMF site would be consistent with the *City of Wasco General Plan;* however, it would not be consistent with *Kern County General Plan*.

Kern Council of Governments – Shafter East HMF Site

The Shafter East HMF site is within the city of Shafter and is designated as agriculture. The Shafter East HMF site would not be consistent with the *City of Shafter General Plan*.

Kern Council of Governments – Shafter West HMF Site

The Shafter West HMF site is located in unincorporated Kern County on land designated for a mix of uses, including agriculture, industrial, and development. The Shafter West HMF would be partially consistent with the *Kern County General Plan*.

3.13.3 Methods for Evaluating Impacts

Data collected from local municipalities include local and regional land use plans and other relevant planning documents. The geographic information system (GIS) database includes electronic information from local and regional government sources. Land uses for the counties and cities were generalized into the dominant land use categories so that the land use could be presented consistently among the areas, to the extent possible.

This analysis based the compatibility of the HST alternatives on (1) the potential sensitivity of various land uses to the changes that likely would result from project implementation; and (2) the potential impact of these changes on the pattern and intensity of existing and planned land uses. GIS tools and aerial photographs facilitated the assessment of land use compatibility, and helped identify and locate sensitive land uses (e.g., single-family residences and schools). The analysts used quantitative analysis and GIS tools to determine direct impacts related to the conversion of land uses to a transportation-related use, and the required property acquisitions for the project. The analyst also reviewed local plans and zoning to determine indirect impacts.

Station alternatives have been planned in collaboration with the cities and with substantial public input to help identify key HST station design, placement, access, and other pertinent issues. (For a review of outreach activities, see Chapter 7, Agency and Public Involvement.) In brief, outreach activities for the Fresno, Kings/Tulare Regional, and Bakersfield HST stations included the following:

- Technical working group meetings with agency, city, and county staff.
- Station workshop meetings with city and county staff.
- Community educational workshops.

The impact analysis for HST station planning and land use includes a qualitative analysis of (1) this project's compatibility with regional and local land use plans, goals, and policies so as to identify any related environmental effects (incompatibility by itself is not an environmental

effect); and (2) the potential impacts, particularly around the HST stations. For example, it asks what type of development and redevelopment opportunities are anticipated with the implementation of an HST station in the downtown areas of Fresno and Bakersfield.

Direct impacts occur if the land use would change for the project footprint, either along the alignment or at a facility or station. Indirect impacts occur where land use adjacent to the project footprint would change as a result of the project, particularly during operation.

3.13.3.1 Methods for Evaluating Effects under NEPA

Pursuant to NEPA regulations (40 Code of Federal Regulations [C.F.R.] 1500-1508), project effects are evaluated based on the criteria of context and intensity. Context means the affected environment in which a proposed project occurs. Intensity refers to the severity of the effect, which is examined in terms of the type, quality, and sensitivity of the resource involved, location and extent of the effect, duration of the effect (short- or long-term), and other considerations of context. Beneficial effects are identified and described. When there is no measurable effect, an impact is found not to occur. Intensity of effects is summarized as the degree or magnitude of a potential effect where the effect is described as negligible, moderate, or substantial. Context and intensity are considered together when determining whether an impact is significant under NEPA. Thus, it is possible that a significant adverse effect may still exist when, on balance, the impact has negligible intensity or is even beneficial.

For station planning, land use, and development, the impact assessment terms are defined as follows:

An impact of *negligible* intensity is defined as changes in land use that would be measurable, but not perceptible, and that would be consistent with applicable plans and policies. For land use, this means, for example, changing a commercial-only development to mixed use, but not changing the footprint of the development. The change would be measurable in that the land use would be slightly different but would not be perceptible to the casual viewer, nor would it impact the physical environment. Impacts of *moderate* intensity are defined as those impacts that would require acquisitions but would not change existing adjacent land uses, would not induce growth, and would be consistent with applicable plans. An impact with *substantial* intensity under NEPA is defined as an impact that would result in changes in the existing land use patterns of adjacent lands due to property acquisitions and would not be consistent with applicable plans.

3.13.3.2 CEQA Significance Criteria

The project would result in a significant impact on land use and development if it would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan or specific plan) adopted for the purpose of avoiding or mitigating an environmental effect.
- Cause a substantial change in pattern or intensity of land use incompatible with adjacent land uses.

As indicated above, the HST project is an undertaking of the Authority and FRA, in their capacities as state and federal agencies. As such, it is not required to be consistent with local plans. Nevertheless, the analysis did include a review of the goals and policies of the local land use plans, as well as other plans, to describe the local land use planning context. The above describes the model approach to analyzing the significance of land use impacts that is recommended in Appendix G of the State CEQA Guidelines (i.e., “Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project…”). Local land use plans are not applicable because the HST project is a state and federal government project, and,

as such, is not subject to local governments' jurisdictional issues of land use. Consequently, a city or county is not “an agency with jurisdiction over the project” as described in Appendix G. Therefore, although the EIR/EIS describes the HST project’s consistency with local plans in order to provide a context for the project, inconsistency with such plans is not considered an environmental impact.

The impact analysis was divided into construction direct impacts (LU #1), permanent or long-term direct impacts (LU #2), indirect impacts on adjacent land use (LU #3 and #4), and potential for future increased density and transit-oriented development (TOD) at HST stations (LU #5).

3.13.3.3 Study Area

The study area comprises those areas where the project components, including stations and HMFs, could result in changes or impacts on land use type, density, and patterns of development. For the direct effects on land use, the study area includes the construction footprint for the alternatives and the proposed HMF sites as described in Section 2.2.8.2, HST Heavy Maintenance Facilities. For indirect effects on land use, the study area includes the land outside of the construction footprint. The study particularly focuses on station areas, which have the greatest probability of causing changes or impacts on land use type, density, and patterns of development. The station area study areas were determined by creating a box around the perimeters of the station footprints and extending a 0.5-mile buffer from the edge of the box.

3.13.4 Affected Environment

A full listing of policies and the project’s consistency is included in Appendix 3.13-A, Land Use Plans, Goals, and Policies.

3.13.4.1 BNSF Alternative

Approximately 84 miles of the proposed BNSF Alternative would be located adjacent to or within railroad property. The BNSF Alternative predominantly passes through agricultural and transportation right-of-way areas. Other existing land uses along the alignment include industrial, community facility, agricultural, single-family and multifamily residential, and commercial uses. Refer to Section 3.14, Agricultural Lands, for information about and the location of agricultural lands. The following describes the land uses adjacent to the north-south alignment beginning in Fresno and traveling south to Bakersfield.

In the city of Fresno, the alignment would not be located near the existing BNSF right-of-way; however, it would be located to the west and adjacent to the UPRR right-of-way. From the Fresno County border to Conejo, the BNSF Alternative would generally be adjacent to the existing right-of-way. South of Conejo, the alignment would pass through agricultural land extending in a separate right-of-way. Land uses along the alignment in the city of Fresno are primarily industrial adjacent to the existing right-of-way, but include small amounts of commercial, community facility, and residential uses. Existing land uses along the alignment in unincorporated Fresno County are generally agricultural, industrial, and scattered residential uses.

The alignment through Kings County would not be located in or adjacent to the existing BNSF right-of-way except for the area starting just north of and through Corcoran. The alignment would extend primarily through existing agricultural lands in the county. Existing uses in the city of Corcoran along the alignment include residential, light and heavy industrial, park, and agricultural uses.

In unincorporated Tulare County, the entire alignment in the county would run adjacent to the existing rail corridor. Existing land uses along the BNSF Alternative are primarily agricultural. Other uses along the alignment include public parks and large lot/rural residential.

In Kern County, most of the alignment would be located within or adjacent to existing railroad property. Agriculture is the predominant land use in the unincorporated part of the county north of Wasco. Other land uses along the alignment include industrial, community facility, and residential. In the city of Wasco, existing land uses along the BNSF Alternative include industrial, agriculture, community facility, and commercial land uses. Some residential uses are located nearby. In the city of Shafter, existing land uses along the alignment include transportation facilities, industrial, agriculture, parks, and commercial. Similar to Wasco, some residential uses are located nearby. South of Shafter, agricultural land uses are predominant up to the Rosedale area. Land uses from the Rosedale area to the Bakersfield city limits include residential, commercial, agricultural, and light industrial. The pattern of existing uses along the study area in the Bakersfield city limits is very diverse. Much of the corridor is characterized by industrial uses associated with oil-related businesses and rail yards. The downtown portion of the alignment, however, is predominantly commercial and community facility with considerable areas of vacant and underused land. East of the Downtown Bakersfield Station area, existing land uses are generally residential and service commercial.

3.13.4.2 Other Alignment Alternatives

Hanford West Bypass 1 and Hanford West Bypass 2 Alternatives

The Hanford West Bypass 1 Alternative and Hanford West Bypass 2 Alternative depart from the current BNSF Alternative in the vicinity of East Conejo Avenue, and travel in a generally north-south direction west of the city of Hanford. The alternatives would be located in areas of agricultural land, with the exception of the area near the community of Laton (adjacent to the Fresno County and Kings County border), and the residential enclave of Grangeville (north of the Armona Community Plan Area), and the Kings/Tulare Regional Station–West Alternative.

South of the Kings/Tulare Regional Station–West Alternative, the Hanford West Bypass 1 and Hanford West Bypass 2 alternatives extend through the city of Hanford, including the boundaries of the *Live Oak Master Plan* residential community. Both bypass alternatives generally share the same at-grade profile. North of Jackson Avenue, the Hanford West Bypass 1 and Hanford West Bypass 2 alternatives divide for the purpose of either rejoining the BNSF Alternative or joining the Corcoran Elevated or Corcoran Bypass alternatives.

Hanford West Bypass 1 and 2 Modified Alternatives

Similar to the Hanford West Bypass 1 and Hanford West Bypass 2, the Hanford West Bypass 1 Modified Alternative and Hanford West Bypass 2 Modified Alternative depart from the current BNSF Alternative in the vicinity of East Conejo Avenue and travel in a generally north-south direction west of the city of Hanford. The alternatives would be located in areas of agricultural land, with the exception of the area near the community of Laton (adjacent to the Fresno County and Kings County border), the residential enclave of Grangeville (north of the Armona Community Plan Area), and the Kings/Tulare Regional Station–West Alternative.

South of the Kings/Tulare Regional Station–West Alternative, the Hanford West Bypass 1 Modified and Hanford West Bypass 2 Modified alternatives extend through the city of Hanford, including the boundaries of the residential community described in the *Live Oak Master Plan*. Both bypass alternatives generally share the same below-grade profile. North of Jackson Avenue, the Hanford West Bypass 1 Modified and Hanford West Bypass 2 Modified alternatives divide for the purpose of either rejoining the BNSF Alternative or joining the Corcoran Elevated or Corcoran Bypass alternatives.

The Hanford West Bypass 1 and Hanford West Bypass 1 Modified alternatives differ in both alignment and profile. The Hanford West Bypass 1 Modified Alternative shifts 400 feet west from Flint Avenue and Jackson Avenue and shifts 1,000 feet east from Jackson Avenue to Kansas

Avenue. Additionally, the Hanford West Bypass 1 Alternative is at-grade while the Hanford West Bypass 1 Modified Alternative is a below-grade alternative.

Similarly, the Hanford West Bypass 2 and Hanford West Bypass 2 Modified alternatives differ in both alignment and profile. The alignment differs between the Hanford West Bypass 2 and Hanford West Bypass 2 Modified alternatives as the modified alternative shifts 400 feet west from Flint Avenue and Idaho Avenue and shifts 400 feet east from Idaho Avenue to S. 11th Avenue. Additionally, the Hanford West Bypass 2 alternative is at-grade while the Hanford West Bypass 2 Modified Alternative is a below-grade alternative.

Corcoran Elevated Alternative

The Corcoran Elevated Alternative would begin north of Nevada Avenue (north of Corcoran) and would extend south of Corcoran, joining the BNSF Alternative south of Avenue 144. The Corcoran Elevated Alternative would be located parallel with and to the east of the BNSF Alternative through Corcoran. The Corcoran Elevated would cross from the eastern to the western side of the BNSF near the intersection of Santa Fe Avenue and 4th Avenue. The Corcoran Elevated Alternative would be adjacent to the existing rail right-of-way. Land uses along the Corcoran Elevated Alternative are similar to the BNSF Alternative.

Corcoran Bypass Alternative

The Corcoran Bypass would pass to the east of Corcoran, beginning south of Nevada Avenue and ending near Avenue 144. The Corcoran Bypass includes more agricultural and agricultural-residential land uses, and fewer industrial uses than the comparative BNSF Alternative segment. Other uses would remain similar to the comparative segment. Approximately 5.9 miles would be adjacent to existing rail right-of-way.

Allensworth Bypass Alternative

The Allensworth Bypass begins near Road 64, joining up with the BNSF Alternative near Taussig Avenue. The Allensworth Bypass would be located west of Pixley National Wildlife Refuge (approximately 500 feet), west of Allensworth State Historic Park (approximately 450 feet), and east and west of the Allensworth Ecological Reserve. Approximately 3.2 miles of the Allensworth Bypass would be adjacent to existing rail right-of-way, with the remainder extending through agricultural land uses.

Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass begins near Taussig Avenue, extending though agricultural land to the east of the BNSF Alternative. The Wasco-Shafter Bypass joins the BNSF Alternative to the south near 7th Standard Road. Land uses along the Wasco-Shafter Bypass include agriculture, industrial, and public land uses. Approximately 5.6 miles of the Wasco-Shafter Bypass would be adjacent to BNSF existing rail right-of-way.

Bakersfield South Alternative

The Bakersfield South Alternative begins at SR 58, connecting to the Bakersfield Station, and ends at Oswell. The alignment is generally to the south of the BNSF Alternative. Land uses along the Bakersfield South Alternative include industrial, residential, commercial, public, residential, and agricultural uses. Approximately 5.5 miles of the alternative would be adjacent to existing rail right-of-way.

Bakersfield Hybrid Alternative

The Bakersfield Hybrid Alternative begins at SR 58, proceeds south of the BNSF and Bakersfield South alternatives, crosses the Bakersfield South Alternative before Q Street, and then crosses north of the BNSF Alternative around the intersection of 14th and L streets near the Bakersfield Station. The Bakersfield Hybrid Alternative ends at Oswell Street. Land uses along the Bakersfield Hybrid Alternative include industrial, residential, commercial, public, residential, and agricultural uses. Approximately 6.9 miles of the alternative would be adjacent to existing rail right-of-way.

3.13.4.3 HST Station Area

Downtown Fresno Station

As shown in Figure 3.13-1, the study area surrounding the station in Downtown Fresno is organized around a northwest-southeast street grid, perpendicular to the existing UPRR corridor and SR 99. The proposed station area is generally southwest of the downtown core. Mariposa Street is the main street through the downtown. Other ancillary streets include Fresno, Tulare, and Van Ness.

The Fresno County Courthouse and other community facilities, including a civic and convention center, are located within 0.5 mile of the proposed station area. Industrial, commercial, office, service, and retail uses, as well as some parks, are in the immediate area of the proposed station locations. Chukchansi Park, a minor-league baseball stadium, is located nearby, across H Street. Heavy commercial uses are located close to Chukchansi Park and east of the UPRR corridor, consisting of automotive and construction services. Some higher-density apartment buildings are located downtown 0.5 mile from the proposed stations.

Residential neighborhoods, consisting of single-family and multifamily homes, are located north and west of the proposed station locations. Fresno's Chinatown is located south and southwest of the proposed Fresno Stations. This once-thriving neighborhood has been largely abandoned, with many of its facades boarded up and only a few remaining businesses.

Zoning in the Fresno Station area is shown in Figure 3.13-2. Zoning consists of Commercial, Industrial, Community Facility, Single-Family and Multifamily Residential, and Parks.

As described in Section 3.2, Transportation, Fresno owns and operates 10 parking lots and garages, with a total of more than 4,700 downtown parking spaces for event, monthly, and daily parking. These parking lots and garages provide hourly parking and monthly permits. Most are in the vicinity of H Street and Van Ness Avenue, approximately 0.5 mile, or less, from the proposed station sites. In addition, the city operates approximately 2,200 parking meters in the downtown area. Most of these meters allow 2-hour parking, but some meters have time limits ranging from 30 minutes to 10 hours.

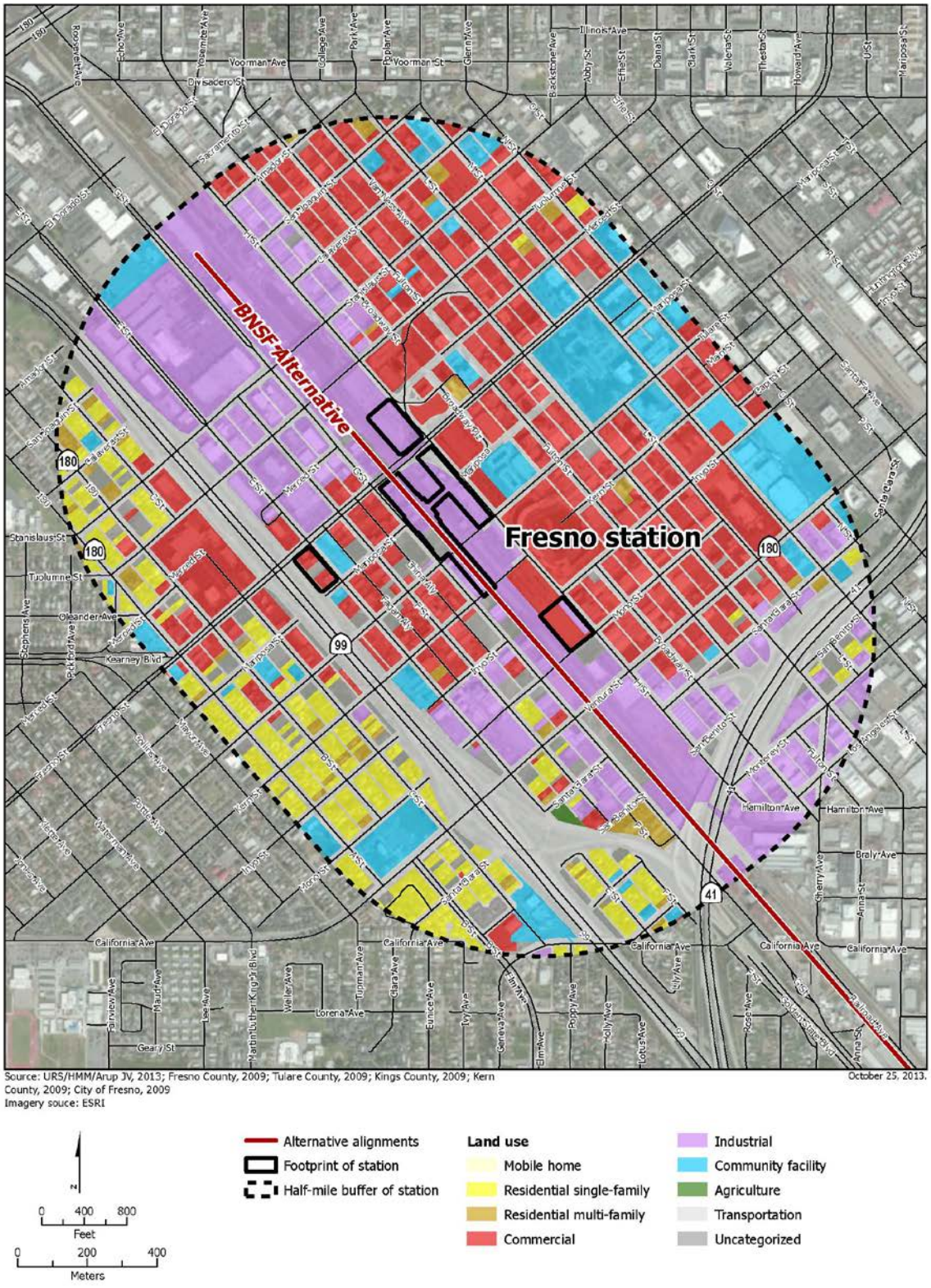

Figure 3.13-1
Existing land use–Fresno station

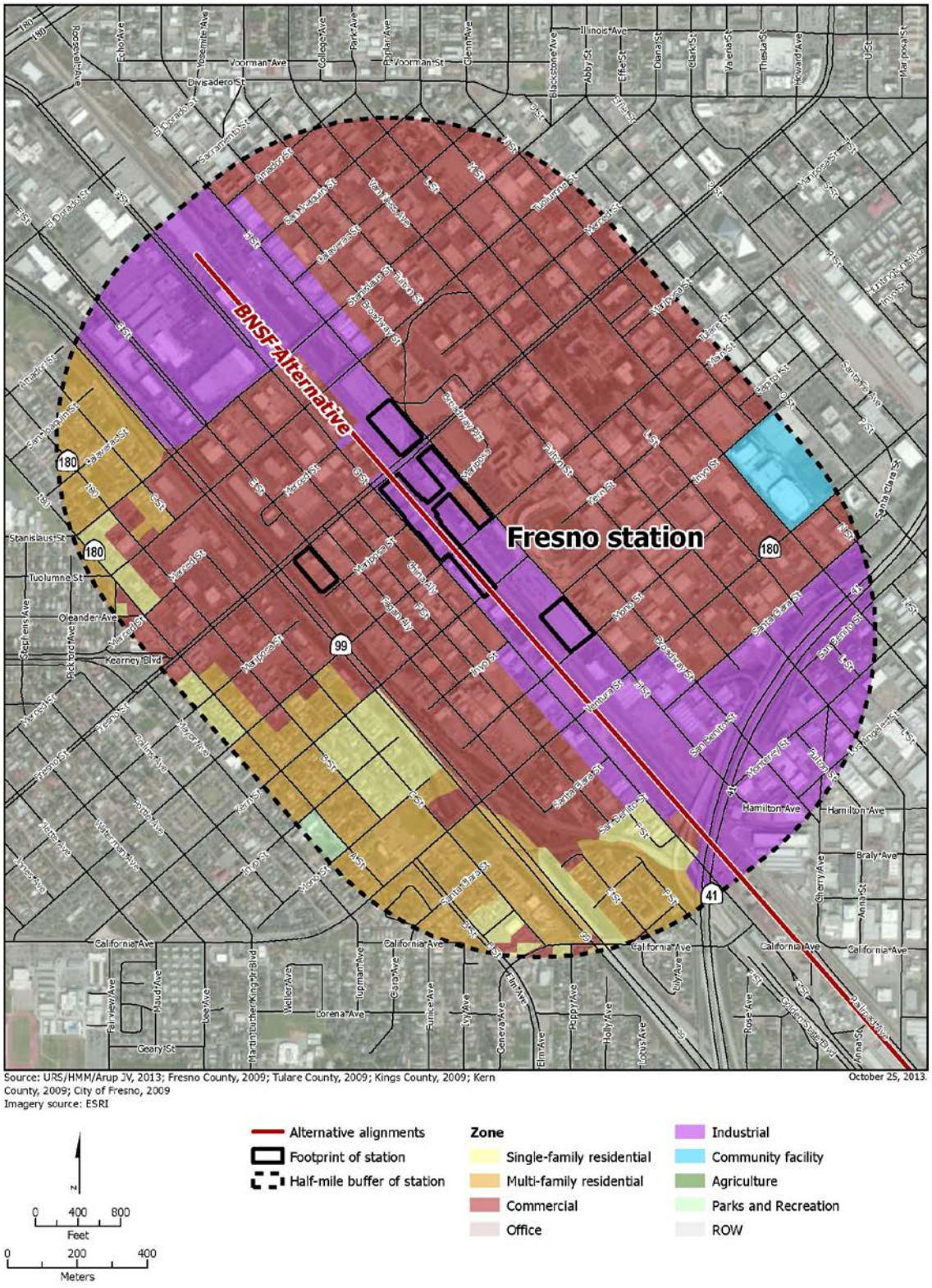

Figure 3.13-2
Current zoning—Fresno station

Kings/Tulare Regional Station–East Alternative

The Kings/Tulare Regional Station–East Alternative would be in Kings County, east of the intersection of SR 43 and SR 198, and approximately 3 miles east of Downtown Hanford. Although the Kings/Tulare Regional Station–East Alternative study area is predominantly within Kings County, a portion of the study area extends into the city of Hanford.

As shown in Figure 3.13-3, existing land uses in the station study area are primarily agricultural and include field crops, orchards, and animal husbandry land uses. The area is characterized by large parcel sizes and some single-family residential buildings. Two residential neighborhoods are located in the study area: one cluster of homes is immediately to the southeast of the proposed station area; and a residential subdivision is approximately 0.5 mile west, across SR 43. Some commercial uses are located west of SR 43. Other uses in the area include industrial, community facility, multifamily residential, and public rights-of-way. The station site would be accessed from SR 43 approximately 0.25 mile to the west. Electrical transmission lines are located on the site. City of Hanford water and sewer lines are located approximately 0.5 and 1 mile from the station site, respectively.

While most of the station study area is currently used for agriculture, the *2035 Kings County General Plan* identifies this area as potentially subject to development in the long term. The station site is located in an area designated in the *2035 Kings County General Plan* as Urban Fringe, in an area that is also designated as a Secondary SOI for the city of Hanford (Kings County Community Development Agency 2010). The "Urban Fringe" Land Use Category is intended to represent residential, commercial, and industrial land uses immediately adjacent to the cities of Corcoran, Hanford, and Lemoore, including the unincorporated land within the city limits of Hanford.

There are no existing parking facilities in the vicinity of the Kings/Tulare Regional Station–East site.

The Local Agency Formation Commission of Kings County (LAFCo of Kings) is required by state law to adopt an SOI for each city and special district in the county. The LAFCo of Kings is unique in that it adopts not just a Primary SOI, but a Secondary SOI as well. The SOI boundaries coincide with areas planned for long-term urban growth in the *2035 Kings County General Plan* (Kings County Community Development Agency 2010). The Land Use Element intends for new development within these spheres to be annexed to the nearest municipal-service-providing entity to prevent urban sprawl and duplication of public services. Additionally, the station area is also located adjacent to and north of a Blueprint Urban Growth Area. Under the coordination efforts of the LAFCo of Kings, a Kings County Blueprint for urban growth was defined that emphasized city-centered urban growth, economic development, and agricultural preservation.

Although the land to the east of SR 43 is located outside of the city limits of Hanford, it is within the City of Hanford General Plan's planning area. Lands to the west and south of the station site within this planning area are designated by the City of Hanford with a variety of Urban Reserve designations, including UR/Service Commercial (UR/SC), UR/Neighborhood Commercial (UR/NC), UR/Planned Commercial (UR/PC), UR/Office (UR/O), UR/Public Facility (UR/PF), UR/Very Low Density (UR/VLD), UR/Low Density (UR/LD), and UR/Medium Density (UR/MD). Other land uses in the area include Planned Highway Development (PHD), Service Commercial (SC), and Open Space (OS). The Urban Reserve designation is a prefix that is applied to land within the City of Hanford's Planning Area Boundary that is either not anticipated to develop within the planning horizon, or will require the resolution of significant infrastructure constraints in the area before any development may occur.

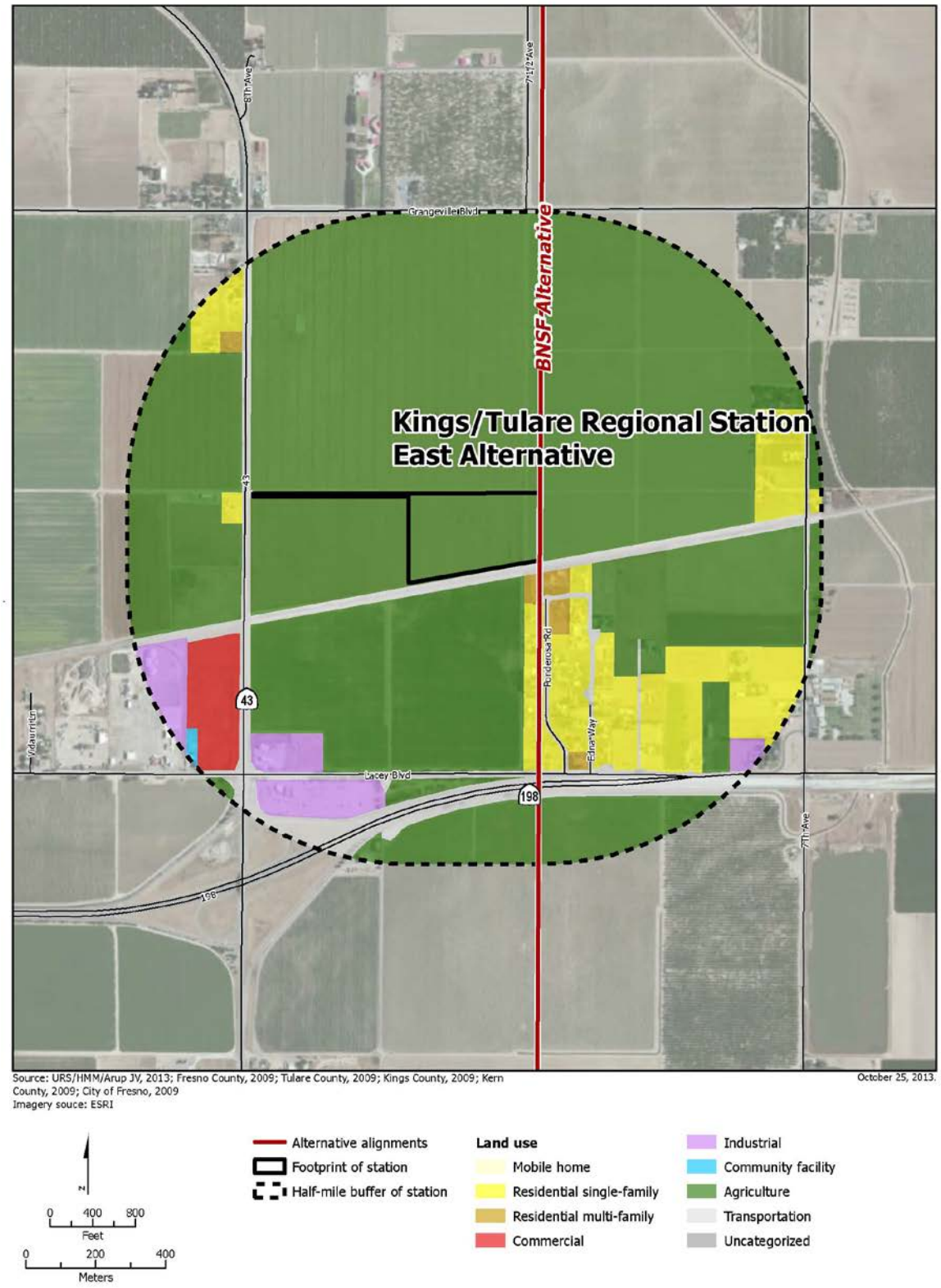

Figure 3.13-3
Existing land use – Kings/Tulare Regional Station–East Alternative

Zoning for the Kings/Tulare Regional Station—East Alternative is shown in Figure 3.13-4. The station area is zoned by Kings County as Industrial; however the area is bounded on three sides by land zoned as agricultural. Other zoning in the area includes Service Commercial, and Rural Residential Estate.

Kings/Tulare Regional Station–West Alternative

The Kings/Tulare Regional Station—West Alternative would be located east of 13th Avenue, between Lacey Boulevard and the San Joaquin Valley Railroad (SJVR) spur, and approximately 3 miles west of Downtown Hanford. The station would be located in Kings County and adjacent to the Armona Community Planning Area. Existing land uses on the station site include agriculture and single-family residences.

As shown in Figure 3.13-5, existing land uses in the station study area are primarily agricultural and include field crops, orchards, and animal husbandry land uses. One industrial facility, a nut processing plant, is located within the proposed station footprint. The area is characterized by large parcel sizes, single-family residential buildings, commercial and industrial uses, and transportation corridors such as the SJVR and SR 198. Four residential neighborhoods are located in the study area: a cluster of homes immediately to the south of the proposed station area and buffered by an existing irrigation channel; a residential subdivision approximately 0.5 mile to the west, across 13th Avenue; and two residential neighborhoods approximately 0.5 mile to the north, across Lacey Boulevard—a residential subdivision and a mobile home park. Some commercial uses are located to the west along Hanford-Armona Road. In addition, the Hanford Mall Shopping Center is located 0.5 mile to the east. Other uses in the area include industrial, community facilities, multifamily residential, and public rights-of-way.

In similar fashion to the Kings/Tulare Regional Station–East Alternative, the Kings/Tulare Regional Station–West Alternative is planned for long-term rather than immediate development. It is located in an area designated in the *2035 Kings County General Plan* as Urban Fringe, in an area also designated as a Primary SOI (Kings County Community Development Agency 2010).

The Kings/Tulare Regional Station–West site is designated in the *2035 Kings County General Plan* as Limited Agriculture, as is all adjacent land to the west, north, and east of the station site (Kings County Community Development Agency 2010). Parcels to the south/southwest of the station site, in the *Armona Community Plan,* are designated Very Low Density Residential, Multiple Commercial, and Reserve Multiple Commercial.

The station site is also located within the City of Hanford Planning Area F, which is described as mostly residential uses. The *City of Hanford General Plan* states that Planning Areas (A to G) were created because each has its own set of opportunities and constraints. The station site is designated Very Low Density Residential (V-LD) and Low Density Residential (LD), and parcels to the south, east and north of the station site within this planning area are designated by the City of Hanford as Very Low Density Residential (V-LD), Low Density Residential (LD), High Density Residential (HD), Public Facility (PF), Service Commercial (SC), Planned Commercial (PC), and Offices (O).

Zoning for the Kings/Tulare Regional Station–West is shown in Figure 3.13-6. The station area is zoned by Kings County as Agricultural and Single-Family Residential.

There are currently no parking facilities in the vicinity of the Kings/Tulare Regional Station–West site.

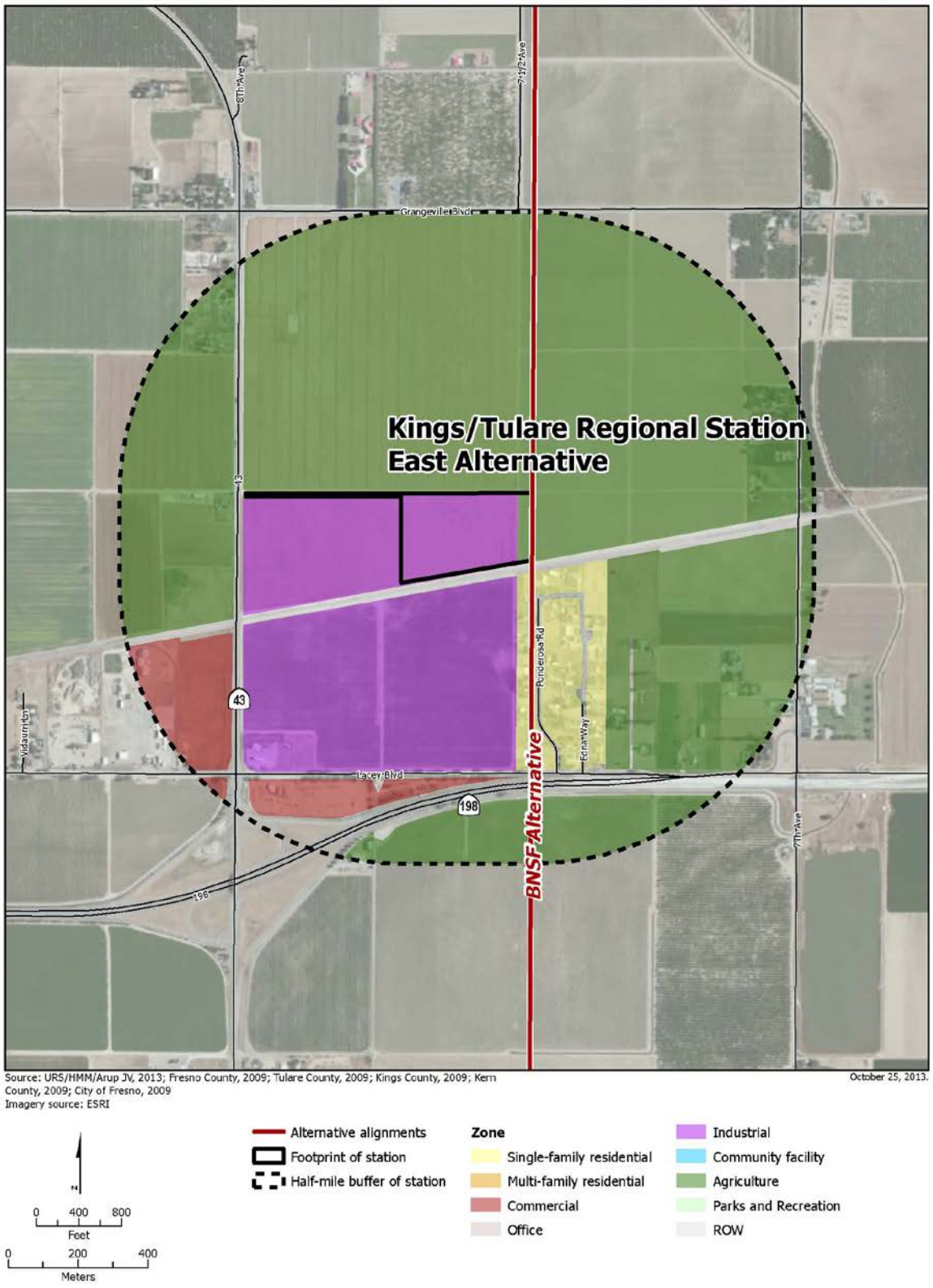

Figure 3.13-4
Current zoning – Kings/Tulare Regional Station–East Alternative

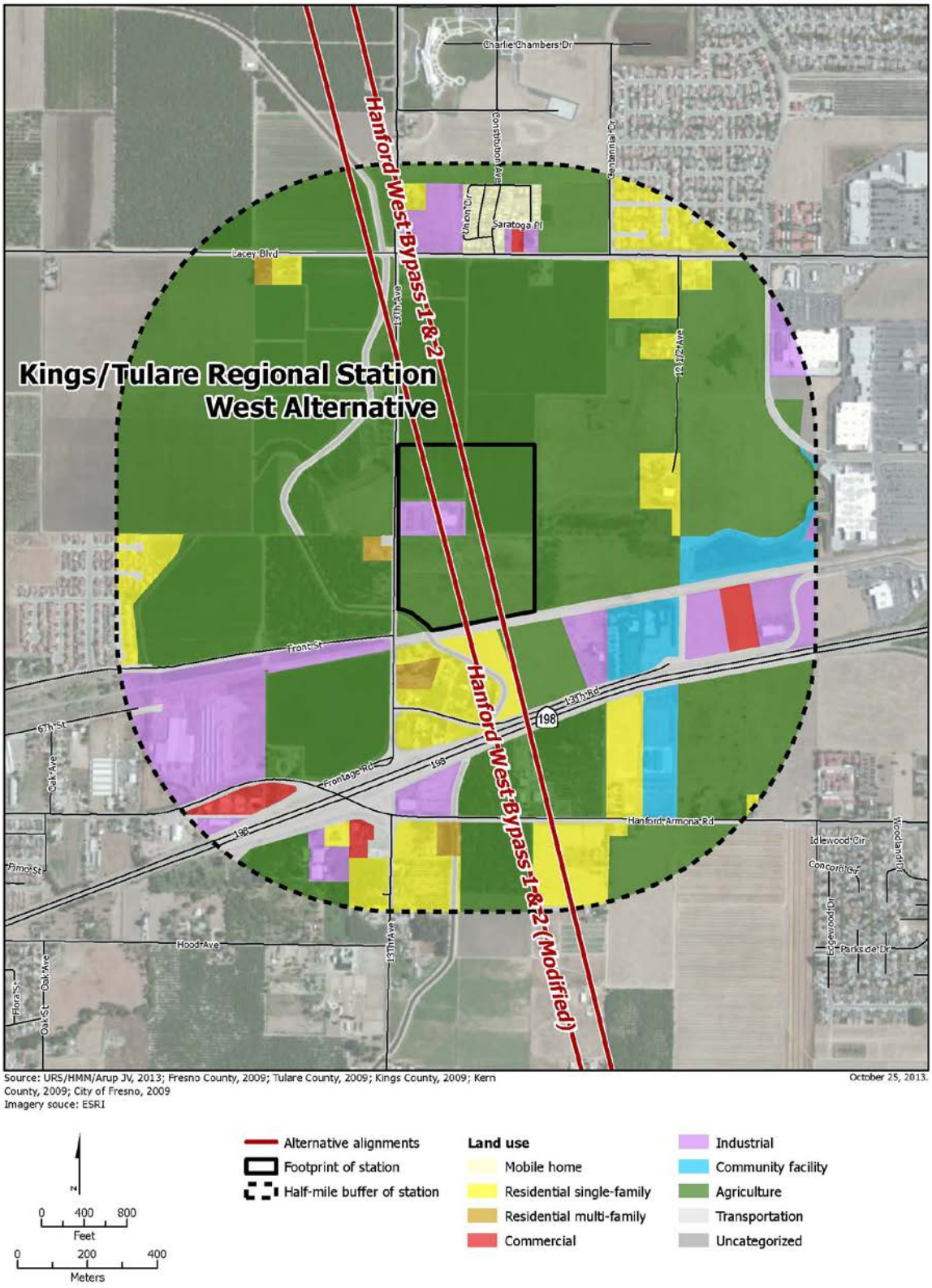

Figure 3.13-5
Existing land use – Kings/Tulare Regional Station—West Alternative

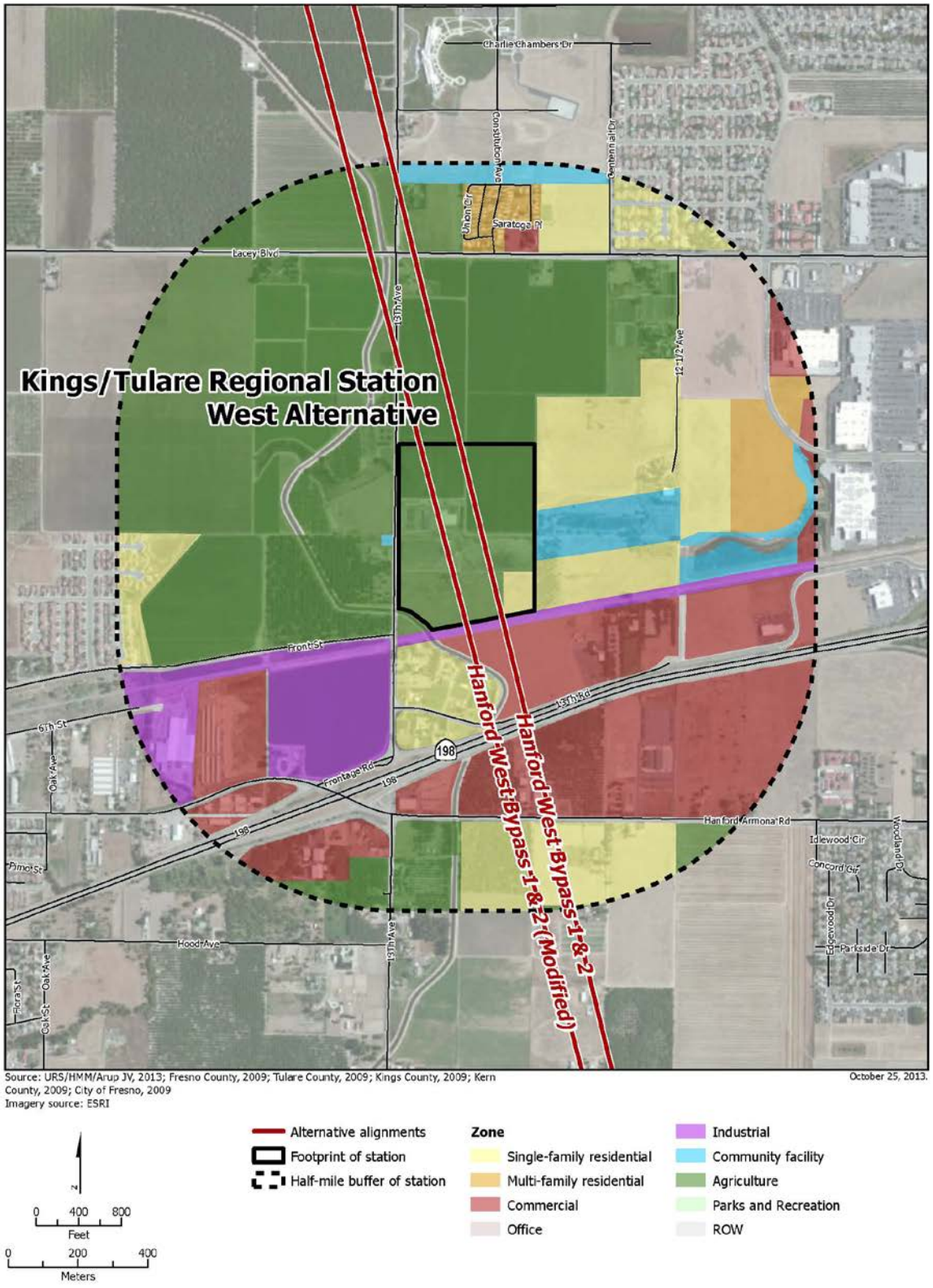

Figure 3.13-6
Current zoning – Kings/Tulare Regional Station–West Alternative

Downtown Bakersfield Station

The proposed sites of the three Bakersfield Station alternatives, Bakersfield Station–South, Bakersfield Station–North, and Bakersfield Station–Hybrid Alternative are in Downtown Bakersfield, between Truxtun Avenue and California Avenue, just west of SR 204. This area serves as a corridor for the existing BNSF railroad that extends through the downtown.

As described in Section 3.2, Transportation, there are four parking lots located in the vicinity of the proposed station sites. All four parking lots are located approximately 0.5 mile, or less, from the proposed station sites.

The Bakersfield Station study area is characterized by commercial, industrial, and community facility uses, as shown in Figure 3.13-7, Existing land use—Bakersfield stations. Downtown Bakersfield, to the northwest of the proposed station sites, includes Bakersfield City Hall, the Kern County government center, and major commercial uses. Several commercial streets are also in the study area, including Chestnut, Union, California, and Truxtun Avenues. A mix of light industrial and offices are generally located east of the sites. Community facility uses are located throughout the station study area and include Beale Memorial Library, the McMurtrey Aquatics Center, numerous parking lots, churches, and government land. The Rabobank Arena, Theater, and Convention Center, Marriott Hotel, and Amtrak station are located near the proposed sites. A hospital, rail yard, and Bakersfield High School are located farther west, outside of the study area.

Figure 3.13-8, Current zoning—Bakersfield stations, shows the zoning for the Bakersfield Station area, which consists of Commercial, Industrial, Single-Family and Multifamily Residential, and Parks. All three alternative station sites overlap and are located within the area bordered by Truxtun Avenue on the north, California Avenue on the south, S Street on the west, and in most cases, Union Avenue on the east (see Figures 2-42 through 2-44 for the layout of the alternative Bakersfield stations).

Residences in the area are generally single-family, with some multifamily units. Most of the residential uses in the station study area are south of California Avenue. Some residential uses are also located west of the proposed sites, between the sites and the rail yard. Residential uses also occur north of the sites, across the existing rail line.

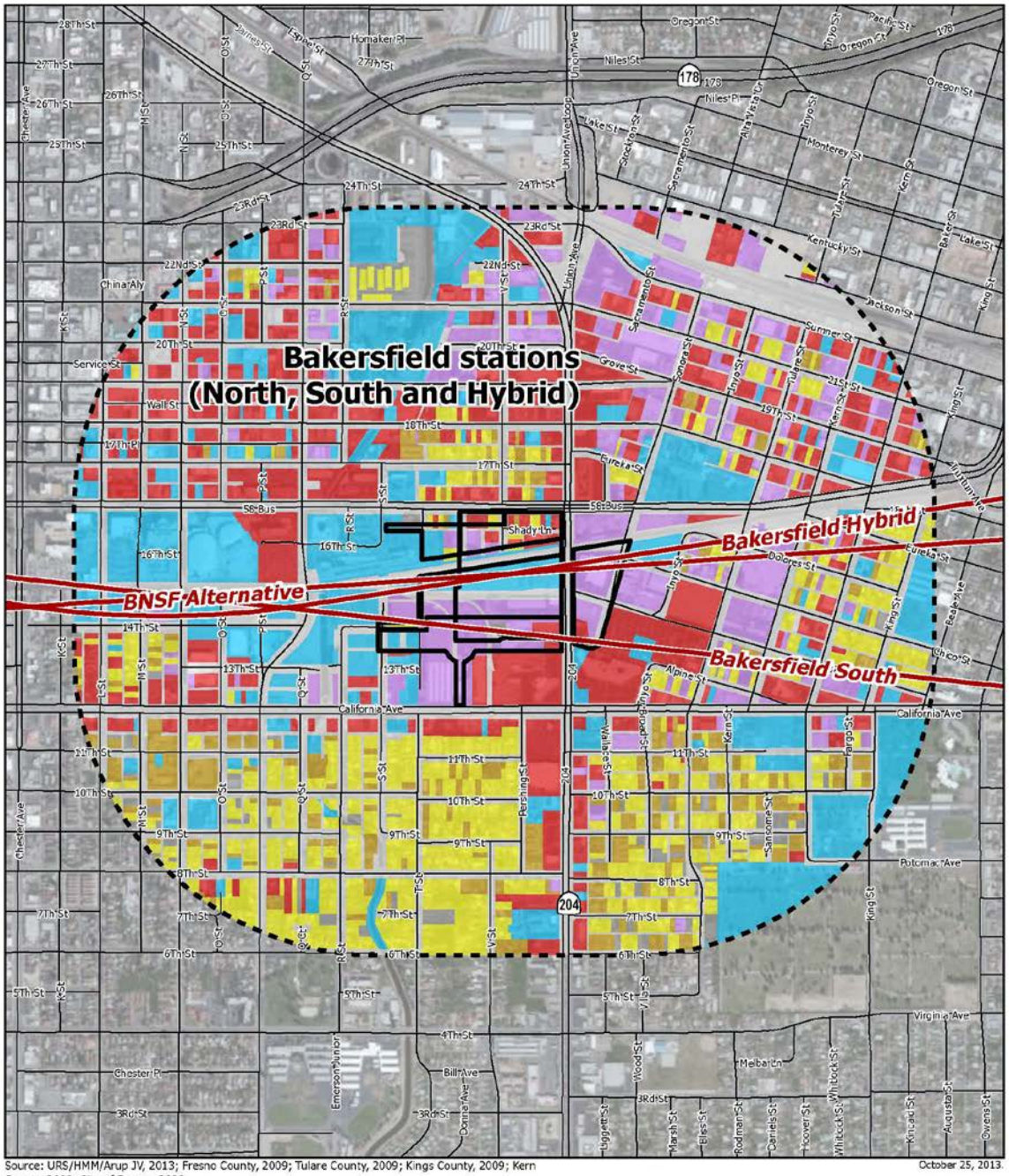

Figure 3.13-7
Existing land use—Bakersfield stations

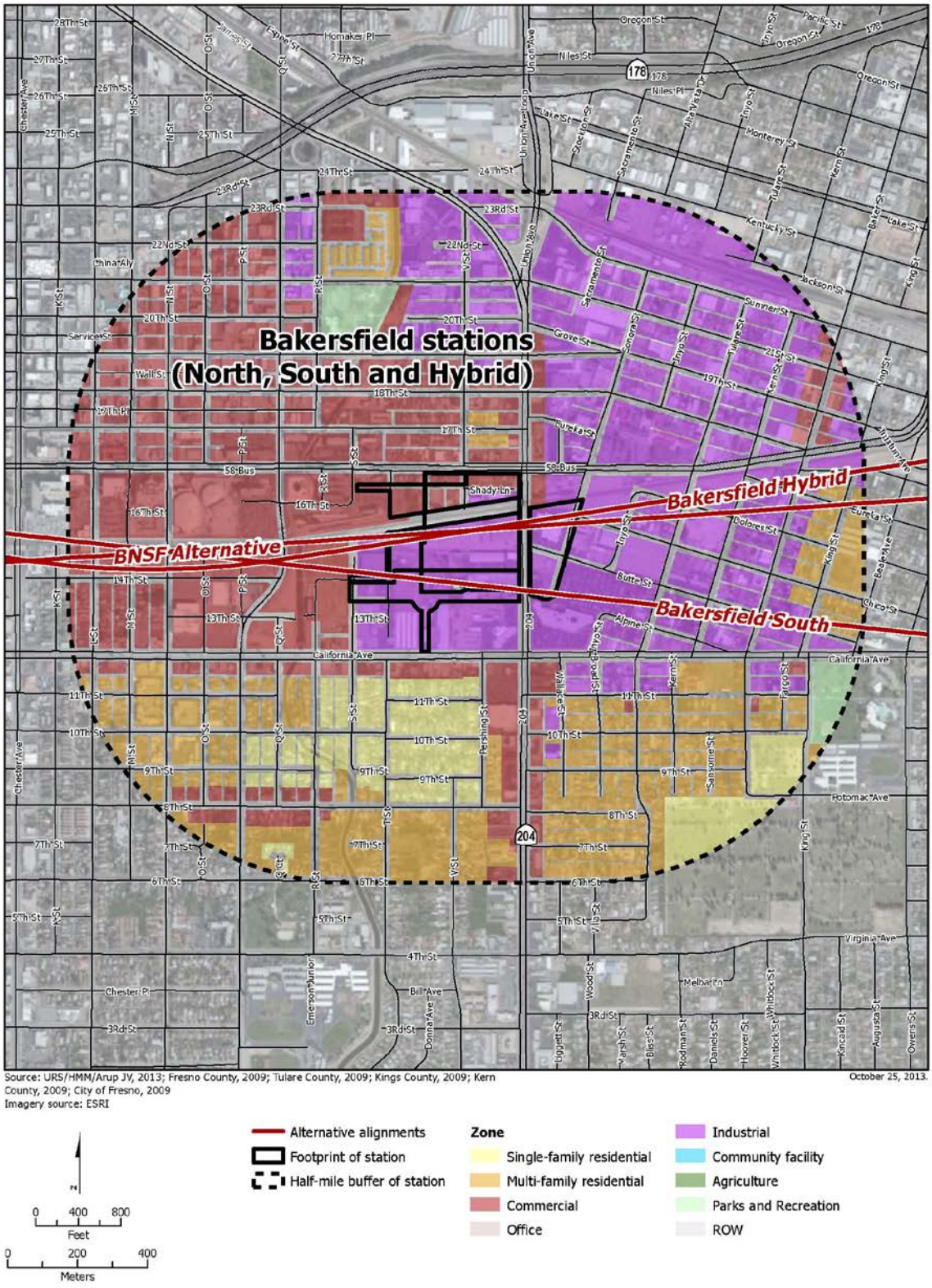

Figure 3.13-8
Current zoning—Bakersfield stations

3.13.4.4 Heavy Maintenance Facility Alternatives

Fresno Works – Fresno HMF Site

The Fresno HMF site is located along the southern edge of the city of Fresno, partially within the city and partially within unincorporated Fresno County. The site is south of SR 99, north and west of the alignments. In the unincorporated area, land uses on the site are predominantly agricultural, and within the city, land uses on the site are predominantly industrial and commercial, including warehouses, a freight truck terminal, slaughterhouse, offices, and retail. Single-family residential neighborhoods are located in the study area as well. The Fresno HMF study area is zoned as Heavy Industrial, Light Manufacturing, and Agriculture.

Kings County – Hanford HMF Site

The Hanford HMF site is southeast of Hanford in unincorporated Kings County. The site is south of Houston Avenue, west of the alignment, and east of SR 43. Existing uses on the site are primarily agricultural. Rural residential single-family homes are also located throughout the area. The Hanford HMF study area is zoned as Light Industrial and Agriculture.

Kern Council of Governments – Wasco HMF Site

The Wasco HMF site is east of SR 43 and south of SR 46, partially within the city of Wasco and partially within Kern County. The site is east of SR 43 and south of SR 46. The existing land uses on the site are entirely agricultural and include row crops. Some residential and light and heavy industrial uses are located immediately adjacent to the west, between the site and SR 43. The Wasco HMF study area is zoned as Heavy Industrial and Agriculture.

Kern Council of Governments – Shafter East HMF Site

The Shafter East HMF site is within the city of Shafter. The site is east of Zachary Avenue and south of Burbank Street. The existing land uses on the site are primarily agricultural and include vineyards and orchards. Some industrial uses exist in the area, including warehouses, distribution centers, and railroad-related uses. Existing uses also include some residential uses, public uses, and rights-of-way for utilities. The Shafter East HMF study area is zoned as Agriculture.

Kern Council of Governments – Shafter West HMF Site

The Shafter West HMF site is located entirely on Kern County lands. Existing land uses on and surrounding the site are agriculture. The Shafter West HMF study area is zoned as Exclusive Agriculture, Limited Agriculture, and Medium Industrial, Precise Development Combining.

3.13.4.5 Planned Development

The areas surrounding the proposed HST stations in Fresno, Hanford, and Bakersfield include underused and vacant parcels and agricultural lands. The cities of Fresno and Bakersfield are planning for new, increased land use density opportunities related to the HST stations in their downtown areas. Although under agricultural cultivation, the area surrounding the Kings/Tulare Regional Station–East is designated as light industrial. Surrounding zoning is Limited Agricultural. Some areas to the south and southwest are zoned as Industrial, Commercial, and Residential (to the southeast) by both Kings County and the City of Hanford. Current plans and policies of the City of Hanford call for development to the west of the city and not to the east.

The Kings/Tulare Regional Station—West station site land use designation within Kings County is Limited Agriculture, as is all adjacent land to the west, north, and east. Plans and policies for land use in the vicinity of the station site continue to be largely focused on agricultural uses. As stated

previously, the Kings/Tulare Regional Station–West Alternative is planned for long-term rather than immediate development. However, as stated in the *California High-Speed Rail Program: Revised 2012 Business Plan*. (Authority2012b.), a Kings/Tulare Regional Station would be constructed in the future as ridership demand dictates.

The current community plan and specific plans for Fresno and Bakersfield call for land use changes in the station areas. Fresno is updating the Fulton Corridor Specific Plan and started preparing a High-Speed Rail Station Area Master Plan in 2012. These plans are in-progress and are planned to be adopted in 2014 (personal communication, Balch, City of Fresno 2014). In the Downtown Fresno Station study area, there are a number of development proposals for primarily mixed-use developments, the largest being a 200-unit development in the Chinatown neighborhood southwest of the station. Other developments are located northwest and northeast of the station and consist of smaller, mixed-use developments, including the completed Fulton Village, consisting of 46-residential units and commercial space, and the Cottages, a 20-unit townhome development. In the Downtown Bakersfield Station study area, recently completed developments include the Maya Cinemas, McMurtrey Aquatic Center, Ice Sports Center, Rabobank Arena, Theater, and Convention Center, Amtrak Station, and Marriott Convention Center. Development proposals for the Downtown Bakersfield study areas include the Mill Creek Linear Park Plan, a mixed-use project that would include 65,000 square feet of commercial development, recreation and neighborhood services, and 115 townhome/condominium units. A small portion of this development has been constructed, with the remainder undeveloped.

3.13.5 Environmental Consequences

3.13.5.1 Overview

The Fresno, Hanford, and Bakersfield downtown centers are developed around historical train stations. The railroad connected the valley to Sacramento, San Francisco, and Los Angeles in the late 1800s, and provided an opportunity for ranchers and farmers to sell their goods to distant markets. The establishment of stations along the railway was a large reason for the settlement and development of the cities in the study area. With the development of the stations, the cities of Fresno and Bakersfield became county seats, and these cities, together with Hanford, became economic and cultural hubs.

As allowed by local plans and as a result of the Authority's adopted Station Area Development Policies, the Fresno and Bakersfield stations would encourage beneficial high-density TOD in those urban areas and discourage the potential for development at urban boundary edges (also called *sprawl*). The Kings/Tulare stations would encourage growth, which would not be consistent with current land uses or land use plans and policies adopted to protect agricultural lands and open space. The presence of an HMF would have greater potential for indirect land use changes than other alternative elements because many of the HMF alternatives would be located in rural areas on the periphery of urban areas that could provide services (i.e., gas stations and restaurants) to HMF employees. (Refer to Section 3.12, Socioeconomics, Communities, and Environmental Justice; Section 3.14, Agricultural Lands; and Section 3.15, Parks, Recreation, and Open Space, for impacts and mitigation measures related to the displacement of residential, businesses, and community facilities and the acquisition of agricultural and park land.)

Although consistency with local plans and policies is not required of the project, the analysis did include a review of the goals and policies of the local land use plans, as well as other plans, to identify conflicts that could result in potential environmental impacts.

3.13.5.2 No Project Alternative

The No Project Alternative includes many planned projects that will likely be implemented by the year 2035. Chapter 2, Alternatives, describes the No Project Alternative. Section 3.19, Cumulative Impacts, provides foreseeable future development projects in the Fresno to Bakersfield Section that could affect land use, including transportation changes. These projects include shopping centers, large residential developments, office buildings/complexes, schools and hospitals, industrial facilities, agricultural business, and transportation projects. Growth would result in congestion, which, based on experience in other parts of California, is likely to pressure expansion and new roadways. Road capacity expansion increases accessibility of adjacent land, and therefore puts pressure on local governments to permit development of those lands.

The projected population growth is anticipated to require many additional acres when the comparable supporting land uses, such as commercial, industrial, schools, parks, other services, and infrastructure, are considered. In other words, population is projected to grow substantially by 2035 (see Table 3.18-2 in Section 3.18, Regional Growth). Based on the California DOF estimates (2010), growth in the four counties is projected to require 86,100 acres to accommodate future housing. With necessary supporting infrastructure, including commercial, office, transportation, parks, and schools, a typical density for an area similar to the San Joaquin Valley would result in the development of 175,800 acres. (Refer to Chapter 2, Alternatives, for complete information on the anticipated growth in the four counties.)

Local jurisdictions are currently working to address what this growth means for their communities. One planning tool is the previously described San Joaquin Valley Blueprint Process that engaged Fresno, Kings, Tulare, and Kern counties. The San Joaquin Valley Blueprint committee adopted smart-growth principles and worked with each county to identify its preferred growth scenario. Although infill development could occur without the HST to act as a catalyst, it is not likely much TOD development would be attracted to the downtown areas of Fresno and Bakersfield with the No Project Alternative. As an example, newly planned residential development proposed in the four counties would primarily be located on currently undeveloped lands planned for that use. The current pattern of low-density development (four to eight dwelling units per acre) would likely persist until an incentive develops to do otherwise.

The RTP/SCSs adopted by the regional agencies pursuant to SB 375 are expected to direct future transportation funding in a manner that will discourage sprawl and encourage more compact growth as a means to reduce greenhouse gas emissions from autos and light trucks. The RTP/SCSs will be integrated with the Regional Housing Needs Allocations that affect city and county general plan housing elements, which would be an impetus to provide new housing opportunities in a manner that encourages more compact growth patterns. However, the extent to which SB 375 will result in compact growth depends upon the extent to which cities and counties decide to reflect the RTP/SCSs in their land use decisions. This factor cannot be known at this time.

The general plans of Fresno and Bakersfield include goals and policies that support development of an HST system to achieve their economic development goals. Overall, the No Project Alternative would not be as strong a catalyst for the development envisioned in these general plans and other planning documents as would the HST alternatives.

3.13.5.3 High-Speed Train Alternatives

Construction period impacts are temporary impacts, including increase in noise and pollutants and disruption in access during the construction period, and temporary use of land for construction staging that would cease when construction is complete. Project operation impacts

are permanent impacts and include acquisition of property, even though that acquisition would occur before construction.

Construction Period Impacts

Common Land Use Impacts

All nine alternatives would affect land uses during construction, although in potentially differing ways. Construction can cause hardship on adjacent businesses and residents, and may temporarily influence land use activities. Also, the project must temporarily acquire land for project construction. However, a land use impact would occur if the use changes or if it is inconsistent with adjacent land uses to the degree that people or the environment would be injured. For instance, a temporary garbage incinerator next to a school would have a land use impact.

Impact LU#1 – Potential for Construction to Alter Land Use Patterns

Construction of project alternatives would result in temporary impacts, including increases in noise levels, dust and other air pollutants, traffic congestion, visual changes, disrupted access to properties and neighborhoods, and temporary use of land for construction fabrication, laydown, and staging areas. Noise, dust, and visual change would inconvenience residents along the alignment alternatives primarily in Corcoran, Wasco, Shafter, and metropolitan Bakersfield, but also rural residents within roughly 0.5 mile of the alternative alignments, who could experience effects from noise, dust, and visual changes. Businesses located primarily in the urban areas crossed by the BNSF, Corcoran Elevated, Bakersfield South, and Bakersfield Hybrid alternatives could experience hardship during construction because of access disruptions and traffic congestion. Some businesses in rural areas of the alternative alignments, particularly those located adjacent to the BNSF Railway on the BNSF Alternative, could also experience hardship during construction because of access disruption.

Approximately 95 miles of the 114-mile Fresno to Bakersfield Section crosses land that is primarily in agricultural production or related land uses (e.g., agricultural product processing and storage facilities). In this agricultural area, approximately 64 miles of the BNSF Alternative is adjacent to the BNSF Railway. Approximately 31 miles of the alignment in Fresno and Kings counties are not adjacent to existing rail lines and crosses primarily agricultural crop lands, although this area includes scattered residential, commercial, and industrial uses.

The BNSF, Hanford West Bypass 1 and 2, Hanford West Bypass 1 and 2 Modified, Corcoran Elevated, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives would require temporary closure of rural roads to construct overpasses and underpasses across the HST (see Section 3.2.5, Transportation, for a description of temporary and permanent road closures). These closures would create some hardships for farm operations by requiring out-of-direction travel for farm equipment and labor but would not alter existing land use patterns. These closures would typically last 8 to 10 months and, in a worst-case scenario, the road could be closed for 18 months. Construction of road crossings would be staggered so that the next adjacent road to the north and south of a road temporarily closed for construction would remain open to accommodate detoured traffic (see Section 3.2.5, Transportation, and Section 3.11.3, Safety and Security). This would typically result in 1 to 2 miles of out-of-direction travel during temporary road closures. However, this temporary disturbance would not constitute a land use impact because the disruption in access due to the road closures would not cause a direct or indirect change in the land use.

The 31 miles of the BNSF Alternative not adjacent to the BNSF Railway, as well as the Hanford West Bypass 1 and Hanford West Bypass 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives primarily cross farmland and

would disrupt farm operations during the construction period. It would be necessary to reconfigure farm infrastructure, such as irrigation systems, and possibly even change row patterns prior to initiation of project construction across farm fields and orchards. Access across farm parcels divided by the alignment would be disrupted during construction. This may result in reduced or no production on affected parcels for one or more growing seasons. Although this would have an economic and agricultural impact, as discussed in Section 3.12, Socioeconomics, Communities, and Environmental Justice, and Section 3.14, Agricultural Lands, property owners would be reimbursed for economic losses caused by project construction. There would be no indirect land use impacts as a result of disruption of farm operations during construction because it would not cause a change in the land use adjacent to the project footprint.

Construction of the project on any of the alignment alternatives would temporarily use approximately 2,000 acres of land outside of the permanent footprint of project facilities for construction staging, laydown, and fabrication areas. These lands would be located both in urban and rural areas, and they would be leased from willing landowners. As discussed in Sections 3.12, Socioeconomics, Communities, and Environmental Justice, and 3.14, Agricultural Lands, existing commercial and agricultural uses of these temporary construction sites would be suspended during the construction period, which in some cases may be up to 5 years (see Section 3.14.5, Agricultural Lands, Environmental Consequences, for additional information on temporary construction sites). The lands would be restored to their pre-construction condition at the end of construction and returned to the landowner, including restoring access, utility connections, and other infrastructure (see Section 3.14, Agricultural Lands, for more details). Because lands used for temporary construction would be acquired from willing landowners and restored to their previous condition at the end of the construction period, long-term land uses would not change, adjacent land uses would not change, and there would not be a substantial change in the long-term pattern or intensity of land use incompatible with adjacent land uses. For these reasons, the effect of the temporary use of land for project construction staging, laydown, and fabrication would have moderate intensity under NEPA, and the impact would be less than significant under CEQA.

As discussed above, project construction would cause temporary and intermittent disruption of access to some properties, temporarily inconvenience nearby residents, and temporarily change the intensity of agricultural operations on some lands along 31 miles of the BNSF Alternative and along the Hanford West Bypass 1 and 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives. Although this would result in a short-term land use that is incompatible with adjacent land uses, it would not cause adjacent land to change uses. For this reason, construction effects would have moderate intensity under NEPA, and the impact would be significant under CEQA.

Project Impacts

Common Land Use Impacts

All nine project alignment alternatives would result in permanent conversion of land in other uses to transportation-related uses. For all alignment alternatives, approximately 30% of the land that would be permanently used for the HST tracks and supporting facilities (e.g., traction power and communication systems) is currently in similar uses (i.e., rights-of-way and transportation) or is vacant land; 60% is in agricultural uses; and about 10% is in residential, commercial, and industrial uses.

The HST station alternatives would also result in permanent conversion of land in other uses to transportation-related uses. In Fresno, the HST station alternatives are located on land currently in industrial and commercial uses. In Bakersfield, the HST station alternatives are located on land in residential, industrial, commercial, and community facility uses. The Kings/Tulare Regional

Station–East Alternative is currently used for agriculture, and the Kings/Tulare Regional Station–West Alternative is currently used for agricultural and industry.

All of the HMF alternative sites are located on agricultural lands. Location of the HMF in the Fresno to Bakersfield Section would permanently convert this agricultural land to a transportation-related use.

The Fresno and Bakersfield HST stations could potentially increase land use densities and TOD in Downtown Fresno and Bakersfield. Increased development density in and around the Downtown Fresno and Downtown Bakersfield HST stations would provide public benefits beyond the access benefits of the system itself. These include promotion of infill development and job opportunities, and more affordable housing. Another positive outcome could be a revitalized downtown that would attract residents whether or not they ride the HST (See Section 3.18, Regional Growth, for further details).

The Kings/Tulare Regional Station–East and Kings/Tulare Regional Station–West alternatives could stimulate transportation-oriented commercial development in areas presently used for agriculture. Zoning for some of the land adjacent to these two station sites is compatible with commercial development. However, for this to occur, the City of Hanford would have to annex this unincorporated land and expand existing sewer and water infrastructure, particularly for the Kings/Tulare Regional Station–East Alternative. This development is not currently planned by Hanford, but is within the city's Sphere of Influence for future growth. Lands within the city's Sphere of Influence clearly coincide with areas planned for urban growth, and new development within these spheres would require annexation to the nearest municipal service providing entity to prevent urban sprawl and duplication of public services.

Impact LU#2 – Permanent Conversion of Existing Land Uses to Transportation Use

Table 3.13-1 summarizes the estimated acreage for each land use that the nine alignment alternatives would convert to transportation-related uses. The table includes impacts for the BNSF Alternative in its entirety, as well as impacts for each of the other eight alternatives, and the difference in land use impacts between these alternatives and the corresponding segment of the BNSF Alternative (in parentheses). The estimated acreage was calculated in GIS using the permanent footprint of the nine alignment alternatives.

The land acquired for the project would constitute a small portion of the total agricultural, industrial, residential, commercial, and public land in the four counties. The footprint of the entire project would require approximately 4,100 acres, or less than 0.01% of the four-county area. Table 3.13-2 provides the acreage of land by county that would be used for the project alternatives.

Overall, the effect of the permanent conversion of land for the project would have moderate intensity under NEPA. The project would require acquisition of land that is not currently in transportation uses; however, it would not change existing adjacent land uses except possibly at the Kings/Tulare Regional Station alternative sites. The HST tracks and supporting facilities would not inhibit continuation of existing uses on adjacent lands, nor would they induce growth. The HST stations in downtown Fresno and Bakersfield could stimulate residential and commercial development on adjacent land that is consistent with current uses and land use plans and policies. The Kings/Tulare Regional Station could stimulate transportation-related commercial development consistent with Kings County and City of Hanford plans and policies. The Kings/Tulare Regional Station-West Alternative is within the City of Hanford's Primary Sphere of Influence, and the Kings/Tulare-East Alternative is with the City of Hanford's Secondary Sphere of Influence. As discussed in Section 3.18.5, Regional Growth, the HST would raise the projected

Table 3.13-1
Permanent Land Use Impacts by Alternative (acres)

Alternative	Single Family	Multi-family	Commer-cial	Industrial	Community Facilities	Agricultural	Other*	Total Acres
BNSF	132	10	70	179	334	2,897	523	4,145
Hanford West Bypass 1	35 (8)	1 (-1)	0 (-2)	12 (-1)	31 (-27)	647 (-263)	126 (20)	853 (-266)
Hanford West Bypass 1 Modified	44(17)	2 (0)	0 (-2)	13 (0)	26 (-32)	710 (-199)	131 (25)	928 (-191)
Hanford West Bypass 2	33 (6)	1 (-1)	4 (2)	11 (-3)	72 (14)	615 (-294)	125 (19)	863 (-256)
Hanford West Bypass 2 Modified	44 (17)	2 (0)	5 (3)	11 (-2)	92 (34)	719 (-190)	130 (24)	1,005 (-114)
Corcoran Elevated	3 (0)	0 (-1)	26 (8)	21 (-8)	69 (40)	226 (-65)	11 (-6)	356 (-32)
Corcoran Bypass	13 (10)	3 (2)	2 (-16)	7 (-22)	88 (58)	297 (5)	20 (4)	429 (41)
Allensworth Bypass	1 (-13)	0 (0)	0 (0)	0 (0)	44 (2)	486 (22)	25 (-45)	556 (-32)
Wasco-Shafter Bypass	18 (-13)	0 (-1)	12 (-8)	2 (-44)	26 (-61)	555 (-55)	11 (-48)	625 (-230)
Bakersfield South	35 (1)	7 (1)	21 (5)	18 (-2)	36 (-77)	12 (5)	78 (14)	208 (-53)
Bakersfield Hybrid	32 (-2)	5 (-1)	18 (2)	19 (-1)	40 (-73)	12 (5)	75 (11)	200 (-61)

Notes: Numbers in parentheses illustrate the difference in acres of land use impact that would occur for each alternative as compared to the corresponding segment of the BNSF Alternative.

Includes all project components. Numbers may vary slightly due to rounding up.
*Other includes right-of-way, transportation, and vacant lands.

Table 3.13-2
Land Use Designations Permanently Affected by Each Alternative (acres)[a]

Land Use Designation	Alternative Alignment										
	BNSF	Hanford West Bypass 1	Hanford West Bypass 1 Modified	Hanford West Bypass 2	Hanford West Bypass 2 Modified	Corcoran Elevated	Corcoran Bypass	Allensworth Bypass	Wasco-Shafter Bypass	Bakersfield South	Bakersfield Hybrid
Fresno County											
Single Family	29	3	3	3	3	-	-	-	-	-	-
Multi-family	1	-	-	-	-	-	-	-	-	-	-
Commercial	7	-	-	-	-	-	-	-	-	-	-
Industrial	70	5	5	5	5	-	-	-	-	-	-
Community Facilities	<1	-	-	-	-	-	-	-	-	-	-
Agricultural	617	132	132	128	132	-	-	-	-	-	-
Other*	189	39	41	39	41	-	-	-	-	-	-
Total	**915**	**175**	181	**175**	181	-	-	-	-	-	-
Kings County											
Single Family	22	33	41	30	41	-	13	-	-	-	-
Multi-family	2	1	2	1	2	-	3	-	-	-	-
Commercial	20	0		4	5	26	2	-	-	-	-
Industrial	42	8	8	6	7	21	7	-	-	-	-
Community Facilities	82	31	26	72	92	65	88	-	-	-	-
Agricultural	765	519	578	487	587	118	196	-	-	-	-
Other*	95	87	90	86	89	8	10	-	-	-	-
Total	**1028**	**678**	747	688	824	238	**318**	-	-	-	-
Tulare County											
Single Family	15	-	-	-	-	2	-	1	-	-	-
Multi-family		-	-	-	-	-	-	-	-	-	-
Commercial	7	-	-	-	-	-	-	-	-	-	-
Industrial		-	-	-	-	-	-	-	-	-	-
Community Facilities	51	-	-	-	-	4	-	36	-	-	-

Table 3.13-2
Land Use Designations Permanently Affected by Each Alternative (acres)[a]

Land Use Designation	Alternative Alignment										
	BNSF	Hanford West Bypass 1	Hanford West Bypass 1 Modified	Hanford West Bypass 2	Hanford West Bypass 2 Modified	Corcoran Elevated	Corcoran Bypass	Allensworth Bypass	Wasco-Shafter Bypass	Bakersfield South	Bakersfield Hybrid
Agricultural	682	-	-	-	-	108	101	237	-	-	-
Other*	52	-	-	-	-	3	11	8	-	-	-
Total	**808**	-	-	-	-	**118**	**112**	**282**	-	-	-
Kern County											
Single Family	66	-	-	-	-	-	-	-	18	35	32
Multi-family	6	-	-	-	-	-	-	-		7	5
Commercial	36	-	-	-	-	-	-	-	12	21	18
Industrial	66	-	-	-	-	-	-	-	2	18	19
Community Facilities	200	-	-	-	-	-	-	8	26	36	40
Agricultural	832	-	-	-	-	-	-	250	555	12	12
Other*	186	-	-	-	-	-	-	17	11	78	75
Total	**1393**	-	-	-	-	-	-	**274**	**625**	**208**	**200**
Total Impacts on All Counties by Land Use Designation											
Total	**4,145**	**853**	**928**	**863**	**1,005**	**356**	**429**	**556**	**625**	**208**	**200**

Notes:
[a] Acreages are rounded to the nearest whole number.
Where there is no value, that land use type would not be affected by the alternative in that county.
Where there is a zero value, less than half an acre of that land use type would be affected by the alternative.
*Other includes right-of-way, transportation, and vacant lands.

population and employment growth of the region by about 3%, and communities in the region have adequate space to accommodate planned growth and HST-induced growth within their current spheres of influence. Approximately 85 miles of the 114-mile-long BNSF Alternative are located adjacent to the existing UPRR and BNSF Railway right-of-way; therefore, a large portion of this alternative is consistent with current land use plans and policies. Approximately 31 miles of the BNSF Alternative and the Hanford West Bypass 1 and 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives cross lands largely designated and zoned for agricultural use. The project would not be consistent with land use plans and policies in these areas. In Bakersfield, much of the BNSF, Bakersfield South, and Bakersfield Hybrid alternatives are adjacent to the BSNF Railway and UPRR. However, portions of all three alternatives cross lands designated and zoned for residential, commercial, and community facilities uses. The Bakersfield South and Bakersfield Hybrid alternatives would not be consistent with land use plans and policies in these areas.

The permanent conversion of land for the project, which would result in a change in intensity of uses, would result in a significant land use impact under CEQA. As indicated above, about 60% of the land converted by the project to transportation uses is currently used for agriculture. The project would represent a substantial change in the intensity of the use of this land. About 95 miles of the BSNF Alternative passes through agricultural land. For about 31 miles the BNSF Alternative is not adjacent to existing railroad right-of-way, resulting in a change in the intensity of land use. The Hanford West Bypass 1 and 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass cross lands used for agriculture. These alternatives would substantially increase the intensity of the use of the land but would not change adjacent land uses. Existing adjacent agricultural land would continue in agricultural use, and the HST alternatives would not have an indirect effect on adjoining agricultural uses (see Section 3.14, Agricultural Lands). The Kings/Tulare Regional Station alternatives would also be located on land used primarily for agriculture but also zoned for industrial use for part of the Kings/Tulare Regional Station site. The Kings/Tulare Regional Station-East Alternative is also zoned for industrial use. Conversion of this land would substantially change the intensity and pattern of land uses, and have a growth-inducing impact on adjacent land uses, although growth is anticipated in existing land use policies.

BNSF Alternative

In the city of Fresno, the BNSF Alternative is adjacent to the UPRR railroad until about East Jensen Avenue where it would curve south and run parallel to the BNSF Railway south of the city, beginning at East Malaga Avenue. While the alignment would convert commercial and industrial lands adjacent to the UPRR in the city of Fresno to transportation uses within the project footprint, these acquisitions would not change existing adjacent land uses or substantially change the pattern and intensity of the land use because the project would not induce development along the alignment. Development would be focused around the HST stations and HMF. The BNSF Alternative would be compatible with adjacent land uses in this area, and would be generally consistent with land use plans and policies. The presence of the HST would not change existing adjacent land uses.

South of Fresno, the BNSF Alternative would be adjacent to the BNSF Railway through largely agricultural land with scattered industrial, commercial, and residential land uses to approximately Conejo, a small agricultural center about 12 miles south of the city of Fresno. In this segment of the alignment, the project would convert agricultural, commercial, and residential uses to transportation uses within the project footprint, substantially increasing the intensity of the use of the land. Because the alignment would be adjacent to the BNSF Railway and land uses in this area were developed around the BNSF Railway, it would be compatible with adjacent land uses and generally be consistent with existing plans and policies. The presence of the HST would not

change existing adjacent land uses, because the project would not induce development along the alignment. Development would be focused around the HST stations and HMF.

At Conejo, the BNSF Alternative would diverge from the BNSF Railway, swinging east around the city of Hanford and rejoining the BNSF Railway just north of the city of Corcoran. In this segment, the alignment largely crosses agricultural land with some residential and industrial uses. The HST would substantially increase the intensity of the use of the land. It would not alter the use of adjacent lands for agriculture, adjacent lands would remain in agricultural uses. As described in Section 3.14, although the HST would convert agricultural land to other uses, it would not have an indirect effect on the use of adjoining agricultural lands. However, because of this increase in the intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the BNSF Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA. The mitigation measure adopted (AG-MM#1) is designed to maintain the pattern and intensity of agricultural land use in the Central Valley because it will prioritize the acquisition of willing seller easements on lands that are adjacent to other protected agricultural lands.

The BNSF Alternative would follow the BNSF Railway from north of Corcoran south through Wasco and Shafter to the Bakersfield HST station site. In Corcoran, Wasco, and Shafter, the BNSF would convert commercial and industrial uses adjacent to the BNSF Railway to transportation uses within the project footprint. This would not substantially change the pattern and intensity of the use of the land and would be largely compatible with adjacent land uses and existing plans and policies. The presence of the HST would not change existing adjacent land uses, because the project would not induce development adjacent to the alignment. Development would be focused around the HST stations and HMF.

In metropolitan Bakersfield, the BNSF Alternative follows the BNSF Railway through a densely developed residential area from Hageman Road to Coffee Road, where there is already an incompatibility between the existing freight rail line and residential uses. This incompatibility would be enhanced by the HST because the project would increase the intensity of the use of the land, and it would be incompatible with adjacent residential land uses. From Coffee Road to SR 99 east of the Kern River, the BNSF Alternative would convert industrial and commercial uses to transportation uses. In this area, the project would increase the intensity of the use of the land, but it would be compatible with adjacent land uses and with existing land use plans and policies. East of SR 99 to the project terminus at the Bakersfield HST station, the BNSF Alternative remains close to the BNSF Railway; however, the existing freight rail is not compatible with many adjacent land uses in this area, including Bakersfield High School, community facilities flanking Truxtun Avenue, and the partially redeveloped Mill Creek area. The BNSF Alternative would enhance this incompatibility by converting residential, commercial, and community facility uses and intensifying the transportation use of the area. East of the Bakersfield HST station to Oswell Street, the BNSF Alternative would convert residential, commercial, and industrial uses to transportation uses. The project would increase the intensity of the use of the land and would be incompatible with adjacent land uses. However, the project would not change existing adjacent land uses.

In the rural area from Corcoran to Bakersfield, the BNSF Alternative would be adjacent to the BNSF Railway. It would convert agricultural uses to transportation uses within the footprint. Because the alignment would be adjacent to the BNSF Railway, it would be compatible with adjacent land uses and generally consistent with existing plans and policies. The presence of the HST would not change existing adjacent land uses.

Over about 70% of its length, the BNSF Alternative would convert agricultural, residential, industrial, and commercial uses to transportation uses within the project footprint. In most areas where the alignment remains close to the BNSF Railway and in metropolitan Bakersfield where

land uses in these areas were developed around the BNSF Railway, the BNSF Alternative would be compatible with adjacent land uses and consistent with land use plans and policies. In Fresno and Kings counties where the alignment diverges from the BNSF Railway and is adjacent to agricultural lands, the HST would convert agricultural land to other uses, and it would not have an indirect effect on the use of adjoining agricultural lands. However, because of this increase in the intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the BNSF Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA. The mitigation measure adopted (AG-MM#1) is designed to maintain the pattern and intensity of agricultural land use in the Central Valley, as it will prioritize the acquisition of willing seller easements on lands that are adjacent to other protected agricultural lands. In parts of metropolitan Bakersfield, the alignment would be largely incompatible with adjacent land uses and existing land use plans and policies. However, the project would not induce development along the alignment adjacent to the project footprint. Development would be focused around the HST stations and HMF. For these reasons, the land use effects of the BSNF Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA.

Hanford West Bypass 1 and 2 Alternatives

The Hanford West Bypass 1 and 2 alternatives, both the at-grade and the below-grade options, would primarily be located in a new right-of-way through agricultural lands. These alternatives would convert more residential, industrial, and agricultural land to transportation uses than the BNSF Alternative. While an HST on these alternative alignments would not change existing uses of adjacent lands or induce growth, as adjacent lands would remain in agricultural use. As described in Section 3.14, although the HST would convert agricultural land to other uses, it would not have an indirect effect on the use of adjoining agricultural lands. However, because of this increase in the intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the Hanford West Bypass 1 and 2 alternatives would have substantial intensity under NEPA, and the impact would be significant under CEQA. The mitigation measure adopted (AG-MM#1) is designed to maintain the pattern and intensity of agricultural land use in the Central Valley, as it will prioritize the acquisition of willing seller easements on lands that are adjacent to other protected agricultural lands.

Hanford West Bypass 1 and Bypass 2 Modified Alternatives

Similar to the Hanford West Bypass 1 and 2 alternatives, the Hanford West Bypass 1 and 2 Modified alternatives, would primarily be located in a new right-of-way through agricultural lands. These alternatives would convert more residential, industrial, and agricultural land to transportation uses than the BNSF Alternative. An HST on these alternative alignments would not change existing uses of adjacent lands or induce growth, and would not have an indirect effect on the use of adjacent agricultural lands. However, because of the increase in intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the Hanford West Bypass 1 and 2 Modified alternatives would have substantial intensity under NEPA, and the impact would be significant under CEQA.

Corcoran Elevated Alternative

The Corcoran Elevated Alternative would be located parallel and to the east of the BNSF Alternative through Corcoran. Like the BNSF Alternative, the Corcoran Elevated Alternative would convert agricultural, industrial, public, commercial, and residential uses to transportation uses. While this would change the pattern of the use of the land, within the city of Corcoran, it would not substantially change land use intensity because most of the land used by the project is currently in transportation-related industrial and commercial uses. Outside the city of Corcoran, land uses changes would be the same as under the BNSF Alternative. This alternative would also

be largely compatible with adjacent land uses and existing plans and policies because it is located in an area historically used for industrial and commercial operations that rely on rail transportation. The presence of the HST would not change existing adjacent land uses. For these reasons, the land use effect of the Corcoran Elevated Alternative would have moderate intensity under NEPA, and the impact would be less than significant under CEQA.

Corcoran Bypass Alternative

The Corcoran Bypass Alternative would extend through areas of agricultural land uses in a new right-of-way. This alternative would convert more agricultural uses and fewer industrial uses than the BNSF Alternative. This would increase the intensity of the use of the land, but would not change existing uses of adjacent lands, as adjacent lands would remain in agricultural use. It would not induce growth that would cause further conversion of adjacent agricultural lands, because the project would not induce development along the alignment on adjacent lands. Development would be focused around the HST stations and HMF. (See Section 3.18, Regional Growth, for further discussion about development around the proposed stations.) However, because of this increase in the intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the Corcoran Bypass Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA. The mitigation measure adopted (AG-MM#1) is designed to maintain the pattern and intensity of agricultural land use in the Central Valley, as it will prioritize the acquisition of willing seller easements on lands that are adjacent to other protected agricultural lands.

Allensworth Bypass Alternative

The Allensworth Bypass Alternative would branch to the east just past the Pixley National Wildlife Refuge, and would bypass Allensworth State Historic Park and Allensworth Ecological Reserve. Like the BNSF Alternative, the Allensworth Bypass would convert agricultural land, although to a greater extent than the BNSF Alternative. Unlike the BNSF Alternative, this alternative would not convert any land at the Allensworth Ecological Reserve or at Allensworth State Historic Park. The Allensworth Bypass Alternative would create a new right-of-way through agricultural land. This would increase the intensity of the use of the land, but adjacent lands would continue in agricultural use. This alternative would not change existing uses of adjacent lands, and it would not induce growth that would cause further conversion of adjacent agricultural lands. However, because of this increase in the intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the Allensworth Bypass Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA. The mitigation measure adopted (AG-MM#1) is designed to maintain the pattern and intensity of agricultural land use in the Central Valley, as it will prioritize the acquisition of willing seller easements on lands that are adjacent to other protected agricultural lands.

Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass Alternative would primarily be located in a new right-of-way through agricultural lands. The Wasco-Shafter Bypass Alternative would convert less industrial but more agricultural land than the BNSF Alternative. The Wasco-Shafter Bypass Alternative would increase the intensity of the use of the land, but adjacent lands would remain in agricultural use. This alternative would not be compatible with land use plans and policies. This alternative would not change existing uses of adjacent lands and it would not induce growth causing further conversion of adjacent agricultural lands. However, because of this increase in the intensity of land use, this analysis adopted a conservative approach from a land use perspective and found that the effect of the Wasco-Shafter Bypass Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA. The mitigation measure adopted (AG-MM#1) is designed to maintain the pattern and intensity of agricultural land use in the Central Valley, as it

will prioritize the acquisition of willing seller easements on lands that are adjacent to other protected agricultural lands.

Bakersfield South Alternative

The Bakersfield South Alternative would convert slightly less commercial and slightly more industrial lands than the BNSF Alternative. This alternative would convert much less "other" lands, including rights-of-way, transportation, and vacant lands, than the BSNF Alternative; however, it would convert slightly more community facility land. The Bakersfield South Alternative would convert commercial and industrial uses adjacent to the BNSF Railway to transportation uses. This would not substantially change the pattern and intensity of the use of the land and would be largely compatible with adjacent land uses and existing plans and policies. Therefore, the land use effects of this alternative would have moderate intensity under NEPA, and the impact would not be significant under CEQA.

Bakersfield Hybrid Alternative

The Bakersfield Hybrid Alternative would convert slightly less commercial and industrial land than the BNSF Alternative. In Bakersfield's Central District, the Bakersfield Hybrid Alternative would avoid the impacts on Bakersfield High School associated with the BNSF Alternative. In the Northeast District, the Bakersfield Hybrid Alternative would cause less conversion of existing residential land use than the BNSF and Bakersfield South alternatives in the neighborhood southeast of the downtown area roughly between East Truxtun and East California avenues, and from Union Avenue to Oswell Street. However, land use conversion under the Bakersfield Hybrid Alternative would include the Bakersfield Homeless Shelter. This alternative would convert far fewer lands designated as Other in Tables 3.13-1 and 3.13-2, including rights-of-way, transportation, and vacant lands than the BNSF Alternative, but it would convert more land overall than the BNSF Alternative. Conversion of this land would substantially change the pattern and intensity of the use of the land and would be incompatible with adjacent land uses and existing plans and policies. Therefore, the land use effects of the Bakersfield Hybrid Alternative would have substantial intensity under NEPA, and the impact would be significant under CEQA.

HST Stations

The Fresno Station would convert commercial and industrial land uses to a transportation use. The Fresno Station was included as an element of the draft *Fulton Corridor Specific Plan*. An HST station at the site would not substantially change the pattern and intensity of land use and would be compatible with adjacent land uses. The HST station could potentially increase land use densities and TOD in Downtown Fresno, which would be consistent with local plans and policies. For these reasons, the land use effect of the Fresno HST station would have moderate intensity under NEPA, and the impact would be less than significant under CEQA.

All three Bakersfield Station alternatives overlap and would have similar impacts. The station in Bakersfield would convert commercial, industrial, and community facility uses to transportation uses. The station would not substantially change the pattern and intensity of the use of the land, but it would be incompatible with many adjacent land uses. The Bakersfield Station could potentially increase land use densities and TOD in Downtown Bakersfield because of its urban location. The alternative station sites are consistent with HST transportation planning in Bakersfield and were identified as the preferred location for the station in past resolutions by the City of Bakersfield, Kern County, and the Kern County Council of Governments, although the present city administration is not in favor of the project. The land use effect of the Bakersfield HST station would have substantial intensity under NEPA, and the impact would be significant under CEQA.

The Kings/Tulare Regional Station–East Alternative would convert about 22 acres of agricultural land in unincorporated Kings County into a transportation use. The Authority would work with the City of Hanford and Kings County to discourage growth in the vicinity of the station by restricting onsite parking and encouraging transit to the station from downtown Hanford, Visalia, and Tulare, and purchasing agricultural conservation easements from willing sellers of adjacent agricultural lands. However, it is likely that the location of the station at this site would attract at least transportation-oriented commercial development. While current zoning allows for industrial uses of some of the land adjoining the Kings/Tulare Regional Station–East Alternative, much of the area continues to be zoned for agriculture and is in agricultural use. In addition, current plans and policies of the City of Hanford call for development to the west of the city and not to the east. This is partially due to the lack of sewer conveyance facilities on the eastern edge of Hanford and the expense of extending this infrastructure out to the station site. The Kings/Tulare Regional Station–East would change the pattern and intensity of the use of the land and would be incompatible with adjacent land uses. The presence of the station is likely to result in some unplanned changes in the use of existing adjacent land. Therefore, the land use effect of the Kings/Tulare Regional Station–East would have substantial intensity under NEPA, and the impact would be significant under CEQA.

The Kings/Tulare Regional Station–West Alternative would convert about 44 acres of agricultural, residential, and industrial land uses to a transportation use. Like the Kings/Tulare Regional Station–East Alternative, the Authority would work with the City of Hanford and Kings County to discourage growth in the vicinity of the Kings/Tulare Regional Station–West, but it is likely that at least transportation-oriented commercial development would take place in the vicinity of the station. This would be incompatible with current land uses. Although the City of Hanford is directing growth on its western edge, future commercial development is envisioned closer to SR 198 than the Kings/Tulare Regional Station–West (Figure 3.13-6). Kings County has zoned the station site and parcels to the west and north as agricultural. Land uses and zoning immediately south and east of the HST station are commercial, industrial, and residential. The Kings/Tulare Regional Station–West would change the pattern and intensity of the use of the land and would be incompatible with most of the adjacent existing land uses. The presence of the station is likely to result in some unplanned changes in the use of existing adjacent land. Therefore, the land use effect of the Kings/Tulare Regional Station–West would have substantial intensity under NEPA, and the impact would be significant under CEQA.

Heavy Maintenance Facility Alternatives

Table 3.13-3 shows land use conversion acreages for the HMF sites. Only one site would be selected for the HMF. The Fresno Works–Fresno HMF Site would be located in an area consisting of residential, commercial, industrial, community facility, and agricultural land uses. The Kings County–Hanford HMF Site would be located on a new right-of-way on agricultural lands. The Kern Council of Governments–Wasco HMF Site would be located primarily on agricultural lands adjacent to areas of residential, industrial, and agricultural lands. Both Kern Council of Governments–Shafter HMF sites would be located in areas composed entirely of a new right-of-way on agricultural lands, with small amounts of industrial lands. The HMF would substantially change the intensity of the use of the land at all of the potential HMF sites, and would generally be incompatible with adjacent land uses. All of the alternative HMF sites except for the Kern Council of Governments–Wasco HMF Site would conflict with current plans and policies adopted to protect agricultural lands and open space. The HMF would employ up to 1,500 workers. It is possible that future commercial development could be proposed on lands adjacent to the HMF to serve this workforce, thereby extending the project's indirect effect on nearby land uses, as discussed below. The HMF would substantially change land use pattern and intensity, and would be incompatible with most adjacent land uses. The HMF could change existing adjacent land use. Therefore, the land use effect of the HMF would have substantial intensity under NEPA, and the impact would be significant under CEQA.

Table 3.13-3
Permanent Land Impacts by Potential HMF Site (acres)

HMF Site	Single Family	Multi-family	Commercial	Industrial	Community Facility	Agricultural	Other*	Total Acres
Fresno Works–Fresno	23	0	1	125	69	299	69	586
Kings County–Hanford	0	0	0	0	0	507	4	511
Kern COG–Wasco	0	0	1	5	0	407	2	415
Kern COG–Shafter East	0	0	0	5	0	484	6	495
Kern COG–Shafter West	4	0	0	10	0	465	1	480

* Other includes right-of-way, transportation, and vacant lands.

Acronyms:
HMF = heavy maintenance facility
Kern COG = Kern Council of Governments

Impact LU#3 – Land Use Effects of Parking Demand at Station Sites

The Fresno Station would not be a terminus station in Phase I (See Section 2.6 for a description of project phasing). Fresno ridership and parking demand would experience changes in demand for parking in the transition to the full HST System. Fresno ridership would be expected to continue to rise incrementally with population growth. Based on ridership projections as stated in the *California High-Speed Rail Program: Revised 2012 Business Plan*, Sacramento (2012b), parking demand at the Fresno Station is conservatively estimated to require approximately 5,900 parking spaces in 2020 and 7,400 spaces in 2035. Based on the amount of excess public parking within 1 mile of the station, it is estimated that the 2035 parking demand can be met with a total of 5,000 parking spaces provided in the four new parking structures built adjacent to the station by 2035. (Please see Volume III: Section E – Station Plans of this EIR/EIS.)

As described above, all four structures would not be needed at the opening of the station in 2020. Instead, parking would be provided as demand requires. At the opening of the Fresno Station in 2020, a combination of parking structures and surface parking lots with a total of about 3,500 spaces would be constructed adjacent to the station. Approximately 5,000 parking spaces exist in downtown Fresno; however, some parking spaces are used on a daily basis and may not be available for use by HST passengers. Additional parking areas are being identified in the downtown area to accommodate both passengers and visitors to the station area, and to encourage land uses that would support other development types.

There are no existing parking facilities at the Kings/Tulare Regional Station–East or the Kings/Tulare Regional Station–West alternatives, or in the vicinity of the proposed stations.

Sufficient land has been identified for both station sites to meet the projected parking demand of 2,800 spaces in 2035. The current parking layout for the Kings/Tulare Regional Station–East provides 2,280 parking spaces in a surface lot, which would not be sufficient to meet expected demand. A combination of surface parking lots and a parking structure would provide 2,800 parking spaces at the Kings/Tulare Regional Station–West, which would meet expected demand. However, to discourage unplanned growth in the area surrounding the station sites, the Authority plans to provide less parking at the stations and to work with local communities such as Hanford, Visalia, and Tulare to provide parking at satellite lots in those communities, with transit service to the stations. A future environmental review of these satellite lots would be conducted by the Authority if this approach to serving the HST station is implemented.

Similar to the Fresno Station, Bakersfield ridership and parking demand would result in changes in demand for parking in the transition to the full HST System. Bakersfield ridership would be expected to continue to rise incrementally with population growth. The downtown Bakersfield Station would provide up to 4,500 parking spaces after the station is completed, although the full 2035 parking demand is estimated to be 8,100 spaces. It is unknown at this time how the additional parking spaces would be provided. The 4,500 spaces would be provided in one or two structures, depending on the alternative chosen for the station. In addition, four parking lots are located approximately 0.5 mile, or less, from the proposed station location, although some parking spaces in these lots are used on a daily basis and are not available for HST parking. Additional parking areas are being identified in the downtown area to accommodate both passengers and visitors to the station area, and to encourage land uses that would support other development types.

Parking for the downtown Fresno and Bakersfield HST stations would be located near the stations or dispersed throughout the downtown areas for the stations. Construction of any new parking garages would not result in land use changes because current zoning allows parking structures in downtown Fresno and Bakersfield. However, dispersed parking options would better encourage TOD because complementary land uses rather than large parking structures could be located close to the station. In addition, the street network in the proposed Fresno and Bakersfield HST station areas is a grid network that provides access to SR 99, SR 41, and SR 180 in Fresno and to SR 99, SR 204, and SR 178 in Bakersfield. The street network also provides access to arterial and collector streets that would serve the HST stations, making the areas compatible with multimodal development. See Section 3.2.4, Transportation, for details regarding the transportation network around the station locations.

In addition, the FRA and Authority have a strategy for long-term coordination with local transit agencies and cities to develop transit connectivity plans for HST station areas and for connectivity to neighboring communities where high HST ridership is projected, which is expected to reduce the overall demand for parking at stations by facilitating alternative methods of station access. The strategy, which has been included in the project design features, includes the following components:

- Design and construct stations to be pedestrian and bicycle-friendly by incorporating features, such as bike lockers, changing rooms, and showers.
- Facilitate easy transfers between local transit and HST, such as shared ticketing, wayfinding for local transit within HST stations, and other features.
- Coordinate transit service and/or ride-sharing to connect HMF sites to population centers to promote an alternative to single-occupant vehicles for employees' commutes.

The development of parking to accommodate demand at the Fresno and Bakersfield stations would be consistent with applicable plans, and would be compatible with adjacent land uses

because current zoning supports parking development as a common use in urban centers. Therefore, this effect is considered to have moderate intensity under NEPA because development of parking would acquire land, but would not change adjacent land uses; would be consistent with plans and policies; and would not result in induced growth. Because the parking at these two stations would not cause a substantial change in the pattern or intensity of land use that is incompatible with adjacent land uses, the impact would be less than significant under CEQA.

As indicated above, both of the Kings/Tulare Regional Station alternatives would change the pattern and intensity of the use of the land and would be incompatible with adjacent land uses. The presence of the station at either site is likely to result in some unplanned changes in the use of existing adjacent land, and could indirectly contribute to changes that are incompatible with adjoining land uses, as discussed below. Therefore, the land use effect of the Kings/Tulare Regional Station would have substantial intensity under NEPA, and the impact would be significant under CEQA regardless of the amount of parking provided at the station.

Impact LU#4 – Indirect Effects on Surrounding Land Uses from the HST Alignment, HST Stations, and the HMF

HST Alignment

Land used for transportation systems, such as roads, typically causes changes to nearby land uses if there is a direct connection to the system, such as highway on- and off-ramps. This is an indirect effect of the system that results from the economic incentive created by improved access. Although the project would convert land to transportation-related uses (less than 0.01% of the total regional land), it would be access restricted; therefore, direct connections to the HST System and the opportunity for related development would occur only at station locations. The HST System would not remove an obstacle to growth along its alignment because it would not provide access or physical connections to lands that could be easily connected to municipal services (e.g., water, sewer, electricity). Section 3.18, Regional Growth, discusses the project's effects on regional growth, including impacts related to induced growth. Indirect effects of the stations on surrounding land uses are discussed below.

All of the alternative alignments are located near or go through rural residential and urban areas, resulting in residential, commercial, and industrial displacements. In a number of cases, the presence of the HST will disrupt community cohesion or result in community division. These displacement and community impacts are discussed in Section 3.12.5, Socioeconomics, Communities, and Environmental Justice. Although impacts will occur to communities and affect some residents, it will not be disruptive enough to force a change in land use patterns. Both the BNSF Railway and UPRR cross through the south San Joaquin Valley and have not prevented recent development of residential neighborhoods in close proximity to the lines. For example, there has been substantial residential development along the BNSF Railway alignment on the western side of metropolitan Bakersfield over the past 30 years.

The HST would not inhibit agricultural production on lands adjacent to the alignment. As discussed in Section 3.14.5, Agricultural Lands, wind generated by the HST would not cause adverse indirect effects on adjacent farmland such as interference with insect pollination, additional pesticide drift, and pesticide application restrictions. While the HST would be initially disruptive to existing agricultural operations, adjacent land would remain in agricultural production in the long term because of the high value of land for agriculture in the south San Joaquin Valley, the predominance of the agricultural industry in the region, and the extensive agricultural infrastructure that is in place. The impacts of the project on the agricultural economy in the project area are provided in Section 3.12.5, Socioeconomics, Communities, and Environmental Justice.

The indirect land use effects of the alternative alignments would not change the pattern or intensity of adjacent land uses. Therefore, the alignments would not have an indirect land use effect under NEPA, and there would be no impact under CEQA.

HST Stations

The urban stations in Fresno and Bakersfield would encourage higher-intensity development in the surrounding areas. However, this indirect effect of the stations is consistent with existing urban development and expectations for the types of uses that can be supported in an urban environment. This would also be consistent with the cities' plans and policies encouraging downtown revitalization. Therefore, the indirect land use effects of these two stations would have negligible intensity under NEPA and be less than significant under CEQA.

Both of the Kings/Tulare Regional Station alternatives could indirectly result in development of supporting uses, such as restaurants and rental car agencies, on adjacent lands to serve the traveling public. These changes to adjacent lands would be incompatible with their current land uses and designations. Therefore, the indirect land use effect of this station would be substantial under NEPA, and the impact would be significant under CEQA.

Heavy Maintenance Facility Alternatives

The HMF sites under consideration are primarily in areas associated with agricultural land uses. Although the alternative HMF sites are close to existing urban areas, the large number of workers employed there in three shifts, 24 hours per day is likely to result in development in the vicinity of the HMF that would meet the anticipated demand for services by facility employees. This development could include new gas stations, restaurants, and other service-type businesses. The provision of utility services (e.g., electricity, water, and sewer) to the HMF sites would make this type of development possible. Even if a cafeteria and other employee services were provided at the HMF site, businesses would likely move nearby to serve the employees off site. This type of commercial development around the alternative HMF sites would change the pattern and intensity of land uses in the vicinity of the HMF, and such changes would be incompatible with adjacent agricultural uses. Therefore, the indirect land use effect of the HMF would have substantial intensity under NEPA, and the impact would be significant under CEQA.

Impact LU#5 – Potential for Future Increased Density and TOD Development at HST Stations

Experience in the U.S. demonstrates that new transit facilities development has been concurrent with major changes in land development near stations (typically within 0.25 mile of the station). Jurisdictions with supportive policies, land use controls, and direct incentives can facilitate TOD development near transit stations (Transit Cooperative Research Program 2004). These references concern development within 0.25 mile of the station for the typical light-rail transit project, but with the higher-ridership attraction and interconnectivity with larger economic centers, an HST project could have a stronger influence on land use, and therefore HST Station Area Development Guidelines developed by the Authority focus on development occurring within 0.5 mile of a station.

As discussed below, generally, TOD occurs under three conditions:

- Policies and regulations of local agencies encourage or allow TOD in station areas. Other regional agencies and transit providers have started to adopt policies that bring together funding for transit expansion with land use.

- Stations are located in prime regional and community activity centers that are attractive to typical market forces.

- Regional and local real estate markets are active.

The Authority has developed urban design guidelines (Authority 2011b), which describe six core principles embodying the essential characteristics of a successful TOD and which directly influence the land use, circulation, and urban form around the stations:

- Development density greater than the community average.
- Mixed land uses.
- Compact, high-quality, pedestrian-oriented environment.
- An active, defined center.
- Limited, managed parking.
- Public leadership.

The *Transit-Oriented Development (TOD) Design Proposals for Fresno, Final Report* (UC Berkeley 2010) analyzed the effects of an HST station in downtown Fresno. The report identified tremendous opportunities to revitalize the downtown through urban design, diversity of higher densities, and mixed-use development with improved transit, bike, and pedestrian connectivity. The report identified a number of vacant and underused parcels (i.e., surface parking lots) adjacent to the corridor, which are available for infill development in downtown areas. The report also revealed how existing wide streets in the downtown area could provide opportunities for widened sidewalks, streetscapes, and bicycle lanes. The higher densities in the station area would translate into higher levels of transit, and the station could become a major transit hub. Office development would be attracted to the area because of the improved access to the larger markets of Los Angeles and the Bay Area, and the station could become an 18-hour destination as more commercial businesses are drawn to the area. Residential growth would be expected to occur because of the increases in retail, nightlife, and improved multimodal connectivity—not because residents want to commute to Los Angeles or the Bay Area (Authority and FRA 2008; Authority 2012).

The reports also identified certain actions that would need to be taken for the HST to be successful:

- Transit-supportive land use designations and zoning in the station areas.
- Downtown revitalization efforts.
- Proactive parking policies.
- Construction of TOD.
- Strategies to encourage compact growth and infill, along with strategies to reduce conversion of farmland to suburban use.
- The need to start station area planning early.

In addition, reports by independent agencies also examine policies that cities can implement to coordinate regional land use and transportation planning. *Thinking Ahead–High-Speed Rail in Southern California* (Center for Urban Infrastructure 2010) explores strategies such as streamlining zoning and implementing land use codes that support intensive development that would allow cities to cluster housing, retail, and office space in areas around the HST stations.

To maximize benefits from HST, the HST Station Area Development Policies (Authority and FRA 2008; Authority 2012) for land use around the stations suggest the following:

- Creating a high-density development pattern in the surrounding area that includes a mixture of land uses (i.e., retail, office, and open space) and a mix of housing types (i.e., apartments, condominiums, and townhomes).

- Maintaining a grid street pattern and compact pedestrian-oriented design that promotes walking, biking, and transit access.

- Coordinating the design for both street-level and upper-level architectural detailing.
- Limiting the amount of parking to that which is essential for system viability.
- Placing parking in structures with retail or other land uses.

The buildings in the area would be designed to complement and mutually support public spaces, including plazas and other open-space areas, and would also take into consideration context-sensitive building design. A grid street pattern would include streets with landscaping features, and small parks or open space and a pedestrian-oriented design to promote alternative forms of transportation (i.e., walking and bicycling). Although some parking would be needed around station locations, the HST station development would encourage the use of transit and other modes. More information regarding the approach to parking can be found in Chapter 2, Alternatives.

Downtown Fresno and Bakersfield Stations

The HST station would be located in an area where the City of Fresno is updating plans to address the potential for infill development and increased densities associated with the HST station. Before dissolution of the Redevelopment Agency by the state, the City of Bakersfield had adopted redevelopment plans for the HST station area in Bakersfield. The HST stations would induce desired residential and commercial infill development, by providing an economic driver for such development. Section 3.18, Regional Growth, discusses the project's effects on regional growth, including impacts related to induced growth. No planned development projects are proposed in the Downtown Fresno Station study area, except for a 3 million gallon water storage tank, and a plan to renovate and expand the Roeding Regional Park and Chaffee Zoo, located just outside the station study area. Two development projects are located within the Bakersfield Station study area: the Mill Creek Linear Park Plan (partially completed) and the Old Town Kern–Pioneer Redevelopment Project, which are both mixed-use residential and commercial projects. HST station development would not affect planned development in Fresno or Bakersfield because those developments are planned for the station study area edges, and include higher-density residential uses that would be compatible with TOD around stations. Indirect effects on surrounding land uses are considered to have moderate intensity under NEPA because the HST stations may induce growth, but they would be consistent with applicable plans. Indirect impacts would be less than significant under CEQA because land use changes would be compatible with adjacent land uses. Indirect effects on surrounding land uses would be beneficial, encouraging more efficient land use patterns that are consistent with Fresno and Bakersfield planning goals.

Kings/Tulare Regional Station–East Alternative

The Kings/Tulare Regional Station–East Alternative is adjacent to the city of Hanford planning boundary, and within Kings County. The station area is shown as Urban Fringe in the *2035 Kings County General Plan*, a designation intended to represent long-term future residential, commercial, and industrial land uses immediately adjacent to cities (Kings County Community Development Agency 2010). The Kings/Tulare Regional Station–East is also located within an area designated as a Secondary SOI. Secondary SOI boundaries coincide with areas planned for long-term urban growth in the General Plan, and the Land Use Element of the General Plan expects land within these spheres to be annexed to the nearest municipal-service-providing entity prior to development. Kings County has zoned the site as Light Industrial. Surrounding zoning is Limited Agricultural. Some areas to the south and southwest are zoned as Industrial, Commercial, and Residential (to the southeast) by both Kings County and the City of Hanford.

Land uses to the west inside the City of Hanford's SOI are designated with a variety of Urban Reserve land uses by the city's General Plan. The Urban Reserve designation is a prefix applied to land within the City of Hanford's Planning Area Boundary that is expected to develop over the

long term, provided that it is annexed to the city and utilities are made available. The *City of Hanford General Plan* states that the development of any Urban Reserve lands is either not anticipated within the planning horizon, or will require the resolution of significant infrastructure constraints in the area prior to development being approved. At present, there is insufficient sewer capacity to serve the western edge of the Hanford Planning Area Boundary. Although there are no plans to fund an expansion of this infrastructure by the City, the Authority could potential fund this expansion.

The City of Hanford General Map designates land on the western side of the city as Residential (Very Low-, Low-, Medium-, and High-Density), Office, Light- and Heavy-Industrial, and Public Facilities. A significant amount of these areas, although designated with these land uses, are still undeveloped. None of the land uses in this area include the Urban Reserve prefix. Therefore, the City of Hanford is not anticipating any long-term constraints in developing this area, and would likely approve development on the western side of Hanford prior to developing any Urban Reserve lands on the eastern side.

Where inconsistencies with local land use plans are present, the Authority could attempt to reconcile those inconsistencies. For example, as stated in Section 3.14, Agricultural Lands, the Authority would work with the Department of Conservation to purchase and establish agricultural conservation easements on a willing seller basis to mitigate for the loss of agricultural land in the Central Valley from the HST facilities' footprint (see Ag-MM#1). The Authority could seek to purchase agricultural easements directly surrounding the Kings/Tulare Regional Station–East footprint. In addition, the Authority could provide a portion of the Kings/Tulare Regional Station–East parking in Downtown Hanford, Visalia, and/or Tulare, with transit connectivity to the stations; although no specific site location(s) have been determined. Reducing the number of spaces provided at the station area would allow for more open-space areas around the station, discourage growth at the station, encourage revitalization of the downtowns (by providing direct shuttles between downtown and the station), and reduce the development footprint of the station. The FRA's and Authority's goals for the Kings/Tulare Regional Station–East include creating a station that serves as a regional transportation hub to provide quick transit connections from the station to the downtown areas of Hanford and Visalia. Given the Urban Reserve and agricultural land use designations surrounding the station area, the availability of appropriately designated land on the western side of Hanford that could be developed, and the Authority's vision for the Kings/Tulare Regional Station–East to act as a transit hub, the potential for indirect effects on land use in the area surrounding the Kings/Tulare Regional Station–East is high.

For purposes of this analysis, it is assumed that development would occur in the area around the station, particularly to the west of Kings/Tulare Regional Station–East, because use of the station is likely to attract service-oriented development like restaurants and gas stations. Lands in this area contain a variety of Urban Reserve lands, including residential, commercial, office, and public facility. No high-density land uses are designated. However, most of Hanford's residential land uses are designated low-density uses, with some medium-density residential uses and a few pockets of high density. Indirect changes to adjacent lands would be a significant impact under CEQA because those changes would result in a land use pattern and intensity that is incompatible with surrounding uses.

These indirect land use effects are considered to have substantial intensity under NEPA because they would require the acquisition of land, may change adjacent land uses, would result in induced growth, and would be generally inconsistent with applicable plans.

Kings/Tulare Regional Station—West Alternative

The Kings/Tulare Regional Station–West Alternative is adjacent to the City of Hanford planning boundary, and is in the Armona Community Planning Area of Kings County. The station site would be in an area categorized by the *2035 Kings County General Plan* as Urban Fringe, and designated a Primary SOI (Kings County Community Development Agency 2010). The site area was added to the Primary SOI as Expansion Area 1 in the LAFCo of Kings County's *City and Community District Sphere of Influence Update,* which stated that extending the SOI to 13th Avenue would "establish a more logical and defined boundary for likely and future annexation proposals and development" (LAFCo of Kings 2007). Primary SOI boundaries coincide with areas planned for urban growth, and Kings County intends for new development within these spheres to be annexed to the nearest municipal-service-providing entity.

The station site land use designation within Kings County is Limited Agriculture, as is all adjacent land to the west, north, and east. Parcels to the south/southwest of the station site, within the Armona Community Planning Area, are designated Very Low Density Residential, Multiple Commercial, and Reserve Multiple Commercial. The station site is also located within the City of Hanford Planning Area F, which is described as mostly residential uses. The station site is designated Very Low Density Residential (V-LD) and Low Density Residential (LD), and parcels to the south, east and north of the station site within this planning area are designated as Very Low Density Residential (V-LD), Low Density Residential (LD), High Density Residential (HD), Public Facility (PF), Service Commercial (SC), Planned Commercial (PC), and Offices (O).

As stated in Section 3.14, Agricultural Lands, the Authority would work with the Department of Conservation to purchase and establish agricultural conservation easements on a willing seller basis to mitigate for the loss of agricultural land in the Central Valley from the HST facilities' footprint. The Authority could seek to purchase agricultural easements directly surrounding the Kings/Tulare Regional Station–West footprint. In addition, the Authority may provide a portion of the Kings/Tulare Regional Station–West parking in Downtown Hanford, Visalia, and/or Tulare, and use shuttles to deliver passengers to the station, although no specific site location(s) have been determined. Reducing the number of spaces provided at the station area would allow for more open-space areas around the station, reduce the development footprint of the station, discourage growth at the station, and encourage revitalization of the downtowns. The goals of the FRA and the Authority for the Kings/Tulare Regional Station–West include creating a station that serves as a regional transportation hub to provide quick transit connections from the station to the downtown areas of Hanford and Visalia (Authority 2011a).

Given the agricultural land use designations surrounding the station area, the availability of appropriately designated land on the western side of Hanford and in the community of Armona that could be developed, and the Authority's vision for the Kings/Tulare Regional Station–West to act as a transit hub, the potential for indirect effects on land use in the area surrounding the Kings/Tulare Regional Station–West is high.

Like the Kings/Tulare Regional Station–East Alternative analysis, the analysis for the Kings/Tulare Regional Station–West assumes that development could occur in the area around the station because use of the station is likely to attract service-oriented development. Lands in this area contain a variety of Urban Reserve lands, including residential, commercial, office, and public facility. No high-density land uses are designated. However, most of Hanford's residential land uses are designated low density, with some medium-density residential uses and a few pockets of high density. Indirect changes to adjacent lands would be a significant impact under CEQA because those changes would substantially change the pattern and intensity of land use in a way that would be incompatible with adjacent land uses.

These indirect land use effects are considered to have substantial intensity under NEPA because they would acquire land, may change adjacent land uses, would result in induced growth, and would be generally inconsistent with applicable plans.

Current Policies and Local Regulations

The counties and cities in the study area control the location and intensity of development through general plans, zoning regulations, and land use ordinances. The adopted general plans for Fresno and Kern counties and the cities of Fresno and Bakersfield include policies related to infill development, development of mixed uses, improvement of mobility, and enhancement of downtown areas. The City of Fresno is in the process of updating its general plan to reflect the addition of an HST station in the downtown area.

Both the Kings/Tulare Regional Station–East and the Kings/Tulare Regional Station–West would be in unincorporated Kings County. The *2035 Kings County General Plan* does not contain any policies specific to the HST System (Kings County Community Development Agency 2010). However, the 2011 Kings County RTP includes the implementation of a high-speed rail facility in the region among its stated objectives (Kern COG 2010). The 2011 Kings County RTP supports state efforts to implement a high-speed rail corridor in the San Joaquin Valley, and the development of strategies that further the goals of reduced traffic congestion through development of alternative transportation modes. The Kings County RTP supports an HST station in Hanford to better serve Kings and Tulare counties.

Current zoning around both Downtown Fresno and Bakersfield HST station sites is primarily commercial and industrial. In Downtown Fresno, the station area is currently zoned industrial and commercial, with public and medium-density residential on the outer edges of the station study area (see Figure 3.13-2). Several vacant and underused properties fall within the HST station study area. According to the general plan, opportunities exist for increasing development densities consistent with TOD in the proposed HST station areas. In Downtown Bakersfield, the station area is currently zoned commercial, industrial, single- and multi-family residential and parks (see Figure 3.13-8). According to the general plan, opportunities exist for increasing development densities consistent with TOD in the proposed HST station areas.

The City of Fresno is currently updating the specific and community plans for the HST station area to support greater development densities and mixed uses consistent with TOD. Fresno anticipates adopting these plans in 2014 (personal communication, Balch, City of Fresno 2014). As shown in Table 3.13-4, the current zoning around both downtown station sites allows higher densities than currently exist. The HST stations would promote the infill development opportunities that the cities of Fresno and Bakersfield are addressing in the updates to their plans, and in existing redevelopment plans that address the station areas.

With respect to zoning, Figures 3.13-2, 3.13-4, 3.13-6, and 3.13-8, show the stations in the center of the 0.5-mile radius of the Fresno, Kings/Tulare Regional Station–East, Kings/Tulare Regional Station–West, and Bakersfield HST station study areas, respectively. In Fresno and Bakersfield, commercial and industrial uses are located nearest the proposed stations (see Figure 3.13-7 for existing land use around the Bakersfield stations).

The Kings/Tulare Regional Station–East study area consists predominately of agricultural lands in which the change to transportation use would not be compatible with current land use designations and zoning. However, some areas to the south and southwest have been zoned as Industrial and Commercial. These are appropriate zoning designations for areas near the station, and it is anticipated that in the future they would become developed with these uses, which are compatible with the station. Residential land uses lie at the outer edges of the station study area, and would likely remain in that land use designation because housing close to the station would

be at a premium. If any changes are made, it would likely be to increase the housing density to allow for more units to be built close to the site.

Table 3.13-4
Acreage of Existing Land Uses and Current Zoning Opportunities Within the HST Station Study Areas

HST Station	Existing Land Uses	Zoning	Changes
Downtown Fresno Station	Commercial 21% Industrial 20% Community facility 8% Multi-family residential 2% Single-family residential 6% Right-of-way 39% Vacant 4%	Commercial 56% Industrial 26% Community Facility 2% Multi-family residential 12% Single-family residential 4%	Increased density of commercial uses and multifamily residential uses likely
Kings/Tulare Regional Station–East	Commercial 2% Industrial 3% Multi-family residential 1% Single-family residential 10% Agriculture 76% Right-of-way 8%	Commercial 5% Industrial 20.5% Single-family residential 4.5% Agriculture 68% Right-of-way 2%	Increased density of commercial uses likely
Kings/Tulare Regional Station–West	Commercial 1% Industrial 9% Community facility 3% Multi-family residential 1% Single-family residential 10% Mobile home 1% Agriculture 65% Right-of-way 10%	Commercial 20% Industrial 7% Community Facilities 4% Multi-family residential 3% Single-family residential 17% Office 3% Agriculture 46%	Increased density of commercial uses likely
Downtown Bakersfield Station	Commercial 18% Industrial 10% Community facility 16% Multi-family residential 5% Single-family residential 13% Right-of-way 36% Vacant 2%	Commercial 36% Industrial 38% Multi-family residential 19% Single-family residential 6% Parks and Recreation 1%	Increased density of commercial uses and multifamily residential uses likely

Sources: City of Fresno 2009a, 2009b; Kings County 2010; City of Bakersfield 2010.
Note: Includes study area for all station alternatives.

Similarly, the Kings/Tulare Regional Station–West study area consists predominately of agricultural lands, which are not consistent with transportation uses. However, some areas to the south, southwest, and east have been zoned as Industrial, Commercial, and Single-Family Residential. Industrial and Commercial land uses are appropriate zoning designations for areas near the station, and it is anticipated that they would remain and become developed with these uses, which are compatible with the station. Areas to the south and east are developed with existing residential uses or are adjacent to existing development in the city of Hanford. Therefore, it is likely that these areas would remain designated as residential, but could undergo modifications to the allowed density of units. The Kings/Tulare Regional Station–West would

result in some land use changes to these local designations, mostly to increase densities of allowed uses.

This analysis shows that both Fresno and Bakersfield have increased and are planning to increase densities near and around the proposed HST station areas, and to increase density of mixed uses in the downtown areas. However, current zoning around either of the Kings/Tulare Regional Stations would not allow for the development of land uses that would complement the station, such as industrial, commercial, or mixed-use developments.

Strengthened Market Activity Centers

Downtown Fresno and Bakersfield are poised to become strong activity centers with the addition of the HST. First, the projected growth for this region is nearly an additional 1.7 million persons by 2035, with comparable growth in employment even before adding the HST to the Central Valley. Fresno is already the economic hub of the Central Valley. In addition, the HST project is estimated to bring up to 7,000 and 8,800 passengers a day to Fresno and Bakersfield, respectively, which translates into nearly 3 million persons getting on or off at the Fresno and Bakersfield stations each year (Cambridge Systematics 2007). This, in combination with nearly 1.7 million additional inhabitants projected in this part of the valley, means that there would be the presence of a large population in the downtown areas.

Increased Real Estate Forces

The necessary investment in the region would equally strengthen market forces. Following the recession of 2008, growth is projected to continue in Fresno, Kings, Tulare, and Kern counties, and there will be high investment to accommodate housing for the projected population. Just developing enough housing for the projected population, factoring a low average of 500 square feet per person at a low estimate of $110 per square foot (a low square footage price, in 2007 dollars), would mean that this four-county region would experience an investment of $97 billion of construction activity without the HST, and before factoring in roads, schools, and commercial establishments, or even the development of the HST itself. This type of investment provides the assurance of market forces for infill development opportunities. The HST would provide a catalyst to concentrate the market energy at station centers that supply interregional connectivity with other metropolitan centers, like airports do except with more convenience of destination-to-destination connection.

The HST stations in Fresno and Bakersfield would be compatible with local zoning for higher-density development (for Fresno Station zoning, see Figure 3.13-7, and for Bakersfield Station zoning, see Figure 3.13-8). The stations would build upon existing activity centers with a large number of passengers, and effective regional connectivity and growth to this region would be inevitable, bringing investment and the potential to change or influence future lands use patterns. With proper coordination, the HST planning and the station area land use planning would lead to a revitalized and vibrant downtown core in both Fresno and Bakersfield that acts as a destination for area residents. The Fresno and Bakersfield HST stations would be a catalyst for development investment, and a focal point for which high-density downtown development could be fiscally viable. The HST stations would encourage the creation of new mixed-use centers with commercial and retail stores, hotels, offices, high-density residential developments, major civic facilities, and open space. TOD would occur not only on individual parcels surrounding the HST station, but throughout the entire district influenced by the station.

To reinforce this direction, the Authority has developed guidelines for station area development (HST Station Area Development: General Principles and Guidelines), as identified in the Bay Area to Central Valley HST Program Final EIR/EIS (Authority and FRA 2008) and Partially Revised Final EIR/EIS (Authority 2012). The guidelines also discuss how the Authority will work with local governments with jurisdiction over the station area (i.e., the cities of Fresno and Bakersfield) to

use a community planning process to develop a station area plan; plan street, pedestrian, bicycle, parks, open-space areas, and other amenities around the stations; incorporate the station area plan into city plans; and use a coordinated planning process to develop regional plans that focus development in existing areas to protect farmland, habitat, and open space. The Authority is currently working with the City of Fresno on station area planning through a station area planning grant. However, these guidelines are not applicable to the Kings/Tulare Regional Station alternatives, so the Authority would need to coordinate with local decision makers to plan amenities near the station.

The Authority plans to work closely with the communities where an HST station would be constructed to verify that polices related to TOD are adopted and implemented. (Refer to Chapter 8, Public and Agency Involvement, for information on the coordination that has occurred.) In addition to the current planning efforts in Fresno to update its general and specific plans, the City of Fresno is also taking part in the Authority's station area planning grant program. The grant programs allow the city to develop station area plans, and the Authority will work cooperatively with the city through the process. The activities being funded are distinct to each city based on their grant applications, and each city will meet with the Authority and develop a timeline for their respective plans with the approval of the grant applications. The planning efforts by the cities are expected to consider the *Urban Design Guidelines* (Authority 2011b) and the HST Station Area Development: General Principles and Guidelines developed by the Authority.

Ultimately, the cities of Fresno and Bakersfield would be responsible for implementing the guidelines that would focus the growth in the HST station areas; but as described above, the HST stations would attract more people to the station areas and create opportunity for revitalization of these areas with new commercial and residential uses. The area affected by the potential for TOD development and the surrounding region would realize beneficial effects, including increased employment, recreation, and community cohesion.

Schools

Existing schools within a 0.5-mile buffer around the HST stations in Fresno and Bakersfield would be indirectly affected due to a greater population density within the TOD areas. Information on potential project effects to schools is provided in Sections 3.2 Transportation, 3.4 Noise and Vibration, 3.10 Hazardous Materials and Wastes, and 3.12, Socioeconomics, Communities, and Environmental Justice.

3.13.6 Project Design Features

Although not strictly part of the project design, the Authority has established a certain "zone of responsibility" around the proposed stations. To that end, the Authority prepared and distributed *Urban Design Guidelines* (Authority 2011b) available on the Authority's website to provide assistance in urban planning for the stations to help achieve great placemaking. The guidelines are based on international examples where cities and transit agencies have incorporated sound urban design principles as integrated elements of large-scale transportation systems. The application of sound urban design principles to the HST System will help to maximize the performance of the transportation investment, enhance the livability of the communities it serves, create long-term value, and sensitively integrate the project into the communities along the HST System corridor. The Authority and FRA have also provided planning grants for cities that could have an HST station to assist them in land use planning in the areas surrounding the stations.

The Authority and FRA have a strategy for long-term coordination with local transit agencies and cities to develop transit connectivity plans for HST station areas and for connectivity to neighboring communities where high HST ridership is projected, which is expected to reduce the overall demand for parking at stations by facilitating alternative methods of station access. The strategy includes the following components:

- Design and construct stations to be pedestrian and bicycle-friendly by incorporating features, such as bike lockers, changing rooms, and showers.

- Facilitate easy transfers between local transit and HST, such as shared ticketing, wayfinding for local transit within HST stations, and other features.

- Coordinate transit service and/or ride-sharing to connect HMF sites to population centers to promote an alternative to single-occupant vehicles for employees' commutes.

The Authority could provide less parking at the Kings/Tulare Regional Station site than described in Chapter 2 by working with local communities such as Hanford, Visalia, and Tulare to provide parking at satellite lots in those communities with frequent transit service to the stations.

Project design features would reduce some of the temporary land use impacts from project construction. These features are described in Section 3.12.6, Socioeconomics, Communities, and Environmental Justice, and in Section 3.3.8, Air Quality and Global Climate Change. They include implementation of a construction management plan to minimize temporary impacts on adjacent land uses and implementation of dust control measures during project construction.

3.13.7 Mitigation Measures

Many related impacts in other resources have mitigation measures that work to further reduce the likelihood for impacts on land uses. For example, mitigation measures for transportation are found in Section 3.2.6, Transportation; for community resources, in Section 3.12.6, Socioeconomics, Communities, and Environmental Justice; for parks in Section 3.15.6, Parks, Recreation, and Open Space; and for regional growth in Section 3.18.6, Regional Growth. In addition, the following mitigation measures (which are described in Section 3.3.9, Air Quality and Global Climate Change; Section 3.4.7, Noise and Vibration; Section 3.14, Agricultural Lands; and Section 3.16.7, Aesthetics and Visual Resources) would also mitigate various impacts on land use:

- **AQ-MM#1**: Reduce Criteria Exhaust Emissions from Construction Equipment to reduce temporary air pollution emissions that could disturb adjacent land uses

- **AQ-MM#2**: Reduce Criteria Exhaust Emissions from On-Road Construction Equipment to reduce temporary air pollution emissions that could disturb adjacent land uses

- **AQ-MM#3**: Reduce the Potential Impact of Concrete Batch Plants to reduce temporary air pollution emissions that could disturb adjacent land uses

- **AQ-MM#4**: Offset Emissions through the VERA Program to reduce air pollution emissions that could disturb adjacent land uses

- **N&V-MM#1**: Construction Noise Mitigation Measures to minimize temporary noise disruption to adjacent land uses

- **N&V-MM#2**: Construction Vibration Mitigation Measures to minimize temporary vibration disruption to adjacent land uses

- **AG-MM#1**: Preserve the Total Amount of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland to reduce long-term land use impacts and policy conflicts.

- **AVR-MM#1a**: Minimize Visual Disruption from Construction Activities to reduce temporary visual impacts on adjacent land uses

- **AVR-MM#1b**: Minimize Light Disturbance during Construction to reduce temporary disruption to adjacent land uses

The Authority has considered avoidance and minimization measures that are consistent with commitments in the Program EIR/EIS documents. No additional measures have been identified to minimize or avoid significant land use impacts. Impacts resulting from implementation of the above mitigation measures are discussed in Section 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; 3.14, Agricultural Lands; and 3.16, Aesthetics and Visual Resources. The Authority would work with local governments to amend their plans to reduce land use conflicts where appropriate.

3.13.8 NEPA Impacts Summary

The project's potential for construction to alter land use patterns would have negligible intensity under NEPA because there would be no perceptible changes to land use and the changes would be generally consistent with applicable plans. Because lands used for temporary construction would be acquired from willing landowners and restored to their previous condition at the end of the construction period, long-term land uses would not change, adjacent land uses would not change, and there would not be a substantial change in the long-term pattern or intensity of land use incompatible with adjacent land uses. For these reasons, the effect of the temporary use of land for project construction staging, laydown, and fabrication would be of moderate intensity in the local context, and would not be significant under NEPA.

In the regional context the project's acquired land would constitute a small portion of the total industrial, residential, commercial, and public land in the four counties, and would not result in material changes in regional land uses, or development patterns. The size of the four counties together is approximately 13.05 million acres.[1] The footprint of the entire project would require approximately 4,100 acres, or less than 0.01% of the four-county area. When considered within this regional context, project construction impacts would be of negligible intensity, and would not be considered significant under NEPA.

The project's land use effect from permanent conversion of existing land uses to transportation use for the alternative alignments would be of moderate local intensity because the project would require land acquisitions and in some cases would not be consistent with applicable plans, but would not cause a change in adjacent land use; in addition, induced growth could be accommodated within existing local development plans. The land use effects of the Kings/Tulare Regional Station alternatives and the HMF would have substantial intensity as a result of the permanent conversion of land largely in agricultural uses to transportation uses and the conversion of adjacent lands in agricultural uses to commercial uses; these HST facilities would also not be consistent with plans and policies adopted for the purpose of protecting agricultural lands and open space. Approximately 4,100 acres of land would be directly converted to transportation uses by the Fresno to Bakersfield Section, and it is estimated that a few hundred acres may be indirectly converted from agricultural to commercial uses. This represents less than 0.01% of the total land area of the four counties affected by the project. Therefore, the land use impact of the project in the regional context would not be significant under NEPA.

The potential for future increased density and TOD development at the proposed Fresno and Bakersfield HST stations, the indirect effects on surrounding land uses are considered to have moderate local intensity under NEPA because the HST stations may induce growth, but these impacts would be consistent with applicable plans and compatible with land uses in these central cities. The city of Fresno covers 112.3 square miles, the city of Bakersfield covers 143.6 square

[1] Fresno County = 3.85 million acres; Kings County = 891,000 acres; Tulare County = 3.09 million acres; and Kern County = 5.22 million acres. URS 2014.

miles, and the city of Hanford covers 16.6 square miles. Development of several city blocks within or around these cities, when considered within the regional context, would be of negligible impact, and would not be significant under NEPA.

3.13.9 CEQA Significance Conclusion

Construction of the project on any of the alignment alternatives would temporarily use approximately 2,000 acres of land outside of the permanent footprint of project facilities for construction staging, laydown, and fabrication areas. These lands would be leased from willing landowners, and the lands would be returned to their former use or uses chosen by the landowner. Because lands used for temporary construction would be acquired from willing landowners and the land would be restored at the end of the construction period, there would not be a substantial change in the long-term pattern or intensity of land use that is incompatible with adjacent land uses. Therefore, the impact would be less than significant under CEQA.

Project construction would result in temporary and intermittent disruption of access to some properties; temporarily inconvenience to nearby residents from dust, noise, and vibration; and temporarily change the intensity of agricultural operations on some lands along 31 miles of the BNSF Alternative and along the Hanford West Bypass 1 and 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives. This would result in a substantial short-term change in the intensity of land use that is incompatible with adjacent land uses. For this reason, construction impacts would be significant under CEQA. These impacts would be mitigated to a less-than-significant level through implementation of project design features and air quality, noise and vibration, and aesthetics mitigation measures.

The permanent conversion of land for the project would result in a significant land use impact under CEQA. About 60% of the land converted by the project to transportation uses is currently used for agriculture. The project would represent a substantial change in the intensity of the use of this land. About 95 miles of the BSNF Alternative passes through agricultural land. For about 31 miles the BNSF Alternative is not adjacent to existing railroad right-of-way, resulting in a change in the intensity of land use; however, this change would be compatible with adjacent land uses. The Hanford West Bypass 1 and 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives cross lands used for agriculture. These alternatives would substantially increase the intensity of the use of the land, but would be compatible with adjacent land uses. The Kings/Tulare Regional Station alternatives would also be located on land used primarily for agriculture. Conversion of this land would substantially change the intensity and pattern of land uses, but would be compatible with adjacent land uses. No mitigation measures have been identified for this land use impact.

Table 3.13-5 lists significant land use-related impacts and measures to mitigate those impacts.

Table 3.13-5
CEQA Significance Conclusions for Station Planning, Land Use, and Development

Impact	CEQA Level of Significance before Mitigation	Mitigation Measure	CEQA Level of Significance after Mitigation
Construction			
LU Impact #1: Temporary and intermittent disruption of access to some properties, temporarily inconvenience nearby residents, and temporarily change the intensity of agricultural operations on some lands along 31 miles of the BNSF Alternative and along the Hanford West Bypass 1 and Hanford West Bypass 2, Hanford West Bypass 1 and 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives.	Significant	**Project Description Feature: Construction Management Plan** (see Section 3.12.6, Socioeconomics, Communities, and Environmental Justice). **Project Description Feature: Dust Control Measures** (see Section 3.3.8, Air Quality and Global Climate Change). **AQ-MM#1:** Reduce Criteria Exhaust Emissions from Construction Equipment. **AQ-MM#2:** Reduce Criteria Exhaust Emissions from On-Road Construction Equipment. **AQ-MM#3:** Reduce the Potential Impact of Concrete Batch Plants. **AQ-MM#4**: Offset Emissions through the VERA Program. **N&V-MM#1:** Construction Noise Mitigation Measures. **N&V-MM#2:** Construction Vibration Mitigation Measures. **AVR-MM#1a:** Minimize Visual Disruption from Construction Activities. **AVR-MM#1b:** Minimize Light Disturbance during Construction.	Less than significant
Project			
LU Impact #2: BNSF, Hanford West Bypass 1 and Hanford West Bypass 2, Hanford West Bypass 1 Modified and Bypass 2 Modified, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alternatives, as well as the Kings/Tulare Regional Station alternatives, would cause a substantial change in intensity of land use.	Significant	**AG-MM#1:** Preserve the Total Amount of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.	Significant

Table 3.13-5
CEQA Significance Conclusions for Station Planning, Land Use, and Development

Impact	CEQA Level of Significance before Mitigation	Mitigation Measure	CEQA Level of Significance after Mitigation
LU Impact #3: The Kings/Tulare Regional Station alternatives are likely to result in some unplanned changes in the use of existing adjacent land, regardless of the amount of parking provided at the station.	Significant	**AG-MM#1:** Preserve the Total Amount of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.	Significant
LU Impact #4: The HMF would change the pattern and intensity of land uses in the vicinity of the HMF, resulting in uses incompatible with adjacent agricultural uses.	Significant	**AG-MM#1:** Preserve the Total Amount of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.	Significant
LU Impact #5: Indirect changes to adjacent lands at the Kings/Tulare Regional Station sites would substantially change the pattern and intensity of land use in a way that would be incompatible with adjacent land uses.	Significant	**AG-MM#1:** Preserve the Total Amount of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.	Significant